KYOCERA

2022-2023 | KYOCERA Precision Tools

GENERAL CATALOG



ADVANCING PRODUCTIVITY

KYOCERA

Continuously Create New Value
at the Cutting Edge of Technology

ADVANCING PRODUCTIVITY

Contributing to the betterment of world-wide
manufacturing and our customers' productivity by
providing efficient cutting tool products and
high-precision machining solutions

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KYOCERA CUTTING TOOLS

GLOBAL FACILITIES NETWORK

NORTH AMERICA



KPT Indexable Technical Center
North Carolina (USA)



KPT Indexable Mfg. Facility
Wapakoneta, Ohio (USA)



KSPT PCB Tool Mfg. Facility
California (USA)



KSPT Round Tool Mfg. Facility
Ohio (USA)



KSPT Tech Hub Mfg. & R&D Facility
Virginia (USA)

GLOBAL



KYOCERA Corp. Indexable Mfg. Facility
Okaya Facility (JAPAN)



KYOCERA Corp. Indexable Mfg. Facility
Yokaichi Facility (JAPAN)



KYOCERA Corp. Indexable Mfg. Facility
Sendai Facility (JAPAN)



KYOCERA Corp. Indexable Mfg. Facility
Silong Facility (CHINA)



KYOCERA Corp. Indexable Mfg. Facility
Incheon Facility (KOREA)

KYOCERA CUTTING TOOLS

GLOBAL TECHNICAL CENTERS



North American Technical Center (NORTH CAROLINA, USA)



Sales & Technical Center (GERMANY)



Technical Center (BRAZIL)



Technical Center (SINGAPORE)



Technical Center (JAPAN)



Technical Center (CHINA)



Technical Center (JAPAN)



Technical Center (KOREA)



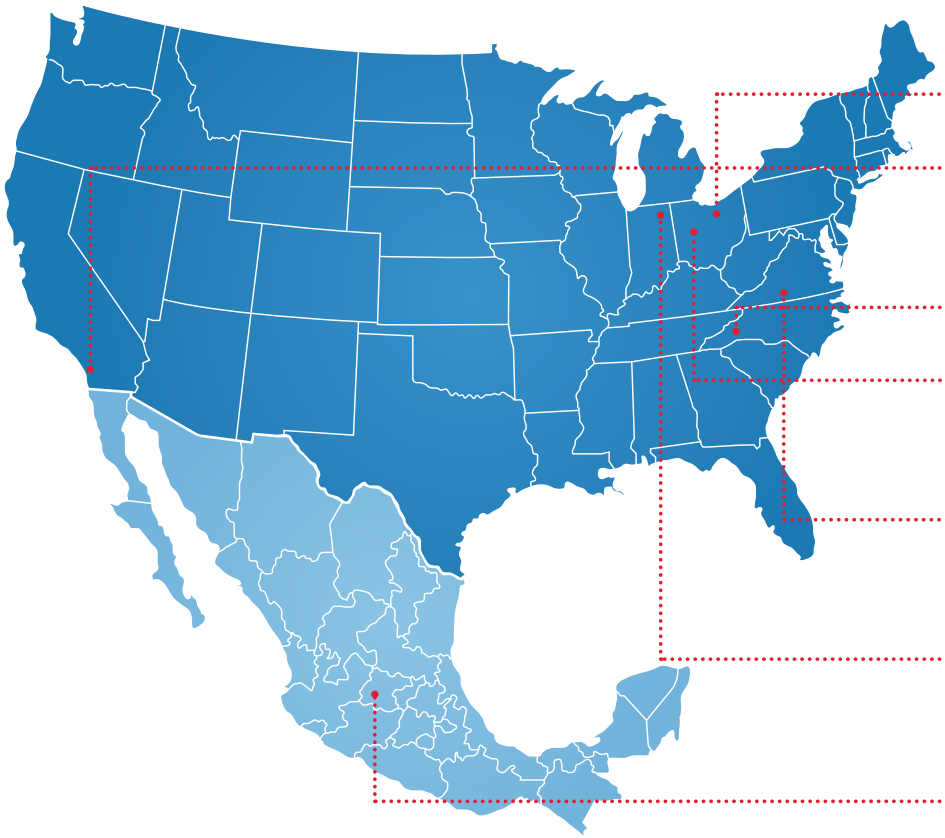
Technical Center (JAPAN)



KYOCERA PRECISION TOOLS

KYOCERA Precision Tools, a division of the KYOCERA-SGS Precision Tools group, provides indexable tooling solutions and service to a variety of industries, including aerospace, automotive, medical, dental, oil & gas, and power generation.





KYOCERA-SGS Precision Tools (KSPT)

Cuyahoga Falls, OH
Global HQ/Solid Round Tool Production

Orange, CA
Solid Round Tool Production

KYOCERA Precision Tools (KPT)

Hendersonville, NC
Sales & Marketing/Customer Service

Wapakoneta, OH
Indexable Toolholder Production

KYOCERA-SGS Tech Hub (KSPT)

Danville, VA
R&D/Custom Tool Production

KYOCERA-SGS Medical Division

Columbia City, IN
Engineering/Production

KYOCERA Precision Tools Mexico

Silao, Guanajuato, Mexico
Sales/Customer Service

KYOCERA Precision Tools

KYOCERA PRECISION TOOLS (KPT)

KYOCERA Precision Tools (KPT) is a division of the Kyocera-SGS Precision Tools Group specializing in the manufacturing, servicing, and marketing of Indexable Cutting Tools. With over 40 years of cutting tool expertise, KYOCERA has become the market-leader in Japan and has an established global presence with manufacturing, technical centers and sales offices in the Americas, Europe, and Asia.

CUTTING-EDGE, COST-EFFICIENT SOLUTIONS



KYOCERA Precision Tools develops state-of-the-art indexable cutting tools that exceed quality expectations while providing the cost-efficiency that today's metalworking consumer demands. Though ceramic technologies were the nucleus of the original business model, Kyocera has become a global leader in the metal removal industry by developing state-of-the-art cutting tool solutions using carbide, cermet, CBN and PCD. Over the past 40 years, Kyocera has developed some of the highest-quality, innovative indexable tooling solutions the industry has seen, including the **MEC Ultra-Hurricane** 90° Milling Cutters, the **MFH-Raptor** High-Feed Milling Cutters, the **DRZ & DRV** Family of Magic Drills, and **CCX**, the first-ever CVD Coated Cermet.

PRODUCTS



Turning & Boring



Holemaking



Indexable Milling



Small Tools for Swiss Lathes



Quick-Change Tooling & Specialty Tools



Grooving & Cut-Off

HOW TO REACH US

KYOCERA Precision Tools
102 Industrial Park Road
Hendersonville, NC 28792

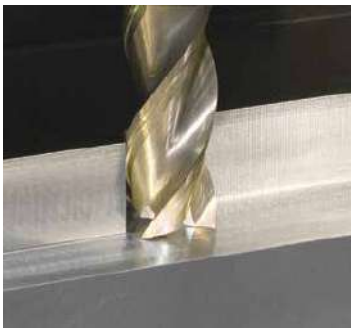
Phone: (800) 823-7284
Email: ctsales@kyocerapti.com
Web: www.kyoceraprecisiontools.com

KYOCERA-SGS PRECISION TOOLS (KSPT)

KYOCERA SGS Precision Tools (KSPT) is an ISO-certied manufacturer of industry leading round solid carbide cutting tools. State of the art manufacturing and warehouse facilities have the capacity and processes to meet the quality and delivery demands of customers in all markets around the world. Complete inspections performed within its metallurgical lab and manufacturing quality departments ensure the use of high quality carbide and reliable manufacturing consistency regardless of when a cutting tool is produced. KSPT Technical Sales Engineers, Application Specialists, and Distribution Partners blanket the globe, delivering reliable service and support to all market segments.

VALUE AT THE SPINDLE®

KYOCERA SGS Precision Tools is a global leader in solid round cutting tools, thanks in part to our unrivaled portfolio of capabilities ranging from world class manufacturing centers, to vigorous research and development teams, to proprietary coatings and dependable logistics. Our dedication to bringing VALUE AT THE SPINDLE® starts with inspecting each batch of raw material, and ends with custom tooling solutions with KSPT Engineers and end users customizing tool paths, machine operation parameters, and work piece testing.



PRODUCTS



Solid Carbide End Mills



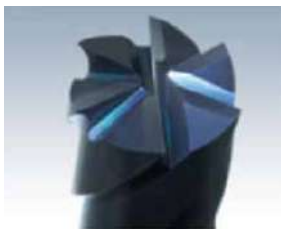
Micro Drills and End Mills

TOOL SERVICES

KSPT is committed to providing superior tooling services in the areas of Reconditioning, Recoating, Regrinding, Specials and Alterations. These services are offered to provide unique solutions and enhanced tool life with involvement from the KSPT Technical Support Team. KSPT proudly offers Tooling Services in North America and Europe.



BEFORE



AFTER

HOW TO REACH US

KYOCERA-SGS Precision Tools
150 Marc Drive
Cuyahoga Falls, Ohio 44223

Phone: (330) 686-5700
E-mail: webmaster@kyocera-sgstool.com
Web: www.kyocera-sgstool.com

KYOCERA SGS Tech Hub LLC

KYOCERA-SGS TECH HUB

The KYOCERA SGS Tech Hub (KSTH) is an independent subsidiary of the Kyocera SGS Precision Tools (KSPT) group created to focus on custom cutting tool solutions and explore new technologies. This facility has resources designed to provide MORE than a cutting tool, but a complete scope of services to include managing the entire cutting tool application from conception to application and beyond.

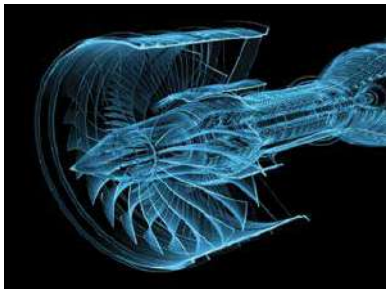
CUSTOMIZED ENGINEERING SOLUTIONS

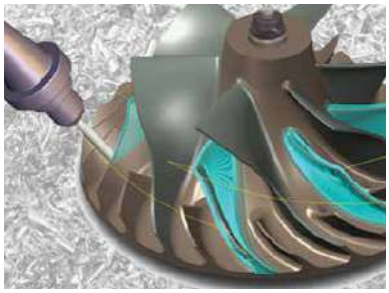
At KSTH we approach each opportunity as a project and manage it as such. We pride ourselves on engineering each project to the specific needs of our customers. Providing quotes often within 24 hours and following through with detailed drawings, solid models, process plans, and program simulations if needed. Our goal is to work hand in hand with the end user and maintain constant communication to customize our support to their needs.



RELEVANT TESTED SOLUTIONS

KSTH R&D has been created with a dual purpose. First and foremost is to create dedicated resources for testing and evaluating application solutions tailored to each customer project. The second is to focus on evaluating technologies within industry as a whole so that we can provide complete and relevant solutions to our customers. The KSTH R&D space is a collaborative think tank that allows KSTH to work for each customer individually with industry partners, new technology, and Universities to provide thorough next level solutions.





HOW TO REACH US

KYOCERA-SGS Precision Tools Tech Hub
149 Slayton Avenue
Danville, VA 24540
Phone: (434) 791-2020
Web: www.kyocera-techhub.com



KYOCERA-SGS MEDICAL DIVISION

KSPT Medical produces unique, customer designed orthopedic devices using highly trained engineers dedicated to new technology. KSPT Medical is a division of KYOCERA SGS Precision tools—an ISO-certified leader, who proudly pioneered some of the world's most advanced metal cutting technology and sells to more than 60 countries. With over 20 years of industry experience, KSPT Medical Division maintains their ISO13485 certification and is FDA Registered in the production of medical devices in the orthopedic marketplace.

MACHINING CAPABILITIES

- Grinding
- Milling
- Turning
- Profiling
- Bending
- Customized Assembly

SERVICES OFFERED

- Welding
- Various Coatings
- Anodizing
- Passivation
- Electropolishing
- Laser Etching
- Heat Treating



HOW TO REACH US

KYOCERA-SGS Precision Tools Medical Division
724 East Swihart Street
Columbia City, Indiana 46725
Phone: (260) 244-7677
Web: www.kyocera-sgstool.com/medical-division

Request a Quote
rfq@kyocera-sgstool.com

Customer Service and Orders:
salesmd@kyocera-sgstool.com

FDA REGISTERED ISO 13485 CERTIFIED

How to Order

Kyocera Precision Tools' high-performance lineup of indexable tooling products can be purchased through our vast North American Distribution network.



Locate a Distributor

Use our ***Locate a Distributor*** map at:
www.KyoceraPrecisionTools.com/locate

Contact Us

CUSTOMER SERVICE

1-800-823-7284
(OPTION 1)

Monday - Friday
8:00AM - 5:00PM (EST)

TECHNICAL SUPPORT

1-800-823-7284
(OPTION 2)

Monday - Friday
8:00AM - 5:00PM (EST)

GENERAL INQUIRIES
cuttingtools@kyocerapti.com

CUSTOMER SERVICE
(Indexable Tools)
ctsales@kyocerapti.com

TECHNICAL SUPPORT
techs@kyocerapti.com



Authorized Distributor Ordering Guide

TO PLACE ORDERS ONLINE VISIT - https://mykpti.kyocera.com

In addition to placing orders, the MyKPTI distributor website allows you to view real-time product availability, lead times, pricing, download product and promotional literature, watch product training videos, and more.

Stock Status Symbols

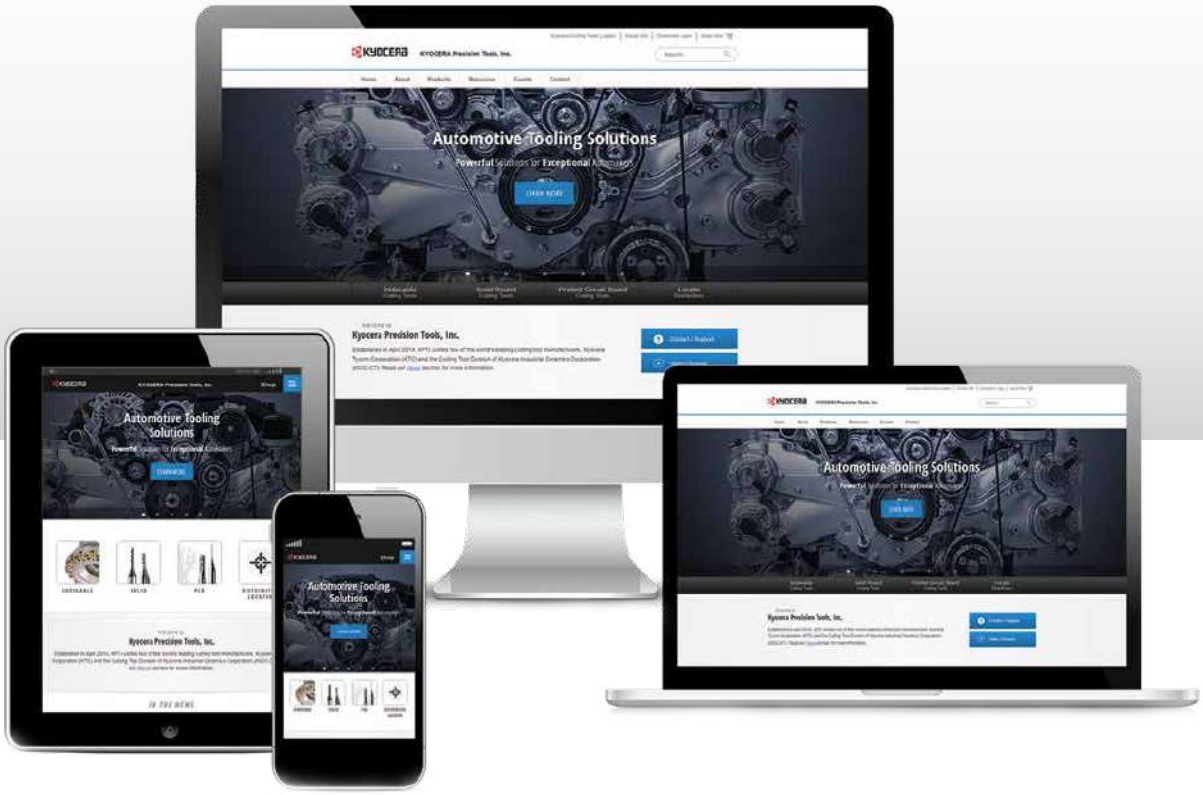
● Indicates that an item is a **Standard Item** and is available to order. If there is stock in the U.S., items will ship the same day if ordered by 4:30pm (EST). If there is no U.S. stock, please allow 7-10 business days for items to arrive.

△ Indicates that an item is being phased out of production. Please contact your local Kyocera sales engineer to determine a replacement solution.

*All Standard Items are subject to U.S. or International availability

VISIT US ONLINE

WWW.KYOCERAPRECISIONTOOLS.COM



BUILT FOR SPEED AND OPTIMIZATION ACROSS ALL DEVICES

- *Easy to navigate, sliding mobile menus*
- *Find the information you need faster than ever*
- *Easy-to-read articles transformed on mobile devices*
- *Fast load times allow you to browse products without waiting*
- *View and download digital product brochures and catalogs*
- *Locate distributors in your area on-the-go through our distributor map*

Turning Grades



CCX

CVD Coated Cermet for Steel Finishing

B16~

- Long tool life and improved wear resistance
- High-speed machining of steel and cast iron



PR1725 / PR1705

PVD Coating for Small Parts Machining

B53~

PR1725

- Great for machining steel and other materials
- Wide range of applications and chipbreakers available

PR1725

- Excellent wear resistance
- High precision machining of free-cutting steel





PV730

Hybrid Cermet for Steel Finishing

B16~

- Kyocera's toughest cermet grade technology
- Stable machining with high-quality surface finish

KS6015

Silicon Nitride Ceramic for Cast Iron

B108~

- Prevents chipping during scale removal and interrupted cuts
- Excellent wear resistance with reduced grain boundary phase



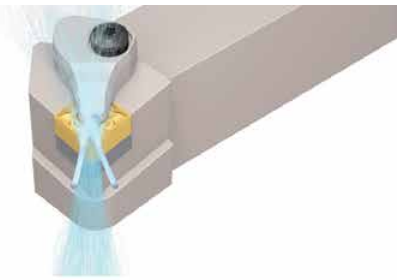
Jet Coolant-Through External Holders



JCT Series

Jet Coolant Through Holders

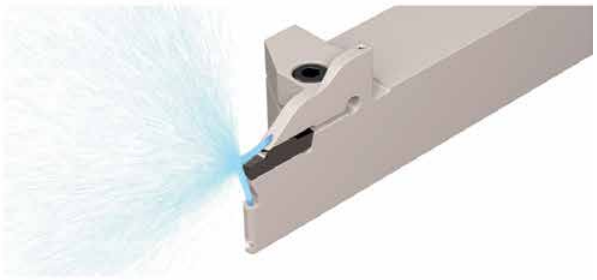
- Excellent chip control and long tool life with high pressure coolant systems
- Large holder lineup for turning, external grooving, cut-off and threading applications
- Internal coolant provides longer tool life and excellent chip control



Double-Clamp-JCT

External Turning Holders

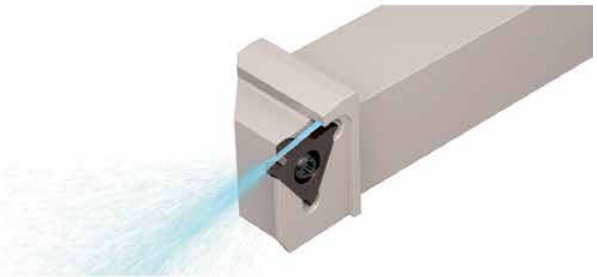
D8~



KGD-JCT

External Grooving / Cut-Off Holders

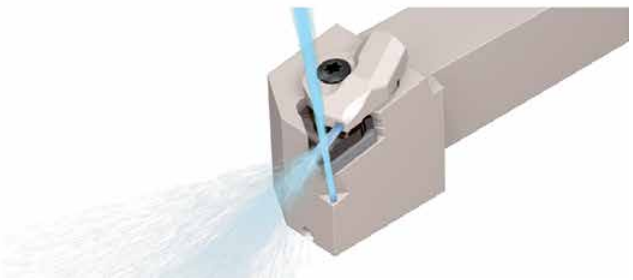
G36~



KGBA-JCT

External Shallow Grooving Holders

G13~

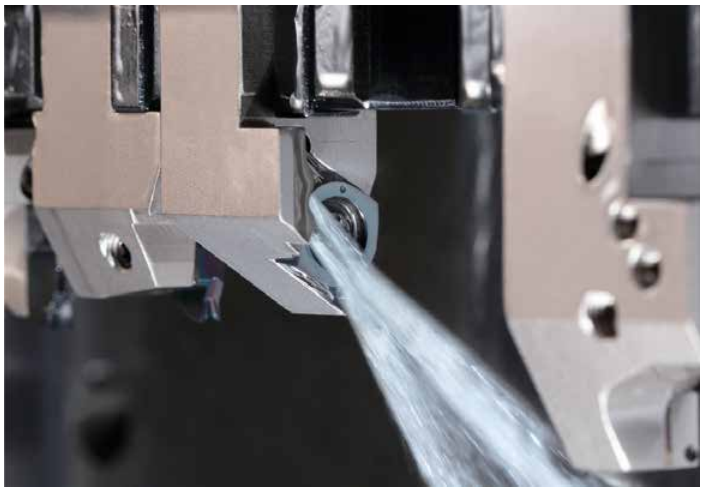


KTN-JCT

External Threading Holders

J21~

Direct Jet Coolant-Through Small Parts Holders

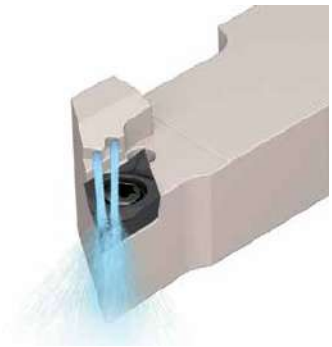


JCTM Series

Direct Jet Coolant-Through Holders for Small Parts Machining

- Supports fewer piping attachments with direct coolant supply
- Take advantage of different supply styles and can support internal coolant with/ without piping system
- Large lineup for various tooling operations
- Long tool life with Kyocera's high-performance insert grades

Turning



Screw Clamp - JCTM

E25~

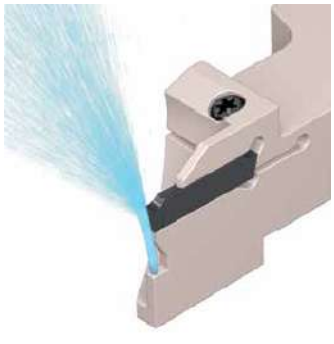
External Grooving



KGBF - JCTM

G19~

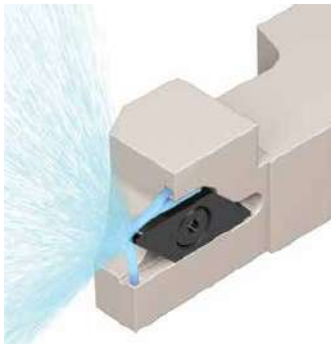
Grooving / Cut-Off



KGD - JCTM

H30~

Cut-Off



KTKF - JCTM

H16~



Small Internal Machining - EZ Bar Series



EZ Bar Series

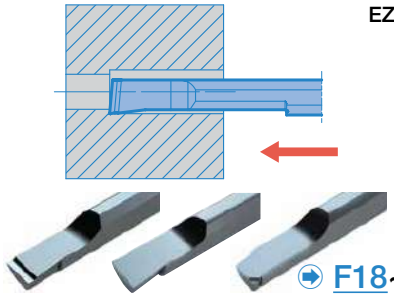
High Precision Small Internal Machining

F16~

- The EZ bar prevents deviation with high-rigidity clamping
- Easy adjustment and high precision for a wide range of applications
- Large lineup for internal grooving, threading, boring, and back turning operations

Boring

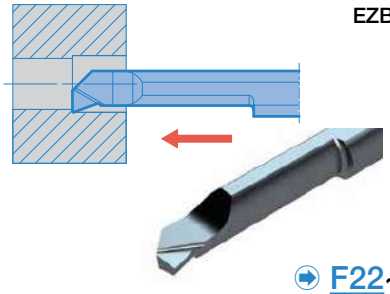
EZB



F18~

90° Lead Angle

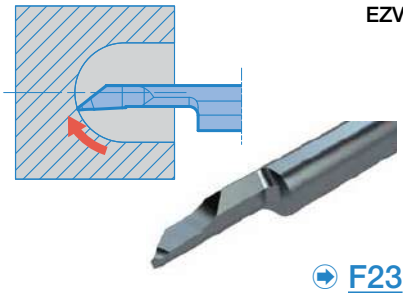
EZBF



F22~

Internal Facing / Profiling

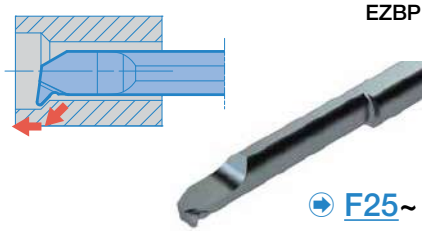
EZVB



F23~

Copying

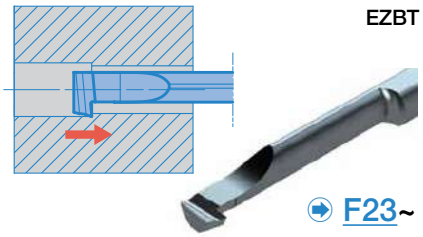
EZBP



F25~

Back Boring

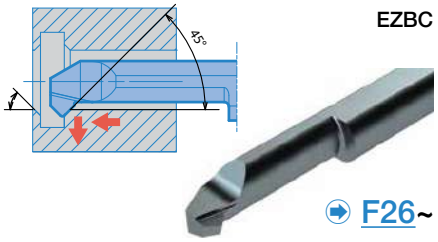
EZBT



F23~

45° Chamfering

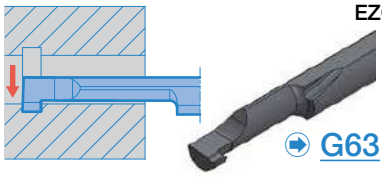
EZBC



F26~

Internal Grooving

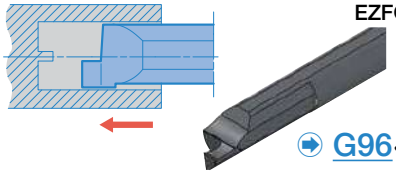
EZG



G63~

Internal Face Grooving

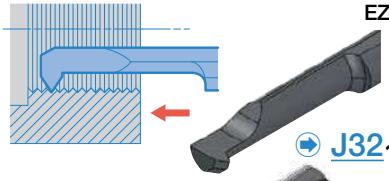
EZFG



G96~

Internal Threading

EZT



J32~

EZ Bar PLUS F29~

High Precision Solid Bar with the Convenience of Indexable Inserts Reduces Machining Costs



Indexable EZ Bar
Minimum Bore Diameter 5mm



800.823.7284
Visit us online at KyoceraPrecisionTools.com

High Performance Cut-Off - KPK Series

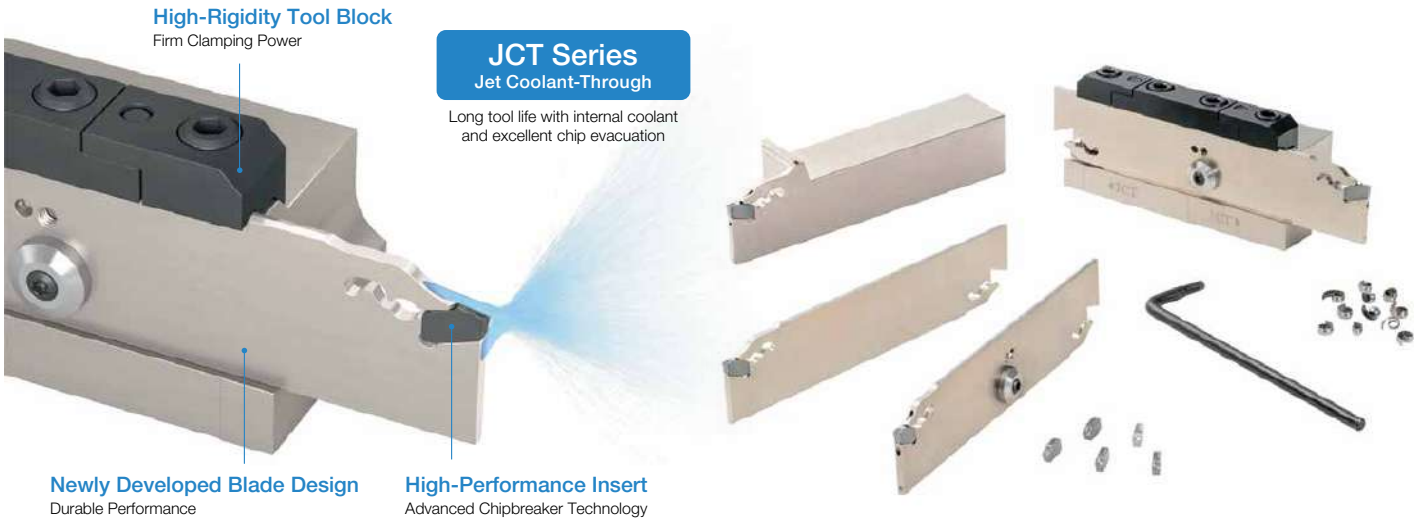


KPK Series

High Performance Cut-Off Solutions

H46~

- Easy insert replacement
- Strong clamping mechanism for added safety and security
- Long tool life and stable machining with unique chipbreaker designs
- Jet coolant-through styles available (JCT)



Unique Chipbreaker Designs for Long Tool Life and Stable Machining

Advanced chipbreaker technology inherited from KGD lineup provides excellent chip control



PM Chipbreaker
General Purpose

Insert Grades

Steel	: **PR1625**
Stainless Steel	: **PR1535**
Cast Iron and Aluminum	: **GW15**



PH Chipbreaker
Tough Edge High-Feed

Insert Grades

Steel	: **PR1625**
Stainless Steel	: **PR1535**

Drilling



DRA Magic Drill

High Efficiency Replaceable Insert Tip Drills

K4~

- 1.5xD to 12xD drilling holder lineup with a low cutting force design for improved hole accuracy
- Fine chip breaking even in deep hole drilling
- Easy to replace inserts
- Diameters ranges
  Ø0.313" ~ Ø1.299" / Ø7.94mm ~ Ø33mm

GM Insert
General Purpose



KM Insert
for Cast Iron



FTP Insert
Flat Bottom /
Counterboring



HQP Insert
High Precision
for Steel





Expanded Lineup from Ø0.500"~Ø2.000" and Ø12mm~Ø60mm

DRV Magic Drill

High Efficiency Indexable Drills

K48~

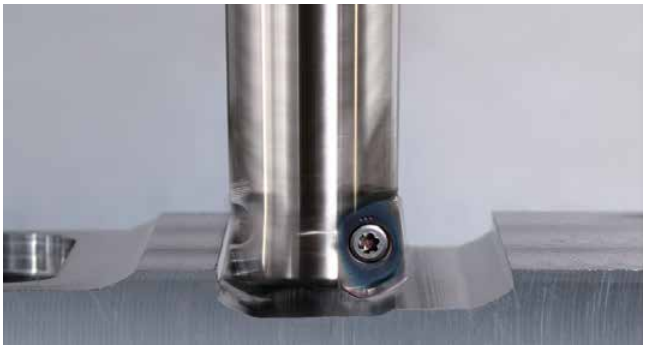
- 2xD to 6xD drilling lineup with 4 chipbreakers for various machining applications
- High speed and highly efficient machining available with the combination of a CVD outer insert and PVD inner insert
- Excellent hole accuracy with a highly rigid design for better chatter resistance



Chamfering Attachment

High Feed Milling - MFH Series

MFH-MAX





High Feed Milling with a Larger Depth of Cut

M166~

- Cutting diameters available from Ø1.000" (Ø22mm) and up to 0.098" (2.5mm) depth of cut
- Excellent performance in a wide range of applications, including automotive parts, difficult-to-cut materials, and molds providing multiple solutions for various machining environments
- Large lineup of end mills, face mills, and modular types available

MFH-MAX

Small Diameter/
Larger Depth of Cut



MFH MAX
Ø1.000" ~ Ø3.000"
Ø22mm ~ Ø80mm

MFH-RAPTOR MICRO

Micro Diameter



MFH Micro
Ø0.375" ~ Ø0.625"
Ø8mm ~ Ø16mm

MFH-RAPTOR MINI

Small Diameter/
Fine Pitch Type



MFH Mini
Ø0.625" ~ Ø2.000"
Ø16mm ~ Ø50mm

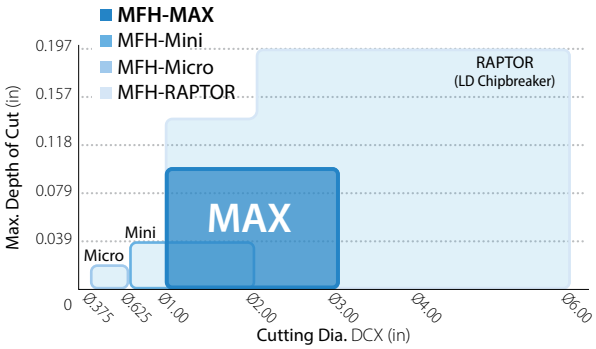
MFH-RAPTOR

Large Diameter

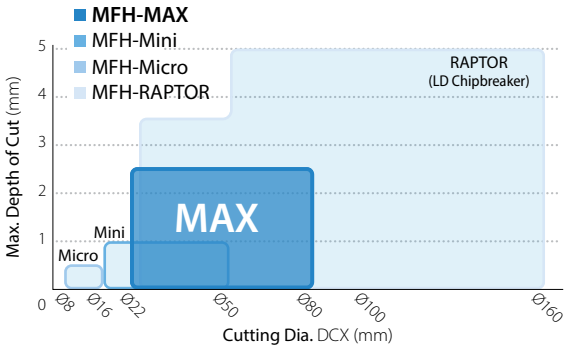


MFH RAPTOR
Ø1.000" ~ Ø6.000"
Ø25mm ~ Ø160mm

MFH-Series Inch Diameter Range



MFH-Series Metric Diameter Range



Performance Milling





MEV

High Performance Multi-functional Milling

M88~



New Triangular Insert Design

- Low cutting forces and higher rigidity for excellent chatter resistance
- Newly developed triangular inserts provide numerous solutions to machining challenges
- Longer insert and holder life when shouldering, slotting, and ramping



MFSE45 (Made to Order Item)

High Precision High Rake Milling

M52~

- Roughing condition (fz = 0.010ipt) provides excellent surface finish
- Provides finish of 0.8 µmRa or less with wiper insert installed
- Newly developed chipbreakers for steel, stainless steel, and aluminum

MEAS

High Efficiency Milling of Aluminum

M154~

- High speed machining with grooved insert pockets
- Sharp cutting edge with low cutting force design
- Simultaneous 3-axis with a max. ramping angle of 20° (Ø25mm)



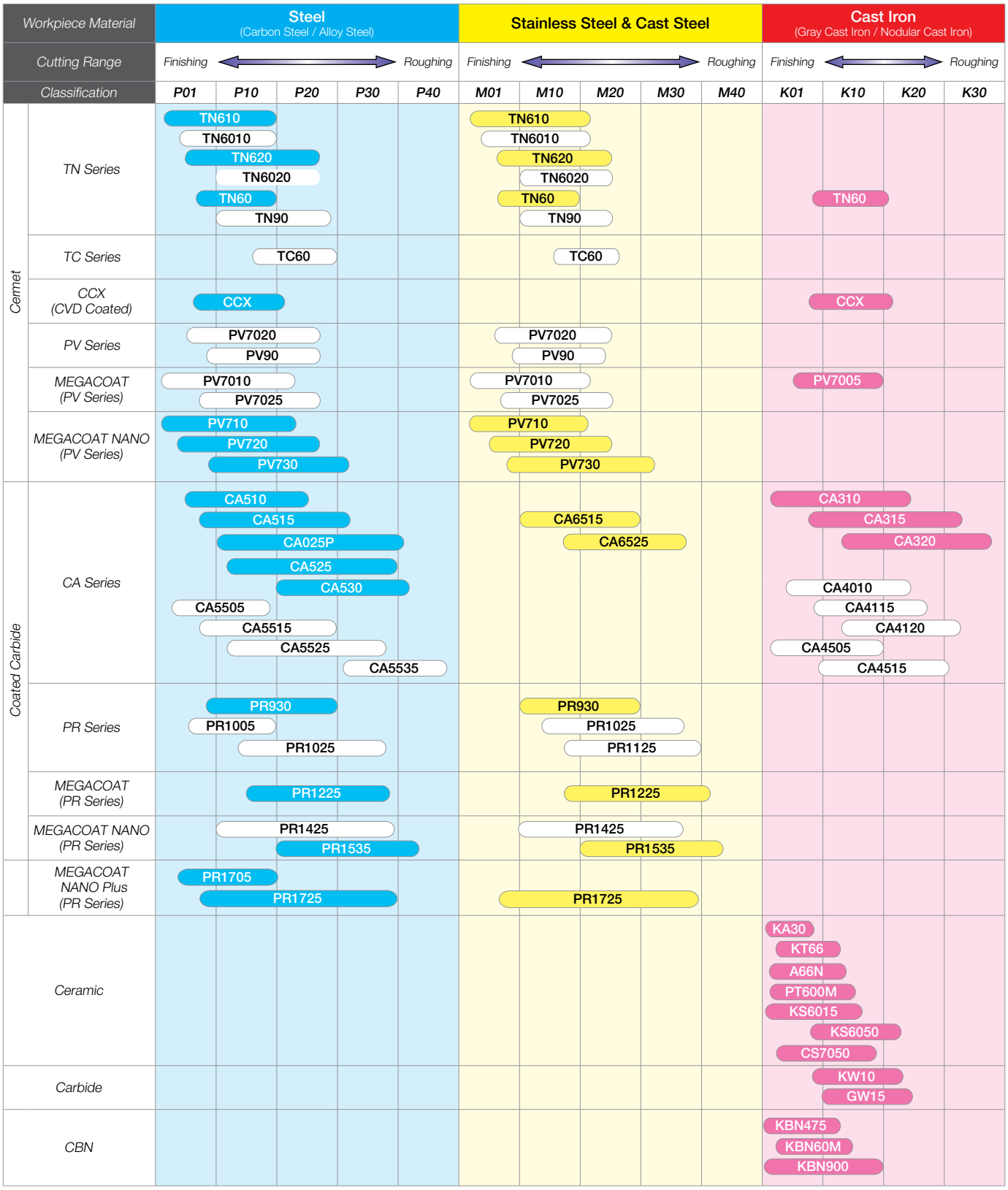
INSERT GRADES

A

A1 - A21

SUMMARY OF INSERT GRADES	A2 - A5
TURNING	A2
SMALL TOOLS	A3
GROOVING	A4
CUT-OFF	A4
DRILLING	A5
MILLING	A5
INSERT GRADES	**A6 - A21**
CERMET	A6
CVD COATED CARBIDE (Turning)	A8
PVD COATED CARBIDE (Turning)	A10
PVD / CVD COATED CARBIDE (Milling, Drilling)	A12
CARBIDE	A14
DLC COATING	A14
CERAMIC	A15
CBN (Cubic Boron Nitride)	A16
PCD (Polycrystaline Diamond)	A17
HONEYCOMB STRUCTURE CBN / CERAMIC	A18
INSERT MATERIAL SELECTION TABLE	A19
GRADE PROPERTIES	A20

Turning



- White bars indicate old grades

Turning

Workpiece Material		Non-Ferrous (Aluminum / Non-Ferrous Metals / Non-Metals)				Difficult-to-Cut Materials (HRSA / Ni-base HRSA)				Hard Materials (Hardened Steel / Chilled Cast Iron)				Powdered Steel			
Cutting Range		Finishing ⟷ Roughing				Finishing ⟷ Roughing				Finishing ⟷ Roughing				Finishing ⟷ Roughing			
Classification		N01	N10	N20	N30	S01	S10	S20	S30	H01	H10	H20	H30	01	10	20	30
Coated Carbide	CA Series						CA6515	CA6525									
	PR Series							PR1125									
	MEGACOAT (PR Series)					PR1305	PR1310	PR1325									
	MEGACOAT HARD (PR Series)					PR005S	PR015S										
	MEGACOAT NANO (PR Series)							PR1535									
Cermet														TN6010			
														TN60			
Ceramic							KXW1				KT66						
							CF1				A66N						
							KS6030				PT600M						
							KS6040										
CBN										KBN510							
										KBN525							
										KBN900							
MEGACOAT										KBN05M							
										KBN10M							
										KBN25M					KBN70M		
										KBN35M					KBN570		

Workpiece Material		Non-Ferrous (Aluminum / Non-Ferrous Metals / Non-Metals)				Difficult-to-Cut Materials (Titanium)				Hard Materials (Hardened Steel / Chilled Cast Iron)				Powdered Steel			
Cutting Range		Finishing ⟷ Roughing				Finishing ⟷ Roughing				Finishing ⟷ Roughing				Finishing ⟷ Roughing			
Classification		N01	N10	N20	N30	S01	S10	S20	S30	H01	H10	H20	H30	01	10	20	30
Coated Carbide	MEGACOAT NANO (PR Series)							PR1535									
Carbide						SW05											
							SW10										
								SW25									
			KW10				KW10										
			GW15				GW15										
DLC Coating			PDL010														
			PDL025														
PCD																	
		KPD001				KPD001											
		KPD010				KPD010											
		KPD230															
		KPD250															

PVD Coated Carbide for Small Tools

Workpiece Material		Steel (Carbon Steel / Alloy Steel)					Stainless Steel & Cast Steel					Cast Iron (Gray Cast Iron / Nodular Cast Iron)			
Cutting Range		Finishing ⟷ Roughing					Finishing ⟷ Roughing					Finishing ⟷ Roughing			
Classification		P01	P10	P20	P30	P40	M01	M10	M20	M30	M40	K01	K10	K20	K30
Coated Carbide	PR Series		PR930					PR930							
			PR1005						PR1025						
				PR1025					PR1125						
	MEGACOAT (PR Series)			PR1225					PR1225						
	MEGACOAT NANO (PR Series)			PR1535					PR1535						
				PR1425					PR1425						
	MEGACOAT NANO PLUS (PR Series)		PR1705												
				PR1725					PR1725						

- White bars indicate old grades

A INSERT GRADES

Grooving / Cut-Off

Workpiece Material		Steel (Carbon Steel / Alloy Steel)					Stainless Steel & Cast Steel					Cast Iron (Gray Cast Iron / Nodular Cast Iron)			
Cutting Range		Finishing ⟷ Roughing					Finishing ⟷ Roughing					Finishing ⟷ Roughing			
Classification		P01	P10	P20	P30	P40	M01	M10	M20	M30	M40	K01	K10	K20	K30
Cermet	MEGACOAT (PV Series)	PV7040										PV7040			
	TN Series	TN620, TN6020, TN60, TN90					TN620, TN6020, TN60, TN90					TN60			
	TC Series	TC40	TC60					TC60				TC40			
Coated Carbide	CR Series		CR9025					CR9025							
	PR Series	PR915, PR930, PR1025, PR1115		PR630, PR660			PR915, PR930, PR1025		PR630, PR660			PR905			
	MEGACOAT (PR Series)		PR1215, PR1225					PR1215, PR1225					PR1215		
	MEGACOAT NANO (PR Series)			PR1535, PR1625				PR1515, PR1535, PR1625							
Ceramic												A65, A66N, PT600M			
Carbide												KW10, GW15			

Workpiece Material		Non-Ferrous (Aluminum / Non-Ferrous Metals / Non-Metals)				Difficult-to-Cut Materials (Titanium)				Hard Materials (Hardened Steel / Chilled Cast Iron)				Powdered Steel			
Cutting Range		Finishing ⟷ Roughing				Finishing ⟷ Roughing				Finishing ⟷ Roughing				Finishing ⟷ Roughing			
Classification		N01	N10	N20	N30	S01	S10	S20	S30	H01	H10	H20	H30	01	10	20	30
Coated Carbide	MEGACOAT (PR Series)														PR1215, PR1225		
Cermet															TN60		
Ceramic										A65, A66N, PT600M							
Carbide			KW10, GW05, GW15				KW10, GW15										
DLC Coating			PDL025														
CBN										KBN510, KBN525					KBN570		
PCD		KPD001, KPD010				KPD001, KPD010											

• White bars indicate old grades

Drilling

Workpiece Material		Steel (Carbon Steel / Alloy Steel)					Stainless Steel & Nickel-based Alloys					Cast Iron (Gray Cast Iron / Nodular Cast Iron)			
Cutting Range		Finishing ⟷ Roughing					Finishing ⟷ Roughing					Finishing ⟷ Roughing			
Classification		P01	P10	P20	P30	P40	M01	M10	M20	M30	M40	K01	K10	K20	K30
Coated Carbide	CA Series		CA520D					CA6535					CA415D		
	PR Series		PR830	PR660				PR830	PR660						
	MEGACOAT (PR Series)		PR1225 PR1230					PR1225					PR1210		
	MEGACOAT NANO (PR Series)		PR1535					PR1535					PR1525		
Carbide													KW10 GW15		

Workpiece Material		Non-Ferrous (Aluminum / Non-Ferrous Metals / Non-Metals)				Difficult-to-Cut Materials (Inconel / Titanium)				Hard Materials (Hardened Steel / Chilled Cast Iron)			
Cutting Range		Finishing ⟷ Roughing				Finishing ⟷ Roughing				Finishing ⟷ Roughing			
Classification		N01	N10	N20	N30	S01	S10	S20	S30	H01	H10	H20	H30
Coated Carbide	MEGACOAT (PR Series)									PR1230			
Carbide			KW10 GW15				KW10 GW15						

Milling

Workpiece Material		Steel (Carbon Steel / Alloy Steel)					Stainless Steel & Cast Steel					Cast Iron (Gray Cast Iron / Nodular Cast Iron)			
Cutting Range		Finishing ⟷ Roughing					Finishing ⟷ Roughing					Finishing ⟷ Roughing			
Classification		P01	P10	P20	P30	P40	M01	M10	M20	M30	M40	K01	K10	K20	K30
Cermet	TN Series		TN620M TN60 TN100M					TN60 TN100M							
	TC Series		TC60					TC60							
Carbide	CA Series							CA6535					CA420M		
	PR Series		PR830					PR830							
	MEGACOAT (PR Series)		PR1225 PR1230					PR1225					PR1210		
	MEGACOAT NANO (PR Series)		PR1525					PR1525 PR1535					PR1510		
Carbide													KW10 GW25		

Workpiece Material		Non-Ferrous (Aluminum / Non-Ferrous Metals / Non-Metals)				Difficult-to-Cut Materials (HRSA / Ni-base HRSA)				Difficult-to-Cut Materials (Titanium)				Hard Materials (Hardened Steel / Chilled Cast Iron)			
Cutting Range		Finishing ⟷ Roughing				Finishing ⟷ Roughing				Finishing ⟷ Roughing				Finishing ⟷ Roughing			
Classification		N01	N10	N20	N30	S01	S10	S20	S30	S01	S10	S20	S30	H01	H10	H20	H30
Coated Carbide	CA Series						CA6535				CA6535						
	MEGACOAT (PR Series)										PR1210						
	MEGACOAT HARD (PR Series)														PR015S		
	MEGACOAT NANO (PR Series)						PR1535				PR1535						
Carbide			KW10 GW25								KW10 GW25						
DLC Coated Carbide			PDL025														
PCD			KPD001 KPD010 KPD230 KPD250								KPD001 KPD010						

- White bars indicate old grades

CERMET & COATED CERMET



CERMET

KYOCERA is known as one of the leading manufacturers of cermets. Cermet is a composite material combining ceramic and metal. Typical materials used in cermets are TiC, TiN, TiCN and NbC. Designed to provide long tool life and excellent surface finishes, cermets combine toughness with superior wear resistance.

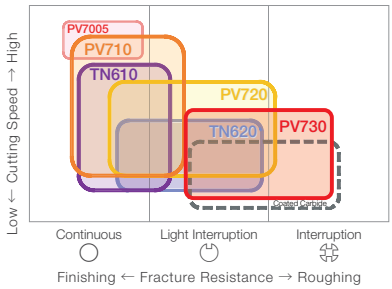
PVD & CVD COATED CERMET

PVD Coated Cermet is a cermet substrate with a thin coating offering high wear resistance and high adhesion resistance. The coating is applied by PVD (Physical Vapor Deposition) technology. CVD Coated Cermet is a cermet substrate with a thin coating offering high-speed wear resistance. The coating is applied by CVD (Chemical Vapor Deposition) technology.

FEATURES OF CERMET & COATED CERMET

Material	Description		Color	Main Component (Coating Composition)	Advantages
P Steel	Cermet	TN610	Gray	TiCN	· Three hybrid technology attributes maintain superior surface finish and machining stability · Application: Stable machining of steel
		TN620	Gray	TiCN	· High wear resistance and chipping resistance cermet due to three hybrid technology attributes · Application: Cermet for steel machining, long tool life in high speed and continuous applications
		TN60	Gray	TiCN+NbC	· Application: Machining of steel, continuous to interruption
		TN6020 (Super Micro-Grain)	Gray	TiCN	· Application: Uncoated cermet for steel
		TN620M	Gray	TiCN	· Tough cermet for milling with excellent balance of wear resistance and toughness
		TN100M	Gray	TiCN+NbC	· Tough cermet with improved oxidation resistance and thermal shock resistance · Application: Milling of steel at high speed
		TC40	Gray	TiC+TiN	· Good balance of wear resistance and toughness · Application: Grooving and threading of steel
	CVD Cermet	CCX	Gold	TiCN	· Ultra-fine grain, high-strength cermet base material with thick film CVD coating for excellent wear resistance and chipping resistance, achieving a long life in high-speed machining · Application: High-speed finishing of steel to light interrupted cutting
	MEGACOAT NANO Cermet	PV710	Gold	TiCN (MEGACOAT NANO)	· Superior wear and adhesion resistant MEGACOAT NANO on wear resistant cermet · Application: Long tool life and stability in high speed continuous machining of steel, excellent surface finish
		PV720	Gold	TiCN (MEGACOAT NANO)	· Superior wear and adhesion resistant MEGACOAT NANO on wear resistant, tough cermet · Application: First recommendation PVD coated cermet for steel machining and high quality surface finish
		PV730	Gold	TiCN (MEGACOAT NANO)	· Fracture resistant grade with MEGACOAT NANO on wear resistant, tough cermet · Application: Wear resistant PVD coated cermet for steel machining and high quality surface finish
		PV60M	Gold	TiCN+NbC (MEGACOAT NANO)	· Milling grade with improved stability using MEGACOAT NANO coating technology · Application: Stable steel milling and high-quality surface finish
	MEGACOAT Cermet	PV7040	Blackish Red	TiC+TiN (MEGACOAT)	· MEGACOAT cermet for grooving · Application: Excellent surface finish and longer tool life in steel grooving
K Cast Iron		PV7005	Blackish Red	TiC+TiN (MEGACOAT)	· Heat-resistant MEGACOAT on cermet with excellent wear resistance · Application: High speed finishing of gray and nodular cast iron

Application Map (PVD and Uncoated Cermet)



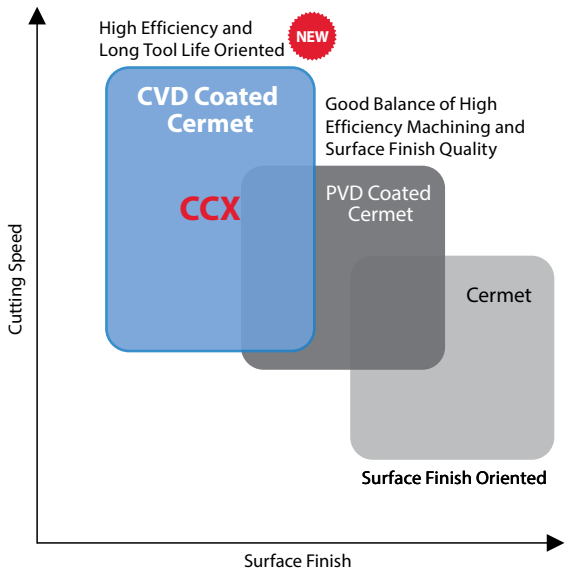
TN-Series (Uncoated Cermet)

TN610: High Wear Resistance
TN620: Chipping Resistance

PV-Series (MEGACOAT NANO Cermet)

PV710: Long Tool Life and Stable Machining for High Speed Continuous Cuts
PV720: First Recommendation for Efficiency and High Quality Surface Finish
PV730: Tough Cermet for High Stability and High Quality Surface Finish

Application Map (CVD Coated Cermet)



Uncoated CERMET
TN610 / TN620

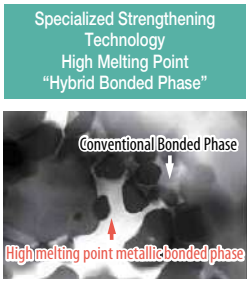
MEGACOAT NANO CERMET
PV710 / PV720 / PV730

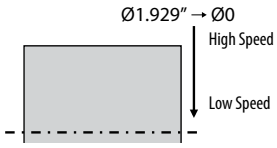
3 Hybrid Technology Attributes Maintain Superior Surface Finish and Machining Stability

Excellent Surface Finish

Combining the conventional cermet bonded phase (nickel, cobalt) and the special high melting point metallic bonded phase.

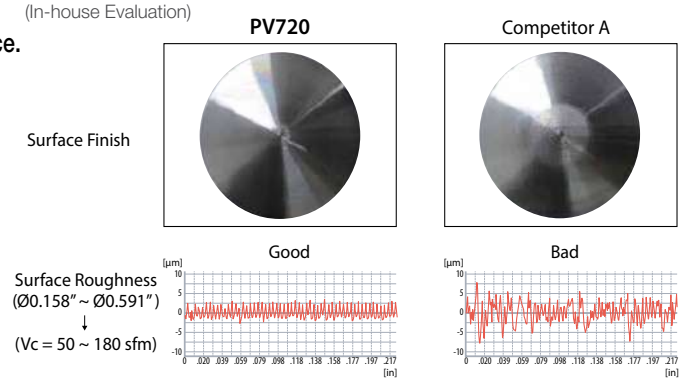
Provides high adhesion resistance to eliminate galling of the work piece.





Surface Finish Comparison (In-house Evaluation)

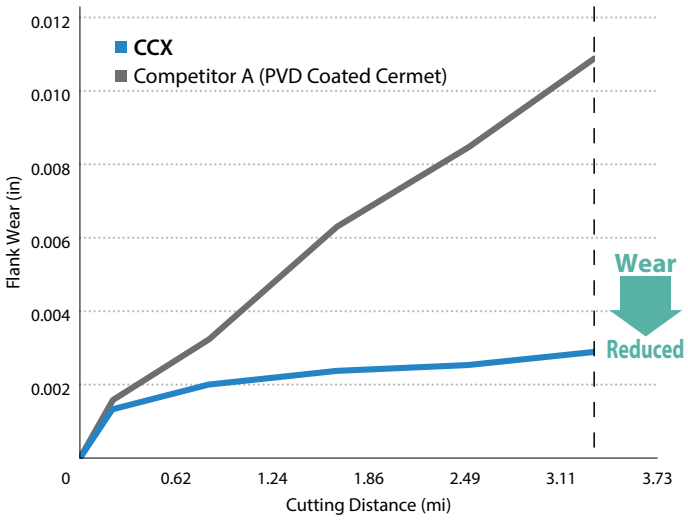
Cutting Conditions: Vc = 590 ~ 0 sfm (Constant Rate), D.O.C. = 0.020"
f = 0.004 ipr, Wet, CNMG431 type Workpiece: 1010



CVD Coated Cermet for Finishing
CCX

- Combination of cermet with a CVD coating provides high-speed machining for better productivity
- Applicable to a wide range of cutting conditions from general to high-speed applications
- Maintains long tool life in soft steel, general steel and cast iron machining

Wear Resistance Comparison (Internal Evaluation)



Cutting Conditions : Vc = 3,280 sfm, D.O.C. = 0.010", f = 0.006 ipr, Wet
CNMG432 Type Facing

Cutting Edge (As of 3.29 mi of machining)

CCX



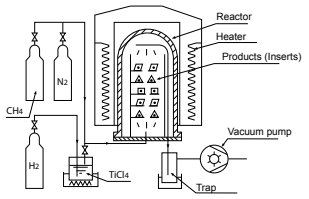
Competitor A (PVD Coated Cermet)



CVD COATED CARBIDE



CVD (Chemical Vapor Deposition)



Features
① Equally deposited on face
② Easy application for multilayer deposition
③ Enabling thick coating

Processing Temperature: 900° ~ 1100°C

CVD COATED CARBIDE

KYOCERA's CVD coated carbide grades are based on ceramic thin film technology and provide stable, efficient cutting at high speeds or heavily interrupted applications.

- Applicable from low to high speed cutting and from finishing to roughing
- Stable cutting is achieved due to the superior toughness and crack resistance
- Cutting times are reduced due to good chip control from effective chipbreakers

FEATURES OF CVD COATED CARBIDE

Material	*Description*	*Color*	*Main Component (Coating Composition)*	*Advantages*
P Steel	**CA510**	Gold	TiCN+Al_2O_3+TiN	· Special substrate with thermal deformation resistance along with a thick and tough coating layer providing high wear resistance · Application: High speed and high efficiency steel machining
	CA515	Gold	TiCN+Al_2O_3+TiN	· Improved wear resistance and stability due to special substrate with heat deformation resistance and hard and tough coating layer with reinforced interface · Application: Light interrupted machining of steel
	CA025P	Gold	TiCN+Al_2O_3+TiN	· Thickened alumina with good thermal resistance (twice as thick as conventional coating) and specialized post-coating process prevents adhesion. · Application: General to interrupted machining of steel
	CA525	Gold	TiCN+Al_2O_3+TiN	· Stable and long tool life machining due to special substrate with heat deformation resistance and tougher coating layer and reinforced interface · Application: Interrupted to general machining of steel
	CA530	Gold	TiCN+Al_2O_3+TiN	· Special tough substrate and tough coating layer providing high stability and wear resistance · Application: General to heavy interrupted machining (stability oriented)
	CA5505	Gold	TiCN+Al_2O_3+TiN	· Application: High speed continuous machining of steel, continuous to light interrupted machining of cast iron
	CA5515	Gold	TiCN+Al_2O_3+TiN	· Application: Machining of steel, continuous to light interruption
	CA5525	Gold	TiCN+Al_2O_3+TiN	· Application: For general machining of steel, roughing to interruption
	CA5535	Gold	TiCN+Al_2O_3+TiN	· Application: Roughing to heavily interrupted machining of steel
	CR9025	Gold	TiCN+TiN	· Application: For general machining of steel, roughing to interruption
M Stainless Steel	**CA6515**	Gold	TiCN+Al_2O_3+TiN	· Specialized carbide substrate for machining stainless steel, excellent wear resistance · Application: Continuous machining of stainless steel
	CA6525	Gold	TiCN+Al_2O_3+TiN	· Specialized carbide substrate for machining stainless steel with excellent notching resistance and toughness · Application: First choice for general machining of stainless steel, from finishing to roughing, continuous to interruption
K Cast Iron	**CA310**	Rose Gold	TiCN+Al_2O_3+Ti Base	· Grade for high-speed continuous machining and improved tool life through the deposition of a thickened Al2O3 coating layer · Application: For finishing to roughing of gray cast iron
	CA315	Rose Gold	TiCN+Al_2O_3+Ti Base	· High efficiency and long tool life for continuous to interrupted machining with a good balance of wear resistance and stability · Excellent performance for machining gray and nodular cast iron
	CA320	Rose Gold	TiCN+Al_2O_3+Ti Base	· Improved stability with CVD layer structure with high adhesion · Application: Roughing to heavy interrupted cutting of nodular cast iron
	CA4010	Gold	TiCN+Al_2O_3+TiN	· Application: Continuous to light interrupted high speed machining of cast iron
	CA4115	Gold	TiCN+Al_2O_3+TiN	· Application: Continuous to light interrupted machining of nodular cast iron
	CA4120	Gold	TiCN+Al_2O_3+TiN	· Application: Roughing to heavy interrupted machining of nodular cast iron
	CA4505	Blackish Gray	TiCN+Al_2O_3	· Stable, longer tool life due to improved bonding strength of coating layers and special treatment of the surface of the top coating layer · Application: For gray cast iron and nodular cast iron at high speed in continuous to light interrupted machining
	CA4515	Blackish Gray	TiCN+Al_2O_3	· Stable, longer tool life due to improved bonding strength of coating layers and special treatment of the surface of the top coating layer · Application: First choice for gray cast iron and nodular cast iron in light to heavy interrupted machining

CVD Coated Carbide for Steel

CA025P

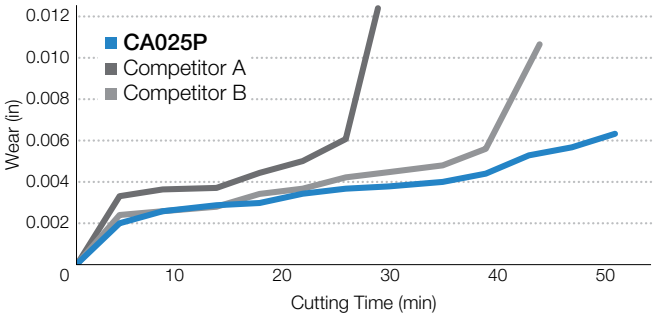
Next Generation CVD Coating for Longer Tool Life



1 Improved Wear Resistance with New CVD Grade for Steel

Thickened Alumina with Good Thermal Resistance (Twice as thick as conventional coating)
Improved Plastic Deformation Resistance by Increased Temperature Strength

Wear Resistance Comparison (Internal Evaluation)



CA025P (50.4 min) | Competitor A (29.4 min) | Competitor B (42 min)



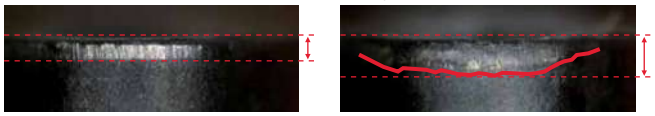
Good Surface Condition

Cutting Conditions : Vc = 980 sfm, D.O.C. = 0.059", f = 0.012 ipr, Wet Workpiece : 4137

CA025P Maintains Smooth and Flat Surface with Stable Tool Life

Wear Comparison (Internal Evaluation) Cutting Time 25.2 min

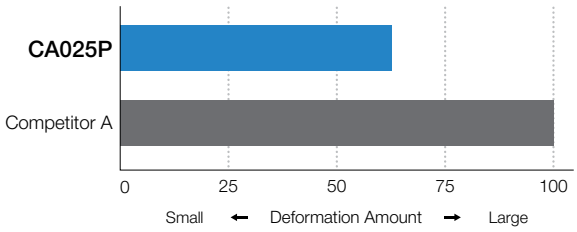
CA025P | Competitor A



Stable Wear on Surface | Unstable Wear Pattern

Cutting Conditions : Vc = 980 sfm, D.O.C. = 0.059", f = 0.012 ipr, Wet Workpiece : 4137

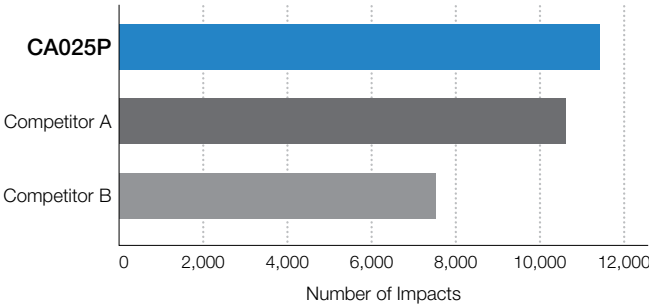
Plastic Deformation Comparison under High Temperature
(Internal Evaluation) Comparison with Competitor A



2 Excellent Fracture Resistance

New Substrate with High Stability Provides Excellent Chipping Resistance

Fracture Resistance Comparison (Internal Evaluation) Average of 5 times



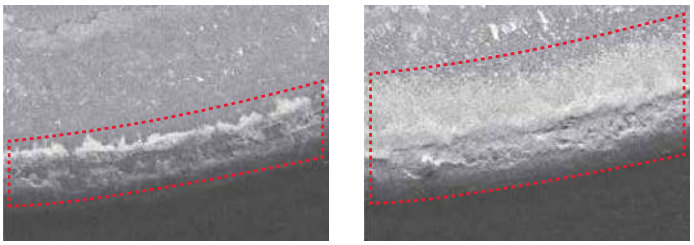
Cutting Conditions : Vc = 820 sfm, D.O.C. = 0.059", f = 0.014 ipr, Wet Workpiece : 4140 (with 4 Slots)

3 Excellent Adhesion Resistance and Chipping Resistance

Specialized Post-coating Process Prevents Adhesion

Adhesion on the Edge after Cutting (Internal Evaluation)

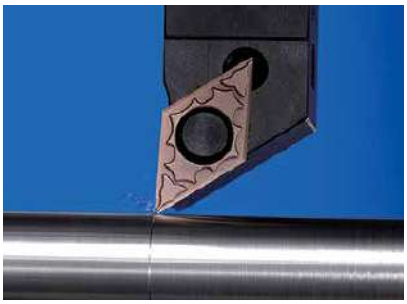
CA025P | Conventional



Less Adhesion | Wide Area of Adhesion
* Adhesion area appears white

Cutting Conditions : Vc = 890 sfm, D.O.C. = 0.039", f = 0.004 ipr, Wet Workpiece : 4140 (with 4 Slots)

PVD COATED CARBIDE FOR TURNING



PVD COATED CARBIDE

KYOCERA's PVD coated carbides for turning utilize very tough carbide substrates. The low processing temperature, compared with CVD, leads to improved bending strength, less deterioration of the coating and superior tool life with stable machining.

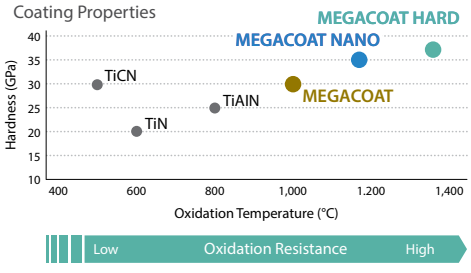
PVD COATED SUPER MICRO-GRAIN CARBIDE

- Smooth fine surface of PVD coated carbide provides good surface finish and high precision machining
- Stable machining with excellent toughness

FEATURES OF PVD COATED CARBIDE FOR TURNING

Material	Description	Color	Main Component (Coating Composition)	Advantages
P Steel	**PR915** (Super Micro-Grain)	Bluish Violet	TiAlN	· Application: Stable and reliable high precision machining of steel
	PR930 (Super Micro-Grain)	Reddish Gray	TiCN	· Application: Low machining speed, precise machining with sharp edge
	PR1005	Reddish Gray	TiCN	· TiCN base PVD coated hard micro-grain carbide · Application: Turning of free-cutting steel, longer tool life achieved through anti-adhesion performance
	PR1025	Reddish Gray	TiCN	· Application: General machining of steel and stainless steel, stable and longer tool life
	PR1115	Purple Red	TiAlN	· Superior oxidation resistance with well balanced wear resistance and toughness · Application: Machining of steel and stainless steel, for grooving, cut-off and threading
	PR1215	Blackish Red	MEGACOAT	· Superior wear and oxidation-resistant MEGACOAT on micro-grain carbide substrate · Application: Superior adhesion resistance and longer tool life for steel and stainless steel machining
	PR1425	Blackish Red	MEGACOAT NANO	· Nano thin multi-layer coating MEGACOAT NANO for superior wear resistance and high oxidation resistance · Application: Variety of steels, high speed machining of stainless steel with extended tool life
	PR1625	Blackish Red	MEGACOAT NANO	· Nano thin multi-layer coating MEGACOAT NANO for superior wear resistance and high oxidation resistance · Application: Stable machining and long tool life when grooving steel and stainless steel
	PR1705	Silver	MEGACOAT NANO PLUS	· Special MEGA COAT NANO PLUS nano-laminated coating for excellent wear resistance and welding resistance · Application: Excellent wear resistance and high-precision machining of free-cutting steel
	PR1725	Silver	MEGACOAT NANO PLUS	· Special MEGA COAT NANO PLUS nano-laminated coating for excellent wear resistance and welding resistance · Application: General purpose grade for stable machining and long tool life when turning steel and stainless steel
M Stainless Steel	**PR1125**	Purple Red	TiAlN	· Hard TiAlN base PVD coated super micro-grain carbide, superior toughness and heat resistance · Application: Finishing and light interrupted machining of stainless steel
	PR1225	Blackish Red	MEGACOAT	· Superior wear and oxidation resistant MEGACOAT on micro grain carbide substrate · Application: Light interrupted to interrupted cutting of stainless steel
	PR1515	Blackish Red	MEGACOAT NANO	· Nano thin multi-layer coating on micro-grain carbide substrate for improved wear resistance and stability · Application: Threading of stainless steel
	PR1535	Blackish Red	MEGACOAT NANO	· Nano thin multi-layer coating on micro-grain carbide substrate for improved wear resistance and stability · Application: Medium to roughing of stainless steel and heat-resistant alloys, cut-off of stainless steel
K Cast Iron	**PR905**	Bluish Violet	TiAlN	· Smooth fine surface PVD coated hard carbide with plastic deformation resistance · Application: Suitable for machining gray and nodular cast iron
S Heat-Resistant Alloys	**PR005S**	Blackish Gray	MEGACOAT HARD	· MEGACOAT on hard and superior heat resistant carbide, superior wear resistance · Application: Finishing of heat-resistant alloys
	PR015S	Blackish Gray	MEGACOAT HARD	· High temperature properties of special carbide substrate and excellent heat-resistance of MEGACOAT HARD for high wear resistance · Application: Finishing and high speed application of heat-resistant alloys
	PR1305	Blackish Red	MEGACOAT	· MEGACOAT on hard and superior heat-resistant carbide, superior wear resistance · Application: Finishing of heat-resistant alloys
	PR1310	Blackish Red	MEGACOAT	· MEGACOAT on hard and superior heat-resistant carbide, superior wear and oxidation resistance · Application: First choice for continuous and light interrupted machining and finishing of heat-resistant alloys
	PR1325	Blackish Red	MEGACOAT	· MEGACOAT on tough carbide · Application: Light interrupted machining and roughing of heat-resistant alloys

PVD Coating Properties

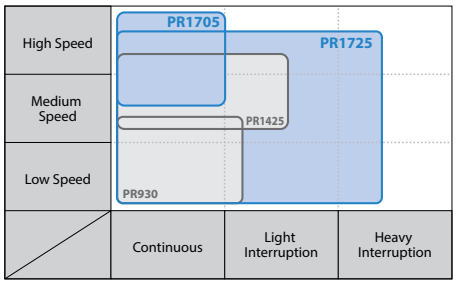


PVD Coated Carbide

PR1725 / PR1705

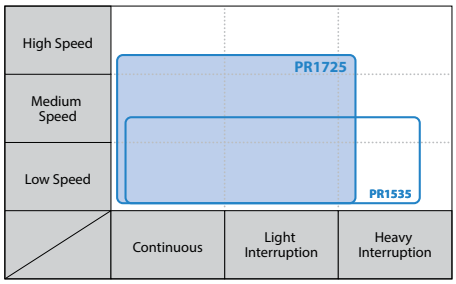
Excellent Surface Finish and Long Tool Life
Great Performance in Small Parts Machining Applications

Steel



PR1725 : 1st Recommendation for Steel

Stainless Steel



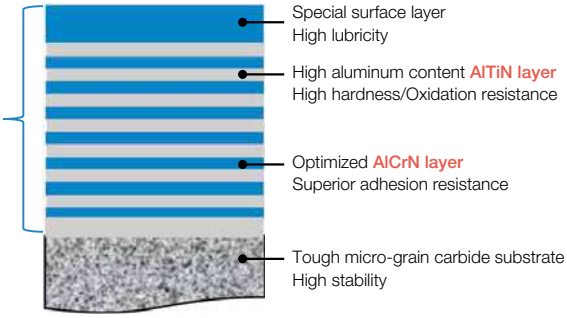
PR1725 : For general purpose high-speed machining
PR1535 : 1st Recommendation for stainless steel machining with long tool life and high-quality surface finish

MEGACOAT NANO PLUS

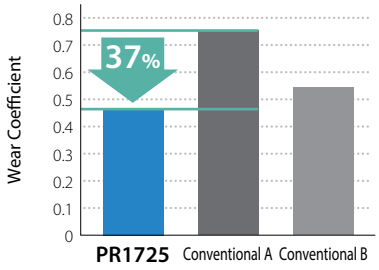
AlTiN/AlCrN Nano laminated film with superior wear resistance and adhesion resistance. Excellent surface finish and long tool life.

REDUCES CRACKING

Reduces abnormal damage such as chipping because of increased lamination layer with a thinner gap than conventional coatings



Wear Coefficient Comparison
(Internal evaluation)



Superior Wear and Chipping Resistance

High Strength with nano laminated film layer properties
Internal stress optimization reduces chipping

Excellent Surface Finish

Special surface layer with great lubricity reduces adhesion

Applicable to Various Workpiece Materials

Superior high temperature properties and oxidation resistance make for great performance in steel, stainless steel and free-cutting steel

High Machining Stability

Tough micro-grain carbide substrate provides stable machining

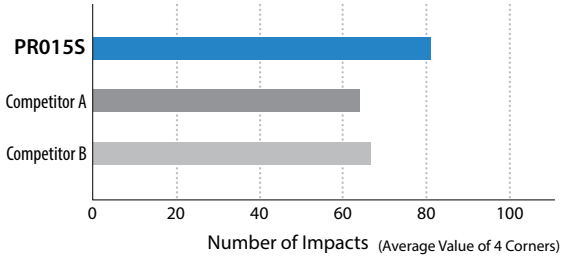
PR005S / PR015S for Heat-Resistant Alloy

PR005S : Hard, Wear-resistant Grade for High-speed Machining

PR015S : General Purpose Grade with Excellent Wear Resistance and Stability

- Improved thermal conductivity by optimum distribution of WC coarse grains
- Resists heat concentration at the cutting edge to promote stable machining
- Improved wear resistance with MEGACOAT HARD coating with high-hardness to resist boundary damage with improved thermal properties

Fracture Resistance Comparison (Internal Evaluation)



Cutting Conditions: Vc = 80 sfm, D.O.C. = 0.039", f = 0.004 ipr, Wet
CNMG432 Type Workpiece: Nickel-based Superalloy
Cylindrical Workpiece with 1 Flat Face

PVD / CVD COATED CARBIDE FOR MILLING & DRILLING





PVD Coated Carbide *(MEGACOAT / MEGACOAT NANO)*

KYOCERA's PVD coated carbides for milling and drilling utilize very tough carbide substrates. The low processing temperature, compared with CVD, leads to improved bending strength, less deterioration of the coating and superior tool life with stable machining.

CVD Coated Carbide

CVD coated carbide grades provide stable, efficient machining at high speeds or for heavy interrupted applications. Ti-base (TiN, TiCN) coating with superior hardness and wear resistance or ceramic-base (Al_2O_3) coating with high-thermal stability is applied on a tough carbide substrate. Superior fracture and wear resistance.

FEATURES OF PVD / CVD COATED CARBIDE FOR MILLING & DRILLING

Material	*Description*	*Color*	*Main Component (Coating Composition)*	*Advantages*
P Steel	**PR830**	Gold	TiAlN+TiN	· Improved high temperature stability and wear resistance with TiAlN base PVD coating · Application: Milling of steel
	PR1230	Blackish Red	MEGACOAT	· Superior wear and oxidation-resistant MEGACOAT on a special tough carbide substrate · Application: Stable and high feed milling and drilling of steel
	PR1525	Blackish Red	MEGACOAT NANO	· MEGACOAT NANO coating technology with a nano thin multi-layer coating performs with superior wear resistance and high oxidation resistance · Application: Stable and longer tool life for milling of steel and stainless steel
	CA520D	Gold	TiCN+Al_2O_3+TiN (CVD)	· Combination of tough substrate, coating crystal control technology, and advanced layer adhesion coating ensures exceptional wear and fracture resistance · Application: 1st recommendation for drilling of steel (high speed applications)
M Stainless Steel	**PR1225**	Blackish Red	MEGACOAT	· Superior wear and oxidation-resistant MEGACOAT on micro-grain carbide substrate · Application: General high feed milling and drilling of steel and stainless steel
K Cast Iron	**PR1210**	Blackish Red	MEGACOAT	· Superior wear and oxidation-resistant MEGACOAT coated on specialized carbide substrate · Application: Highly efficient stable milling and drilling of gray and nodular cast iron
	PR1510	Blackish Red	MEGACOAT NANO	· New coating technology [MEGACOAT NANO] is applied. Nano thin multi-layer coating performs superior wear resistance and high oxidation resistance. · Application: For gray and nodular cast iron, stable wear resistance and toughness
	CA415D	Gold	TiCN+Al_2O_3+TiN (CVD)	· Combination of tough substrate for cast iron, coating crystal control technology, and advanced layer adhesion coating ensures exceptional wear resistance · Application: 1st recommendation for drilling of gray and nodular cast iron
	CA420M	Gold	TiCN+Al_2O_3+TiN (CVD)	· Kyocera's unique crystal control technology and advanced layer adhesion CVD coating with superior wear resistance and toughness · Application: Milling of gray and nodular cast iron
S Heat-Resistant Alloys	**PR1535**	Blackish Red	MEGACOAT NANO	· Nano thin multi-layer coating MEGACOAT NANO improves wear resistance and stability · Application: For milling of Ni-base heat-resistant alloys, titanium alloys and precipitation hardened stainless steel
	CA6535	Gold	TiCN+Al_2O_3+TiN (CVD)	· High heat-resistance and wear resistance with CVD coating · Application: For milling of Ni-base heat-resistant alloys and martensitic stainless steel
H Hardened Materials	**PR015S**	Blackish Gray	MEGACOAT HARD	· MEGACOAT NANO HARD coating technology achieves stable machining in hardened materials with excellent wear resistance and chipping resistance · Application: Suitable for machining hardened materials of 60 HRC or less and difficult-to-cut materials

Grades for Heat-resistant Alloys and Difficult-to-cut materials

CA6535 CVD

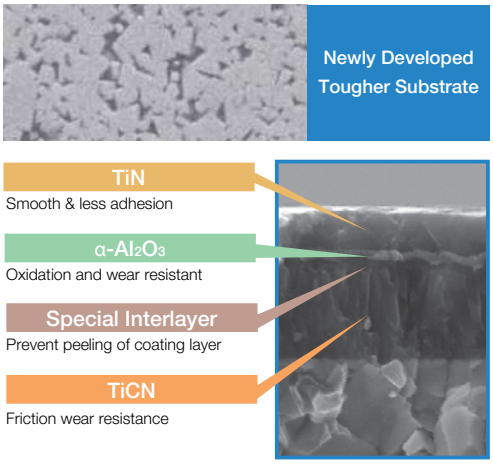
for Ni-base Heat Resistant Alloy and Martensitic Stainless Steels

PR1535 PVD

for Titanium Alloy and Precipitation Hardened Stainless Steels

New grades for difficult-to-cut material

Stable cutting prevents insert fracturing for highly efficient machining





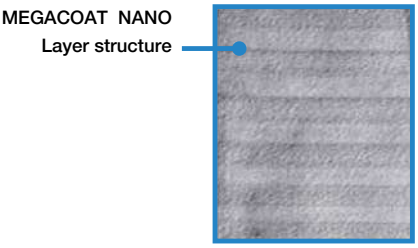
CA6535

- For Ni-base heat resistant alloys and martensitic stainless steel
- High heat resistance and wear resistance with CVD coating
- Improved stability due to thin film coating technology

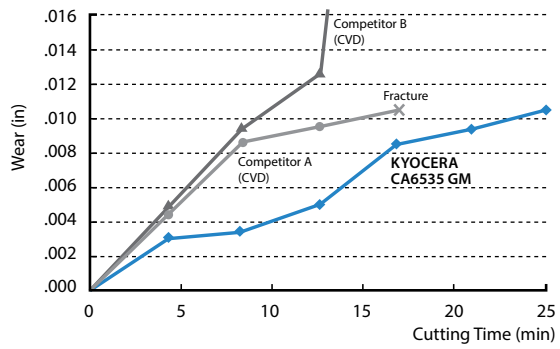


PR1535

- For titanium alloys and precipitation hardened stainless steel
- Stabilized milling operation and long tool life with Kyocera's MEGACOAT NANO coating technology
- Improved stability due to thin film coating technology



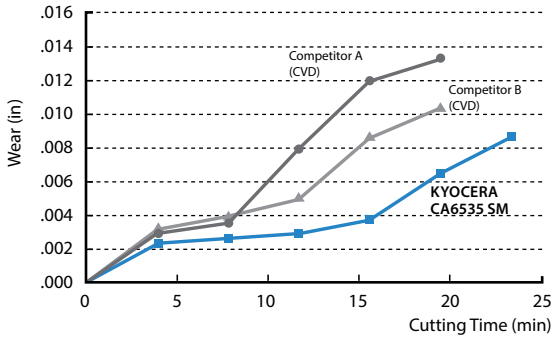
• Ni-base Heat Resistant Alloy



Cutting Conditions: 165 sfm, 0.006 ipt, 0.039" D.O.C., Coolant

(Internal Evaluation)

• Martensitic Stainless Steel



Cutting Conditions: 980 sfm, 0.008 ipt, 0.079" D.O.C., Coolant

(Internal Evaluation)

CARBIDE



CARBIDE

Due to its superior mechanical features carbide is used in a variety of applications. KYOCERA produces a variety of carbides, including KW10 for non-ferrous materials and micro-grain carbides for precision cutting.

FEATURES

- Tough and hard
- Good thermal conductivity
- Suitable for cutting non-ferrous metals and non-metals
- Stable cutting at low cutting speeds, including milling operations

FEATURES OF CARBIDE

Material	Description	Color	Main Component (Coating Composition)	Advantages
N Non-Ferrous Materials	**KW10**	Gray	WC+Co	· ISO identification symbol K carbide (K10 class) · Application: Machining cast iron, non-ferrous materials and non-metals
	GW05	Gray	WC+Co	· ISO identification symbol K carbide (K05 class) · Application: Excellent wear resistance against cast iron and non-ferrous metals
	GW15	Gray	WC+Co	· ISO identification symbol K carbide (K10 class), tough micro-grain carbide · Application: Machining cast iron, non-ferrous materials and non-metals
	GW25	Gray	WC+Co	· ISO identification symbol K carbide (K30 class) · Application: Milling operations of aluminum
S Heat-Resistant Alloys	**SW05**	Gray	WC+Co	· ISO identification symbol K carbide (K05 class) · Application: Continuous machining and finishing of titanium alloys
	SW10 (Made to Order)	Gray	WC+Co	· ISO identification symbol K carbide (K10 class) · Application: Continuous to light interrupted machining of titanium alloys
	SW25 (Made to Order)	Gray	WC+Co	· ISO identification symbol K carbide (K25 class) · Application: Interrupted and light interrupted machining of titanium alloys

DLC COATING



DLC COATING

High quality and long tool life when machining aluminum. Achieves long tool life with hardness close to that of diamond and maintains an excellent surface finish with aluminum welding resistance.

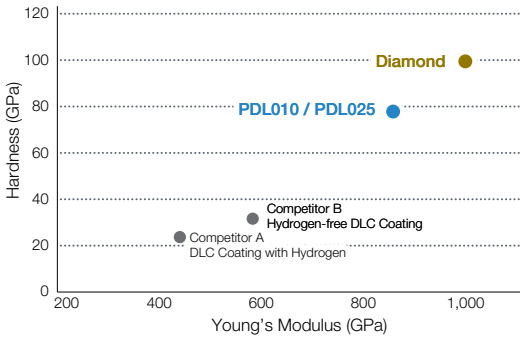
FEATURES

- Excellent surface finish
- Stable machining with excellent peeling resistance
- Improved chip evacuation due to high lubricity

FEATURES OF CARBIDE

Material	Description	Color	Main Component (Coating Composition)	Advantages
N Non-Ferrous Materials	**PDL010**	Iridescent	C	· High Hardness with Kyocera's Proprietary Hydrogen-free DLC Coating · Application: Long tool life and stable machining of aluminum alloys
	PDL025	Iridescent	C	· High Hardness with Kyocera's Proprietary Hydrogen-free DLC Coating · Application: Excellent machining stability in interrupted aluminum machining

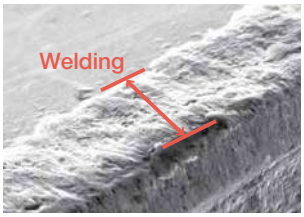
DLC Coating Properties



Welding Resistance Comparison



PDL025



Competitor A

Cutting Conditions: Vc = 2,630 sfm, fz = 0.004 ipt, D.O.C. × ae = 0.118" × 0.197", Dry
Cutter Dia. Ø1.000" Workpiece: 5052 Cutting Length: 187ft

CERAMIC



CERAMIC

Ceramic inserts are capable of running at high speeds, thus reducing expensive machining time. Hard turning of 38HRC to 64HRC hardened steel, or rough to finish turning of cast iron are recommended applications for ceramic inserts. KYOCERA's ceramic grades are designed to resist oxidation and maintain hardness at elevated temperatures.

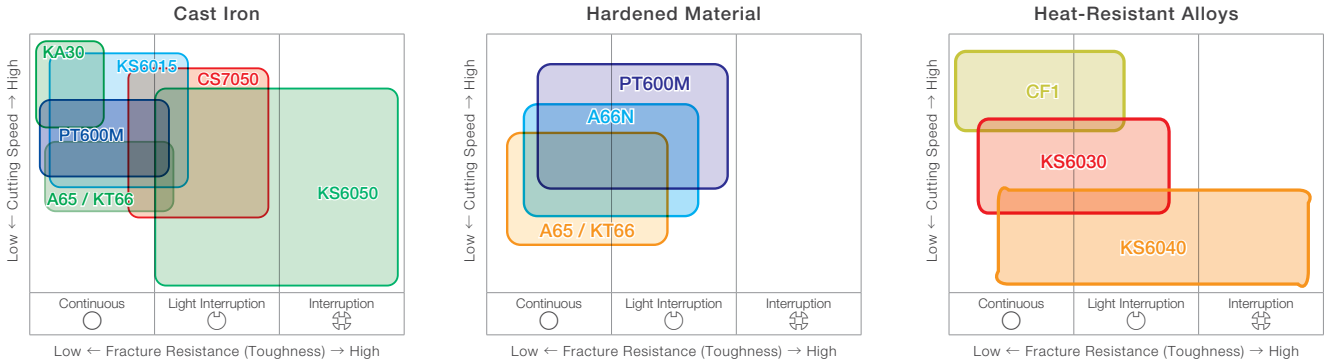
FEATURES

- Excellent wear resistance for high cutting speeds
- Ceramic maintains good surface finishes due to the low affinity to workpiece materials
- Silicon nitride ceramic has improved thermal shock resistance allowing cast iron cutting using coolants

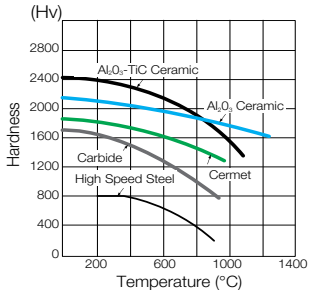
FEATURES OF CERAMIC

Material	Description	Color	Main Component (Coating Composition)	Coating Layer	Hardness of Substrate (GPa)	Fracture Toughness (MPa·m½)	Transverse Strength (MPa)	Advantages
K Cast Iron	KA30	White	Al_2O_3	-	17.5	4.0	750	· Aluminum oxide ceramic (Al_2O_3) · Application: Finishing of cast iron at high cutting speeds without coolant
K Cast Iron	KS6015	Black	Si_3N_4	-	15.2	7.8	1,000	· Silicon nitride ceramic (Si_3N_4) · Application: High-speed continuous machining of cast iron. Focus on wear resistance. (with or without coolant)
K Cast Iron	KS6050	Gray	Si_3N_4	-	15.6	8.0	1,200	· Silicon nitride ceramic (Si_3N_4) · Application: General purpose and interrupted machining of cast iron. Focus on stability. (with or without coolant)
K Cast Iron	CS7050	Grayish White	Si_3N_4 (Special Al_2O_3 Coat)	Thin Coating	15.6	8.0	1,200	· Silicon nitride ceramic (Si3N4) CVD Coated Carbide (Special Al_2O_3 COAT) · Application: Finishing and continuous machining, high speed and high efficient machining (with or without coolant)
K Cast Iron	KT66	Black	Al_2O_3+TiC	-	20.1	4.1	980	· Aluminum Oxide and Titanium Carbide ceramic (Al_2O_3+TiC) · Application: Hard materials and hardened roll materials
K Cast Iron	A65	Black	Al_2O_3+TiC	-	20.1	4.1	980	· Aluminum Oxide and Titanium Carbide ceramic (Al_2O_3+TiC) · Application: Semi-roughing to finishing of cast iron, and hard materials
H Hardened Materials	A66N	Gold	Al_2O_3+TiC (TiN Coat)	Thin Coating	20.1	4.1	980	· TiN PVD coated Aluminum Oxide and Titanium Carbide ceramic (TiN coated Al_2O_3+TiC) · Application: Semi-roughing to finishing of hard materials
H Hardened Materials	PT600M	Blackish Red	Al_2O_3+TiC (MEGACOAT)	Thin Coating	20.1	4.1	980	· Heat-resistant MEGACOAT on Aluminum Oxide and Titanium Carbide ceramic (MEGACOAT Al_2O_3+TiC) · Application: Semi-roughing to finishing of cast iron, hard materials and hardened roll materials
S Heat-Resistant Alloys	KS6030	Gray	SiAlON	-	15.2	6.0	600	· SiAlON Ceramic with superior wear resistance and high resistance against boundary wear · Application: Finishing to medium machining of heat-resistant alloys
S Heat-Resistant Alloys	KS6040	Brown	SiAlON	-	16.7	7 .0	900	· High stability SiAlON ceramic with wear resistance and fracture resistance · Application: Roughing of heat-resistant alloys

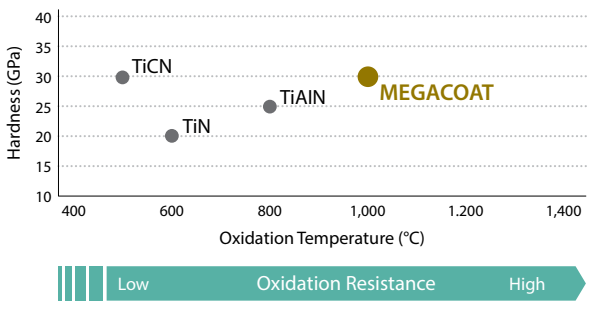
Application Maps



High Temperature Hardness



PVD Coating Properties



CBN



CBN

KYOCERA CBN is second only to diamond in hardness. CBN (Cubic Boron Nitride) is a synthetically produced material with high thermal conductivity which provides stable cutting.

FEATURES

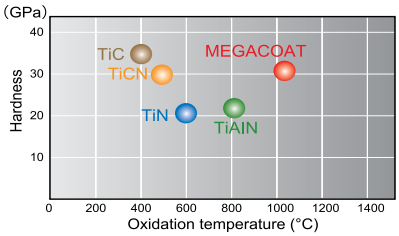
- Superior wear resistance when cutting hardened materials
- Suitable for high speed cutting of cast iron and sintered steel
- High thermal conductivity provides stable cutting

FEATURES OF CBN

Material	Description	Color	Av. Grain Size (μm)	Hardness of Substrate (GPa)	Transverse Strength (MPa)	Advantages
H Hardened Materials	**KBN510**	Black	2	28	1,000	· Excellent wear resistance and crack resistance, non-coated CBN · Application: Finishing and continuous cutting of hardened die steel
	KBN525	Black	1 and Under	25	1,250	· Good balance of toughness and wear resistance, non-coated CBN · Application: General grade for hardened steel, high stability at high speed and high feed cutting
	KBN05M (MEGACOAT)	Blackish Red	0.5-1.5	27	1,000	· Heat-resistant MEGACOAT on highly heat-resistant CBN substrate · Application: High speed finishing of hardened steel
	KBN10M (MEGACOAT)	Blackish Red	2	28	1,000	· Heat-resistant MEGACOAT on CBN with hard binder phase, superior anti-crater wear resistance · Application: High speed finishing of hardened die steel
	KBN25M (MEGACOAT)	Blackish Red	1 and Under	25	1,250	· Heat-resistant MEGACOAT on micro-grain CBN with heat resistant binder phase · Application: Stable cutting of hardened steel at high speed
Sintered Steel	**KBN570**	Black	2-4	34	1,350	· High CBN content ratio · Application: Machining of sintered steel (preventing burr formation)
	KBN70M (MEGACOAT)	Blackish Red	2-4	34	1,350	· Heat-resistant MEGACOAT on CBN rich substrate · Application: General cutting of sintered steel (ferrous sintered alloy) at high speed
K Cast Iron	**KBN475**	Black	2	39	1,400	· Excellent wear resistance due to high CBN content and special binder · Application: High speed machining of gray cast iron
	KBN60M (MEGACOAT)	Blackish Red	0.5-6	33	1,250	· Heat-resistant MEGACOAT on CBN rich substrate with hard binder phase · Application: High speed finishing of gray cast iron
	KBN900 (TiN COAT)	Gold	9	31	630	· TiN coated solid CBN · Application: Heavy duty, interrupted cutting and finishing of hardened steel, hardened roll steel and cast iron

MEGACOAT CBN

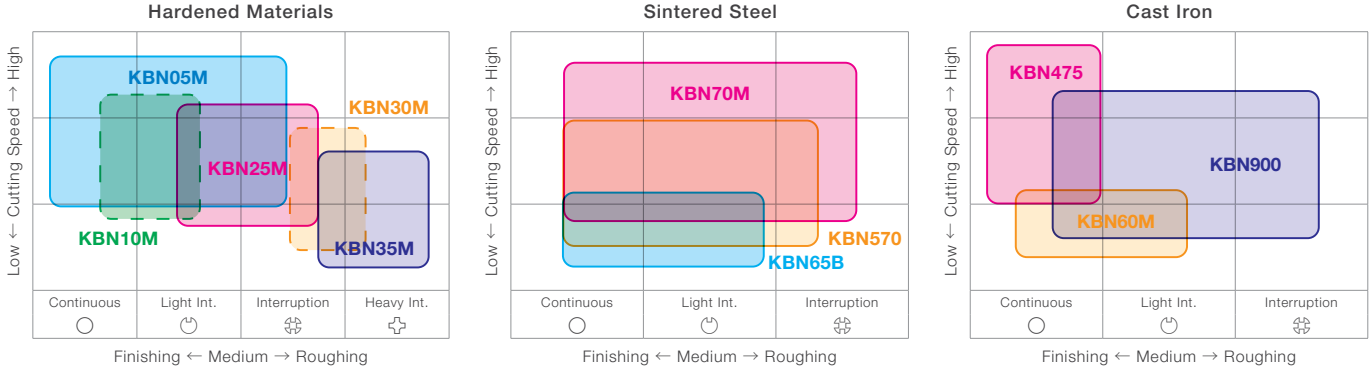
Properties of PVD Coated Layer



Advantages of MEGACOAT

- Long tool life and stable cutting due to superior heat-resistance and hardness
- Improvement of crater wear (oxidation, diffusional wear) resistance
- High thermal stability and surface smoothness provide excellent surface finish

Application Map



PCD



PCD (Polycrystalline Diamond)

KYOCERA diamond material is a synthetic diamond sintered under high temperatures and pressures. PCD (Polycrystalline diamond) is ideal for non-ferrous metals and non-metals.

FEATURES

- Applicable for non-ferrous metals, non-metals turning, milling and other various type of cutting
- Long tool life due to extreme hardness
- Capable of high cutting speeds which increases cutting productivity
- Reduced edge build-up allows for high precision cutting
- Diversified applications for cutting of non-ferrous materials and non-metals
- Finished surface will be rainbow colored.
  (a mirror-like finished surface will not be obtained as when single crystal diamond is used.)

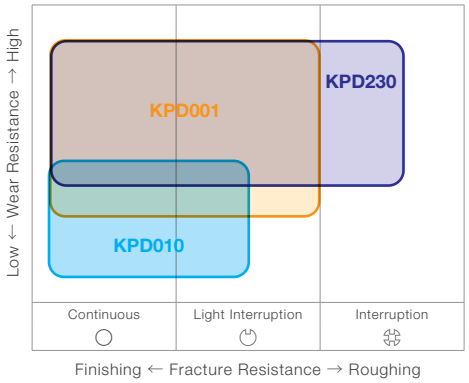
FEATURES OF PCD

Material	Description	Av. Grain Size (μm)	Advantages
N Non-Ferrous Materials	KPD001	0.5	· Super Micro-Grain PCD features cutting edge strength, wear resistance, fracture resistance, good edge-sharpening performance and long, stable tool life. · Application: High speed cutting of aluminum alloys, brass, non-ferrous metals and non-metals including plastics, fiberglass, carbide and ceramics.
	KPD010	10	· Good wear resistance and toughness, good grindability · Application: General purpose, high speed cutting of aluminum alloys, non-ferrous metals and non-metals including plastics, fiberglass, carbide and ceramics.
	KPD230	2-30	· Superior abrasive wear resistance and toughness due to high density PCD with mixed rough and fine grains · Application: High speed milling of aluminum alloys, non-ferrous metals, plastics and fiberglass
	KPD250	25	· Excellent wear resistance due to coarse-grained PCD (25 μm) · Application: High-speed processing of high-silicon aluminum alloy, processing of cemented carbide

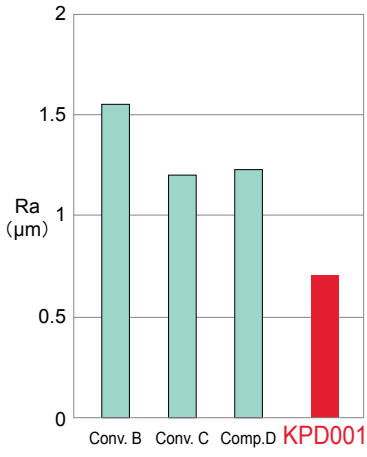
Applications

Workpiece Material		Non-ferrous materials (Aluminum / Non-ferrous metals / Non-metals)				Difficult-to-Cut Materials Titanium / Titanium alloys			
Cutting Range		Finishing ← → Roughing				Finishing ← → Roughing			
Classification		N01	N10	N20	N30	S01	S10	S20	S30
Turning Milling	PCD	KPD001	KPD001	KPD001	KPD001	KPD001	KPD001		
			KPD010	KPD010		KPD010			
		KPD230	KPD230	KPD230	KPD230				
		KPD250	KPD250						

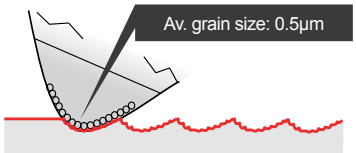
Application Map



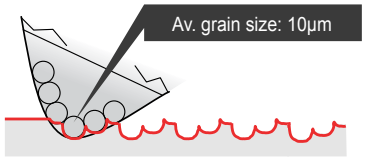
Surface Finish Roughness Comparison of Aluminum Cutting



Excellent surface finish provided by Super Micro-Grain KPD001



Surface finish of conventional PCD



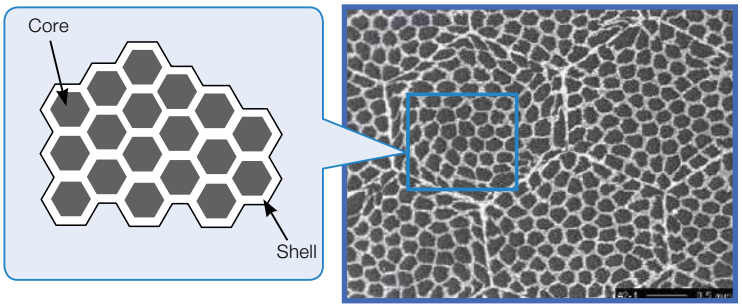
(Grain size affects surface finish quality)

A INSERT GRADES

Honeycomb Structure CBN / CERAMIC

Honeycomb Structure CBN / CERAMIC

Honeycomb structure is a composite material consisting of a hard and superior wear-resistant core (gray portion) and a tough shell (white portion) with a precisely controlled grain structure.



FEATURES

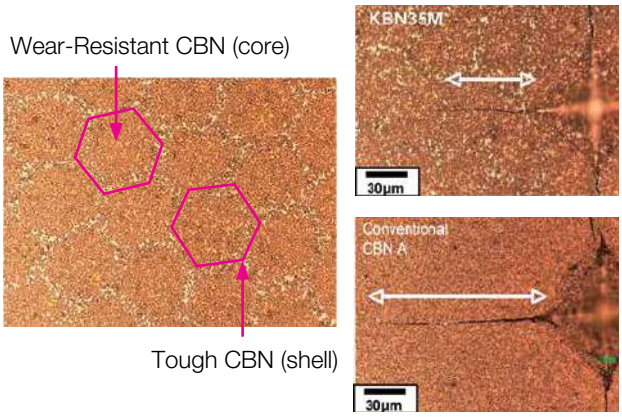
- Cell Fibers combine a hard, wear-resistant core and a tough shell into one insert.
- The tough shell stops cracks that form in the core.
- CBN is good for interrupted machining of exceptionally hard material and ceramic is good for heat-resistant alloys

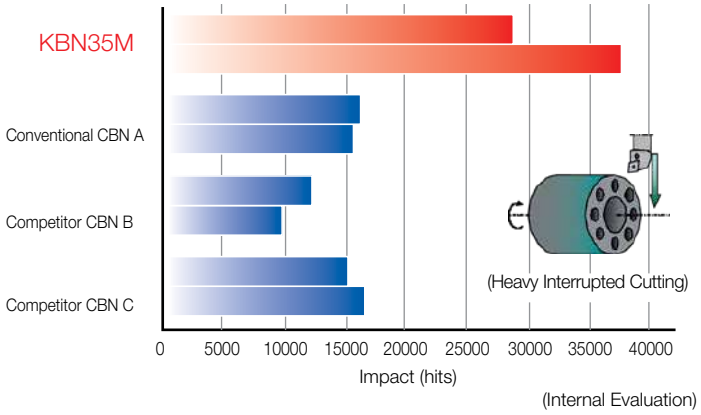
FEATURES OF CBN

Material	*Description*	*Color*	*Main Component (Coating Composition)*	*Advantages*
H Hardened Materials	**KBN35M** (MEGACOAT)	Blackish Red	CBN	· Honeycomb structure CBN composite material consisting of wear resistant CBN (core) and tough CBN (shell) · Heat-resistant MEGACOAT on tough Honeycomb structure CBN · Application: Stable machining of hardened steel at interrupted machining
S Heat-Resistant Alloys	**CF1**	Gray	Ceramic	· Honeycomb structure ceramic composite material consisting of wear resistant ceramic (core) and tough ceramic (shell) · Application: Machining of heat-resistant alloys like Ni-base heat-resistant alloys

KBN35M (MEGACOAT Honeycomb Structure CBN)

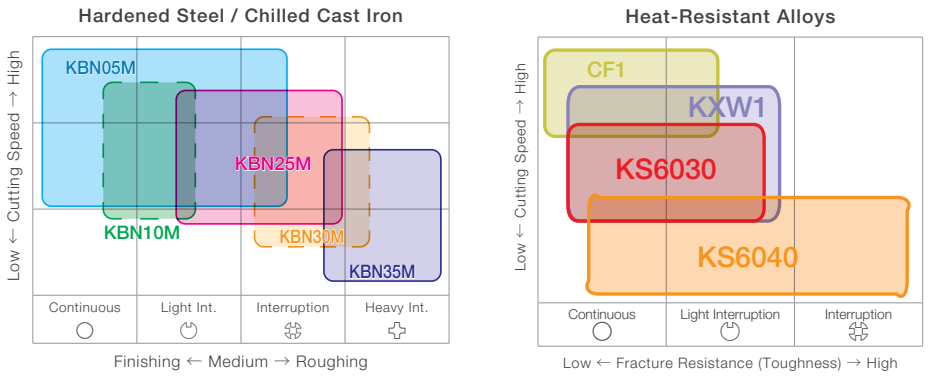
Tough CBN (Shell) Prevents Crack Growth





(Internal Evaluation)

Application Map



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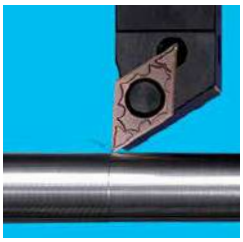
Insert Material Selection Table

Applications		Cutting Range	P	M	K		N	S		H	Powdered Metal
			Steel	Stainless Steel	Gray Cast Iron	Nodular Cast Iron	Non-Ferrous Metals	Heat-Resistant Alloys	Titanium Alloys	Hardened Materials	
Turning		Finishing Roughing	TN610 CCX TN620 TN60 PV710 PV720 PV730 CA510 CA515 CA025P CA530	TN610 TN620 TN60 PV720 CA6515 CA6525 PR1535	KBN475 KBN60M KA30 PV7005 CA5505 CA310 CA315	TN60 PV7005 CA5505 CA310 CA315 CA320	KPD001 KPD010 PDL010 PDL025 KW10	CF1 KS6040 CA6515 CA6525 PR005S PR015S PR1535	KPD001 KPD010 SW05 SW10 SW25	KT66 A66N PT600M KBN05M KBN10M KBN25M KBN35M KBN900	TN610 TN60 KBN570 KBN70M
Small Tools		Finishing Roughing	TN610 TN620 PV710 PV720 PR1705 PR1725 PR930 PR1025 PR1535	TN610 TN620 PV720 PR1725 PR930 PR1025 PR1225 PR1535	CA310 CA315 KW10	CA310 CA315 CA320 KW10	KPD001 KPD010 PDL010 PDL025 GW05 KW10	CA6515 PR1125 PR1225 PR1535	KPD001 KPD010 KW10 PR1535	KBN05M KBN10M KBN25M KBN30M	TN610 TN60 KBN570 KBN70M
Boring		Large Bore Dia. Small	TN610 TN620 PV710 PV720 PV730 CA515 CA525 CA530 PR1705 PR1725 PR1025 PR930 PR1535	TN60 CA6515 CA6525 PR1725 PR1025 PR1225 PR930 PR1535	KBN475 KBN60M PV7005 CA310 CA315 KW10	PV7005 CA310 CA315 CA320 KW10	KPD001 KPD010 PDL010 PDL025 GW05 KW10	CA6515 CA6525 PR1125 PR1225 PR1535	KPD001 KPD010 KW10 SW05 PR1535	PT600M KBN05M KBN10M KBN25M	TN610 TN60 KBN570 KBN70M
General Cut-Off		Large Cutting Dia. Small	CR9025 PR930 PR915 PR1215 PR1225 PR1535	CR9025 PR930 PR915 PR1215 PR1225 PR1535	KW10 PR1215	KW10 PR1215	PDL025 KW10	KW10 PR1225 PR660	KW10	-	-
Small Dia. Cut-Off		Depends on Workpiece Material	PR1025 PR1225 PR1535	PR1025 PR1225 PR1535	KW10	KW10	PDL025 KW10	KW10 PR1025 PR1225	KW10	-	-
Grooving		Glossy Finish Stable	TC40 TN620 TN90 PV7040 PR930 PR1115 PR1215 PR1225 PR1625	TC40 TN620 TN90 PV7040 PR930 PR1115 PR1215 PR1225 PR1625	PR905 PR1215 KW10 GW15	PR905 PR1215 KW10 GW15	KPD001 PDL025 KW10 GW15	PR915 KW10 PR1215 PR1225 PR1535	KPD001 KW10 PR1535	KBN510 KBN525 PT600M	TC40 KBN570
Threading		Glossy Finish Stable	TC60 PR1215 PR1115 PR930	TC60 PR1515 PR1115 PR930	KW10 GW15	KW10 GW15	KW10 GW15	KW10 GW15	KW10 GW15	-	PR1515 PR1115
Drilling		Wear Resistance Toughness	CA520D PR1225 PR1230 PR1535	PR1225 PR1535	CA415D PR1210 KW10	PR1210 KW10	KW10 GW15	PR1225 KW10 GW15	KW10	-	-
Milling		Finishing Roughing	TN100M TN620M PV60M PR1225 PR1230	CA6535 PR1225 PR1525 PR1535	PR1210 PR1510 KW10	PR1210 PR1510 KW10	KPD230 KPD001 KPD010 PDL025 KW10 GW25	CA6535 PR1225 PR1535	KPD230 KPD001 KW10 PR905 PR1210 PR1535	PR015S	-

· *Highlighted Items are Recommended Grades*

Cermet

Grade Name	Color	Coating / Main Component	Coating Layer	Density	Hardness of Substrate		Fracture Toughness ($MPam^{1/2}$)	Flexural Toughness (MPa)
					(HV)	(GPa)		
TN610	Gray	TiCN	-	6.6	1,750	17.2	6.0	2,100
TN620	Gray	TiCN	-	6.9	1,550	15.2	9.0	2,500
TN620M	Gray	TiCN	-	6.9	1,550	15.2	9.0	2,500
TN6020	Gray	TiCN	-	6.4	1,500	14.7	10.0	2,500
TN60	Gray	TiCN+NbC	-	6.6	1,600	15.7	9.0	1,760
TN90	Gray	TiCN+NbC	-	6.4	1,450	14.2	10.0	1,960
TN100M	Gray	TiCN+NbC	-	6.7	1,520	14.9	10.5	1,860
TC40	Gray	TiC+TiN	-	6.0	1,650	16.2	9.0	1,570
TC60	Gray	NbC	-	8.1	1,500	14.7	10.5	1,670

CVD Coated Cermet

Grade Name	Color	Coating / Main Component	Coating Layer	Density	Hardness of Substrate		Fracture Toughness ($MPam^{1/2}$)	Flexural Toughness (MPa)
					(HV)	(GPa)		
CCX	Gold	TiCN+Al2O3+TiN	Thiick Coating	7	1,500	14.7	10.0	2,600

PVD Coated Cermet

Grade Name	Color	Coating / Main Component	Coating Layer	Density	Hardness of Substrate		Fracture Toughness ($MPam^{1/2}$)	Flexural Toughness (MPa)
					(HV)	(GPa)		
PV710	Gold	MEGACOAT NANO	Thin Coating	6.6	1,750	17.2	6.0	2,100
PV720	Gold	MEGACOAT NANO	Thin Coating	6.9	1,550	15.2	9.0	2,500
PV730	Gold	MEGACOAT NANO	Thin Coating	7.0	1,450	14.2	10.0	2,500
PV7005	Blackish Red	MEGACOAT	Thin Coating	6.0	1,650	16.2	8.5	1,470
PV7040	Blackish Red	MEGACOAT	Thin Coating	6.0	1,650	16.2	9.0	1,570
PV7020	Gold	TiAlN+TiN	Thin Coating	6.4	1,500	14.7	10.0	2,500
PV90	Gold	TiN	Thin Coating	6.4	1,450	14.2	10.0	1,960
PV60M	Gold	MEGACOAT NANO	Thin Coating	6.6	1,600	15.7	9.0	1,760

CVD Coated Carbide

Grade Name	Color	Coating / Main Component	Coating Layer	Density	Hardness of Substrate		Fracture Toughness ($MPam^{1/2}$)	Flexural Toughness (MPa)
					(HV)	(GPa)		
CA310	Rose Gold	TiCN+Al_2O_3+Ti Base	Thick Coating	15.0	1,570	15.4	12.0	2,780
CA315	Rose Gold	TiCN+Al_2O_3+Ti Base	Thick Coating	15.0	1,570	15.4	12.0	2,780
CA320	Rose Gold	TiCN+Al_2O_3+Ti Base	Thick Coating	15.0	1,570	15.4	12.0	2,780
CA415D	Gold	TiCN+Al_2O_3+TiN	Thick Coating	15.0	1,570	15.4	12.0	2,780
CA420M	Gold	TiCN+Al_2O_3+TiN	Thick Coating	14.5	1,600	15.8	13.0	3,400
CA4505	Blackish Gray	TiCN+Al_2O_3	Thick Coating	15.0	1,790	17.5	9.5	2,350
CA4515	Blackish Gray	TiCN+Al_2O_3	Thick Coating	15.0	1,570	15.4	12.0	2,780
CA510	Gold	TiCN+Al_2O_3+TiN	Thick Coating	14.5	1,470	14.4	11.5	2,500
CA515	Gold	TiCN+Al_2O_3+TiN	Thick Coating	14.4	1,440	14.1	12.5	2,650
CA520D	Gold	TiCN+Al_2O_3+TiN	Thick Coating	14.7	1,370	13.4	16.0	3,100
CA025P	Gold	TiCN+Al_2O_3+TiN	Thick Coating	14.2	1,400	13.7	13.5	2,800
CA525	Gold	TiCN+Al_2O_3+TiN	Thick Coating	14.2	1,360	13.3	13.5	2,750
CA530	Gold	TiCN+Al_2O_3+TiN	Thick Coating	13.9	1,340	13.1	14.5	2,850
CA5505	Gold	TiCN+Al_2O_3+TiN	Thick Coating	14.7	1,730	17.0	10.0	2,540
CA5515	Gold	TiCN+Al_2O_3+TiN	Thick Coating	14.7	1,550	15.2	12.0	2,750
CA5525	Gold	TiCN+Al_2O_3+TiN	Thick Coating	14.5	1,400	13.7	12.0	2,780
CA5535	Gold	TiCN+Al_2O_3+TiN	Thick Coating	14.1	1,340	13.1	16.5	2,970
CA6515	Gold	TiCN+Al_2O_3+TiN	Thin Coating	14.7	1,530	15.0	12.0	2,780
CA6525	Gold	TiCN+Al_2O_3+TiN	Thin Coating	14.7	1,370	13.4	16.0	3,100
CA6535	Gold	TiCN+Al_2O_3+TiN	Thin Coating	14.3	1,320	12.9	16.0	3,700
CR9025	Gold	TiCN+TiN	Thick Coating	14.5	1,400	13.7	12.0	2,780

PVD Coated Carbide

Grade Name	Color	Coating / Main Component	Coating Layer	Density	Hardness of Substrate		Fracture Toughness ($MPam^{1/2}$)	Flexural Toughness (MPa)
					(HV)	(GPa)		
PR005S	Blackish Gray	MEGACOAT HARD	Thin Coating	15.0	1,750	17.2	8.0	2,000
PR015S	Blackish Gray	MEGACOAT HARD	Thin Coating	14.9	1,680	16.5	9.0	2,400
PR630	Gold	TiN	Thin Coating	12.5	1,500	14.7	11.0	2,160
PR660	Gold	TiN	Thin Coating	13.7	1,450	14.2	13.0	2,250
PR830	Gold	TiAlN+TiN	Thin Coating	13.7	1,450	14.2	13.0	2,250
PR905	Bluish Violet	TiAlN	Thin Coating	14.8	1,720	16.8	9.0	2,450
PR915	Bluish Violet	TiAlN	Thin Coating	14.1	1,700	16.7	11.0	4,140
PR930	Reddish Gray	TiCN	Thin Coating	14.1	1,700	16.7	11.0	4,140
PR1005	Reddish Gray	TiCN	Thin Coating	14.9	1,800	17.6	10.0	3,300
PR1025	Reddish Gray	TiCN	Thin Coating	14.5	1,600	15.8	13.0	3,400
PR1115	Purple red	TiAlN	Thin Coating	14.7	1,700	16.7	11.0	3,000
PR1125	Purple red	TiAlN	Thin Coating	14.5	1,600	15.8	13.0	3,400
PR1210	Blackish Red	MEGACOAT	Thin Coating	14.8	1,720	16.8	9.0	2,450
PR1215	Blackish Red	MEGACOAT	Thin Coating	14.7	1,700	16.7	11.0	3,000
PR1225	Blackish Red	MEGACOAT	Thin Coating	14.5	1,600	15.8	13.0	3,400
PR1230	Blackish Red	MEGACOAT	Thin Coating	13.7	1,450	14.2	13.0	2,250
PR1305	Blackish Red	MEGACOAT	Thin Coating	15.0	1,790	17.5	9.5	2,350
PR1310	Blackish Red	MEGACOAT	Thin Coating	14.8	1,720	16.8	9.0	2,450
PR1325	Blackish Red	MEGACOAT	Thin Coating	14.7	1,370	13.4	16.0	3,100
PR1425	Blackish Red	MEGACOAT NANO	Thin Coating	14.5	1,600	15.8	13.0	3,400
PR1510	Blackish Red	MEGACOAT NANO	Thin Coating	14.8	1,720	16.8	9.0	2,450
PR1515	Blackish Red	MEGACOAT NANO	Thin Coating	14.7	1,700	16.7	11.0	3,000
PR1525	Blackish Red	MEGACOAT NANO	Thin Coating	14.5	1,600	15.8	13.0	3,400
PR1535	Blackish Red	MEGACOAT NANO	Thin Coating	14.3	1,320	12.9	16.0	3,700
PR1625	Blackish Red	MEGACOAT NANO	Thin Coating	14.5	1,600	15.8	13.0	3,400
PR1705	Silver	MEGACOAT NANO PLUS	Thin Coating	14.9	1,800	17.6	10.0	3,300
PR1725	Silver	MEGACOAT NANO PLUS	Thin Coating	14.5	1,600	15.8	13.0	3,400

Carbide

Grade Name	Color	Coating / Main Component	Coating Layer	Density	Hardness of Substrate		Fracture Toughness ($MPam^{1/2}$)	Flexural Toughness (MPa)
					(HV)	(GPa)		
KW10	Gray	WC+Co	-	15.0	1,650	16.2	10.0	1,470
GW05	Gray	WC+Co	-	14.9	1,800	17.6	10.0	3,300
GW15	Gray	WC+Co	-	14.7	1,700	16.7	11.0	3,000
GW25	Gray	WC+Co	-	14.5	1,600	15.8	13.0	3,400
SW05	Gray	WC+Co	-	15.0	1,790	17.5	9.5	2,350
SW10	Gray	WC+Co	-	14.8	1,720	16.8	9.0	2,450
SW25	Gray	WC+Co	-	14.7	1,370	13.4	16.0	3,100

DLC Coated Carbide

Grade Name	Color	Coating / Main Component	Coating Layer	Density	Hardness of Substrate		Fracture Toughness ($MPam^{1/2}$)	Flexural Toughness (MPa)
					(HV)	(GPa)		
PDL010	Iridescent	C	Thin Coating	15.0	1,650	16.2	10.0	1,470
PDL025	Iridescent	C	Thin Coating	14.5	1,600	15.8	13.0	3,400

TURNING INSERTS

B

B1 - B118

TURNING INSERT IDENTIFICATION SYSTEM		B2
INSERT COLOR		B3
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NEGATIVE INSERTS		B4
POSITIVE INSERT		B12
HOW TO READ INSERT PAGES		B15
CERMET / COATED CARBIDE / CARBIDE LINEUP		B16 - B106
NEGATIVE TURNING INSERTS	CN□□...80° Diamond	B16
	DN□□...55° Diamond	B23
	KN□□...55° Parallelogram	B31
	RN□□...Round	B31
	SN□□...90° Square	B32
	TN□□...60° Triangle	B36
	VN□□...35° Diamond	B44
	WN□□...80° Trigon	B46
	Small Double Sided Inserts	B50
POSITIVE TURNING INSERTS	CC□□, CP□□...80° Diamond	B53
	DC□□, DP□□...55° Diamond	B62
	JC□□...70° Diamond	B73
	RC□□...Round	B74
	SC□□, SP□□...90° Square	B75
	TB□□, TC□□, TP□□...60° Triangle	B76
	VB□□, VC□□, VP□□...35° Diamond	B89
	WB□□, WP□□...80° Trigon	B97
	ZBMT... 25° / 15° Diamond	B100
BACK TURNING INSERTS	TKFB, TKF	B102
	ABS15 / ABW15 / ABW23	B104
BEARING MACHINING	R□MT-BB / SNMF	B105
SOLID MICRO BORING BARS		B106
CERAMIC INSERTS INDENTIFICATION		B107
CERAMIC INSERTS		B108 - B117
NEGATIVE TURNING INSERTS	CN□□...80° Diamond	B108
	DN□□...55° Diamond	B109
	EN□□...75° Diamond	B109
	RN□□...Round	B110
	SN□□...90° Square	B111
	TN□□...60° Triangle	B113
	VN□□...35° Diamond	B114
	WN□□...80° Trigon	B114
POSITIVE TURNING INSERTS	RP□□...Round	B115
	SP□□...90° Square	B115
	TB□□, TC□□, TP□□...60° Triangle	B115
ROLL MACHINING INSERTS	RBG / RCGX / RPGX / RCMA / LNU	B116
GROOVING INSERTS	GH	B117

INSERT IDENTIFICATION SYSTEM

Symbol	Insert
H	Hexagon
O	Octagon
P	Pentagon
S	Square
T	Triangle
C	80° Diamond
D	55° Diamond
E	75° Diamond
F	50° Diamond
M	86° Diamond
J	70° Diamond
V	35° Diamond
Z	25°/15° Diamond
W	80° Trigon
L	Rectangle
A	85° Parallelogram
B	82° Parallelogram
K	55° Parallelogram
R	Round

Shown angle stands for acute angle for diamond and parallelogram inserts.

① Shape Symbol

Symbol	Relief Angle
A	3°
B	5°
C	7°
D	15°
E	20°
F	25°
G	30°
N	0°
P	11°

② Relief Angle Symbol

Symbol (Class)	Tolerance					
	Corner Height		Thickness		I.C. Size	
	ANSI (±inch)	ISO (±mm)	ANSI (±inch)	ISO (±mm)	ANSI (±inch)	ISO (±mm)
A	0.0002	0.005	0.0010	0.025	0.0010	0.025
F	0.0002	0.005	0.0010	0.025	0.0005	0.013
C	0.0005	0.013	0.0010	0.025	0.0010	0.025
H	0.0005	0.013	0.0010	0.025	0.0005	0.013
E	0.0010	0.025	0.0010	0.025	0.0010	0.025
G	0.0010	0.025	0.0050	0.130	0.0010	0.025
J	0.0002	0.005	0.0010	0.025	0.002~0.006	0.05~0.15
K※	0.0005	0.013	0.0010	0.025	0.002~0.006	0.05~0.15
L※	0.0010	0.025	0.0010	0.025	0.002~0.006	0.05~0.15
M※	0.003~0.007	0.080~0.180	0.0050	0.130	0.002~0.006	0.05~0.15
N※	0.003~0.007	0.080~0.180	0.0010	0.025	0.002~0.006	0.05~0.15
U※	0.005~0.015	0.130~0.380	0.0050	0.130	0.003~0.009	0.08~0.25

※ Insert's periphery is as fired.
Tolerance difference depends on size and shape of insert

③ Tolerance Symbol

Symbol	Hole	Hole Shape	Chipbreaker	Insert
N	No	-	No	
R			One Side	
F			Two Sides	
A	Yes	With Hole	No	
M			One Side	
G			Two Sides	
W		With Hole and One Countersink 40°~60°	No	
T			One Side	
Q		With Hole and Two Countersink 40°~60°	No	
U			Two Sides	
B		With Hole and One Countersink 70°~90°	No	
H			One Side	
C		With Hole and Two Countersink 70°~90°	No	
J			Two Sides	
X	-	-	-	-

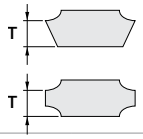
④ Hole / Chipbreaker Symbol

	①	②	③	④	⑤	⑥	⑦	⑧
ISO (metric)	C	N	M	G	12	04	08	PG
ANSI (inch)	C	N	M	G	4	3	2	PG

⑤ Edge Length Symbol (ISO)							I.C. Size (mm)	I.C. Size (ANSI)	
C	D	S	R	T	V	W		I.C. Size (inch)	Symbol
03	04		03	06			3.97	5/32	1.2
04	05		04	08	08		4.76	3/16	1.5
		05					5		
05	06		05	09		03	5.56	7/32	1.8
		06					6		
06	07		06	11	11	04	6.35	1/4	2
08	09		07	13		05	7.94	5/16	2.5
		08					8		
09	11	09	09	16	16	06	9.525	3/8	3
	12	10					10		
		12					12		
12	15	12	12	22	22	08	12.7	1/2	4
16	19	15	15	27	27	10	15.875	5/8	5
		16					16		
19	23	19	19	33	33	13	19.05	3/4	6
		20					20		
22	27		22	38			22.225	7/8	7
		25					25		
25	31	25	25	44	44	17	25.4	1	8
32	38	31	31	54	54	21	31.75	1-1/4	10
		32					32		

- Expressed as edge length for ISO.
- ANSI expresses the inscribed circle diameter in inches.

⑥ Thickness Symbol			
ISO		ANSI	
Thickness (mm)	Symbol	Thickness (inch)	Symbol
1.59	01	1/16	1
1.98	T1	5/64	1.2
2.38	02	3/32	1.5
2.78	T2	-	-
3.18	03	1/8	2
3.97	T3	5/32	2.5
4.76	04	3/16	3
5.56	05	7/32	3.5
6.35	06	1/4	4
7.94	07	5/16	5
9.525	09	3/8	6



Thickness displayed as the distance between bottom surface and highest point on cutting edge.

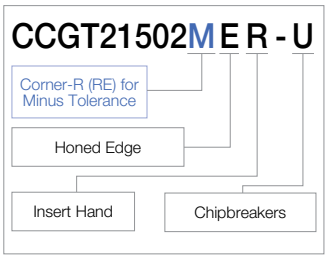
⑦ Corner-R (RE) Symbol			
ISO		ANSI	
Corner-RE (mm)	Symbol	Corner-RE (inch)	Symbol
Sharp Corner	00	0.000	00
0.03	003	0.001	0.1
0.05	005	0.002	0.13
0.10	01	0.004	0.2
0.20	02	0.008	0.5
0.40	04	1/64	1
0.80	08	1/32	2
1.20	12	3/64	3
1.60	16	1/16	4
2.00	20	5/64	5
2.40	24	3/32	6
2.80	28	7/64	7
3.20	32	1/8	8
Round insert	00 (inch) or M0 (metric)	Round insert	

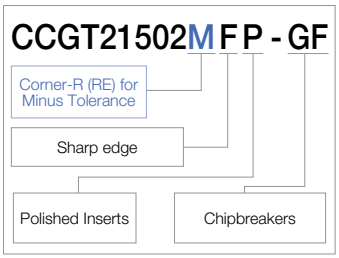
⑧ Manufacturer's Option

Hand Symbol, Chipbreaker, Symbol, Etc.

Positive Insert Identification System

(e.g. of (8) Manufacturer's Option)





When a minus tolerance is specified for the corner-R (RE)

- If a minus tolerance is specified for the corner-R (RE) as shown in the Fig.1, using an insert with corner-R (RE) = 0.008" may result in larger radius than specified.
- Use an insert with a corner R (RE) that has a minus tolerance.

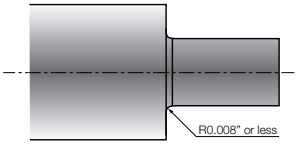


Fig.1 Example of a specified corner-R in the drawing

Insert Color

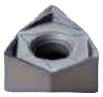
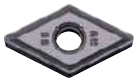
Cermet, CVD Coated Cermet, MEGACOAT NANO Cermet, MEGACOAT Cermet, and PVD Coated Cermet

Grades	Cermet									CVD Cermet	MEGACOAT NANO Cermet				MEGACOAT Cermet				PVD Cermet	
	TN610	TN620	TN620M	TN6010	TN6020	TN60	TN100M	TC40	TC60	CCX	PV710	PV720	PV730	PV60M	PV7005	PV7010	PV7025	PV7040	PV7020	PV90
Insert Color																				

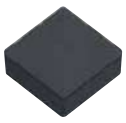
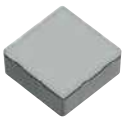
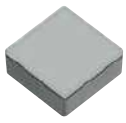
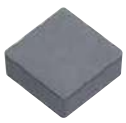
CVD Coated Carbide

Grades	CVD Coated Carbide																	
	CA310	CA315	CA320	CA415D	CA520D	CA420M	CA4505	CA4515	CA4010	CA4115	CA4120	CA510	CA515	CA025P	CA525	CA530	CA55 Series	CA65 Series	CR9025
Insert Color																		

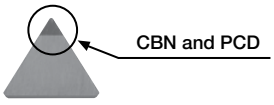
PVD Coated Carbide

Grades	MEGACOAT NANO						MEGACOAT NANO PLUS		MEGACOAT NANO HARD		MEGACOAT							PVD Coated Carbide							
	PR1425	PR1510	PR1515	PR1525	PR1535	PR1625	PR1705	PR1725	PR005S	PR015S	PR1210	PR1215	PR1225	PR1230	PR1305	PR1310	PR1325	PR660	PR830	PR905	PR915	PR930	PR1005	PR1025	PR1115	PR1125
Insert Color																										

Ceramic

Grades	Alumina Ceramic			PVD Coated Ceramic	MEGACOAT Ceramic	Silcon Nitride Ceramic		CVD Coated Silicon Nitride Ceramic	SiAlON Ceramic		Whisker Reinforced Ceramic	Cell Fiber Ceramic
	KA30	A65	KT66	A66N	PT600M	KS6015	KS6050	CS7050	KS6030	KS6040	KXW1	CF1
Insert Color												

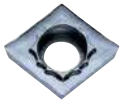
CBN and PCD

Grades	CBN					PCD			MEGACOAT CBN	PVD Coated CBN
	KBN65B	KBN475	KBN510	KBN525	KBN570	KPD001	KPD010	KPD230	KBN..M	KBN900
Insert Color	 CBN and PCD									

DLC Coated Carbide

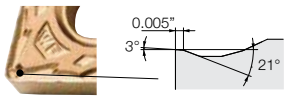
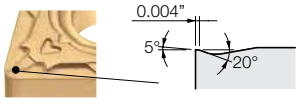
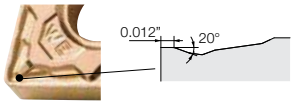
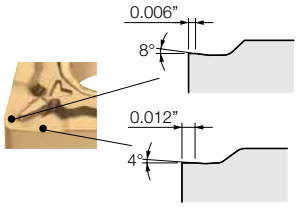
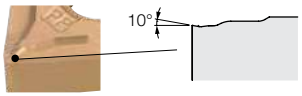
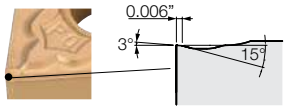
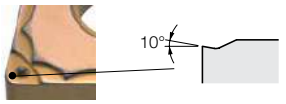
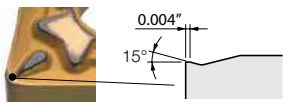
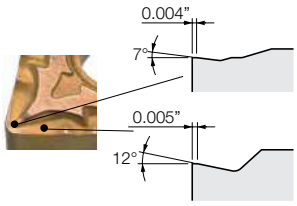
Grades	DLC	
	PDL010	PDL025
Insert Color		

Uncoated Carbide

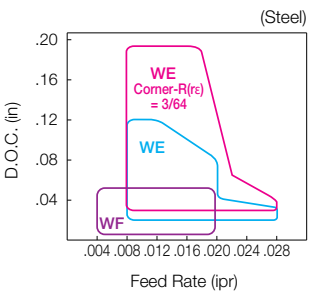
Grades	Carbide				
	GW05	GW15	GW25	KW10	SW05
Insert Color					

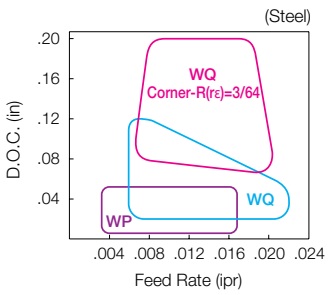
Steel

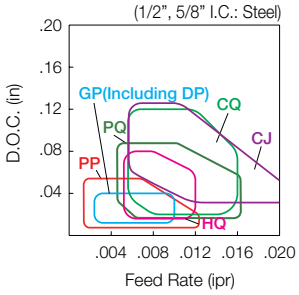
1 *Molded Chipbreaker*

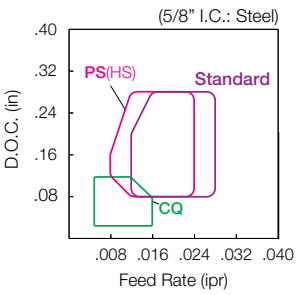
Finishing (Wiper Edge)	WF			Good chip control in finishing operations. Excellent surface finish by controlling adhesion. Less cutting force due to sharp cutting edge.
	WP			Double feed rate is available for finishing to light machining, while maintaining a smooth finish.
Finishing-Medium (Wiper Edge)	WE			Wide application range is available with improved chip control and high stability. Good surface finish at high feed rates.
	WQ			Double feed rate possible while maintaining a smooth finish. High efficiency and good chip control.
Finishing	PP			3-step dot structure realizes stable chip control at a wide range of feed rates. Less cutting force due to sharp cutting edge and smooth rake face.
Finishing-Medium	PQ			Stable chip control over a wide feed rate range. Well-balanced edge sharpness and toughness.
Finishing	GP			Finishing to light machining. Good chip control.
Finishing-Medium	HQ			Sharp cutting performance with 3-D rake angle and double projection design.
Finishing-Medium	CQ			Good chip control at various D.O.C. such as copying. Applicable for up-facing.

Applicable Chipbreaker Range (D.O.C. Refers to Radial Depth of Cut)



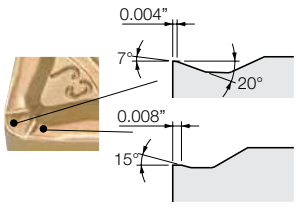
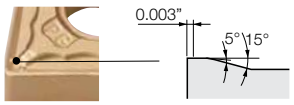
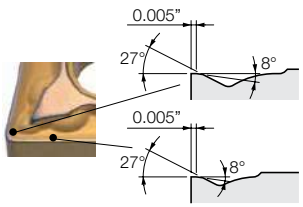
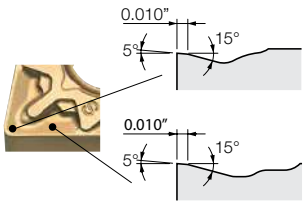
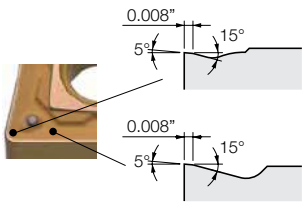
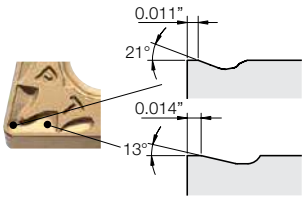
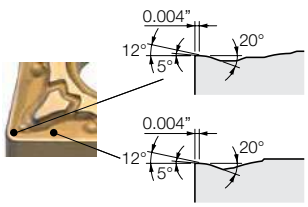
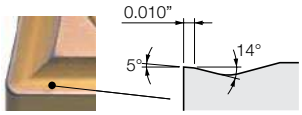




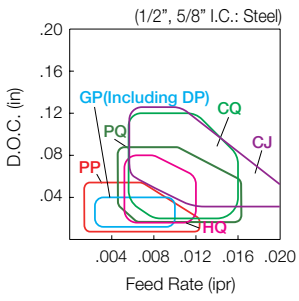


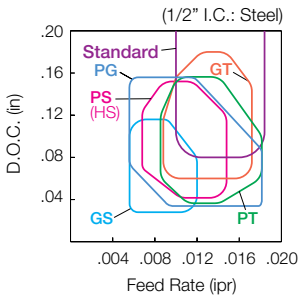
Steel

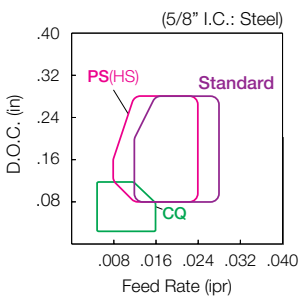
1 *Molded Chipbreaker*

Finishing-Medium (Up-Facing)	CJ			Ensures chips will curl even in small depth, high feed rate machining. Improves chip evacuation when copying and up-facing.
Medium-Roughing	PG			Stable machining with a balance of edge sharpness and strength. Prevents chip clogging at high feed rates. Good chip control at low feed rates. Stable machining with wide chip control range.
Medium-Roughing	GS			Strong edge chipbreaker. Stable for continuous machining and light interrupted machining.
Medium-Roughing	PS			General purpose chipbreaker. More stable due to large contact surface.
Medium-Roughing	HS			General purpose chipbreaker. Applicable for copying.
Medium-Roughing / High Feed Rate	PT			Low cutting force during high feed machining. Land support structure.
Medium-Roughing / High Feed Rate	GT			Strong edge chipbreaker. Wide land design and smooth chip control even at high feed rate machining.
Roughing	Standard			Low cutting force and suitable for large D.O.C. roughing.

Applicable Chipbreaker Range (D.O.C. Refers to Radial Depth of Cut)

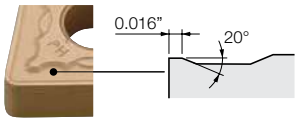
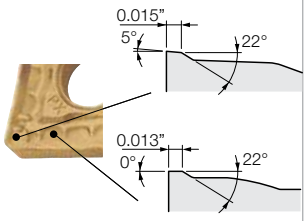




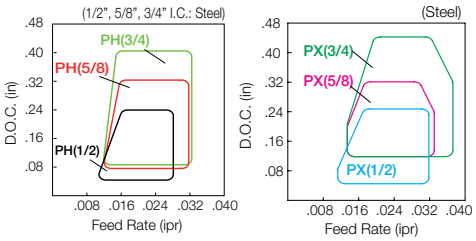


Steel

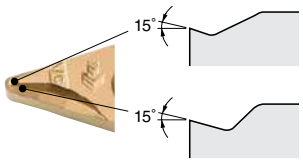
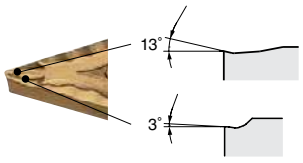
1 *Molded Chipbreaker*

Roughing	PH			For roughing of steel and cast iron. Suitable for heavy interrupted machining and for workpieces with scale due to strong cutting edge.
Single Sided Roughing (High Feed Rate)	PX			Roughing and high feed rate operation. Low cutting force chipbreaker.

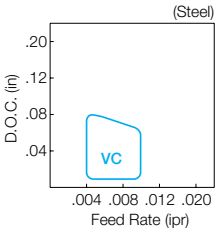
● **Applicable Chipbreaker Range** (D.O.C. Refers to Radial Depth of Cut)

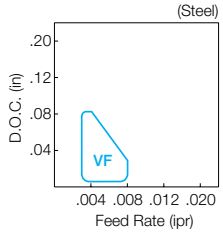


Steel (Copying / Undercutting, Varied D.O.C.)

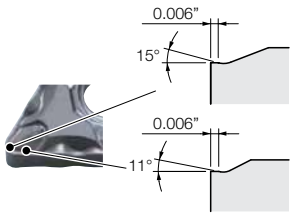
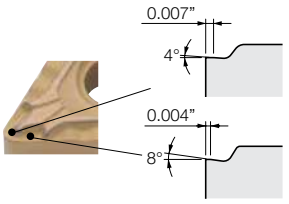
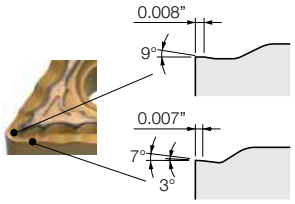
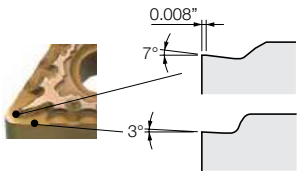
Finishing-Medium	VC			Handed chipbreaker for copying. Good chip control at varied D.O.C. because of the large space on the main cutting edge side.
Finishing-Medium	VF			Good chip control for varied D.O.C. such as copying and undercutting.

● **Applicable Chipbreaker Range** (D.O.C. Refers to Radial Depth of Cut)

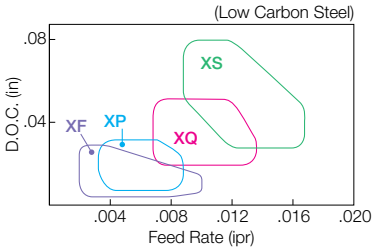




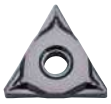
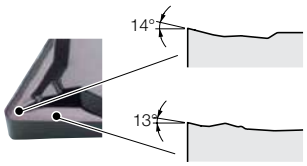
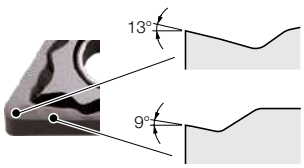
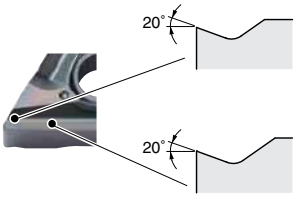
Steel (Copying / Undercutting, Varied D.O.C.)

Finishing	XF			Excellent chip control at high speed and small D.O.C. machining of low carbon steel.
Finishing	XP			Short chips when finishing due to sharp cutting and special design.
Medium	XQ			Consistent chip breaking at medium machining due to moderate rake face and special design.
Roughing	XS			Consistent chip breaking when roughing due to special rake angle design.

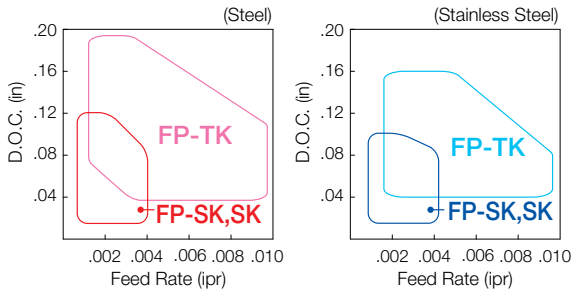
Applicable Chipbreaker Range (D.O.C. Refers to Radial Depth of Cut)

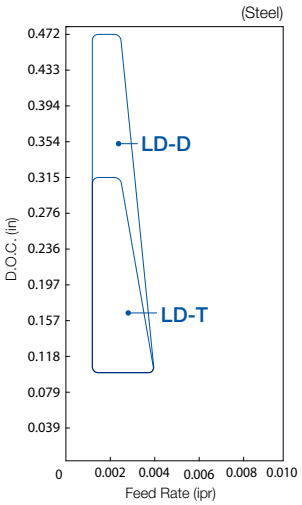


Steel / Stainless Steel (Small Parts Machining)

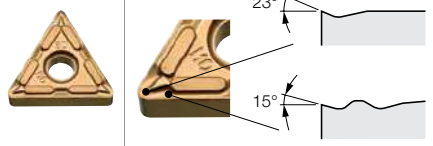
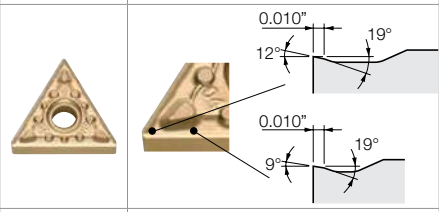
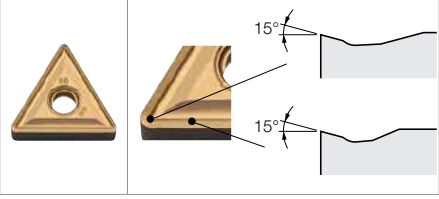
Finishing-Medium	SK	 FP-SK : Polished Sharp Edge -SK : Honed		For finishing to medium machining in automatic lathes. Sharp cutting performance equivalent to positive inserts. 2-step dot design provides reliable chip control at various D.O.C..
Medium-Roughing	FP-TK			For medium to high feed rate in automatic lathes (When machining workpieces of medium to large dia.) Superior cutting performance achieved by sharp edge and polished surface. Smooth chipbreaker geometry improves chip flow with less adhesion. Large curled chips.
Large D.O.C.	LD			Available for greater depths of cut than many conventional chipbreakers. Achieves high-precision machining in a single pass. Chipbreaker shape optimized for various depths of cut. Stable chip control in a wide range of machining applications.

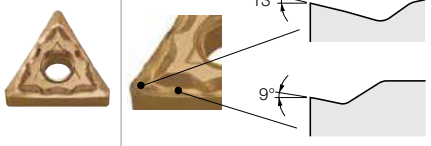
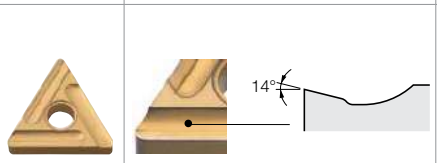
Applicable Chipbreaker Range
(D.O.C. Refers to Radial Depth of Cut)





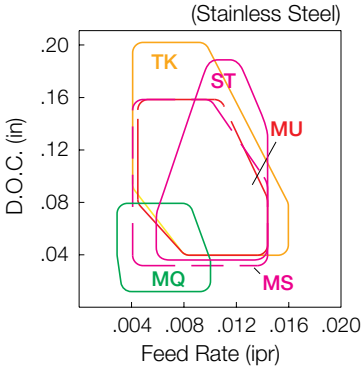
Stainless Steel / Heat-Resistant Alloy / Titanium Alloy

Finishing	MQ		Large rake angle and circular edge line. Low cutting force and good chip control.
Medium-Roughing	MS		Superior cutting edge sharpness and strength achieved by a positive land. Extra strength of cutting edge inhibits damage from wall shouldering.
Medium-Roughing	MU		Large rake angle reduces cutting force. Less burring achieved by diminishing damage from notching.

Medium-Roughing	TK		Smooth chipbreaker geometry improves chip flow with less adhesion. Large curled chips.
Medium-Roughing	ST		Lower cutting forces due to large rake angle. Less notching with special design.

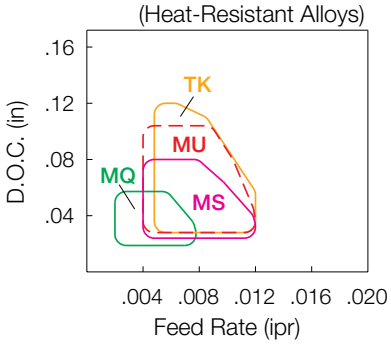
Stainless Steel

Applicable Chipbreaker Range
(D.O.C. Refers to Radial Depth of Cut)



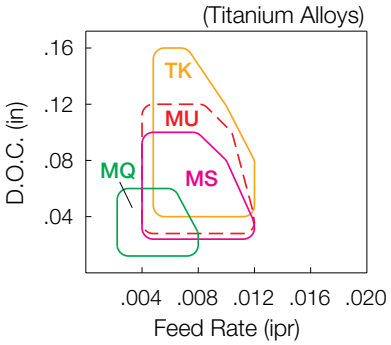
Heat-Resistant Alloy

Applicable Chipbreaker Range
(D.O.C. Refers to Radial Depth of Cut)

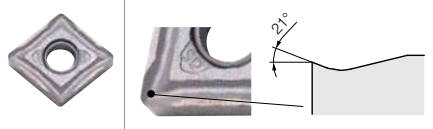
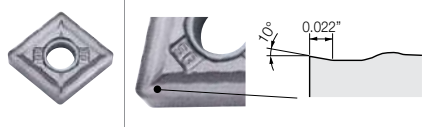
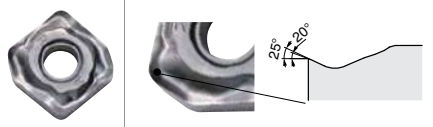


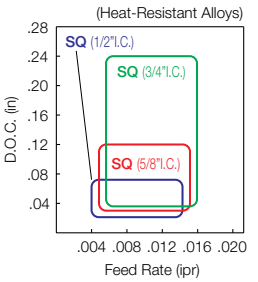
Titanium Alloy

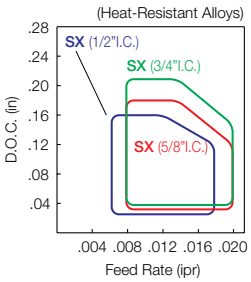
Applicable Chipbreaker Range
(D.O.C. Refers to Radial Depth of Cut)

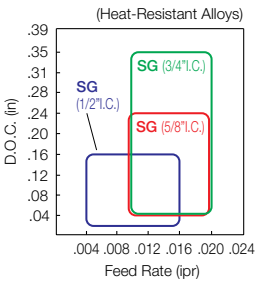


Heat-Resistant Alloy

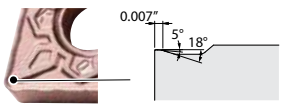
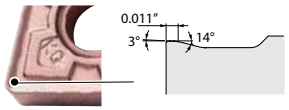
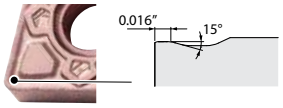
Finishing-Medium	SQ		Effective for burr suppression and reducing notching with positive cutting edge (inclined in (-) direction)
Roughing	SG		Stable chip control during heavy machining applications and high-strength land with low cutting force design.
Roughing (Single Sided)	SX		Slant cutting edge reduces cutting force. Less burring achieved by unique cutting edge design.





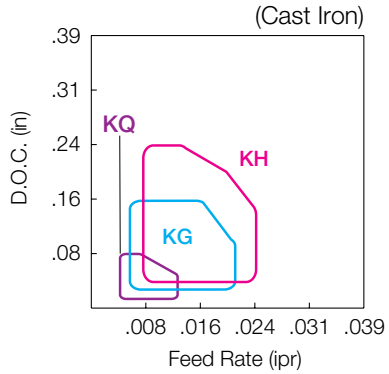


Cast Iron (K Series)

Sharp Cutting	KQ			Sharp cutting chipbreaker. Edge geometry is great when requiring sharpness such as machining thin-walled workpieces.
Medium	KG			Excellent balance of sharpness and strength. Excellent stability in continuous machining.
Medium-Roughing	KH			Good for heavily interrupted machining. Strong edge chipbreaker. Improved locating/seating in the toolholder pocket, with high reliability.

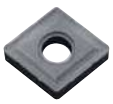
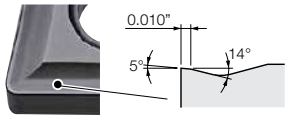
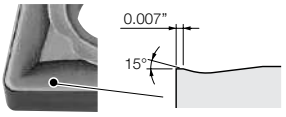
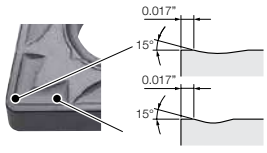
Applicable Chipbreaker Range

(D.O.C. Refers to Radial Depth of Cut)

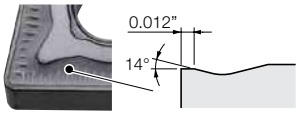
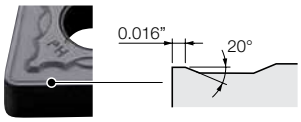


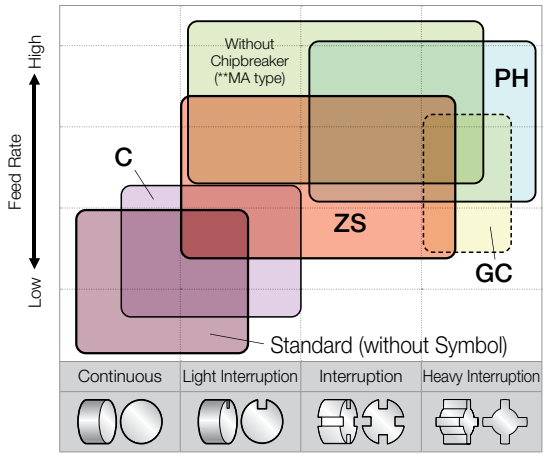
Cast Iron

Sharp Cutting Oriented

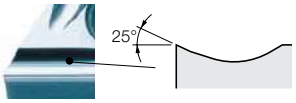
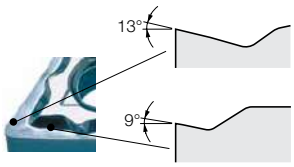
Standard			Standard chipbreaker for continuous to light interrupted machining of cast iron. (Low cutting force)
C			High feed rate chipbreaker for continuous to light interrupted machining of cast iron.
ZS			Standard chipbreaker for light interrupted to interrupted machining of cast iron. (High stability)
Without Chipbreaker			High feed rate chipbreaker for light interrupted machining of cast iron.

Stability Oriented

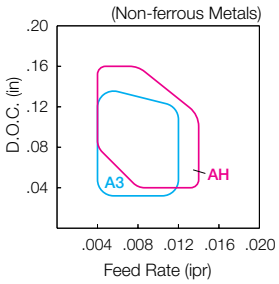
GC			Chipbreaker for heavy interrupted machining of cast iron. (Tough edge chipbreaker)
PH			Chipbreaker for roughing of cast iron and steel. Suitable for heavy interrupted machining and for workpieces with scale due to strong cutting edge.

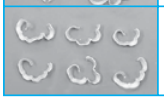


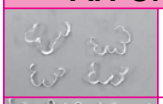
Non-ferrous Metals

Finishing-Medium	A3			Large rake angle and smooth surface. Good chip control and less adhesion.
Medium-Roughing	AH		 G Class: Sharp Edge Prep. M Class: Honed Edge Prep.	Polished chipbreaker. Smooth chip control and less adhesion.

Applicable Chipbreaker Range (D.O.C. Refers to Radial Depth of Cut)

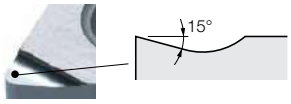
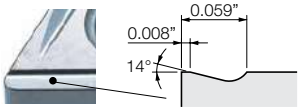


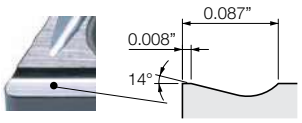
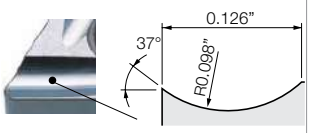
A3 Chipbreaker	
	D.O.C.= 0.08” f= 0.008 ipr
	D.O.C.=0.08” f= 0.012 ipr

AH Chipbreaker	
	D.O.C.= 0.08” f= 0.008 ipr
	D.O.C.= 0.08” f= 0.012 ipr

Steel

2 *Ground Chipbreaker*

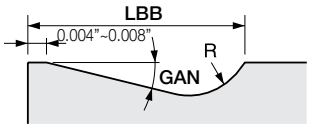
Sharp Cutting	S			Sharp edge and less cutting force. Good chip control and smooth chip evacuation.
Medium	B			Suitable for general purpose machining at feed rate from 0.006 to 0.010ipr.

Sharp Cutting	C			Suitable for general purpose machining at feed rate from 0.008 to 0.014ipr.
Medium	25R			Applicable to sticky material such as low carbon steel. Large rake angle also suitable for stainless steel.

Effectiveness of Ground Chipbreaker

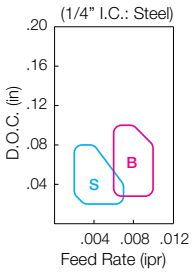
(1) Lower cutting force and sharper cutting edge
(2) Improved adhesion resistance
(3) Improved dimensional accuracy and surface finish
(4) Controlled chip flow

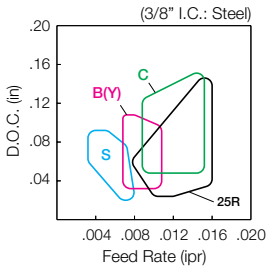
Specification of B, C, D and Parallel Ground Chipbreaker

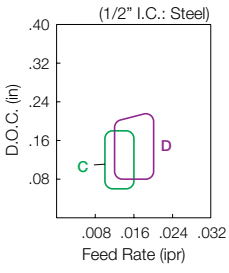


Insert Type	I.C. Size	Chipbreaker Name	LBB (in)	GAN	R (in)
CNGG	3/8, 1/2	Without Indication (Similar to C)	0.087	14°	0.040
WNGG	3/8	Without Indication (Similar to C)	0.087	14°	0.040
TNGG	1/4, 3/8	B	0.060	14°	0.020
	3/8, 1/2	C	0.087	14°	0.040
DNGG	3/8, 1/2	Without Indication (Similar to C)	0.100	14°	0.080
VNGG	3/8	Without Indication (Similar to B)	0.060	14°	0.020
SNGG	3/8, 1/2	B	0.060	14°	0.020
	1/2	C	0.087	14°	0.040

Applicable Chipbreaker Range (D.O.C. Refers to Radial Depth of Cut)

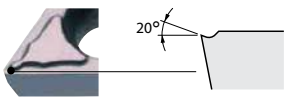
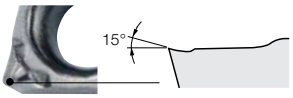
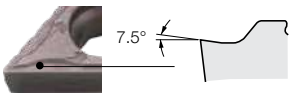
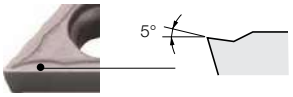
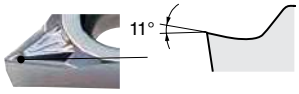
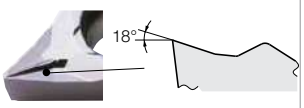
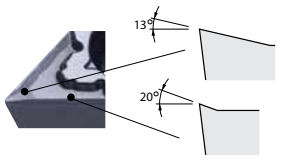
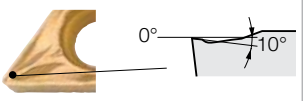


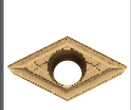
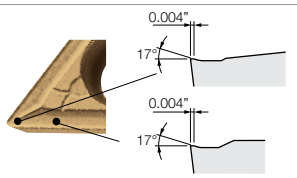
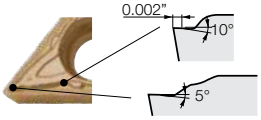
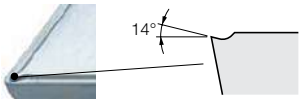
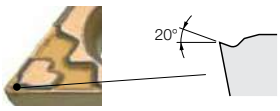
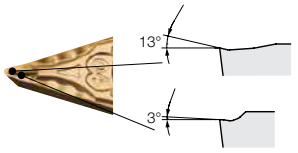
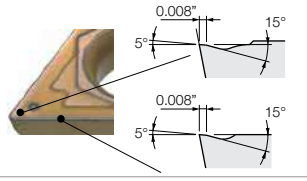
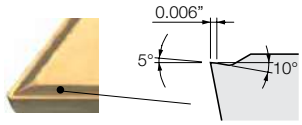
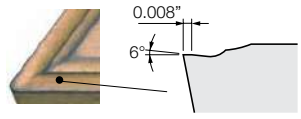




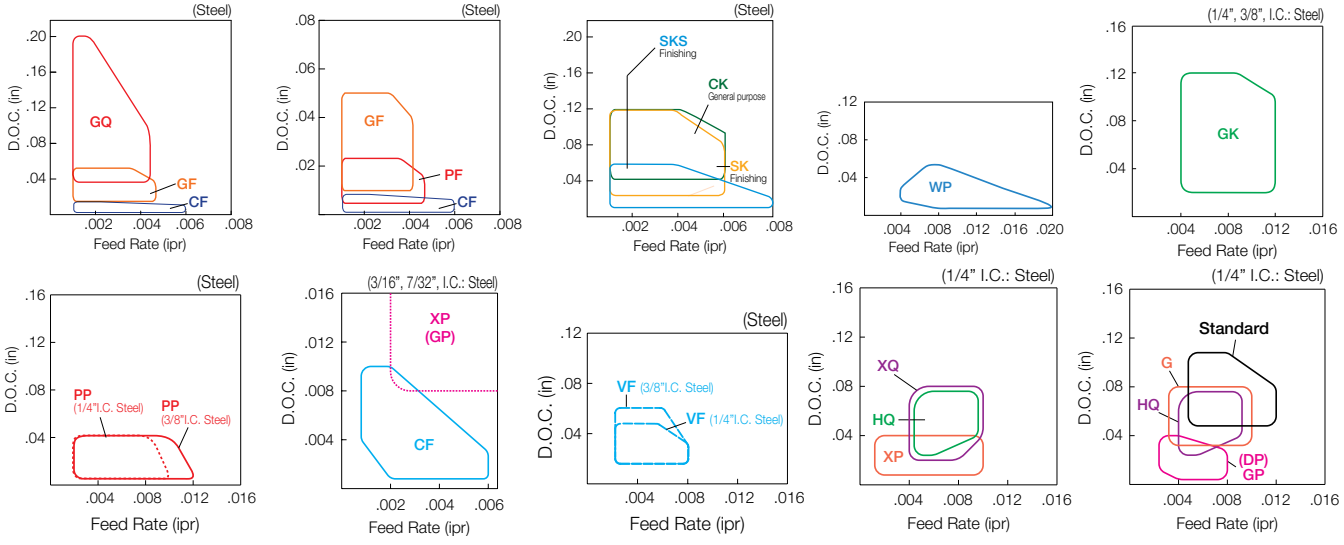
Steel

1 *Molded Chipbreaker*

Minute D.O.C.	CF			Available for minute D.O.C. (0.0008" - 0.008") finishing.
Finishing	PF			Finishing chipbreaker for boring with D.O.C. of (0.006"~0.024")
Finishing	GF			Dot located close to ridge line of cutting edge on corner. Breaks chips into small pieces at low D.O.C.
Finishing-Medium	GQ			Enables cutting over a wide range of conditions by using the optimum chipbreaker width according to the cutting depth.
Finishing	SKS			Finishing chipbreaker with a D.O.C. of 0.2mm-1.5mm. Stable chip control with rake face, bottom face, and chipbreaker face design.
Finishing	SK			Sharp cutting performance due to Large rake angle. Large dot to the corner edge improved chip control in a wide feed rate range.
Finishing	CK			Good cutting performance. Applicable without hand for two direction cutting on automatic lathe.
Finishing	WP			Dual-dot structure with one dot offering stabilized chip control at low feed rates, while a second dot controls chips at higher feed rates.

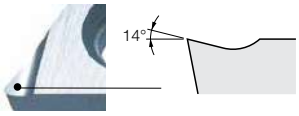
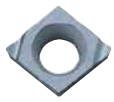
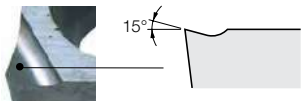
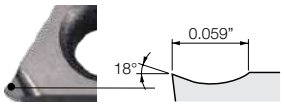
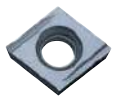
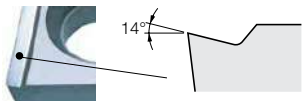
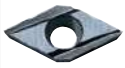
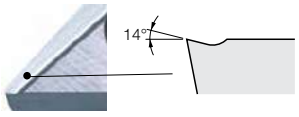
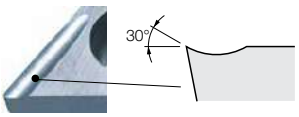
Finishing-Medium	GK			Good chip evacuation at wide range by breaker dot and wide chip pocket.
Finishing	PP			3-step Smart Dot structure is applicable to a wide range of feed rates in steel finishing. Smooth taper cutting edge reduces cutting forces.
Finishing	DP			Consistent chip breaking performance for finishing.
Finishing	GP			Good chip control at finishing. Applicable to sticky material like low carbon steel, pipe material.
Finishing	VF			Good chip control for varied D.O.C. such as copying and undercutting.
Finishing-Medium	HQ			General purpose chipbreaker for medium machining.
Medium	G			Chipbreaker for short chips at medium machining.
Medium	Standard			Strong edge chipbreaker for medium machining range.

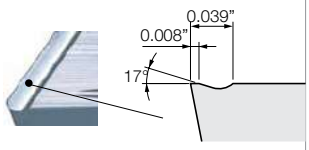
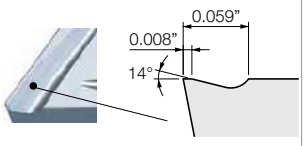
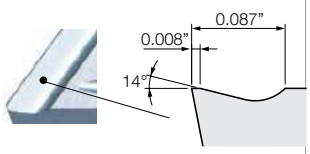
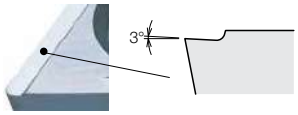
Applicable Chipbreaker Range (D.O.C. Refers to Radial Depth of Cut)



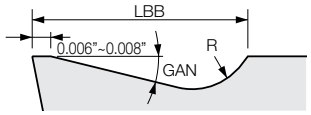
Steel

2 *Ground Chipbreaker*

Finishing	(Without Indication)			Good chip control during finishing to light machining with low cutting forces.
Finishing	F			Good chip control during finishing to light machining with low cutting forces.
Finishing	P			Chipbreaker smoothly breaks chips and directs them towards the outside of the workpiece when boring. Sharp cutting performance and good surface finish.
Finishing-Medium	Y			Sharp cutting performance and good surface finish.
Low Feed	J			Slant chipbreaker width provides chip control at various D.O.C..
Low Feed	U			Good chip control at low feed rates and varied D.O.C. with low cutting force. Suitable for automatic lathes.

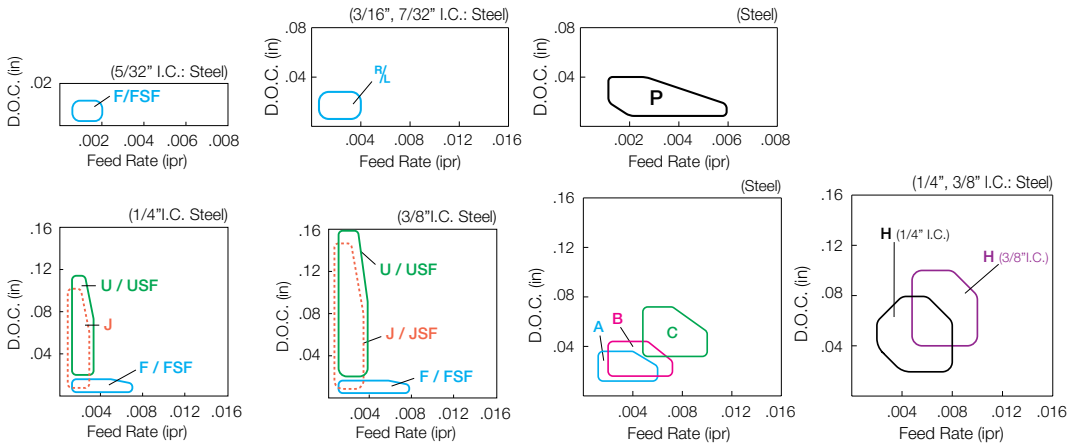
Finishing	A			Large rake angle and low cutting force. Narrow chipbreaker width and consistent chip control.
Finishing-Medium	B			General purpose chipbreaker for medium machining. Good balance between chip control and sharp cutting.
Medium	C			Applicable to high load machining. Good chip flow and less resistance.
Finishing-Medium	H			Sharp cutting performance and small curled chips.

Specification of A, B, C and parallel ground chipbreaker



Insert Type	Size	Chipbreaker Name	LBB (in)	GAN	R (in)
TPGR	1/4	A	0.040	17°	0.020
	1/4, 3/8	B	0.060	14°	0.020
	3/8	C	0.087	14°	0.040
SPGR	3/8	Without Indication (Similar to B)	0.060	14°	0.020
	1/2	Without Indication (Similar to C)	0.087	14°	0.040

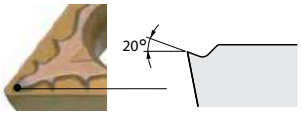
Applicable Chipbreaker Range (D.O.C. Refers to Radial Depth of Cut)



Low Carbon Steel (Pipe / Rolled Plate / Rolled Steel)

Finishing | **XP**

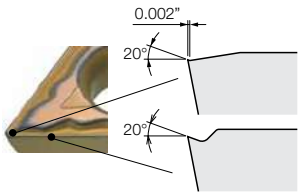




Wide chip control range and sharp cutting performance. Suitable for low carbon steel and sticky material.

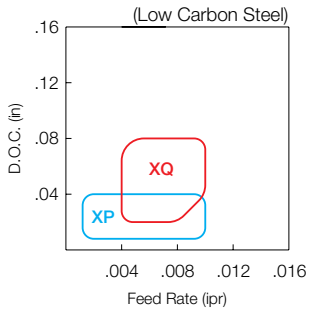
Finishing-Medium | **XQ**



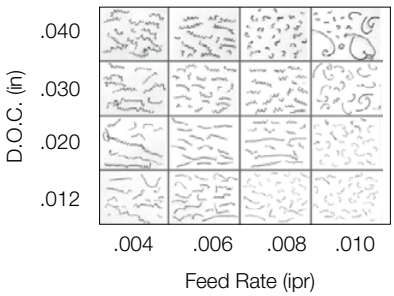


Wide chip control range and sharp cutting performance. Suitable for low carbon steel and sticky material.

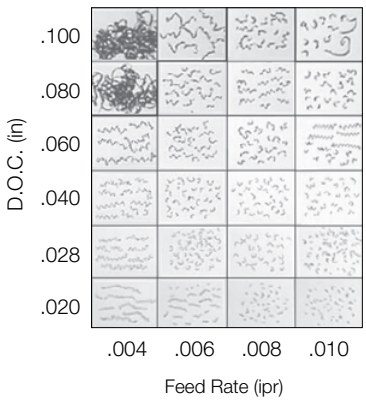
● **Applicable Chipbreaker Range** (D.O.C. Refers to Radial Depth of Cut)



XP Chipbreaker



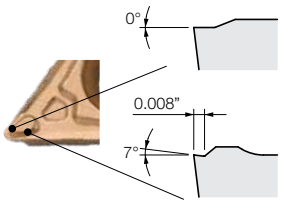
XQ Chipbreaker



Stainless Steel

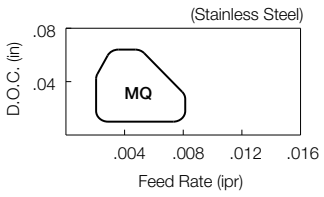
Finishing | **MQ**





Good chip evacuation when boring. Small curled chips. Prevents chip entanglement with toolholder and stabilizes surface roughness.

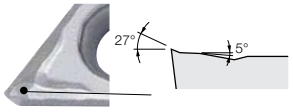
● **Applicable Chipbreaker Range** (D.O.C. Refers to Radial Depth of Cut)



Non-ferrous Metals

Finishing | **AP**

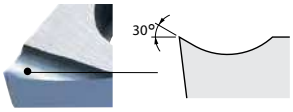




Stable chip evacuation and good surface finish when boring stainless steel with small curled chips evacuated towards the outside of the workpiece.

Finishing-Medium | **A3**

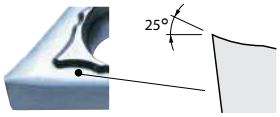




Large rake angle, smooth chip flow and less adhesion. Sharp edge and good surface finish.

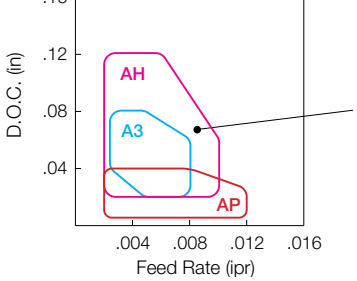
Finishing-Medium | **AH**





Positive chip groove and good chip control with low cutting forces. Polished surface reduces adhesion.

● **Applicable Chipbreaker Range** (D.O.C. Refers to Radial Depth of Cut)



AH Chipbreaker



How to Read "Turning Inserts" Pages

- Refer below on how to read the "Indexable Turning Inserts" tables
- Section C contains similar content.

Classification of usage

- ✖ Interruption / 1st Choice
- ✖ Interruption / 2nd Choice
- ● Light Interruption / 1st Choice
- ○ Light Interruption / 2nd Choice
- ● Continuous / 1st Choice
- ○ Continuous / 2nd Choice

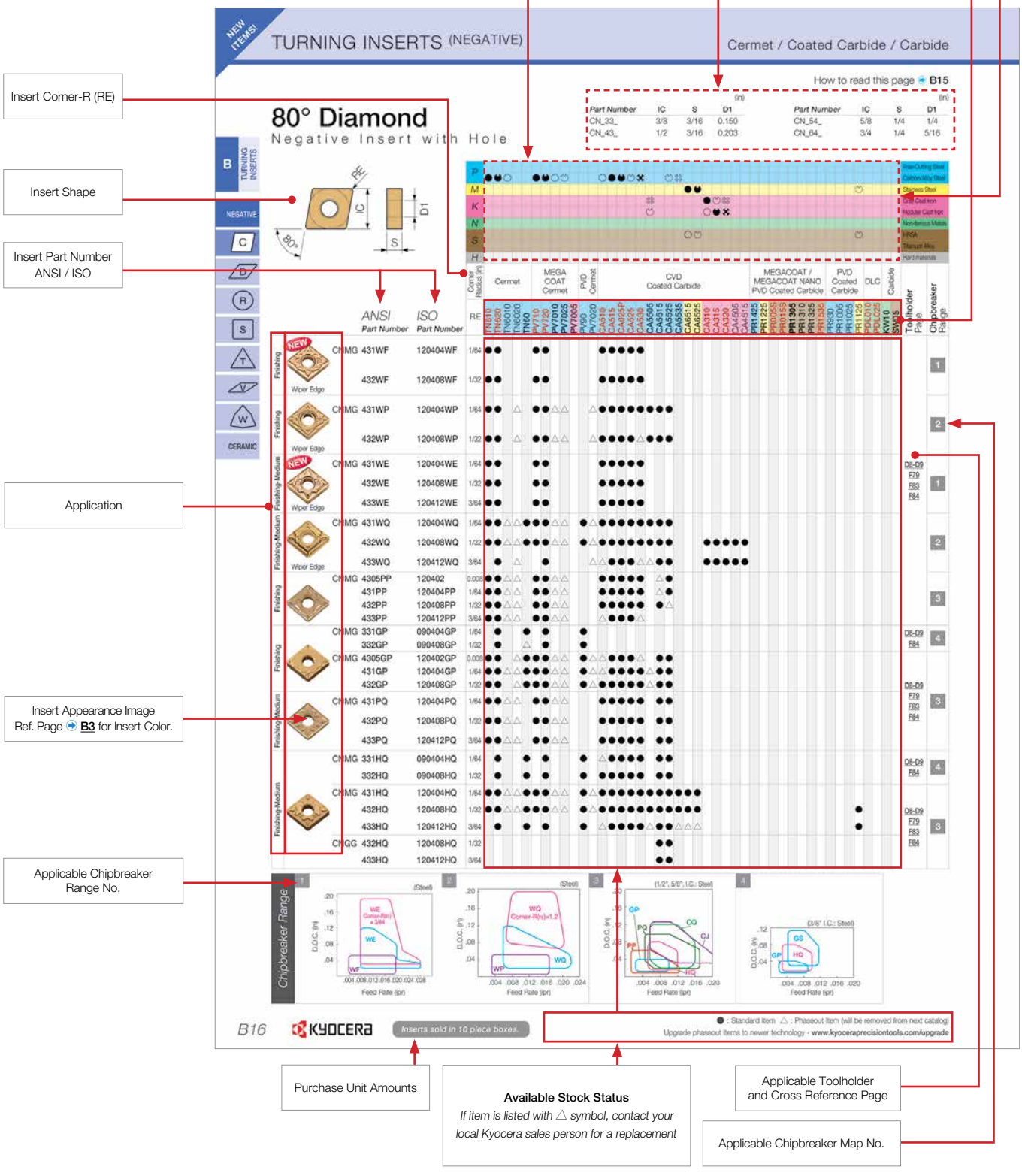
(For hardness under 45HRC)

Recommended grades for each application are shown here.

Inserts' ISO Classification of Usage
(Workpiece materials are written on the right side)

Insert Dimensions

Insert Grades
(Red Fonts Are New Grades)



Purchase Unit Amounts

Available Stock Status
If item is listed with △ symbol, contact your local Kyocera sales person for a replacement

Applicable Toolholder and Cross Reference Page

Applicable Chipbreaker Map No.

How to read this page B15

80° Diamond

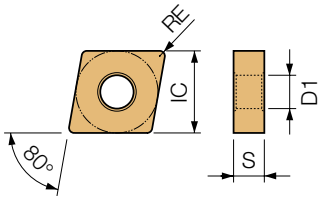
Negative Insert with Hole

(in)

Part Number	IC	S	D1
CN_33_	3/8	3/16	0.150
CN_43_	1/2	3/16	0.203

(in)

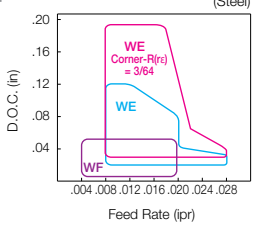
Part Number	IC	S	D1
CN_54_	5/8	1/4	1/4
CN_64_	3/4	1/4	5/16



P Free-Cutting Steel, Carbon/Alloy Steel
M Stainless Steel
K Gray Cast Iron, Nodular Cast Iron
N Non-ferrous Metals
S HRSA, Titanium Alloy
H Hard materials

		ANSI Part Number	ISO Part Number	RE	Corner Radius (in)	Cermet		CVD Coated Carbide																			MEGACOAT / MEGACOAT NANO PVD Coated Carbide											PVD Coated Carbide				DLC		Carbide		Toolholder Page	Chipbreaker Range
						TN610	TN620	TN60	PV710	PV720	PV730	PV7005	PV90	CA510	CA515	CA025P	CA525	CA530	CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA310	CA315	CA320	CA4505	CA4515	PR1705	PR1725	PR1425	PR1225	PR005S	PR015S	PR1305	PR1310	PR1325	PR1535	PR930	PR1005	PR1025	PR1125	PDL010	PDL025	KW10	SW05		
Finishing	Wiper Edge	CNMG	431WF	120404WF	1/64	●	●			●	●			●	●	●	●	●																													
			432WF	120408WF	1/32	●	●			●	●			●	●	●	●	●																													1
Finishing	Wiper Edge	CNMG	431WP	120404WP	1/64	●	●			●	●			●	●	●	●	●	●	●	●																											
			432WP	120408WP	1/32	●	●			●	●			●	●	●	●		●	●	●																											2
Finishing-Medium	Wiper Edge	CNMG	431WE	120404WE	1/64	●	●			●	●			●	●	●	●	●																													
			432WE	120408WE	1/32	●	●			●	●			●	●	●	●	●																													
			433WE	120412WE	3/64	●	●			●	●			●	●	●	●	●																													D8-D9 F87 F91 F92
Finishing-Medium	Wiper Edge	CNMG	431WQ	120404WQ	1/64	●	●			●	●			●	●	●	●	●	●	●	●																											
			432WQ	120408WQ	1/32	●	●	△		●	●		●	●	●	●	●	●	●	●	●			●	●	●	●	●																		2
			433WQ	120412WQ	3/64		●				●				●	●	●			●	●				●	●	●	△	●																		
Finishing		CNMG	4305PP	120402PP	0.008	●	●		●	●	●	●		●	●	●	●	●		△	●																										
			431PP	120404PP	1/64	●	●		●	●	●	●		●	●	●	●	●			●																										
			432PP	120408PP	1/32	●	●		●	●	●	●		●	●	●	●	●			●																										
			433PP	120412PP	3/64	●	●		●	●	●	●			●	●	●																													3
Finishing		CNMG	331GP	090404GP	1/64		●	●			●	●	●																																
			332GP	090408GP	1/32		●				●	●	●																																	D9 F92	4
Finishing		CNMG	4305GP	120402GP	0.008	●	●	●		●	●	●			●	●	●			●	●																										
			431GP	120404GP	1/64	●	●	●		●	●	●	●		●	●	●	●		●	●																										
			432GP	120408GP	1/32	●	●	●		●	●	●	●		●	●	●	●		●	●																									D8-D9	
Finishing-Medium		CNMG	431PQ	120404PQ	1/64	●	●		●	●	●	●			●	●	●	●		●	●																									F87 F91 F92	3
			432PQ	120408PQ	1/32	●	●		●	●	●	●			●	●	●	●		●	●																										
			433PQ	120412PQ	3/64	●	●		●	●	●	●			●	●	●	●		●	●																										
Finishing-Medium		CNMG	331HQ	090404HQ	1/64		●	●			●	●			●	●	●	●		●	●																										
			332HQ	090408HQ	1/32		●	●			●	●			●	●	●	●		●	●																									D9 F92	4
		CNMG	431HQ	120404HQ	1/64	●	●	●	●	●	●			●	●	●	●	●	●	●	●	●	●													●									
			432HQ	120408HQ	1/32	●	●	●	●	●	●			●	●	●	●	●	●	●	●	●	●													●					△				D8-D9 F87 F91 F92	
			433HQ	120412HQ	3/64		●	●	●		●	●			●	●	●	●		●	●																					△					3
		CNGG	432HQ	120408HQ	1/32																●	●																								
			433HQ	120412HQ	3/64																●	●																										

Chipbreaker Range

1


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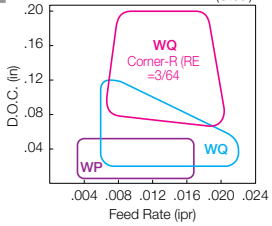

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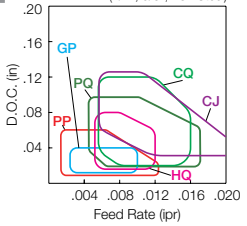

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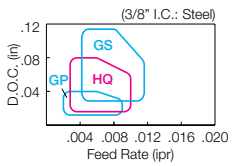


KYOCERA

Inserts sold in 10 piece boxes.

● : Standard Item △ : Phaseout Item (will be removed from next catalog)
Contact your local Kyocera sales engineer to upgrade old products to new technology

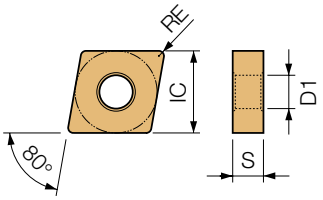
How to read this page ➔ B15

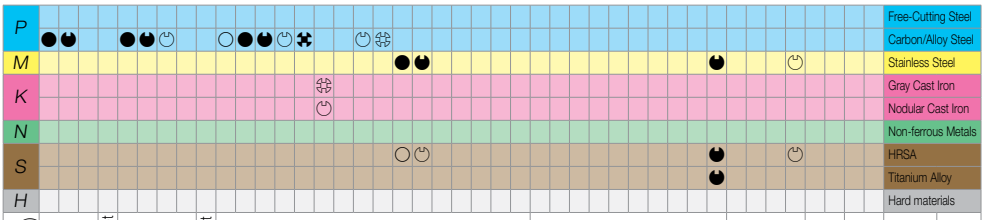
80° Diamond

Negative Insert with Hole

Part Number	IC	S	D1 (in)
CN_33_	3/8	3/16	0.150
CN_43_	1/2	3/16	0.203

Part Number	IC	S	D1 (in)
CN_54_	5/8	1/4	1/4
CN_64_	3/4	1/4	5/16

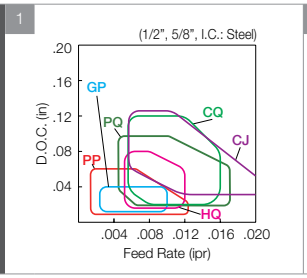




		ANSI Part Number	ISO Part Number	RE	Corner Radius (in)	Cermet		CVD Cermet	MEGA COAT Cermet			PVD Cermet	CVD Coated Carbide														MEGACOAT / MEGACOAT NANO PVD Coated Carbide											PVD Coated Carbide			DLC		Carbide		Toolholder Page	Chipbreaker Range
						TN610	TN620	TN60	CCX	PV710	PV720	PV730	PV7005	PV90	CA510	CA515	CA025P	CA525	CA530	CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA310	CA315	CA320	CA4505	CA4515	PR1705	PR1725	PR1425	PR1225	PR005S	PR015S	PR1305	PR1310	PR1325	PR1535	PR930	PR1005	PR1025	PR1125	PDL010	PDL025	KW10	SW05		
Finishing-Medium		CNMG	431CQ	120404CQ	1/64	●	●			●	●	●			●	●	●	●	●	△	●	●	●																							D8-D9 F87 F91 F92	
			432CQ	120408CQ	1/32	●	●	●		●	●	●		●	●	●	●	●	●	●	●	●																									
			433CQ	120412CQ	3/64									●	●	●	●	●	●	●	●	●																									
		CNMG	542CQ	160608CQ	1/32										●	●	●	●	●		●	●																							D9	1
	Up Facing		543CQ	160612CQ	3/64										●	●	●	●	△		△	●																								
Finishing-Medium		CNMG	432CJ	120408CJ	1/32										●	●	●	●	●	●	●	●																							D8-D9 F87 F91 F92	
			433CJ	120412CJ	3/64										●	●	●	●	●		●	●																								
		CNMG	543CJ	160612CJ	3/64											●	●		●		●																							D8-D9	
	Up Facing		544CJ	160616CJ	1/16											●	●	●	●		●																								
Medium		CNMG	431TN-V	120404TN-V	1/64			●																																			D8-D9 F87 F91 F92	2
			432TN-V	120408TN-V	1/32			●																																				
Medium-Roughing		CNMG	331GS	090404GS	1/64		●	△			●	●				●	●	●	●			●																							D9 F92	See B16 4
			332GS	090408GS	1/32		●	●			●	●			●	●	●	●	●		●	●																								
		CNMG	431GS	120404GS	1/64		●				●	●		●		●	●	●	●		●	●																								3
			432GS	120408GS	1/32		●				●	●		●	●	●	●	●	●		●	●																								
			433GS	120412GS	3/64									△		●	●	●	●		●	●																								
Medium-Roughing		CNMG	431PG	120404PG	1/64	●	●			●	●	●			●	●	●	●	●																		●								D8-D9 F87 F91 F92	
			432PG	120408PG	1/32	●	●			●	●	●			●	●	●	●	●																		●									
			433PG	120412PG	3/64		●				●	●			●	●	●	●	●																		●									
			434PG	120416PG	1/16											●	●	●	●																											
Medium-Roughing		CNMG	431PS	120404PS	1/64		●				●	●			●	●	●	●	●	●	●	●	●	●																		△				
			432PS	120408PS	1/32		●				●	●			●	●	●	●	●	●	●	●	●	●																		△				
			433PS	120412PS	3/64										●	●	●	●	●	●	●	●		●																		△				
			434PS	120416PS	1/16											●	●	●	●		●	●		●																						
		CNMG	543PS	160612PS	3/64										●	●	●	●	●		●	●	●	●																					D9	
			544PS	160616PS	1/16										●	●	●	●	●	●	●	●																								

Chipbreaker Range

1



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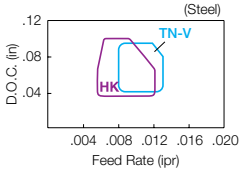

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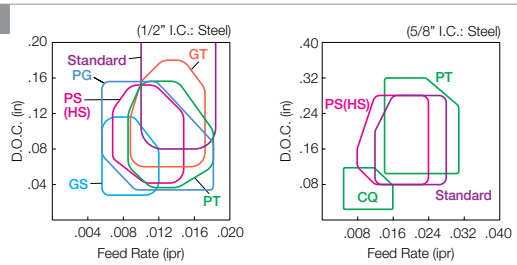


● : Standard Item △ : Phaseout Item (will be removed from next catalog)

Contact your local Kyocera sales engineer to upgrade old products to new technology

Inserts sold in 10 piece boxes.

How to read this page B15

80° Diamond

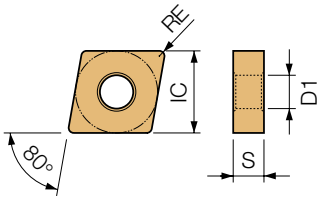
Negative Insert with Hole

(in)

Part Number	IC	S	D1
CN_33_	3/8	3/16	0.150
CN_43_	1/2	3/16	0.203

(in)

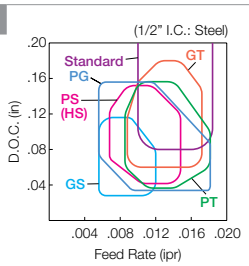
Part Number	IC	S	D1
CN_54_	5/8	1/4	1/4
CN_64_	3/4	1/4	5/16



	ANSI Part Number	ISO Part Number	RE	Corner Radius (in)	Cermet		CVD Coated Carbide																				MEGACOAT / MEGACOAT NANO PVD Coated Carbide														PVD Coated Carbide			DLC		Carbide		Toolholder Page	Chipbreaker Range
					TN610	TN620	TN60	CCX	PV710	PV720	PV730	PV7005	PV90	CA510	CA515	CA025P	CA525	CA530	CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA310	CA315	CA320	CA4505	CA4515	PR1705	PR1725	PR1425	PR1225	PR005S	PR015S	PR1305	PR1310	PR1325	PR1535	PR930	PR1005	PR1025	PR1125	PDL010	PDL025	KW10	SW05		
Medium-Roughing	CNMG 432PT	120408PT	1/32											●	●	●	●	●	●	●	●	●	●	●																							D8-D9 F87 F91 F92	
	CNMG 433PT	120412PT	3/64											●	●	●	●	●	●	●	●	●	●																									
	CNMG 542PT	160608PT	1/32											●	●	●	●	●	●	●	●	●	●																									
	CNMG 543PT	160612PT	3/64												●	●	●	●		●	●	●	●																							D9	
High Feed Rate	CNMG 544PT	160616PT	1/16												●	●	●	●		●	●	●	●																									
Medium-Roughing	CNMG 432GT	120408GT	1/32										●	●	●	●	●	●		●	●																											1
	CNMG 433GT	120412GT	3/64												●	●	●			●	●																							D8-D9 F87 F91 F92	
High Feed Rate	CNMG 643GT	190612GT	3/64																	●																											
Roughing	CNMG 431	120404	1/64		●	●	●	●	●	●	●	△	●	●	●	●	●	●			●	●	●	●	●	●										●					△					
	CNMG 432	120408	1/32		●	●	●	●	●	●	●		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●										●					△		●			
	CNMG 433	120412	3/64				●	●				●		●	●	●	●	●		●	●	●	●	●	●	●	△	●										●					△					
	CNMG 434	120416	1/16																					●	●	●	△	●																			
	CNMG 542	160608	1/32													●	●			●	●																											
	CNMG 543	160612	3/64													●	●	●	●	●	●	●			●	●	●																			D9	2
	CNMG 544	160616	1/16																			●			●	●	●																			
	CNMG 642	190608	1/32																●						●	●	△	●																			
	CNMG 643	190612	3/64											●	●	●	●	●		●	●	●			●	●	△	●																●			
	CNMG 644	190616	1/16													●	●	●			●	●			●	●	●	●																			
Roughing	CNMG 432PH	120408PH	1/32											●	●	●	●	●		●	●	●			●	●	●	●	●																	D8-D9 F87 F91 F92	
	CNMG 433PH	120412PH	3/64											●	●	●	●	●		●	●	●			●	●	●	●	●																		
	CNMG 434PH	120416PH	1/16												●	●	●	●			●	●			●	●	●		●																		
	CNMG 542PH	160608PH	1/32											●	●	●	●	●			●																											
	CNMG 543PH	160612PH	3/64											●	●	●	●	●		●	●	●			●	●	●		●																	D9	3
	CNMG 544PH	160616PH	1/16											●	●	●	●	●		●	●				●	●	●	△	●																		
	CNMG 642PH	190608PH	1/32											●	●	●	●	●		●	●																											
	CNMG 643PH	190612PH	3/64											●	●	●	●	●		●	●	●																									
	CNMG 644PH	190616PH	1/16												●	●	●	●		△	●	●																									
	CNMG 646PH	190624PH	3/32												●	●	●																														

Chipbreaker Range

1



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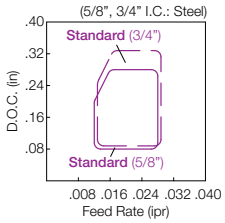

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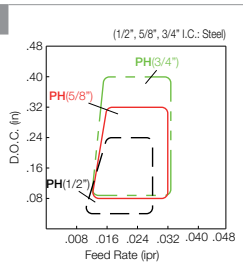


Inserts sold in 10 piece boxes.

● : Standard Item △ : Phaseout Item (will be removed from next catalog)

Contact your local Kyocera sales engineer to upgrade old products to new technology

How to read this page ➔ B15

80° Diamond

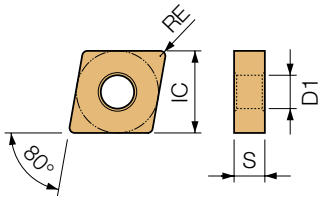
Negative Insert with Hole

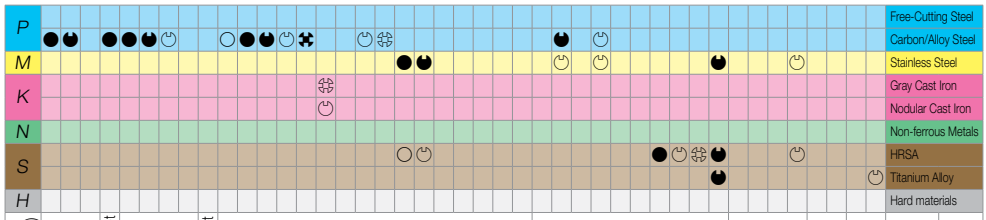
(in)

Part Number	IC	S	D1
CN_33_	3/8	3/16	0.150
CN_43_	1/2	3/16	0.203

(in)

Part Number	IC	S	D1
CN_54_	5/8	1/4	1/4
CN_64_	3/4	1/4	5/16

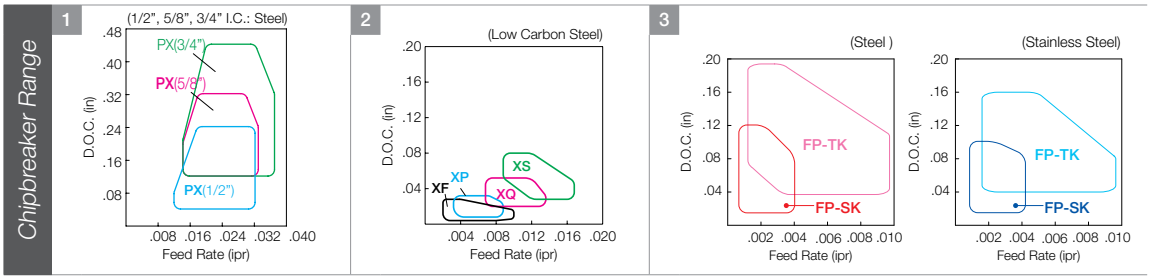




		ANSI Part Number	ISO Part Number	RE	TN610	TN620	TN60	CCX	PV710	PV720	PV730	PV7005	PV90	CA510	CA515	CA025P	CA525	CA530	CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA310	CA315	CA320	CA4505	CA4515	PR1705	PR1725	PR1425	PR1225	PR005S	PR015S	PR1305	PR1310	PR1325	PR1535	PR930	PR1005	PR1025	PR1125	PDL010	PDL025	KW10	SW05	Toolholder Page	Chipbreaker Range
Corner Radius (in)					Cermet			CVD Cermet	MEGA COAT Cermet				PVD Cermet	CVD Coated Carbide																	MEGACOAT / MEGACOAT NANO PVD Coated Carbide										PVD Coated Carbide				DLC		Carbide			
Single Sided / Roughing		CNMM	432PX	120408PX	1/32										●	●	●	●	●		●	●	●																								D8-D9 F87 F91 F92	1
			433PX	120412PX	3/64										●	●	●	●	●		●	●	●																									
			434PX	120416PX	1/16												●	●				△																									
		CNMM	542PX	160608PX	1/32												●	●	●																												
			543PX	160612PX	3/64											●	●	●	●			●	●																								
			544PX	160616PX	1/16											●	●	●	●			●	●																								
		CNMM	642PX	190608PX	1/32												●	●				●																									
			643PX	190612PX	3/64											●	●	●	●			●	●																								
			644PX	190616PX	1/16											●	●	●	●			●	●																								
	High Feed Rate		646PX	190624PX	3/32												●	●	●				●																								
Finishing		CNMG	431XF	120404XF	1/64	●	●		●	●	●	●																																		D8-D9 F87 F91 F92	2
	Low Carbon Steel Small D.O.C.		432XF	120408XF	1/32	●	●		●	●	●	●																																		
Finishing		CNMG	431XP	120404XP	1/64	●	●	●	●	●	●	●			●	●	●				●	●																								
	Low Carbon Steel		432XP	120408XP	1/32	●	●	△	●	●	●	●		●		●	●	●	●			●	●																								
Medium		CNMG	431XQ	120404XQ	1/64	●	●	●	●	●	●	●		●	●	●	●	●	●			●	●																								
	Low Carbon Steel		432XQ	120408XQ	1/32	●	●	△	●	●	●	●		●	●	●	●	●	●			●	●																								
Roughing		CNMG	432XS	120408XS	1/32	●	●	●		●	●	●		●	●	●	●	●	●			●	●																								
	Low Carbon Steel																																													
Finishing-Medium		CNGG	4305MFP-SK	120402MFP-SK	<0.008							●																			●	△	●				●									D8-D9 E50 F87 F91 F92	3
	Sharp Edge / Polished		431MFP-SK	120404MFP-SK	<1/64							●																			●	△	●				●									
Medium-Roughing		CNGG	431FP-TK	120404FP-TK	1/64																										●	△	●				●									
	Sharp Edge / Polished		432FP-TK	120408FP-TK	1/32																										●	△	●				●									
Medium-Roughing		CNGG	431TK	120404TK	1/64																															△	△									●		
	Sharp Edge Stainless Steel / HRSA		432TK	120408TK	1/32																															△	△									●	D8-D9 F87 F91 F92	See B20 1
Medium-Roughing		CNMG	431TK	120404TK	1/64																		●	●												△	△	△	●				△					
			432TK	120408TK	1/32																		●	●												△	△	△	●				△					

• Insert with corner R (RE) dimension expressed with less than sign (e.g. **<0.002, <0.004, <0.008** etc.) indicate models with minus tolerance for corner R (RE).

Chipbreaker Range



● : Standard Item △ : Phaseout Item (will be removed from next catalog)

Contact your local Kyocera sales engineer to upgrade old products to new technology

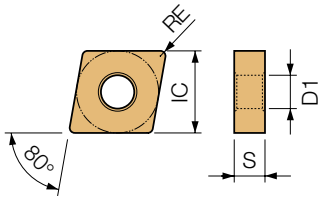
Inserts sold in 10 piece boxes.

How to read this page ➔ B15

80° Diamond

Negative Insert with Hole

Part Number	IC	S	D1
		(in)	
CN_33_	3/8	3/16	0.150
CN_43_	1/2	3/16	0.203
CN_54_	5/8	1/4	1/4
CN_64_	3/4	1/4	5/16

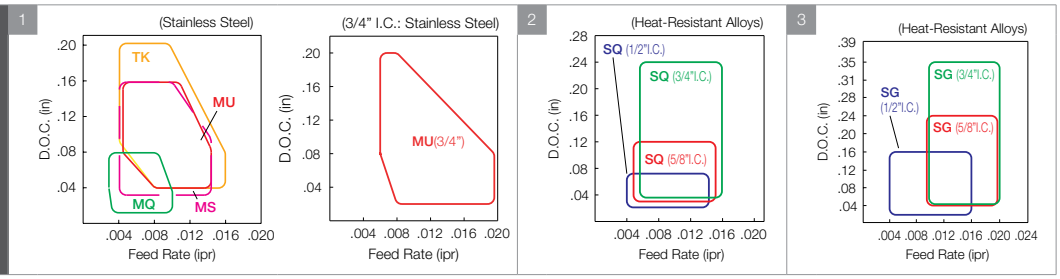


	Free-Cutting Steel	Carbon/Alloy Steel	Stainless Steel	Gray Cast Iron	Nodular Cast Iron	Non-ferrous Metals	HRSA	Titanium Alloy	Hard materials
P									
M			● ●				●	◔	
K									
N									
S			○ ◔			● ● ○ ◔ ⇳	●	◔	◔
H							●		

Right-Hand Shown where Applicable	ANSI Part Number	ISO Part Number	RE	Corner Radius (in)	Cermet		CVD Coated Carbide		MEGACOAT / MEGACOAT NANO PVD Coated Carbide		PVD Coated Carbide		DLC	Carbide	Toolholder Page	Chipbreaker Range
					TN610	TN620	CA6515	CA6525	PR005S	PR015S	PR1305	PR1325	PR1535	SW05		
Finishing-Medium	CNMG 431MQ	120404MQ	1/64				●	●	●	●	△	△	●	●	D8-D9 F87 F91	1
Stainless Steel / HRSA	432MQ	120408MQ	1/32				●	●	●	●	△	△	●	●		
Finishing-Medium	CNMG 431SQ	120404SQ	1/64						●	●					F92	
	432SQ	120408SQ	1/32						●	●						
	433SQ	120412SQ	3/64						●	●						
	CNMG 543SQ	160612SQ	3/64						●	●					D9	2
	544SQ	160616SQ	1/16						●	●						
Heat-Resistant Alloy	CNMG 643SQ	190612SQ	3/64						●	●						
	644SQ	190616SQ	1/16						●	●						
Medium-Roughing	CNMG 431MS	120404MS	1/64				●	●	●	●	△	△	●	●	D8-D9 F87 F91 F92	1
Stainless Steel / HRSA	432MS	120408MS	1/32				●	●	●	●	△	△	●	●		
	433MS	120412MS	3/64				●	●	●	●	△	△	●	●		
	434MS	120416MS	1/16					●	●	●	△	△	●	△		
Medium-Roughing	CNGG 4302MU	120401MU	0.004								●					
	4305MU	120402MU	0.008								●					
	CNMG 431MU	120404MU	1/64				●	●	●	●	△	△	●	●		
	432MU	120408MU	1/32				●	●	●	●	△	△	●	●		
	433MU	120412MU	3/64				●	●	●	●			●	△		
	CNMG 542MU	160608MU	1/32				●	●	●	●	△	△	●	△		
	543MU	160612MU	3/64				●	●	●	●	△	△	●	△		
	544MU	160616MU	1/16					●	●	●	△	△	●	△	D9	
Stainless Steel / HRSA	CNMG 643MU	190612MU	3/64						●	●	△	△	●			
	644MU	190616MU	1/16						●	●	△	△	●			
Roughing	CNMG 432SG	120408SG	1/32						●	●			●	●	D8-D9 F87	
	433SG	120412SG	3/64						●	●			●	●	F91~F92	
	CNMG 543SG	160612SG	3/64						●	●			●	●		3
	544SG	160616SG	1/16						●	●			●	●		
Heat-Resistant Alloy	CNMG 643SG	190612SG	3/64						●	●			●	●	D9	
	644SG	190616SG	1/16						●	●			●	●		

For Heat-Resistant Alloys See ➔ B8

Chipbreaker Range



KYOCERA

Inserts sold in 10 piece boxes.

● : Standard Item △ : Phaseout Item (will be removed from next catalog)

Contact your local Kyocera sales engineer to upgrade old products to new technology

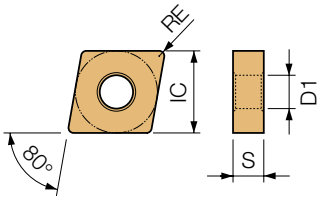
How to read this page ➔ B15

80° Diamond

Negative Insert with Hole

Part Number	IC (in)	S (in)	D1 (in)
CN_33_	3/8	3/16	0.150
CN_43_	1/2	3/16	0.203
CNMM_43X_	1/2	0.174	0.203

Part Number	IC (in)	S (in)	D1 (in)
CN_54_	5/8	1/4	1/4
CNMM_54X_	5/8	0.235	1/4
CN_64_	3/4	1/4	5/16
CNMM_64X_	3/4	0.233	5/16

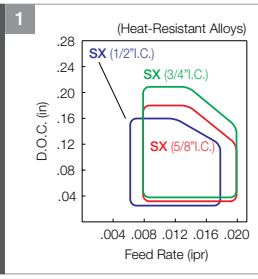


		ANSI Part Number	ISO Part Number	RE	TN610	TN620	TN60	CCX	PV710	PV720	PV730	PV7005	PV90	CA510	CA515	CA025P	CA525	CA530	CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA310	CA315	CA320	CA4505	CA4515	PR1705	PR1725	PR1425	PR1225	PR005S	PR015S	PR1305	PR1310	PR1325	PR1535	PR930	PR1005	PR1025	PR1125	PDL010	PDL025	KW10	SW05	Toolholder Page	Chipbreaker Range
Roughing (Single Sided)	Heat-Resistant Alloy	CNMM 43XR-SX	1204XR-SX	-																														●●	●●													
		43XL-SX	1204XL-SX	-																														●●	●●													
		CNMM 54XR-SX	1606XR-SX	-																														●●	●●												D8-D9	1
		54XL-SX	1606XL-SX	-																														●●	●●													
		CNMM 64XR-SX	1906XR-SX	-																														●●	●●													
		64XL-SX	1906XL-SX	-																														●●	●●													
Sharp Edge	Cast Iron	CNMG 431KQ	120404KQ	1/64																					●	●	●																					
		432KQ	120408KQ	1/32																					●	●	●																					
		433KQ	120412KQ	3/64																					●	●	●																					
Medium	Cast Iron	CNMG 431KG	120404KG	1/64																					●	●	●																					
		432KG	120408KG	1/32																					●	●	●																					
		433KG	120412KG	3/64																					●	●	●																					
Medium-Roughing	Cast Iron	CNMG 432KH	120408KH	1/32																					●	●	●																					
		433KH	120412KH	3/64																					●	●	●																					
		434KH	120416KH	1/16																					●	●	●																					
Roughing	Cast Iron	CNMG 431C	120404C	1/64																					●	●	●	●	●																			
		432C	120408C	1/32																					●	●	●	●	●																			
		433C	120412C	3/64															●						●	●	●		●																			
		434C	120416C	1/16															●						●	●	●		●																			
		CNMG 543C	160612C	3/64																					●	●	●		●																		D9	
Roughing	Cast Iron	CNMG 432ZS	120408ZS	1/32															●						●	●	●	●	●																			3
		433ZS	120412ZS	3/64															●						●	●	●	●	●																			
Roughing	Cast Iron	CNMG 432GC	120408GC	1/32															●	●					●	●	●	●	●																		D8-D9 F87 F91 F92	
		433GC	120412GC	3/64																					●	●	●	●	●																			
Cast Iron	Without Chipbreaker	CNGA 431	120404	1/64								●																	●																	●		
		432	120408	1/32	●		●					●																	●																	●		-
		CNMA 431	120404	1/64				●				●							●						●	●	●	●	●																	●		
		432	120408	1/32				●				●							●						●	●	●	●	●																	●		
		433	120412	3/64															●						●	●	●	●	●																			
		434	120416	1/16																					●	●	●		△																			
		CNMA 543	160612	3/64																●																												D9	

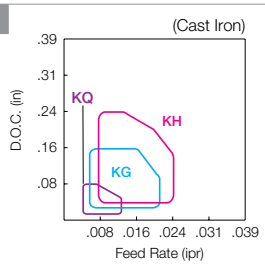
• **CNMM…X$^{R}_{L}$-SX** inserts require a different shim, sold separately. See applicable holders on page ➔ D8-D9 for applicable shim for SX chipbreaker inserts.

Chipbreaker Range

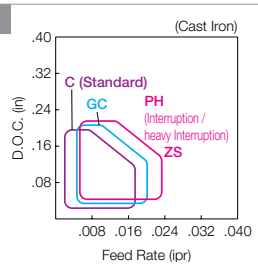
1 (Heat-Resistant Alloys)



2 (Cast Iron)



3 (Cast Iron)



● : Standard Item △ : Phaseout Item (will be removed from next catalog)
Contact your local Kyocera sales engineer to upgrade old products to new technology

Inserts sold in 10 piece boxes.

How to read this page ➔ B15

80° Diamond

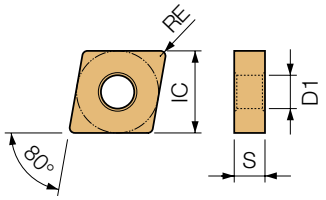
Negative Insert with Hole

(in)

Part Number	IC	S	D1
CN_33_	3/8	3/16	0.150
CN_43_	1/2	3/16	0.203

(in)

Part Number	IC	S	D1
CN_54_	5/8	1/4	1/4
CN_64_	3/4	1/4	5/16



| | | |

How to read this page B15

55° Diamond

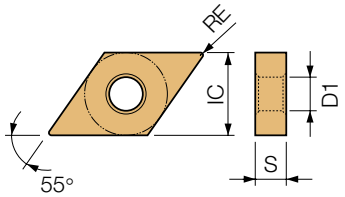
Negative Insert with Hole

(in)

Part Number	IC	S	D1
DN_33_	3/8	3/16	0.150
DN_43_	1/2	3/16	0.203

(in)

Part Number	IC	S	D1
DN_44_	1/2	1/4	0.203



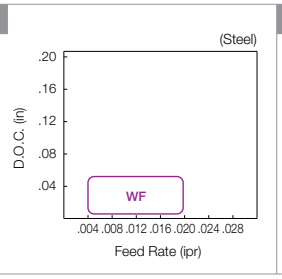
		ANSI Part Number	ISO Part Number	RE	TN610	TN620	TN60	CCX	PV710	PV720	PV730	PV7005	PV90	CA510	CA515	CA025P	CA525	CA530	CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA310	CA315	CA320	CA4505	CA4515	PR1705	PR1725	PR1425	PR1225	PR005S	PR015S	PR1305	PR1310	PR1325	PR1535	PR930	PR1005	PR1025	PR1125	PDL010	PDL025	KW10	SW05	Toolholder Page	Chipbreaker Range
Finishing		DNMX 431WF	150404WF	1/64	●	●			●	●				●	●	●	●	●																													D12 D13 F88 F94 F95	1
			432WF	150408WF	1/32	●	●			●	●				●	●	●	●	●																														
			433WF	150412WF	3/64	●	●			●	●				●	●	●	●	●																														
		DNMX 441WF	150604WF	1/64	●	●			●	●				●	●	●	●	●																													D12 D13 F88	
			442WF	150608WF	1/32	●	●			●	●				●	●	●	●	●																														
	Wiper Edge		443WF	150612WF	3/64	●	●			●	●				●	●	●	●	●																														
Finishing		DNMG 4305PP	150402PP	0.008	●	●		●	●	●	●				●	●	●	●			●																									D12 D13 F88 F94 F95	
			431PP	150404PP	1/64	●	●		●	●	●	●			●	●	●	●	●		●	●																								
			432PP	150408PP	1/32	●	●		●	●	●	●			●	●	●	●	●		●	●																								
			433PP	150412PP	3/64	●	●		●	●	●	●			●	●	●	●	●																												
		DNMG 4405PP	150602PP	0.008	●	●		●	●	●	●					●	●	●																												
			441PP	150604PP	1/64	●	●		●	●	●	●			●	●	●	●			●																								D12 D13 F88	
			442PP	150608PP	1/32	●	●		●	●	●	●			●	●	●	●																												
			443PP	150612PP	3/64	●	●		●	●	●	●					●	●																												
Finishing		DNMG 331GP	110404GP	1/64		●	●			●	●		●		●	●	●	●			●	●																							D13 F93	2
			332GP	110408GP	1/32		●	●			●	●		●	●	●	●	●				●																								
		DNMG 4305GP	150402GP	0.008	●	●	●		●	●	●		●	●	●	●	●	●			●	●																							D12 D13 F88 F94 F95	
			431GP	150404GP	1/64	●	●	●		●	●	●		●	●	●	●	●	●		●	●																								
			432GP	150408GP	1/32	●	●	●		●	●	●		●	●	●	●	●	●	●	●	●																								
		DNMG 4405GP	150602GP	0.008	●				●																																				D12 D13 F88	
			441GP	150604GP	1/64	●				●																																			
			442GP	150608GP	1/32	●				●																																			
Finishing-Medium		DNMG 431PQ	150404PQ	1/64	●	●		●	●	●	●				●	●	●	●			●	●																							D12 D13 F88 F94 F95	
			432PQ	150408PQ	1/32	●	●		●	●	●	●				●	●	●	●			●	●																								
			433PQ	150412PQ	3/64	●	●		●	●	●	●				●	●	●	●			●	●																								
		DNMG 441PQ	150604PQ	1/64	●	●		●	●	●	●					●	●	●																												D12 D13 F88	
			442PQ	150608PQ	1/32	●	●		●	●	●	●					●	●	●																												
			443PQ	150612PQ	3/64	●	●		●	●	●	●					●	●	●																												

Corner Radius (in) | Cermet | CVD Cermet | MEGA COAT Cermet | PVD Cermet | CVD Coated Carbide | MEGACOAT / MEGACOAT NANO PVD Coated Carbide | PVD Coated Carbide | DLC | Carbide

P Free-Cutting Steel / Carbon/Alloy Steel
M Stainless Steel
K Gray Cast Iron / Nodular Cast Iron
N Non-ferrous Metals
S HRSA / Titanium Alloy
H Hard materials

Chipbreaker Range

1



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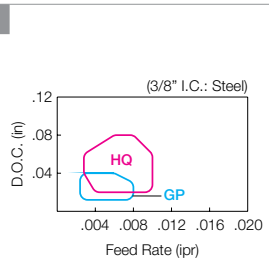
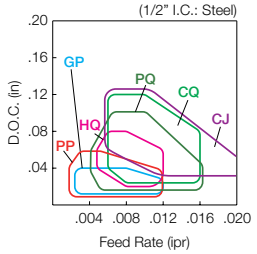




● : Standard Item △ : Phaseout Item (will be removed from next catalog)
Contact your local Kyocera sales engineer to upgrade old products to new technology

Inserts sold in 10 piece boxes.

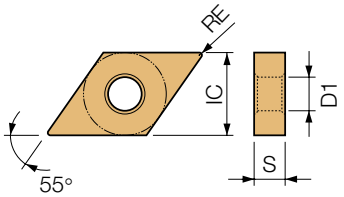
How to read this page ➔ B15

55° Diamond

Negative Insert with Hole

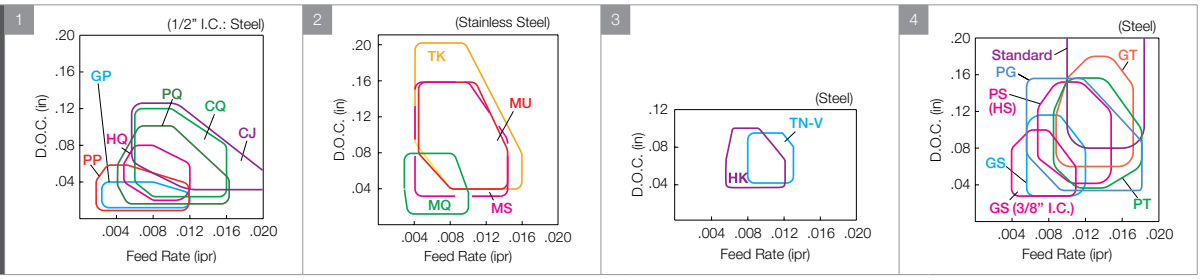
Part Number	IC	S	D1 (in)
DN_33_	3/8	3/16	0.150
DN_43_	1/2	3/16	0.203

Part Number	IC	S	D1 (in)
DN_44_	1/2	1/4	0.203



		ANSI Part Number	ISO Part Number	RE	TN610	TN620	TN60	CCX	PV710	PV720	PV730	PV7005	PV90	CA510	CA515	CA025P	CA525	CA530	CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA310	CA315	CA320	CA4505	CA4515	PR1705	PR1725	PR1425	PR1225	PR005S	PR015S	PR1305	PR1310	PR1325	PR1535	PR930	PR1005	PR1025	PR1125	PDL010	PDL025	KW10	SW05	Toolholder Page	Chipbreaker Range
Finishing-Medium		DNMG 3305HQ	110402HQ	0.008	●	●	●		●	●					●	●	●	●		●	●																											D13 F93	B23 1
			331HQ	110404HQ	1/64	●	●	●		●	●			●	●	●	●			●	●																												
		DNMG 431HQ	150404HQ	1/64	●	●	●	●	●	●	●		●	●	●	●	●	●		●	●	●	●	●															●			△					D12-D13 F88 F94-F95	
			432HQ	150408HQ	1/32	●	●	●	●	●	●		●	●	●	●	●	●	●	●	●	●	●	●															●			△						
			433HQ	150412HQ	3/64	●	●	●	●	●	●				●	●	●	●		●	●	●																											
		DNMG 441HQ	150604HQ	1/64	●		●	●					●	●	●	●	●	●	●	●	●		●	●															●			△					D12 D13 F88	
			442HQ	150608HQ	1/32	●		●	●						●	●	●			●	●		●	●															●			△						
			443HQ	150612HQ	3/64	●		●	●						●	●	●			●	●																											
Finishing-Medium		DNMG 431CQ	150404CQ	1/64	●	●	●		●	●	●		●	●	●	●	●	●	●	●	●	●																									D12-D13 F88 F94-F95	1
			432CQ	150408CQ	1/32	●	●	●		●	●	●		●	●	●	●	●	●	●	●	●	●																									
			433CQ	150412CQ	3/64	●	●			●	●	●		●	●	●	●	●		●	●	●																											
		DNMG 441CQ	150604CQ	1/64	●				●						●	●	●			●	●																											D12 D13 F88	
	Up Facing		442CQ	150608CQ	1/32									●	●	●	●	●	●	●	●																											
			443CQ	150612CQ	3/64									●	●	●	●			●	●																											
Finishing-Medium		DNMG 432CJ	150408CJ	1/32											●	●	●			●	●																										D12 D13 F88 F94-F95	
			433CJ	150412CJ	3/64											●	●	●			●	●																											
	Up Facing	DNMG 442CJ	150608CJ	1/32											●	●	●			●	●																										D12 D13 F88	
			443CJ	150612CJ	3/64										●	●	●	●			●	●																											
Finishing-Medium		DNMP 442TK	150608TK	1/32																																				●							D12 D13 F88	2
Medium		DNMG 431TN-V	150404TN-V	1/64			●																																							D12 D13 F88 F94 F95	3
			432TN-V	150408TN-V	1/32			●																																							
Medium-Roughing		DNMG 331GS	110404GS	1/64	●	●			●	●			●		●	●	●	●		●	●																										D13 F93	
			332GS	110408GS	1/32	●	●			●	●			●	●	●	●	●		●	●																											
		DNMG 431GS	150404GS	1/64		●				●	●				●	●	●			●	●																										D12-D13 F88 F94-F95	4
			432GS	150408GS	1/32		●				●	●			●	●	●	●		●	●																											
			433GS	150412GS	3/64										●	●	●			●	●																											
		DNMG 441GS	150604GS	1/64												●	●			●	△																										D12-D13 F88	
			442GS	150608GS	1/32												●	●				●																											

Chipbreaker Range



KYOCERA

Inserts sold in 10 piece boxes.

● : Standard Item △ : Phaseout Item (will be removed from next catalog)

Contact your local Kyocera sales engineer to upgrade old products to new technology

How to read this page ➔ B15

55° Diamond

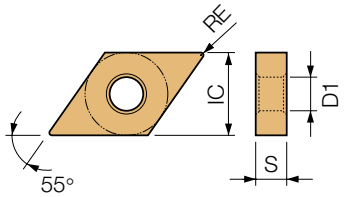
Negative Insert with Hole

(in)

Part Number	IC	S	D1
DN_33_	3/8	3/16	0.150
DN_43_	1/2	3/16	0.203

(in)

Part Number	IC	S	D1
DN_44_	1/2	1/4	0.203



| | ANSI Part Number | ISO Part Number | RE | Corner Radius (in) | Cermet | | CVD Coated Carbide | | | | | | | | | | | | | | | | | | | | | | | | | | MEGACOAT / MEGACOAT NANO PVD Coated Carbide | | | | | | | | | | | | PVD Coated Carbide | | | | | DLC | | Carbide | | Toolholder Page | Chipbreaker Range |
|---|---|---|---

How to read this page B15

55° Diamond

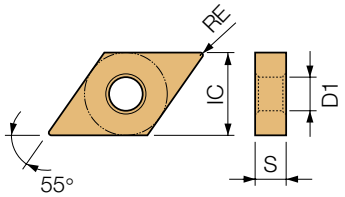
Negative Insert with Hole

(in)

Part Number	IC	S	D1
DN_33_	3/8	3/16	0.150
DN_43_	1/2	3/16	0.203

(in)

Part Number	IC	S	D1
DN_44_	1/2	1/4	0.203



	ANSI Part Number	ISO Part Number	RE	TN610	TN620	TN60	CCX	PV710	PV720	PV730	PV7005	PV90	CA510	CA515	CA025P	CA525	CA530	CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA310	CA315	CA320	CA4505	CA4515	PR1705	PR1725	PR1425	PR1225	PR005S	PR015S	PR1305	PR1310	PR1325	PR1535	PR930	PR1005	PR1025	PR1125	PDL010	PDL025	KW10	SW05	Toolholder Page	Chipbreaker Range
Roughing	DNMG 431	150404	1/64	●	●	●		●	●	●		●		●	●	●			●	●				●	●	●	●	●																		D12 D13 F88 F94 F95	1
	432	150408	1/32	●	●	●	●	●	●	●	●		●	●	●	●	●		●	●	●			●	●	●	●	●																			
	433	150412	3/64																		●			●	●	●	●	●																			
	DNMG 441	150604	1/64																					●	●	●																				D12 D13 F88	
	442	150608	1/32											●	●	●	●				●	●		●	●	●	●	●																			
	443	150612	3/64											●	●	●	●		●					●	●	●		●																			
Roughing	DNMG 432PH	150408PH	1/32										●	●	●	●			●	●				●	●	●	●	●																		D12 D13 F88 F94 F95	2
	433PH	150412PH	3/64											●	●	●			●	●				●	●	●	●	△																			
	434PH	150416PH	1/16												●	●	●																														
	DNMG 442PH	150608PH	1/32											●	●	●	●			●				●	●	●																		D12 D13 F88	
	443PH	150612PH	3/64											●	●	●	●			●				●	●	●																			
	444PH	150616PH	1/16											●	●	●	●			●																									
Roughing	DNMM 432PX	150408PX	1/32												●	●				●																								D12 D13 F88 F94 F95	
	433PX	150412PX	3/64												●	●	●			●																									
	434PX	150416PX	1/16												●																													
	DNMM 442PX	150608PX	1/32											●	●	●				●																								D12 D13 F88	
	443PX	150612PX	3/64											●	●	●	●		●	●	●																								
	444PX	150616PX	1/16												●	●																												
Finishing	DNMG 431XF	150404XF	1/64	●	●		●	●	●	●																																D12 D13 F88 F94 F95	3
	432XF	150408XF	1/32	●	●		●	●	●	●																																
Finishing	DNMG 431XP	150404XP	1/64	●	●	●	●	●	●	●		●	●	●	●	●		●	●	●																							
	432XP	150408XP	1/32	●	●	●	●	●	●	●		●	●	●	●	●	●	●	●	●																							
	DNMG 441XP	150604XP	1/64	●		●	●	●					●																														D12 D13 F88	
	442XP	150608XP	1/32	●		●	●	●					●																													
Medium	DNMG 431XQ	150404XQ	1/64	●	●	●	●	●	●	●		●		●	●	●	●			●	●																						D12 D13 F88 F94 F95	
	432XQ	150408XQ	1/32	●	●	△	●	●	●	●		●		●	●	●	●			●	●																						
	DNMG 442XQ	150608XQ	1/32			●																																				D12 D13 F88	
Roughing	DNMG 432XS	150408XS	1/32	●	●		●	●	●					●	●	●	●			●	●																						D12 D13 F88 F94 F95	

Free-Cutting Steel
Carbon/Alloy Steel
Stainless Steel
Gray Cast Iron
Nodular Cast Iron
Non-ferrous Metals
HRSA
Titanium Alloy
Hard materials

Corner Radius (in)
Cermet
CVD Cermet
MEGA COAT Cermet
PVD Cermet
CVD Coated Carbide
MEGACOAT / MEGACOAT NANO PVD Coated Carbide
PVD Coated Carbide
DLC
Carbide

Single Sided High Feed Rate

Small D.O.C. Low Carbon Steel

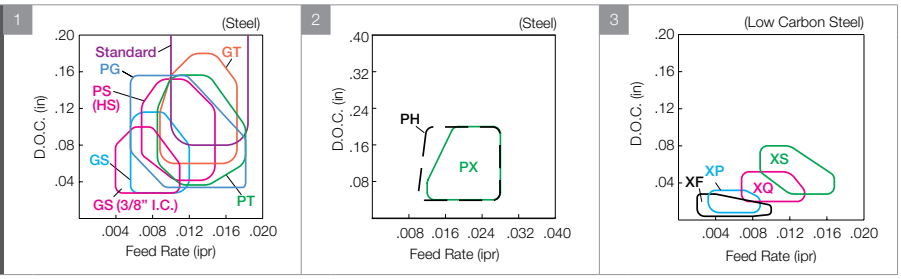
Low Carbon Steel

Low Carbon Steel

Low Carbon Steel

Low Carbon Steel

Chipbreaker Range



Inserts sold in 10 piece boxes.

● : Standard Item △ : Phaseout Item (will be removed from next catalog)
Contact your local Kyocera sales engineer to upgrade old products to new technology

How to read this page B15

55° Diamond

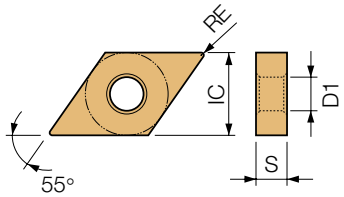
Negative Insert with Hole

(in)

Part Number	IC	S	D1
DN_33_	3/8	3/16	0.150
DN_43_	1/2	3/16	0.203

(in)

Part Number	IC	S	D1
DN_44_	1/2	1/4	0.203

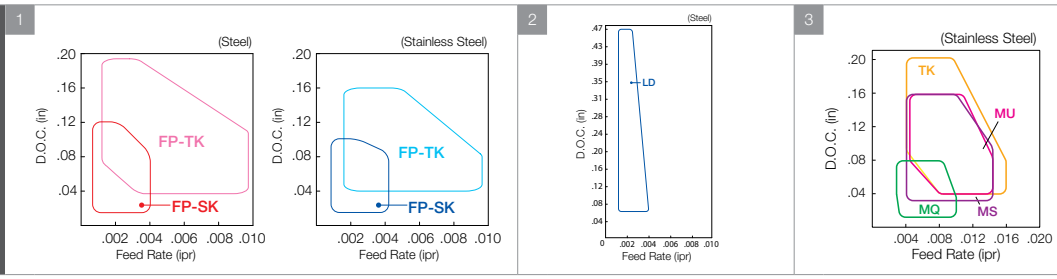


	ANSI Part Number	ISO Part Number	RE	TN610	TN620	TN60	CCX	PV710	PV720	PV730	PV7005	PV90	CA510	CA515	CA025P	CA525	CA530	CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA310	CA315	CA320	CA4505	CA4515	PR1705	PR1725	PR1425	PR1225	PR005S	PR015S	PR1305	PR1310	PR1325	PR1535	PR930	PR1005	PR1025	PR1125	PDL010	PDL025	KW10	SW05	Toolholder Page	Chipbreaker Range
Finishing-Medium	DNGG 4305MFP-SK	150402MFP-SK	<0.008							●																			●	△	●						●											1
Sharp Edge / Polished	431MFP-SK	150404MFP-SK	<1/64							●																			●	△	●						●											
Large D.O.C.	DNMG 4305R-LD	150402R-LD	0.008																										●	△						●											2
	431R-LD	150404R-LD	1/64																										●	△						●											D12 D13 F88 F94 F95
Medium-Roughing	DNGG 431FP-TK	150404FP-TK	1/64																										●	△	●						●											1
Sharp Edge / Polished	432FP-TK	150408FP-TK	1/32																										●	△	●						●											
Medium-Roughing	DNGG 431TK	150404TK	1/64																															△	△										●		
	432TK	150408TK	1/32																															△	△										●		
Sharp Edge Stainless Steel / HRSA	DNGG 441TK	150604TK	1/64																																△										△	D12 D13 F88	
	442TK	150608TK	1/32																																△										△		
Medium-Roughing	DNMG 431TK	150404TK	1/64																			●	●												△	△	△	●								D12 D13 F88 F94 F95	3
	432TK	150408TK	1/32																			●	●												△	△	△	●									
Stainless Steel / HRSA	DNMG 441TK	150604TK	1/64																			●	●													△	△	●								D12 D13 F88	
	442TK	150608TK	1/32																			●	●													△	△	●									
Finishing-Medium	DNMG 431MQ	150404MQ	1/64																			●	●										●	●	△	△	△	●							●	D12 D13 F88 F94 F95	
	432MQ	150408MQ	1/32																			●	●										●	●	△	△	△	●							●		
Stainless Steel / HRSA	DNMG 441MQ	150604MQ	1/64																			●	●										●	●	△	△	△	●							●	D12 D13 F88	
	442MQ	150608MQ	1/32																			●	●										●	●	△	△	△	●							●		

• Insert with corner R (RE) dimension expressed with less than sign (e.g. **<0.002, <0.004, <0.008** etc.) indicate models with minus tolerance for corner R (RE).

For Heat-Resistant Alloys See B8

Chipbreaker Range



● : Standard Item △ : Phaseout Item (will be removed from next catalog)

Contact your local Kyocera sales engineer to upgrade old products to new technology

Inserts sold in 10 piece boxes.

How to read this page ➡ B15

55° Diamond

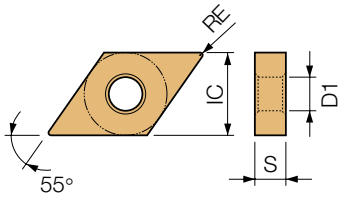
Negative Insert with Hole

(in)

Part Number	IC	S	D1
DN_33_	3/8	3/16	0.150
DN_43_	1/2	3/16	0.203

(in)

Part Number	IC	S	D1
DN_44_	1/2	1/4	0.203



	ANSI Part Number	ISO Part Number	RE	Finishing-Medium	Medium-Roughing	Medium-Roughing	Roughing	Chipbreaker Range	Toolholder Page
	DNMG	431SQ	150404SQ	1/64				1	D12 D13 F88 F94 F95
		432SQ	150408SQ	1/32					
		433SQ	150412SQ	3/64					
	DNMG	441SQ	150604SQ	1/64					D12 D13 F88
Heat-Resistant Alloy		442SQ	150608SQ	1/32					
		443SQ	150612SQ	3/64					
	DNMG	431MS	150404MS	1/64				2	D12 D13 F88 F94 F95
		432MS	150408MS	1/32					
		433MS	150412MS	3/64					
	DNMG	441MS	150604MS	1/64					D12 D13 F88
Stainless Steel / HRSA		442MS	150608MS	1/32					
		443MS	150612MS	3/64					
	DNMG	431MU	150404MU	1/64					D12 D13 F88 F94 F95
		432MU	150408MU	1/32					
	DNMG	441MU	150604MU	1/64					D12 D13 F88
Stainless Steel / HRSA		442MU	150608MU	1/32					
	DNMG	432SG	150408SG	1/32				3	D12 D13 F88 F94 F95
		433SG	150412SG	3/64					
	DNMG	442SG	150608SG	1/32					D12 D13 F88
Heat-Resistant Alloy		443SG	150612SG	3/64					

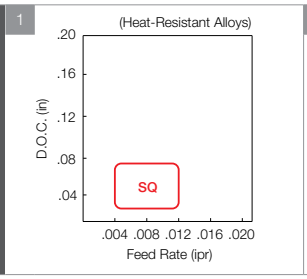
	Corner Radius (in)	Cermet		CVD Cermet	MEGA COAT Cermet			PVD Cermet	CVD Coated Carbide																MEGACOAT / MEGACOAT NANO PVD Coated Carbide										PVD Coated Carbide				DLC		Carbide		
	RE	TN610	TN620	TN60	CCX	PV710	PV720	PV730	PV7005	PV90	CA510	CA515	CA025P	CA525	CA530	CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA310	CA315	CA320	CA4505	CA4515	PR1705	PR1725	PR1425	PR1225	PR005S	PR015S	PR1305	PR1310	PR1325	PR1535	PR930	PR1005	PR1025	PR1125	PDL010	PDL025	KW10	SW05
P																																											
M																				●	●																							
K																																											
N																																											
S																				○										●	●	○											
H																																											

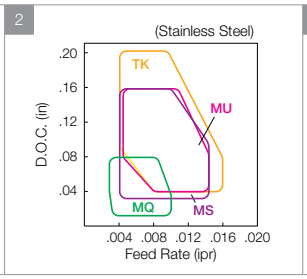
● : Standard Item △ : Phaseout Item (will be removed from next catalog)

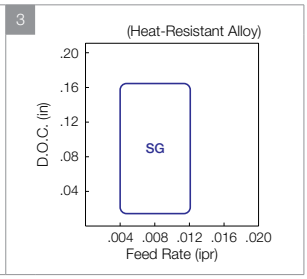
Contact your local Kyocera sales engineer to upgrade old products to new technology

For Heat-Resistant Alloys See ➡ B8

Chipbreaker Range







Inserts sold in 10 piece boxes.

How to read this page B15

55° Diamond

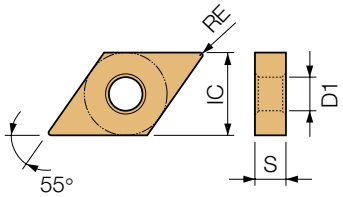
Negative Insert with Hole

(in)

Part Number	IC	S	D1
DN_33_	3/8	3/16	0.150
DN_43_	1/2	3/16	0.203

(in)

Part Number	IC	S	D1
DN_44_	1/2	1/4	0.203



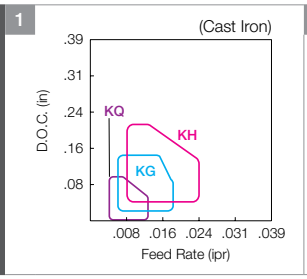
	ANSI Part Number	ISO Part Number	RE	TN610	TN620	TN60	CCX	PV710	PV720	PV730	PV7005	PV90	CA510	CA515	CA025P	CA525	CA530	CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA310	CA315	CA320	CA4505	CA4515	PR1705	PR1725	PR1425	PR1225	PR005S	PR015S	PR1305	PR1310	PR1325	PR1535	PR930	PR1005	PR1025	PR1125	PDL010	PDL025	KW10	SW05	Toolholder Page	Chipbreaker Range
Sharp Edge	DNMG 431KQ	150404KQ	1/64																					●	●	●																					D12-D13 F88 F94-F95	
	432KQ	150408KQ	1/32																					●	●	●																						
Cast Iron	DNMG 441KQ	150604KQ	1/64																					●	●	●																					D12 D13 F88	
	442KQ	150608KQ	1/32																					●	●	●																						
Medium	DNMG 431KG	150404KG	1/64																					●	●	●																					D12 D13 F88 F94 F95	1
	432KG	150408KG	1/32																					●	●	●																						
	433KG	150412KG	3/64																					●	●	●																						
Cast Iron	DNMG 441KG	150604KG	1/64																					●	●	●																					D12 D13 F88	
	442KG	150608KG	1/32																					●	●	●																						
	443KG	150612KG	3/64																					●	●	●																						
Medium-Roughing	DNMG 432KH	150408KH	1/32																					●	●	●																					D12-D13 F88 F94-F95	
	433KH	150412KH	3/64																					●	●	●																						
Cast Iron	DNMG 442KH	150608KH	1/32																					●	●	●																					D12 D13 F88	
	443KH	150612KH	3/64																					●	●	●																						
Roughing	DNMG 431C	150404C	1/64																					●	●	●	△	●																	D12 D13 F88 F94 F95	2
	432C	150408C	1/32																					●	●	●	△	●																				
	433C	150412C	3/64																					●	●	●		●																				
Cast Iron	DNMG 441C	150604C	1/64																					●	●	●		●																	D12 D13 F88	
	442C	150608C	1/32																					●	●	●		●																				
	443C	150612C	3/64																					●	●	●																						
Roughing	DNMG 432ZS	150408ZS	1/32																					●	●	●	●	●																	D12-D13 F88 F94-F95	
	433ZS	150412ZS	3/64																					●	●	●	●	●																				
Cast Iron	DNMG 442ZS	150608ZS	1/32																					●	●	●	●	●																	D12 D13 F88	
	443ZS	150612ZS	3/64																					●	●	●		●																				
Roughing	DNMG 432GC	150408GC	1/32																					●	●	●		●																	D12-D13 F88 F94-F95	
	433GC	150412GC	3/64																					●	●	●		●																				
Cast Iron	DNMG 442GC	150608GC	1/32																					●	●	●		●																	D12 D13 F88	
	443GC	150612GC	3/64																					●	●	●																						

Corner Radius (in) | Cermet | CVD Cermet | MEGA COAT Cermet | PVD Cermet | CVD Coated Carbide | MEGACOAT / MEGACOAT NANO PVD Coated Carbide | PVD Coated Carbide | DLC | Carbide

P Free-Cutting Steel; Carbon/Alloy Steel
M Stainless Steel
K Gray Cast Iron; Nodular Cast Iron
N Non-ferrous Metals
S HRSA; Titanium Alloy
H Hard materials

Chipbreaker Range

1



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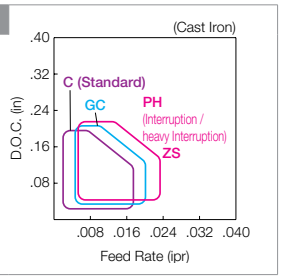


● : Standard Item △ : Phaseout Item (will be removed from next catalog)
Contact your local Kyocera sales engineer to upgrade old products to new technology

Inserts sold in 10 piece boxes.

How to read this page B15

55° Diamond

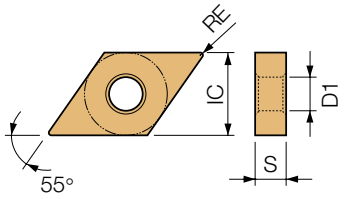
Negative Insert with Hole

(in)

Part Number	IC	S	D1
DN_33_	3/8	3/16	0.150
DN_43_	1/2	3/16	0.203

(in)

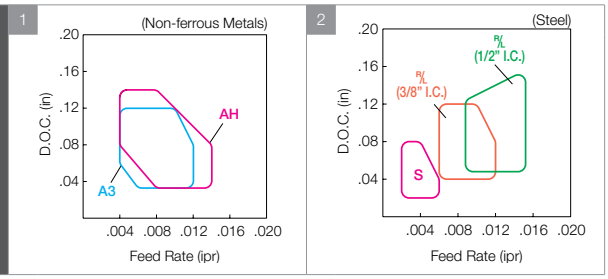
Part Number	IC	S	D1
DN_44_	1/2	1/4	0.203



P Free-Cutting Steel; Carbon/Alloy Steel
M Stainless Steel
K Gray Cast Iron; Nodular Cast Iron
N Non-ferrous Metals
S HRSA; Titanium Alloy
H Hard materials

Right-Hand Shown where Applicable	ANSI Part Number	ISO Part Number	RE	Cermet TN610	Cermet TN620	Cermet TN60	CVD Cermet CCX	MEGA COAT Cermet PV710	MEGA COAT Cermet PV720	MEGA COAT Cermet PV730	PVD Cermet PV7005	CVD Coated Carbide PV90	CA510	CA515	CA025P	CA525	CA530	CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA310	CA315	CA320	CA4505	CA4515	MEGACOAT / MEGACOAT NANO PVD Coated Carbide PR1705	PR1725	PR1425	PR1225	PR005S	PR015S	PR1305	PR1310	PR1325	PR1535	PVD Coated Carbide PR930	PR1005	PR1025	PR1125	DLC PDL010	DLC PDL025	Carbide KW10	Carbide SW05	Toolholder Page	Chipbreaker Range
Cast Iron																																																
 Without Chipbreaker	DNMA	431	150404	1/64														●						●	●	●	△	●																		●		D12-D13 F88 F94-F95	-
		432	150408	1/32				●				●						●						●	●	●	△	●																		●			
	DNMA	441	150604	1/64																				●	●	●																						D12 D13 F88	
		442	150608	1/32																				●	●	●	●	●																					
Finishing-Medium																																																
 Sharp Edge Non-ferrous Metals	DNGG	431R-A3	150404R-A3	1/64																																								●	●	●			
		431L-A3	150404L-A3	1/64																																								●	●	●			
		432R-A3	150408R-A3	1/32																																								●	●	●		D12 D13 F88 F94 F95	
		432L-A3	150408L-A3	1/32																																								●	●	●			
Medium-Roughing																																																
 Sharp Edge Non-ferrous Metals	DNGG	431AH	150404AH	1/64																																								●	●	●			1
		432AH	150408AH	1/32																																								●	●	●			
	DNGG	441AH	150604AH	1/64																																										●		D12 D13 F88	
		442AH	150608AH	1/32																																										●			
Medium-Roughing																																																
 Non-ferrous Metals	DNMG	431AH	150404AH	1/64																																								●	●	●		D12-D13 F88 F94-F95	
		432AH	150408AH	1/32																																								●	●	●			
	DNMG	441AH	150604AH	1/64																																										●		D12 D13 F88	
		442AH	150608AH	1/32																																										●			
Finishing																																																
 Surface Roughness Oriented	DNGG	3305R-S	110402R-S	0.008			●				●																																			●		D13 F93	2
		3305L-S	110402L-S	0.008			●																																							●			
		331R-S	110404R-S	1/64			●				●																																			●			
		331L-S	110404L-S	1/64			●																																							●			
		332R-S	110408R-S	1/32			●				●																																						
		332L-S	110408L-S	1/32			△				●																																						
Medium																																																
	DNGG	331R	110404R	1/64			●																																							●			2
		331L	110404L	1/64			●																																							●			
		332R	110408R	1/32			△																																									
	DNGG	431R	150404R	1/64	●	●	●	●	●	●	●																																●					D12 D13 F88 F94 F95	
		431L	150404L	1/64	●	●	●	●	●	●	●																																●						
		432R	150408R	1/32	●	●	●	●	●	●	△																																●						
		432L	150408L	1/32	●	●	●	●	●	●																																●						

Chipbreaker Range



KYOCERA

Inserts sold in 10 piece boxes.

● : Standard Item △ : Phaseout Item (will be removed from next catalog)
Contact your local Kyocera sales engineer to upgrade old products to new technology

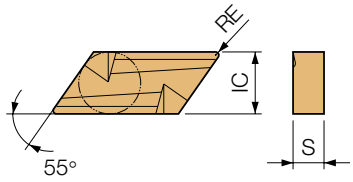
How to read this page ➔ B15

55° Parallelogram

Negative Insert without Hole

(in)

Part Number	IC	S	D1
KNMX1604_	3/8	3/16	-



	ANSI Part Number	ISO Part Number	RE	TN610	TN620	TN60	CCX	PV710	PV720	PV730	PV7005	PV90	CA510	CA515	CA025P	CA525	CA530	CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA310	CA315	CA320	CA4505	CA4515	PR1705	PR1725	PR1425	PR1225	PR005S	PR015S	PR1305	PR1310	PR1325	PR1535	PR930	PR1005	PR1025	PR1125	PDL010	PDL025	KW10	SW05	Toolholder Page	Chipbreaker Range
Medium-Roughing	KNMX 160405R-1	160405R-1	0.020																●	●																											-	1
		160405L-1	0.020																●	●																												
		160410R	0.039																●	●																												
		160410L	0.039																●	●																												

Round

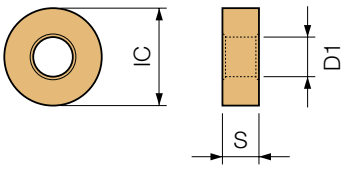
Negative Insert with Hole

(in)

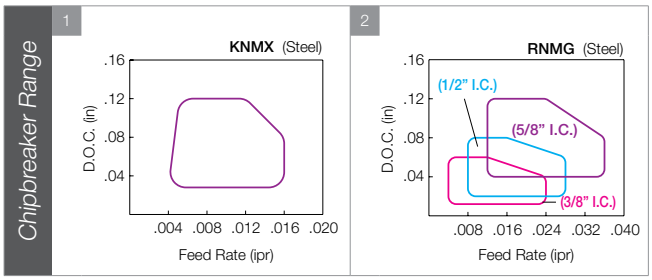
Part Number	IC	S	D1
RN_32_	3/8	1/8	0.150
RN_43_	1/2	3/16	0.203

(in)

Part Number	IC	S	D1
RN_54_	5/8	1/4	1/4



	ANSI Part Number	ISO Part Number	RE	TN610	TN620	TN60	CCX	PV710	PV720	PV730	PV7005	PV90	CA510	CA515	CA025P	CA525	CA530	CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA310	CA315	CA320	CA4505	CA4515	PR1705	PR1725	PR1425	PR1225	PR005S	PR015S	PR1305	PR1310	PR1325	PR1535	PR930	PR1005	PR1025	PR1125	PDL010	PDL025	KW10	SW05	Toolholder Page	Chipbreaker Range
Medium-Roughing	RNMG 32	090300	-		●	●			●					●	●	●				●																										D25	2
	RNMG 43	120400	-		●	●			●		●		△	●	●	●	●		●	●					●	●	●																		-	
	RNMG 54	150600	-													●	●			●					●	●	●																				



● : Standard Item △ : Phaseout Item (will be removed from next catalog)
Contact your local Kyocera sales engineer to upgrade old products to new technology

Inserts sold in 10 piece boxes.

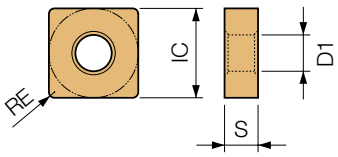
How to read this page ➔ B15

90° Square

Negative Insert with Hole

Part Number	IC	S	D1
			(in)
SN_32_	3/8	1/8	0.150
SN_43_	1/2	3/16	0.203

Part Number	IC	S	D1
			(in)
SN_54_	5/8	1/4	1/4
SN_64_	3/4	1/4	5/16



		ANSI Part Number	ISO Part Number	RE	TN610	TN620	TN60	CCX	PV710	PV720	PV730	PV7005	PV90	CA510	CA515	CA025P	CA525	CA530	CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA310	CA315	CA320	CA4505	CA4515	PR1705	PR1725	PR1425	PR1225	PR005S	PR015S	PR1305	PR1310	PR1325	PR1535	PR930	PR1005	PR1025	PR1125	PDL010	PDL025	KW10	SW05	Toolholder Page	Chipbreaker Range
Finishing-Medium		SNMG 431PQ	120404PQ	1/64	●	●		●	●	●	●			●	●	●	●																																
			432PQ	1/32	●	●		●	●	●	●			●	●	●	●	●																																
			433PQ	3/64											●	●	●	●																																
Finishing-Medium		SNMG 431HQ	120404HQ	1/64	●	●	●	●	●	●	●				●	●	●	●			●	●																												
			432HQ	1/32	●	●	●	●	●	●	●		●	●	●	●	●	●	●	●	●	●	●	●																●			△						
			433HQ	3/64	●	●	●	●	●	●	●				●	●	●				●	●																												
Medium-Roughing		SNMG 432PG	120408PG	1/32	●	●			●	●	●			●	●	●	●	●																						●									
			433PG	3/64		●			●	●				●	●	●	●	●																						●									
			434PG	1/16		●			●	●						●	△																																
Medium-Roughing		SNMG 432PS	120408PS	1/32										●	●	●	●	●	●	●	●	●	●	●																			△						
			433PS	3/64										●	●	●	●	●		●	●	●		●																			△						
			434PS	1/16											●	●	●	●		●	●																												
Medium-Roughing		SNMG 432PT	120408PT	1/32										●	●	●	●	●	●		●	●		●																									
	High Feed Rate		433PT	3/64											●	●	●	●			●	●		●																									
Roughing		SNMG 321	090304	1/64	●	●	●		●	●	●					●	●				●																												
			322	1/32	●	●	●		●	●	●					●	●				●				●	●	●		●																		
		SNMG 431	120404	1/64	●	●	●		●	●	●		●					●							●	●	●		●																			
			432	1/32	●	●	●	●	●	●	●	△		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●										●			△						
			433	3/64		●	●			●				●	●	●	●	●	●	●	●				●	●	●	●	●											●			△						
			434	1/16		●	●			●						●	●	●	●		●	●			●	●	●		●																		
			435	5/64		●	●			●									●						●	●	●		●																		
		SNMG 643	190612	3/64																		●																					●						
			644	1/16																	●	●	●																									

D14
D15
F97

1

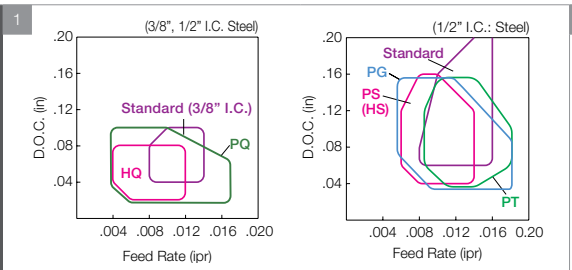
D14
D15

D14
D15
F97

2

-

Chipbreaker Range



KYOCERA

Inserts sold in 10 piece boxes.

● : Standard Item △ : Phaseout Item (will be removed from next catalog)
Contact your local Kyocera sales engineer to upgrade old products to new technology

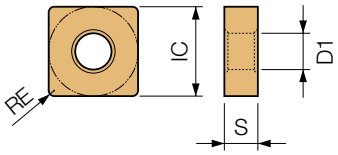
How to read this page ➔ B15

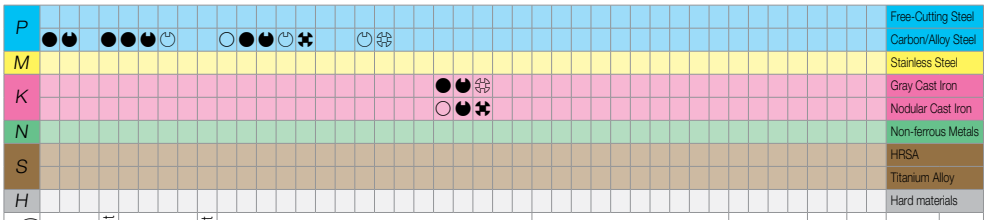
90° Square

Negative Insert with Hole

(in)

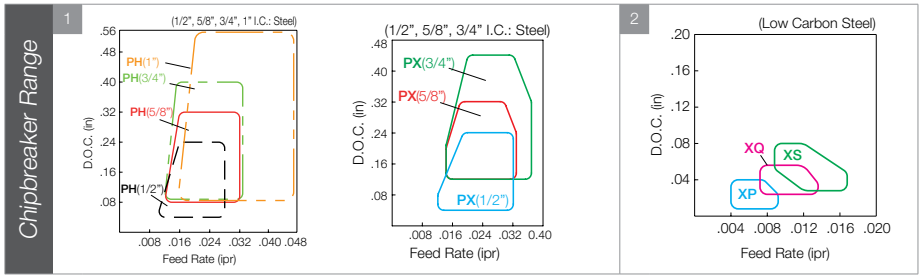
Part Number	IC	S	D1
SN_32_	3/8	1/8	0.150
SN_43_	1/2	3/16	0.203
SN_54_	5/8	1/4	1/4
SN_64_	3/4	1/4	5/16
SN_86_	1	3/8	0.359





		ANSI Part Number	ISO Part Number	RE	TN610	TN620	TN60	CCX	PV710	PV720	PV730	PV7005	PV90	CA510	CA515	CA025P	CA525	CA530	CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA310	CA315	CA320	CA4505	CA4515	PR1705	PR1725	PR1425	PR1225	PR005S	PR015S	PR1305	PR1310	PR1325	PR1535	PR930	PR1005	PR1025	PR1125	PDL010	PDL025	KW10	SW05	Toolholder Page	Chipbreaker Range
Roughing		SNMG 432PH	120408PH	1/32											●	●	●	●		●	●	●				●	●		●																				
		SNMG 433PH	120412PH	3/64										●	●	●	●	●		●	●	●				●	●		●																				
		SNMG 434PH	120416PH	1/16											●	●	●	●			●	●				●	●																						
		SNMG 543PH	150612PH	3/64											●	●	●	●			●					●	●		●																				
		SNMG 544PH	150616PH	1/16											●	●		●								●	●																						
		SNMG 643PH	190612PH	3/64												●	●	●			●	●																										
		SNMG 644PH	190616PH	1/16												●	●	●		●	●																										
		SNMG 646PH	190624PH	3/32																△																												
		SNMG 866PH	250924PH	3/32														●																						●									1
Roughing		SNMM 432PX	120408PX	1/32											●	●	●	●		●																												
		SNMM 433PX	120412PX	3/64											●	●	●	●		●	△																										
		SNMM 434PX	120416PX	1/16												●																															
		SNMM 543PX	150612PX	3/64												●	●	●																													
		SNMM 544PX	150616PX	1/16												●	△	△																													
		SNMM 643PX	190612PX	3/64												●	●	●					●																								
		SNMM 644PX	190616PX	1/16											●	●	●	●			●	●																									
	Single Sided High Feed Rate	SNMM 646PX	190624PX	3/32												●	●	●			●																											
Finishing		SNMG 432XP	120408XP	1/32	●	●		●	●	●	●				●	●	●			●	●																										
	Low Carbon Steel																																														
Medium		SNMG 432XQ	120408XQ	1/32	●	●	△	●	●	●	●		●		●	●	●			●	●																										
	Low Carbon Steel																																														
Roughing		SNMG 432XS	120408XS	1/32	●	●		●	●	●	●				●	●	●	●			●																										
	Low Carbon Steel																																														

Chipbreaker Range



● : Standard Item △ : Phaseout Item (will be removed from next catalog)

Contact your local Kyocera sales engineer to upgrade old products to new technology

SNMG866PH sold in 5 piece boxes.

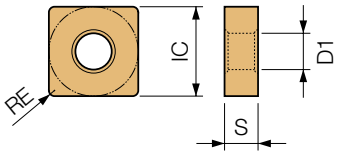
Inserts sold in 10 piece boxes.

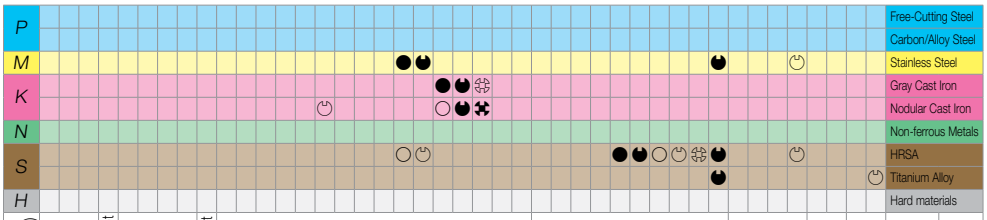
How to read this page ➔ B15

90° Square
Negative Insert

Part Number	IC	S	D1
	(in)		
SN_43_	1/2	3/16	0.203
SN_54_	5/8	1/4	1/4

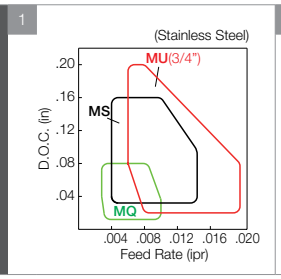
Part Number	IC	S	D1
	(in)		
SN_64_	3/4	1/4	5/16

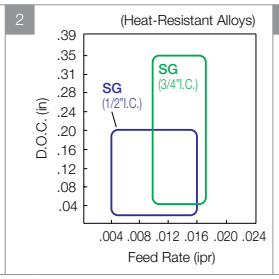


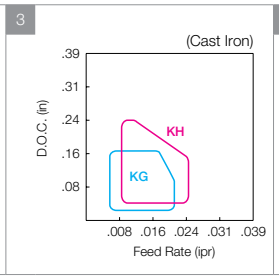


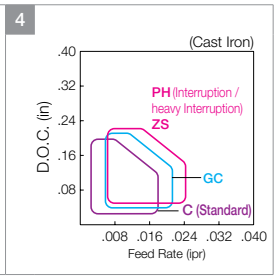
		ANSI Part Number	ISO Part Number	RE	Corner Radius (in)	Cermet		CVD Coated Carbide																						MEGACOAT / MEGACOAT NANO PVD Coated Carbide										PVD Coated Carbide			DLC		Carbide	Toolholder Page	Chipbreaker Range
						TN610	TN620	TN60	CCX	PV710	PV720	PV730	PV7005	PV90	CA510	CA515	CA025P	CA525	CA530	CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA310	CA315	CA320	CA4505	CA4515	PR1705	PR1725	PR1425	PR1225	PR005S	PR015S	PR1305	PR1310	PR1325	PR1535	PR930	PR1005	PR1025	PR1125	PDL010	PDL025	KW10	SW05		
Finishing-Medium	Stainless Steel / HRSA	SNMG	431MQ	120404MQ	1/64																		●●										●●		△	△	●			△			●	D14 D15 F97	
			432MQ	120408MQ	1/32																		●●										●●		△	△	●			△			●		
Medium-Roughing	Stainless Steel / HRSA	SNMG	431MS	120404MS	1/64																		●●										●●			△	●			△			●		1
			432MS	120408MS	1/32																		●●										●●		△	△	●			△			●		
			433MS	120412MS	3/64																		●●										●●		△	△	●			△			●		
			434MS	120416MS	1/16																		●●										●●		△	△	●			△					
Medium-Roughing	Stainless Steel / HRSA	SNMG	643MU	190612MU	3/64																												●●			△	△	●							-	
			644MU	190616MU	1/16																												●●			△	△	●								
Roughing	Heat-Resistant Alloy	SNMG	432SG	120408SG	1/32																												●●					●							D14 D15 F97	
			433SG	120412SG	3/64																												●●					●								
		SNMG	643SG	190612SG	3/64																												●●					●								2
			644SG	190616SG	1/16																												●●					●							-	
Medium	Cast Iron	SNMG	432KG	120408KG	1/32																				●●	●	●																				
			433KG	120412KG	3/64																				●●	●	●																				3
Medium-Roughing	Cast Iron	SNMG	432KH	120408KH	1/32																				●●	●	●																				
			433KH	120412KH	3/64																				●●	●	●																				
			434KH	120416KH	1/16																				●●	●	●																				
Roughing	Cast Iron	SNMG	432C	120408C	1/32																				●●	●	●		●																	D14 D15 F97	
			433C	120412C	3/64																				●●	●	●		●																		
Roughing	Cast Iron	SNMG	432ZS	120408ZS	1/32															●					●●	●	●	●	●																		4
			433ZS	120412ZS	3/64																				●●	●	●		●																		
Roughing	Cast Iron	SNMG	432GC	120408GC	1/32																				●●	●	●		●																		
			433GC	120412GC	3/64															●					●●	●	●		●																		

Chipbreaker Range









For Heat-Resistant Alloys See ➔ B8

KYOCERA

Inserts sold in 10 piece boxes.

● : Standard Item △ : Phaseout Item (will be removed from next catalog)
Contact your local Kyocera sales engineer to upgrade old products to new technology

How to read this page ➔ B15

90° Square

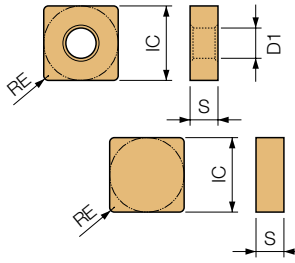
Negative Insert with & without Hole

(in)

Part Number	IC	S	D1
SN_32_	3/8	1/8	0.150
SN_43_	1/2	3/16	0.203

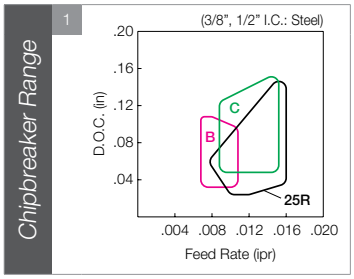
(in)

Part Number	IC	S	D1
SN_64_	3/4	1/4	5/16
SNM43_	1/2	3/16	-



						Corner Radius (in)	Cermet		CVD Cermet	MEGA COAT Cermet		PVD Cermet	CVD Coated Carbide																		MEGACOAT / MEGACOAT NANO PVD Coated Carbide										PVD Coated Carbide			DLC		Carbide		Toolholder Page	Chipbreaker Range
		Right-Hand Shown where Applicable	ANSI Part Number	ISO Part Number	RE		TN610	TN620	TN60	CCX	PV710	PV720	PV730	PV7005	PV90	CA510	CA515	CA025P	CA525	CA530	CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA310	CA315	CA320	CA4505	CA4515	PR1705	PR1725	PR1425	PR1225	PR005S	PR015S	PR1305	PR1310	PR1325	PR1535	PR930	PR1005	PR1025	PR1125	PDL010	PDL025	KW10	SW05		
P	Free-Cutting Steel																																															
M	Carbon/Alloy Steel																																															
K	Stainless Steel																																															
N	Gray Cast Iron																																														
S	Nodular Cast Iron																																														
H	Non-ferrous Metals																																														
	HRSA																																														
	Titanium Alloy																																														
	Hard materials																																														
Cast Iron			SNGA	321	090304	1/64																																								●		D14 D15 F97	-
				322	090308	1/32	●																																						●			
			SNMA	431	120404	1/64																				●●●			●																			
				432	120408	1/32															●					●●●		●●	●																			
				433	120412	3/64			●												●					●●●		●●	●																			
				434	120416	1/16															●					●●●			●																			
		Without Chipbreaker		435	120420	5/64																				●●●			●																			
Cast Iron			SNM	432	120408	1/32																				●●●																					D35 D40 D41	
		Without Chipbreaker		433	120412	3/64																				●●●																						
Finishing-Medium / Medium-Roughing			SNGG	321R-B	090304R-B	1/64	●	●	●		●	●		●																																D14 D15	1
				321L-B	090304L-B	1/64	●	●	●		●	●		●																																		
				322R-B	090308R-B	1/32	●	●	●		●	●																																			
				322L-B	090308L-B	1/32	●	●	●		●	●																																			
			SNGG	431R-C	120404R-C	1/64	●	●	●		●	●																																	●		
				431L-C	120404L-C	1/64	●	●	●		●	●																																	●		
				432R-C	120408R-C	1/32	●	●	●		●	●		●																															●		
				432L-C	120408L-C	1/32	●	●	●		●	●																																	●		
			SNMG	431R-C	120404R-C	1/64	●	●	●		●	●																																			
				431L-C	120404L-C	1/64	●	●	●		●	●																																			
		-B Finishing-Medium -C Medium-Roughing		432R-C	120408R-C	1/32	●	●	●		●	●																																			
				432L-C	120408L-C	1/32	●	●	●		●	●																																			
Medium-Roughing			SNGG	431R-25R	120404R-25R	1/64	●	●	●		●	●																																			
				431L-25R	120404L-25R	1/64	●	●	●		●	●																																			
				432R-25R	120408R-25R	1/32	●	●	●		●	●																																			
		Low Cutting Force		432L-25R	120408L-25R	1/32	●	●	●		●	●																																			

Chipbreaker Range



● : Standard Item △ : Phaseout Item (will be removed from next catalog)
Contact your local Kyocera sales engineer to upgrade old products to new technology

Inserts sold in 10 piece boxes.

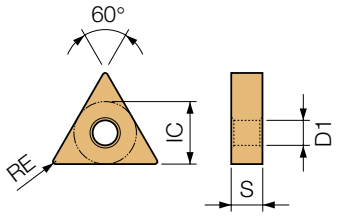
How to read this page B15

60° Triangle

Negative Insert with Hole

Part Number	IC	S	D1
	(in)		
TN_22_	1/4	1/8	0.089
TN_23_	1/4	3/16	0.089

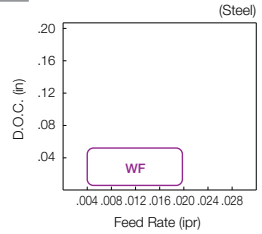
Part Number	IC	S	D1
	(in)		
TN_32_	3/8	1/8	0.150
TN_33_	3/8	3/16	0.150
TN_43_	1/2	3/16	0.203



		ANSI Part Number	ISO Part Number	RE	Corner Radius (in)	Cermet		CVD Cermet	MEGA COAT Cermet		PVD Cermet	CVD Coated Carbide																MEGACOAT / MEGACOAT NANO PVD Coated Carbide										PVD Coated Carbide				DLC			Carbide	Toolholder Page	Chipbreaker Range
						TN610	TN620	TN60	CCX	PV710	PV720	PV730	PV7005	PV90	CA510	CA515	CA025P	CA525	CA530	CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA310	CA315	CA320	CA4505	CA4515	PR1705	PR1725	PR1425	PR1225	PR005S	PR015S	PR1305	PR1310	PR1325	PR1535	PR930	PR1005	PR1025	PR1125	PDL010	PDL025	KW10	SW05		
Finishing	Wiper Edge	TNMX	331WF	160404WF	1/64	●	●			●	●				●	●	●	●	●																												D16 D17 F98	1
			332WF	160408WF	1/32	●	●			●	●				●	●	●	●	●																												
			333WF	160412WF	3/64	●	●			●	●				●	●	●	●	●																												
Finishing		TNMG	3305PP	160402PP	0.008	●	●		●	●	●	●			●	●	●	●	●			●																								D16-D18 F88 F98 F99	
			331PP	160404PP	1/64	●	●		●	●	●	●			●	●	●	●	●			●																									
			332PP	160408PP	1/32	●	●		●	●	●	●			●	●	●	●	●																												
			333PP	160412PP	3/64	●	●		●	●	●	●				●	●	●	●																												
Finishing		TNMG	231GP	110404GP	1/64		●	●			●	●																																D16-D17 F99	
			232GP	110408GP	1/32		●	●			●	●																																		
		TNMG	3305GP	160402GP	0.008	●	●	●		●	●	●			●	●	●	●	●	●	●	●																								D16-D18 F88 F98 F99	
			331GP	160404GP	1/64	●	●	●		●	●	●			●	●	●	●	●	●	●	●																									
			332GP	160408GP	1/32	●	●	●		●	●	●			●	●	●	●	●		●	●																									
Finishing-Medium		TNMG	331PQ	160404PQ	1/64	●	●		●	●	●	●			●	●	●	●	●			●																								D16-D18 F88 F98 F99	2
			332PQ	160408PQ	1/32	●	●		●	●	●	●			●	●	●	●	●		●	●																									
			333PQ	160412PQ	3/64	●	●		●	●	●	●				●	●	●				●																									
Finishing-Medium		TNMG	231HQ	110404HQ	1/64		●	●	●		●	●		△		●	●	●				●																								D16-D17 F99	
			232HQ	110408HQ	1/32		●	●	●		●	●		●	●	●	●	●	●		●	●																									
		TNMG	331HQ	160404HQ	1/64	●	●		●	●	●	●			●	●	●	●	●	●	●	●	●	●																		△				D16-D18 F88 F98 F99	
			332HQ	160408HQ	1/32	●	●	●	●	●	●	●			●	●	●	●	●	●	●	●	●	●																		△					
			333HQ	160412HQ	3/64		●	●	●		●	●			●	●	●	●	●		●	●																									
Finishing-Medium		TNMG	331CQ	160404CQ	1/64	●	●	●		●	●	●			●	●	●	●	●		●	●	●																								D16-D18 F88 F98 F99	
			332CQ	160408CQ	1/32	●	●	●		●	●	●			●	●	●	●	●	●	●	●	●																									
			333CQ	160412CQ	3/64		●	●			●	●			●	●	●	●	●		●	●	●																									
	Up Facing	TNMG	432CQ	220408CQ	1/32										●	●	●	●	●		●	●																								D16-D17 F99	3
			433CQ	220412CQ	3/64											●	●	●				●																									
Medium-Roughing		TNMG	231GS	110404GS	1/64		●	●			●	●					●	●				●																								D16-D17 F99	2
			232GS	110408GS	1/32												●	●				●																									
		TNMG	331GS	160404GS	1/64		●				●	●			●	●	●	●	●			●	●																								D16-D18 F88 F98 F99	
			332GS	160408GS	1/32		●				●	●			●	●	●	●	●			●	●																									
Medium-Roughing		TNMG	331PG	160404PG	1/64	●	●			●	●	●			●	●	●	●	●																												D16-D18 F88 F98 F99	3
			332PG	160408PG	1/32	●	●			●	●	●			●	●	●	●	●																												
			333PG	160412PG	3/64		●				●	●			●	●	●	●	●																												

Chipbreaker Range

1



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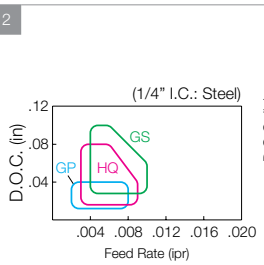

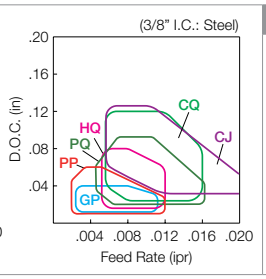

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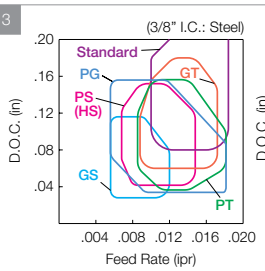
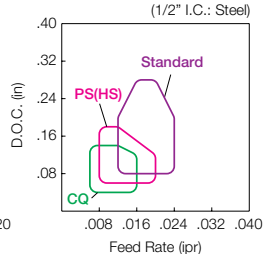




KYOCERA

Inserts sold in 10 piece boxes.

● : Standard Item △ : Phaseout Item (will be removed from next catalog)

Contact your local Kyocera sales engineer to upgrade old products to new technology

How to read this page B15

60° Triangle

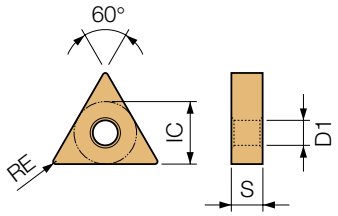
Negative Insert with Hole

(in)

Part Number	IC	S	D1
TN_22_	1/4	1/8	0.089
TN_23_	1/4	3/16	0.089

(in)

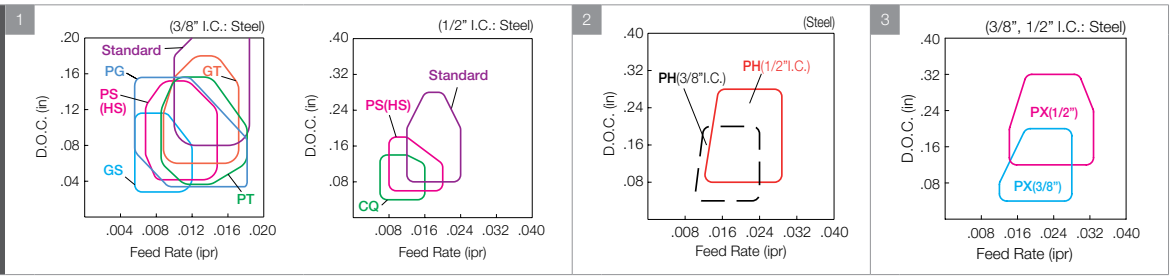
Part Number	IC	S	D1
TN_32_	3/8	1/8	0.150
TN_33_	3/8	3/16	0.150
TN_43_	1/2	3/16	0.203



P Free-Cutting Steel / Carbon/Alloy Steel
M Stainless Steel
K Gray Cast Iron / Nodular Cast Iron
N Non-ferrous Metals
S HRSA / Titanium Alloy
H Hard materials

		ANSI Part Number	ISO Part Number	RE	Corner Radius (in)	Cermet		CVD Coated Carbide																		MEGACOAT / MEGACOAT NANO PVD Coated Carbide												PVD Coated Carbide			DLC			Carbide	Toolholder Page	Chipbreaker Range
						TN610	TN620	TN60	CCX	PV710	PV720	PV730	PV7005	PV90	CA510	CA515	CA025P	CA525	CA530	CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA310	CA315	CA320	CA4505	CA4515	PR1705	PR1725	PR1425	PR1225	PR005S	PR015S	PR1305	PR1310	PR1325	PR1535	PR930	PR1005	PR1025	PR1125	PDL010	PDL025	KW10	SW05		
Medium-Roughing		TNMG	331PS	160404PS	1/64		●				●	●			●	●	●	●	●	●	●	●	●	●	●																	△				D16-D18 F88 F98 F99	
			332PS	160408PS	1/32		●				●	●			●	●	●	●	●	●	●	●	●	●	●																	△					
			333PS	160412PS	3/64											●	●	●	●		●	●	●		●																							
		TNMG	431PS	220404PS	1/64										●	●	●	●	●		●	●	●																							D16 D17 F98	
			432PS	220408PS	1/32										●	●	●	●	●		●	●	●	●	●																						
			433PS	220412PS	3/64										●	●	●	●	●		●	●			●																						
			434PS	220416PS	1/16											●	●	●			●	●																										
Medium-Roughing		TNMG	332PT	160408PT	1/32										●	●	●	●	●	●	●	●	●		●																							
	High Feed Rate		333PT	160412PT	3/64											●	●	●	●			●	●																								
Medium-Roughing		TNMG	332GT	160408GT	1/32									●	●	●	●	●	●		●	●																								D16-D18 F88 F98 F99	1
	High Feed Rate		333GT	160412GT	3/64												●	●				●																								
Roughing		TNMG	331	160404	1/64	●	●	●	●	●	●	●	●	●	●	●	●	●			●	●		●	●	●	●	●										●				△					
			332	160408	1/32	●	●	●	●	●	●	●	●	●	●	●	●	●			●	●		●	●	●	●	●										●				△					
			333	160412	3/64		●	●			●				●	●	●	●			●	●			●	●	●	●																			
			334	160416	1/16															●					●	●	●	●																			
			335	160420	5/64															●					●	●	●	●																			
		TNMG	431	220404	1/64			●												●					●	●	●	●																	D16 D17 F98	
			432	220408	1/32		●	●			●				●	●	●	●	●		●	●			●	●	●	△																		
			433	220412	3/64			●							●	●	●	●			●	●			●	●	●	●																		
Medium-Roughing		TNMG	332PH	160408PH	1/32										●	●	●	●	●		△	●			●	●	●	●	●																	D16-D18 F88 F98 F99	
			333PH	160412PH	3/64										●	●	●	●	●			●			●	●	●		●																		
		TNMG	432PH	220408PH	1/32										●	●	●	●	●			●																							D16 D17 F98	2
			433PH	220412PH	3/64										●	●	●	●	●			●	●																							
			434PH	220416PH	1/16												●	●																												

Chipbreaker Range



● : Standard Item △ : Phaseout Item (will be removed from next catalog)
Contact your local Kyocera sales engineer to upgrade old products to new technology

Inserts sold in 10 piece boxes.

How to read this page B15

60° Triangle

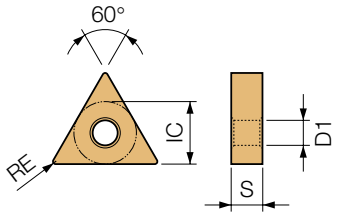
Negative Insert with Hole

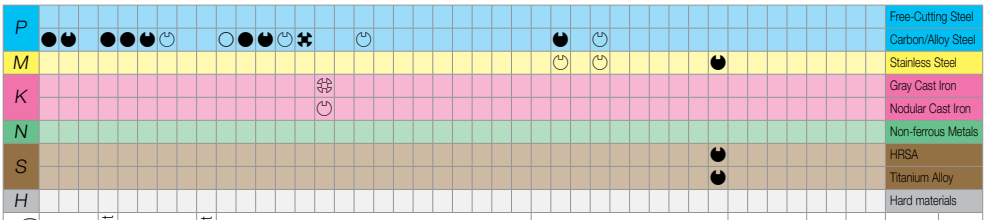
(in)

Part Number	IC	S	D1
TN_22_	1/4	1/8	0.089
TN_23_	1/4	3/16	0.089
TN_32_	3/8	1/8	0.150

(in)

Part Number	IC	S	D1
TN_33_	3/8	3/16	0.150
TN_43_	1/2	3/16	0.203
TN_66_	3/4	3/8	0.312

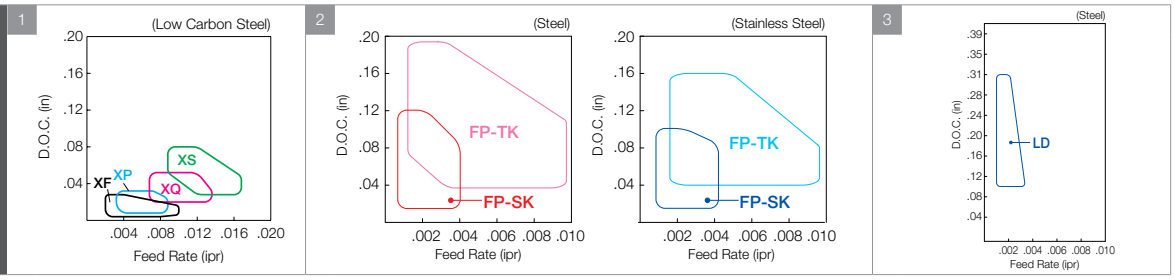




		Right-Hand Shown where Applicable	ANSI Part Number	ISO Part Number	Corner Radius (in)	Cermet TN610	Cermet TN620	Cermet TN60	CVD Cermet CCX	MEGA COAT Cermet PV710	MEGA COAT Cermet PV720	MEGA COAT Cermet PV730	PVD Cermet PV7005	CVD Coated Carbide PV90	CVD Coated Carbide CA510	CVD Coated Carbide CA515	CVD Coated Carbide CA025P	CVD Coated Carbide CA525	CVD Coated Carbide CA530	CVD Coated Carbide CA5505	CVD Coated Carbide CA5515	CVD Coated Carbide CA5525	CVD Coated Carbide CA5535	CVD Coated Carbide CA6515	CVD Coated Carbide CA6525	CVD Coated Carbide CA310	CVD Coated Carbide CA315	CVD Coated Carbide CA320	CVD Coated Carbide CA4505	CVD Coated Carbide CA4515	MEGACOAT / MEGACOAT NANO PVD Coated Carbide PR1705	MEGACOAT / MEGACOAT NANO PVD Coated Carbide PR1725	MEGACOAT / MEGACOAT NANO PVD Coated Carbide PR1425	MEGACOAT / MEGACOAT NANO PVD Coated Carbide PR1225	MEGACOAT / MEGACOAT NANO PVD Coated Carbide PR005S	MEGACOAT / MEGACOAT NANO PVD Coated Carbide PR015S	MEGACOAT / MEGACOAT NANO PVD Coated Carbide PR1305	MEGACOAT / MEGACOAT NANO PVD Coated Carbide PR1310	MEGACOAT / MEGACOAT NANO PVD Coated Carbide PR1325	MEGACOAT / MEGACOAT NANO PVD Coated Carbide PR1535	PVD Coated Carbide PR930	PVD Coated Carbide PR1005	PVD Coated Carbide PR1025	PVD Coated Carbide PR1125	DLC PDL010	DLC PDL025	Carbide KW10	Carbide SW05	Toolholder Page	Chipbreaker Range
Roughing		Single Sided High Feed Rate	TNMM	332PX	160408PX	1/32											●	●				●																					D16-D18 F88 F98-F99	See B38
				333PX	160412PX	3/64											●	●				●																						
			TNMM	432PX	220408PX	1/32											●	●				●																					D16 D17 F98	3
				433PX	220412PX	3/64											●	●				●																						
				434PX	220416PX	1/16											●	●	●																									
Finishing		Small D.O.C. Low Carbon Steel	TNMG	331XF	160404XF	1/64	●	●		●	●	●	●																													D16-D18 F88 F98 F99	1
				332XF	160408XF	1/32	●	●		●	●	●	●																														
Finishing		Low Carbon Steel	TNMG	331XP	160404XP	1/64	●	●	●	●	●	●	●	●		●	●	●				●	●																				
				332XP	160408XP	1/32	●	●		●	●	●	●	●		●	●	●	●	●	●	●	●																				
Medium		Low Carbon Steel	TNMG	331XQ	160404XQ	1/64	●	●	●	●	●	●	●	●		●	●	●	●			●	●																				
				332XQ	160408XQ	1/32	●	●	●	●	●	●	●	●		●	●	●	●	●	●	●	●																				
Roughing		Low Carbon Steel	TNMG	332XS	160408XS	1/32		●	●			●	●	●		●	●	●	●	●	●	●	●																				
Finishing-Medium		Sharp Edge / Polished	TNGG	3302MFP-SK	160401MFP-SK	<0.004							●																			●	△	●			●							D16-D18 E51 F88 F98 F99	2
				3305MFP-SK	160402MFP-SK	<0.008							●																			●	△	●			●								
				331MFP-SK	160404MFP-SK	<1/64							●																			●	△	●			●								
Large D.O.C.			TNMG	3305R-LD	160402R-LD	0.008																										●	△				●							3
				331R-LD	160404R-LD	1/64																										●	△				●							

• Insert with corner R (RE) dimension expressed with less than sign (e.g. **<0.002, <0.004, <0.008** etc.) indicate models with minus tolerance for corner R (RE).

Chipbreaker Range



Inserts sold in 10 piece boxes.

● : Standard Item △ : Phaseout Item (will be removed from next catalog)
Contact your local Kyocera sales engineer to upgrade old products to new technology

How to read this page ➔ B15

60° Triangle

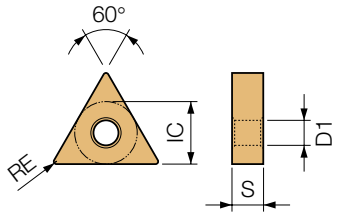
Negative Insert with Hole

(in)

Part Number	IC	S	D1
TN_22_	1/4	1/8	0.089
TN_23_	1/4	3/16	0.089

(in)

Part Number	IC	S	D1
TN_32_	3/8	1/8	0.150
TN_33_	3/8	3/16	0.150
TN_43_	1/2	3/16	0.203



| | | |

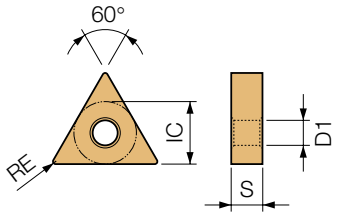
How to read this page B15

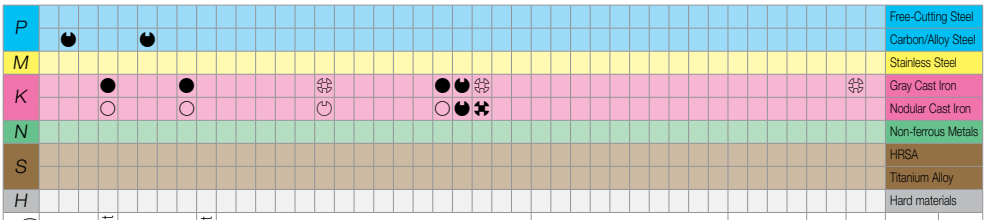
60° Triangle

Negative Insert with Hole

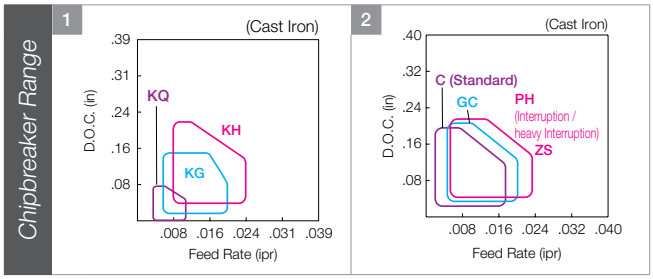
Part Number	IC	S	D1 (in)
TN_22_	1/4	1/8	0.089
TN_23_	1/4	3/16	0.089

Part Number	IC	S	D1 (in)
TN_32_	3/8	1/8	0.150
TN_33_	3/8	3/16	0.150
TN_43_	1/2	3/16	0.203





		ANSI Part Number	ISO Part Number	RE	Corner Radius (in)	Cermet			CVD Coated Carbide														MEGACOAT / MEGACOAT NANO PVD Coated Carbide										PVD Coated Carbide				DLC		Carbide	Toolholder Page	Chipbreaker Range
						TN610	TN620	TN60	CCX	PV710	PV720	PV730	PV7005	PV90	CA510	CA515	CA025P	CA525	CA530	CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA310	CA315	CA320	CA4505	CA4515	PR1705	PR1725	PR1425	PR1225	PR005S	PR015S	PR1305	PR1310	PR1325	PR1535	PR930	PR1005	PR1025	PR1125	PDL010	PDL025	KW10	SW05		
Sharp Edge	Cast Iron	TNMG	331KQ	160404KQ	1/64																				●	●	●																				
			332KQ	160408KQ	1/32																				●	●	●																				
Medium	Cast Iron	TNMG	331KG	160404KG	1/64																				●	●	●																				
			332KG	160408KG	1/32																				●	●	●																				
			333KG	160412KG	3/64																				●	●	●																				
Medium-Roughing	Cast Iron	TNMG	332KH	160408KH	1/32																				●	●	●																				
			333KH	160412KH	3/64																				●	●	●																				
			334KH	160416KH	1/16																				●	●	●																			D16-D18 F88 F98 F99	1
Roughing	Cast Iron	TNMG	331C	160404C	1/64																				●	●	●	△	●																		
			332C	160408C	1/32															●					●	●	●	△	●																		
			333C	160412C	3/64																				●	●	●		△																		
Roughing	Cast Iron	TNMG	332ZS	160408ZS	1/32															●					●	●	●	●	●																		
			333ZS	160412ZS	3/64																				●	●	●		●																		
Roughing	Cast Iron	TNMG	332GC	160408GC	1/32																				●	●	●	●	●																		
			333GC	160412GC	3/64															●					●	●	●		△																		
Cast Iron	Without Chipbreaker	TNGA	221	110304	1/64																																							D16-D17	
		TNGA	331	160404	1/64								●																																	
			332	160408	1/32								●																																	
		TNMA	331	160404	1/64		●	●	●		●		●												●	●	●	●	●																	D16-D18 F88 F98 F99	
			332	160408	1/32		●	●	●		●		●							●					●	●	●	●	●																		
			333	160412	3/64																				●	●	●	●	●																		
			334	160416	1/16																				●	●	●		●																		
			335	160420	5/64																				●	●	●		●																		



Inserts sold in 10 piece boxes.

● : Standard Item △ : Phaseout Item (will be removed from next catalog)
Contact your local Kyocera sales engineer to upgrade old products to new technology

How to read this page B15

60° Triangle

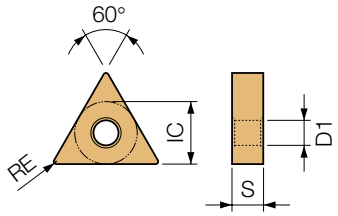
Negative Insert with Hole

(in)

Part Number	IC	S	D1
TN_22_	1/4	1/8	0.089
TN_23_	1/4	3/16	0.089

(in)

Part Number	IC	S	D1
TN_32_	3/8	1/8	0.150
TN_33_	3/8	3/16	0.150
TN_43_	1/2	3/16	0.203



| | | |

How to read this page ➔ B15

60° Triangle

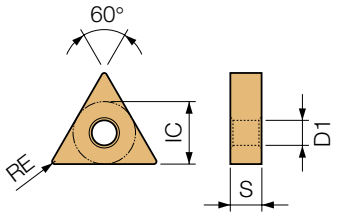
Negative Insert with Hole

(in)

Part Number	IC	S	D1
TN_22_	1/4	1/8	0.089
TN_23_	1/4	3/16	0.089

(in)

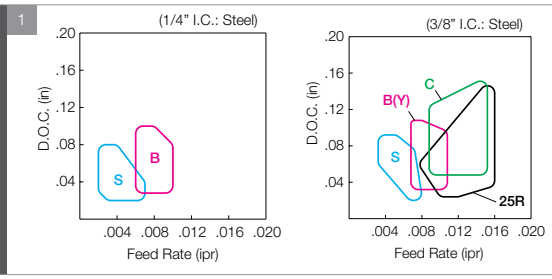
Part Number	IC	S	D1
TN_32_	3/8	1/8	0.150
TN_33_	3/8	3/16	0.150
TN_43_	1/2	3/16	0.203



					Corner Radius (in)	Cermet		CVD Cermet	MEGA COAT Cermet	PVD Cermet	CVD Coated Carbide																			MEGACOAT / MEGACOAT NANO PVD Coated Carbide										PVD Coated Carbide			DLC		Carbide		Toolholder Page	Chipbreaker Range
	Right-Hand Shown where Applicable	ANSI Part Number	ISO Part Number		RE	TN610	TN620	TN60	CCX	PV710	PV720	PV730	PV7005	PV90	CA510	CA515	CA025P	CA525	CA530	CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA310	CA315	CA320	CA4505	CA4515	PR1705	PR1725	PR1425	PR1225	PR005S	PR015S	PR1305	PR1310	PR1325	PR1535	PR930	PR1005	PR1025	PR1125	PDL010	PDL025	KW10	SW05		
Finishing	Super Fine Sharp Edge / Precision	TNEG	3305R-SSF	160402R-SSF	0.008	●	●	●		●	●	●																												●								D16-D18 F88 F98 F99	
			3305L-SSF	160402L-SSF	0.008	●	●	●		●	●	●																												●									
			331R-SSF	160404R-SSF	1/64	●	●	●		●	●	●																													●									
			331L-SSF	160404L-SSF	1/64	●	●	●		●	●	●																													●									
Finishing		TNGG	2305R-S	110402R-S	0.008			●																																					●		D16 D17 F98	
			2305L-S	110402L-S	0.008			●																																					●			
			231R-S	110404R-S	1/64			●																																								
			231L-S	110404L-S	1/64			●																																								
			232R-S	110408R-S	1/32			●																																								
			232L-S	110408L-S	1/32			●																																								
		TNGG	3302R-S	160401R-S	0.004		●				●	●																																				
			3302L-S	160401L-S	0.004		●				●	●																																				
			3305R-S	160402R-S	0.008	●	●	●		●	●	●	●	●																			●	△								●	●		△					D16-D18 F88 F98 F99	1
			3305L-S	160402L-S	0.008	●	●	●		●	●	●	●	●																			●	△								●	●		△						
			331R-S	160404R-S	1/64	●	●	●		●	●	●	●	●																			●	△								●	●		△						
			331L-S	160404L-S	1/64	●	●	●		●	●	●	●	●																			●	△								●	●		△						
	Surface Roughness Oriented		332R-S	160408R-S	1/32	●	●	●		●	●	●																					●	△								●	●		△						
			332L-S	160408L-S	1/32	●	●	●		●	●	●																					●	△								●	●		△						
Finishing-Medium		TNGG	2205R-B	110302R-B	0.008	●	●	●		●	●																																			●		D16 D17	
			2205L-B	110302L-B	0.008	●	●	●		●	●																																			●			
			221R-B	110304R-B	1/64	●	●	●		●	●																																			●			
			221L-B	110304L-B	1/64	●	●	●		●	●																																			●			
		TNGG	321R-B	160304R-B	1/64			●																																								-
			321L-B	160304L-B	1/64			△																																								
		TNGG	3305R-B	160402R-B	0.008	●	●	●		●	●	●																																			●		D16-D18 F88 F98 F99	
			3305L-B	160402L-B	0.008	●	●	●		●	●	●																																			●			
			331R-B	160404R-B	1/64	●	●	●		●	●	●	●																																			●			
			331L-B	160404L-B	1/64	●	●	●		●	●	●	●																																			●			
			332R-B	160408R-B	1/32	●	●	●		●	●	●																																					
			332L-B	160408L-B	1/32	●	●	●		●	●	●																																					

Chipbreaker Range

1



KYOCERA

Inserts sold in 10 piece boxes.

● : Standard Item △ : Phaseout Item (will be removed from next catalog)

Contact your local Kyocera sales engineer to upgrade old products to new technology

How to read this page B15

60° Triangle

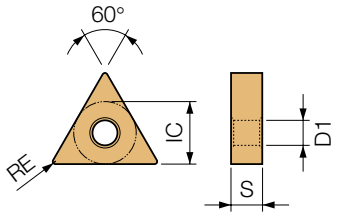
Negative Insert with Hole

(in)

Part Number	IC	S	D1
TN_22_	1/4	1/8	0.089
TN_23_	1/4	3/16	0.089

(in)

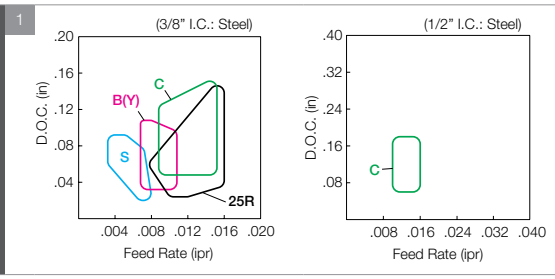
Part Number	IC	S	D1
TN_32_	3/8	1/8	0.150
TN_33_	3/8	3/16	0.150
TN_43_	1/2	3/16	0.203



					Corner Radius (in)	Cermet		CVD Cermet	MEGA COAT Cermet		PVD Cermet	CVD Coated Carbide																						MEGACOAT / MEGACOAT NANO PVD Coated Carbide										PVD Coated Carbide					DLC		Carbide		Toolholder Page	Chipbreaker Range
				RE	TN610	TN620	TN60	CCX	PV710	PV720	PV730	PV7005	PV90	CA510	CA515	CA025P	CA525	CA530	CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA310	CA315	CA320	CA4505	CA4515	PR1705	PR1725	PR1425	PR1225	PR005S	PR015S	PR1305	PR1310	PR1325	PR1535	PR930	PR1005	PR1025	PR1125	PDL010	PDL025	KW10	SW05		
Medium-Roughing		TNGG	3305R-C	160402R-C	0.008		●			●	●																																					D16-D18 F88 F98 F99	
			3305L-C	160402L-C	0.008		●			●	●																																						
			331R-C	160404R-C	1/64	●	●	●		●	●	●	●																											●						●			
			331L-C	160404L-C	1/64	●	●	●		●	●	●																													●						●			
			332R-C	160408R-C	1/32	●	●	●		●	●	●																													●						●			
			332L-C	160408L-C	1/32	●	●	●		●	●	●																													●						●			
			333R-C	160412R-C	3/64	●	●	●		●	●	●																																						
			333L-C	160412L-C	3/64	●	●	●		●	●	●																																						
		TNGG	431R-C	220404R-C	1/64	●	●	●			●																																					D16 D17 F98	
			431L-C	220404L-C	1/64	●	●	●			●																																						
			432R-C	220408R-C	1/32		●	●			●																																						
			432L-C	220408L-C	1/32		●	●			●																																						
		TNGG	2305R	110402R	0.008			●																																							D16 D17 F99	1
			2305L	110402L	0.008			△																																							
			231R	110404R	1/64			●																																								
			231L	110404L	1/64			●																																								
			232R	110408R	1/32			●																																								
		TNMG	331R-C	160404R-C	1/64	●	●	●		●	●	●																																					
			331L-C	160404L-C	1/64	●	●	●		●	●	●																																					
			332R-C	160408R-C	1/32	●	●	●		●	●	●																																					
			332L-C	160408L-C	1/32	●	●	●		●	●	●																																					
			333R-C	160412R-C	3/64			●																																								D16-D18 F88 F98 F99	
Medium-Roughing	Low Cutting Force	TNGG	331R-25R	160404R-25R	1/64	●	●	●		●	●	●																													●	●		△		●				
			331L-25R	160404L-25R	1/64	●	●	●		●	●	●																													●	●		△		●				
			332R-25R	160408R-25R	1/32	●	●	●		●	●	●																													●	●		△		●				
			332L-25R	160408L-25R	1/32	●	●	●		●	●	●																													●	●		△		●				

Chipbreaker Range

1



● : Standard Item △ : Phaseout Item (will be removed from next catalog)

Contact your local Kyocera sales engineer to upgrade old products to new technology

Inserts sold in 10 piece boxes.

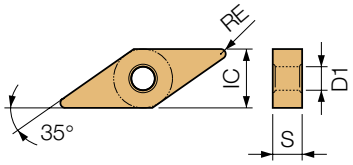
How to read this page ➔ B15

35° Diamond

Negative Insert with Hole

(in)

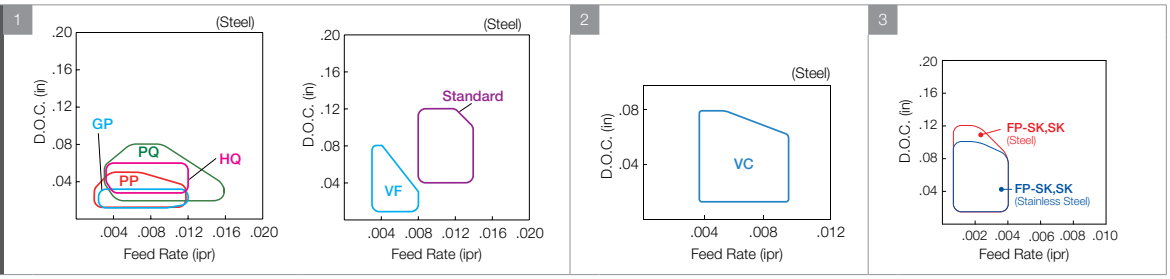
Part Number	IC	S	D1
VN_33_	3/8	3/16	0.150



			Right-Hand Shown where Applicable	ANSI Part Number	ISO Part Number	RE	TN610	TN620	TN60	CCX	PV710	PV720	PV730	PV7005	PV90	CA510	CA515	CA025P	CA525	CA530	CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA310	CA315	CA320	CA4505	CA4515	PR1705	PR1725	PR1425	PR1225	PR005S	PR015S	PR1305	PR1310	PR1325	PR1535	PR930	PR1005	PR1025	PR1125	PDL010	PDL025	KW10	SW05	Toolholder Page	Chipbreaker Range
Corner Radius (in)							Cermet			CVD Cermet	MEGA COAT Cermet			PVD Cermet	CVD Coated Carbide																	MEGACOAT / MEGACOAT NANO PVD Coated Carbide										PVD Coated Carbide				DLC		Carbide			
Finishing	VNMG	3305PP	160402PP	0.008	●	●		●	●	●	●			●	●	●	●	●			●																													
		331PP	160404PP	1/64	●	●		●	●	●	●			●	●	●	●	●			●																													
		332PP	160408PP	1/32	●	●		●	●	●	●			●	●	●	●	●		●																													
		333PP	160412PP	3/64	●	●		●	●	●	●						●	●																													
Finishing	VNMG	3305GP	160402GP	0.008	●	●	●		●	●	●		●		●	●	●	●				●	●																										
		331GP	160404GP	1/64	●	●	●		●	●	●		●		●	●	●	●				●	●																										
		332GP	160408GP	1/32	●	●	●		●	●	●		●		●	●	●	●				●	●																										
Finishing-Medium	VNMG	331 ℞ VC	160404 ℞ VC	1/64	●	●		●	●	●	●				●	●	●	●	●																													
		332 ℞ VC	160408 ℞ VC	1/32	●	●		●	●	●	●				●	●	●	●	●																													
		333 ℞ VC	160412 ℞ VC	3/64	●	●		●	●	●	●				●	●	●	●	●																													
Finishing-Medium	VNMG	331VF	160404VF	1/64	●	●		●	●	●	●				●	●	●	●	●			●	●																										
		332VF	160408VF	1/32	●	●		●	●	●	●				●	●	●	●	●			●	●																										
		333VF	160412VF	3/64		●				●	●					●	●	●	●			●	●																										
Finishing-Medium	VNMG	331PQ	160404PQ	1/64	●	●		●	●	●	●				●	●	●	●	●			△	●																										
		332PQ	160408PQ	1/32	●	●		●	●	●	●				●	●	●	●	●			●	●																										
		333PQ	160412PQ	3/64	●	●		●	●	●	●				●	●	●	●	●			●																										
Finishing-Medium	VNMG	331HQ	160404HQ	1/64	●	●	●	●	●	●	●		●		●	●	●	●	●	●	●	●	●																										
		332HQ	160408HQ	1/32	●	●	●	●	●	●	●		●		●	●	●	●	●	●	●	●	●																										
		333HQ	160412HQ	3/64		●	△	●		●	●		●		●	●	●	●	●	●	●	●	●																										
Medium	VNMG	331TN-V	160404TN-V	1/64			●																																									
		332TN-V	160408TN-V	1/32			●																																									
		333TN-V	160412TN-V	3/64			●																																									
Roughing	VNMG	331	160404	1/64	●	●	●		●	●	●		●		●	●	●	●	●		●	●	●	●	●	●	●	●	●	●																		
		332	160408	1/32	●	●	●	●	●	●	●	●	●		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●																		
Finishing-Medium	VNGG	3305MFP-SK	160402MFP-SK	<0.008							●																					●	△	●						●									
Sharp Edge / Polished		331MFP-SK	160404MFP-SK	<1/64							●																					●	△	●						●									
Finishing-Medium	VNGG	3305M-SK	160402M-SK	<0.008	●	●			●	●	●																																					
		331M-SK	160404M-SK	<1/64	●	●			●	●	●																																					

D20
D21
D22
D23
D24

Chipbreaker Range



KYOCERA

Inserts sold in 10 piece boxes.

● : Standard Item △ : Phaseout Item (will be removed from next catalog)

Contact your local Kyocera sales engineer to upgrade old products to new technology

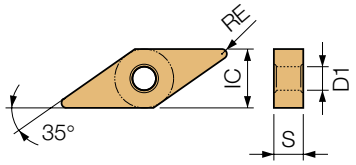
How to read this page ➔ B15

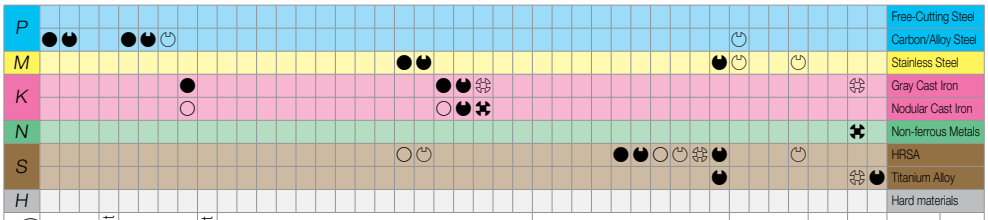
35° Diamond

Negative Insert with Hole

(in)

Part Number	IC	S	D1
VN_33_	3/8	3/16	0.150

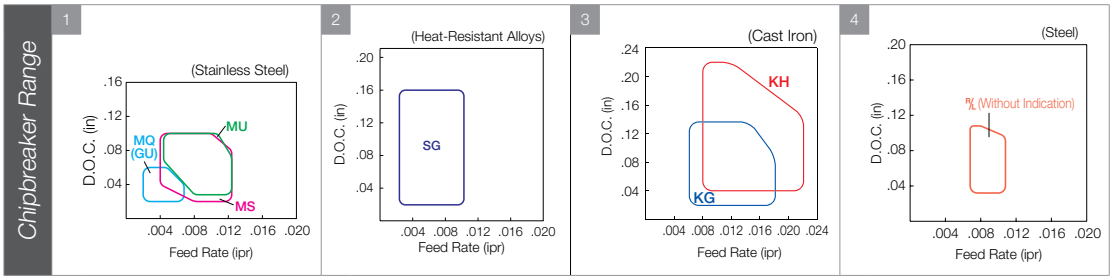




		ANSI Part Number	ISO Part Number	RE	Cermet TN610	Cermet TN620	Cermet TN60	CVD Cermet CCX	MEGA COAT Cermet PV710	MEGA COAT Cermet PV720	MEGA COAT Cermet PV730	PVD Cermet PV7005	PVD Cermet PV90	CVD Coated Carbide CA510	CA515	CA025P	CA525	CA530	CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA310	CA315	CA320	CA4505	CA4515	MEGACOAT / MEGACOAT NANO PVD Coated Carbide PR1705	PR1725	PR1425	PR1225	PR005S	PR015S	PR1305	PR1310	PR1325	PR1535	PVD Coated Carbide PR930	PR1005	PR1025	PR1125	DLC PDL010	PDL025	Carbide KW10	SW05	Toolholder Page	Chipbreaker Range
Finishing-Medium	Right-Hand Shown where Applicable	VNMG	331MQ	160404MQ	1/64																		●	●										●	●	△	△	△	●			△				●			
	Stainless Steel / HRSA		332MQ	160408MQ	1/32																		●	●										●	●	△	△	△	●			△				●			
Medium-Roughing		VNMG	331MS	160404MS	1/64																		●	●										●	●	△	△	△	●			△				●			
	Stainless Steel / HRSA		332MS	160408MS	1/32																		●	●										●	●	△	△	△	●			△				●			1
			333MS	160412MS	3/64																		●	●										●	●	△	△		●			△							
Medium-Roughing		VNGG	3302MU	160401MU	0.004																																	●											
			3305MU	160402MU	0.008																																	●											
	Stainless Steel / HRSA	VNMG	331MU	160404MU	1/64																		●	●										●	●	△	△	△	●			△				●			
			332MU	160408MU	1/32																		●	●										●	●	△	△	△	●			△				●			
Roughing		VNMG	331SG	160404SG	1/64																													●	●				●							●			2
	Heat-Resistant Alloy		332SG	160408SG	1/32																													●	●				●							●			
Medium-Roughing		VNMG	332KH	160408KH	1/32																				●	●	●																				D20 D21 D22 D23 D24	
	Cast Iron		333KH	160412KH	3/64																				●	●	●																					3
Medium-Roughing		VNMG	332KG	160408KG	1/32																				●	●	●																					
	Cast Iron		333KG	160412KG	3/64																				●	●	●																					
Cast Iron		VNGA	331	160404	1/64							●																																				●			-
	Without Chipbreaker		332	160408	1/32							●																																				●			
Medium		VNGG	3305R	160402R	0.008	●	●	●	●	●	●		●																														●							4
			3305L	160402L	0.008	●	●	●	●	●	●																																●						
			331R	160404R	1/64	●	●	●	●	●	●																																●					●	
			331L	160404L	1/64	●	●	●	●	●	●																																●					●	
			332R	160408R	1/32	●	●	●	●	●	●																																●					●	
			332L	160408L	1/32	●	●	●	●	●	●																																●					●	

• Insert with corner R (RE) dimension expressed with less than sign (e.g. **<0.002, <0.004, <0.008** etc.) indicate models with minus tolerance for corner R (RE).

Chipbreaker Range



● : Standard Item △ : Phaseout Item (will be removed from next catalog)

Contact your local Kyocera sales engineer to upgrade old products to new technology

Inserts sold in 10 piece boxes.

How to read this page ➔ B15

80° Trigon

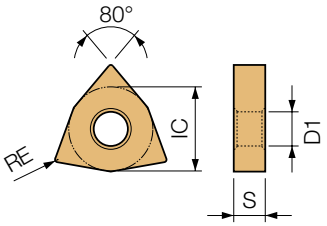
Negative Insert with Hole

(in)

Part Number	IC	S	D1
WN_325_	3/8	5/32	0.150
WN_33_	3/8	3/16	0.150

(in)

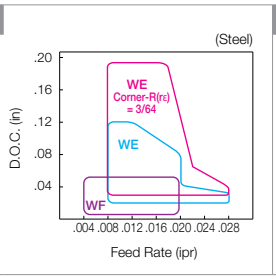
Part Number	IC	S	D1
WN_43_	1/2	3/16	0.203



		ANSI Part Number	ISO Part Number	RE	TN610	TN620	TN60	CCX	PV710	PV720	PV730	PV7005	PV90	CA510	CA515	CA025P	CA525	CA530	CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA310	CA315	CA320	CA4505	CA4515	PR1705	PR1725	PR1425	PR1225	PR005S	PR015S	PR1305	PR1310	PR1325	PR1535	PR930	PR1005	PR1025	PR1125	PDL010	PDL025	KW10	SW05	Toolholder Page	Chipbreaker Range
Finishing	Wiper Edge	WNMG 431WF	080404WF	1/64	●	●			●	●				●	●	●	●	●																																
		432WF	080408WF	1/32	●	●			●	●				●	●	●	●	●																																
Finishing	Wiper Edge	WNMG 431WP	080404WP	1/64	●	●			●	●				●	●	●	●		●	●	●																												
		432WP	080408WP	1/32	●	●			●	●				●	●	●	●	●	●	●	●																												
Finishing-Medium	Wiper Edge	WNMG 431WE	080404WE	1/64	●	●			●	●				●	●	●	●	●																																
		432WE	080408WE	1/32	●	●			●	●				●	●	●	●	●																																
		433WE	080412WE	3/64	●	●			●	●				●	●	●	●	●																																
Finishing-Medium	Wiper Edge	WNMG 431WQ	080404WQ	1/64	●	●			●	●			●		●	●	●	●			●	●																											
		432WQ	080408WQ	1/32	●	●			●	●				●	●	●	●	●	●	●	●																												
		433WQ	080412WQ	3/64		●				●				●	●	●	●	●	●	●	●																												
Finishing		WNMG 4305PP	080402PP	0.008	●	●		●	●	●	●			●	●	●	●	●																															
		431PP	080404PP	1/64	●	●		●	●	●	●			●	●	●	●	●																															
		432PP	080408PP	1/32	●	●		●	●	●	●			●	●	●	●	●																															
		433PP	080412PP	3/64	●	●		●	●	●	●				●	●	●	●																															
Finishing		WNMG 331GP	060404GP	1/64		●	●			●	●		●																																			
		332GP	060408GP	1/32		●	△			●	●		●																																			
		WNMG 431GP	080404GP	1/64	●	●	●		●	●	●																																					
		432GP	080408GP	1/32	●	●	●		●	●	●		●																																		
Finishing-Medium		WNMG 431PQ	080404PQ	1/64	●	●		●	●	●	●			●	●	●	●	●			●																												
		432PQ	080408PQ	1/32	●	●		●	●	●	●			●	●	●	●	●			●	●																											
		433PQ	080412PQ	3/64										●	●	●	●	●			●																												
Finishing-Medium		WNMG 3251HQ	06T304HQ	1/64		●	●			●	●					●	●	●			●																												
		3252HQ	06T308HQ	1/32			△									●	●				●																												
		WNMG 331HQ	060404HQ	1/64		●	●			●	●			●	●	●	●	●			●	●																											
		332HQ	060408HQ	1/32		●	●			●	●			●	●	●	●	●			●	●																											
		WNMG 431HQ	080404HQ	1/64	●	●	●		●	●	●			●	●	●	●	●	●	●	●	●	●	●													●						△				
		432HQ	080408HQ	1/32	●	●	●		●	●	●			●	●	●	●	●	●	●	●	●	●	●													●						△				
		433HQ	080412HQ	3/64	●	●	△		●	●	●			●	●	●	●	●			●	●																											

Chipbreaker Range

1



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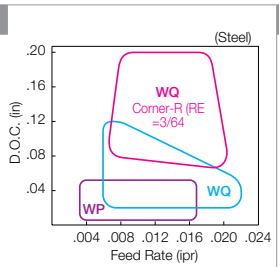

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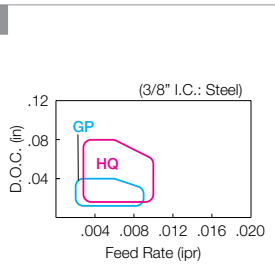
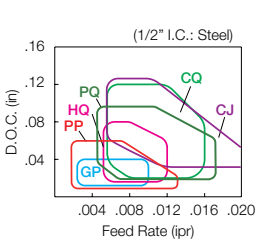




KYOCERA

Inserts sold in 10 piece boxes.

● : Standard Item △ : Phaseout Item (will be removed from next catalog)

Contact your local Kyocera sales engineer to upgrade old products to new technology

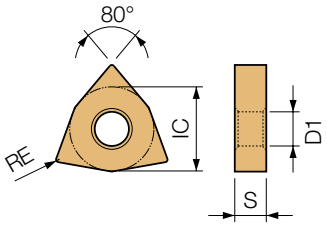
How to read this page ➔ B15

80° Trigon

Negative Insert with Hole

Part Number	IC	S	D1
	(in)		
WN_325_	3/8	5/32	0.150
WN_33_	3/8	3/16	0.150

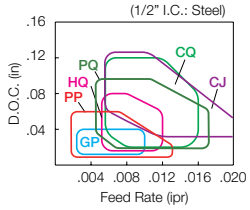
Part Number	IC	S	D1
	(in)		
WN_43_	1/2	3/16	0.203



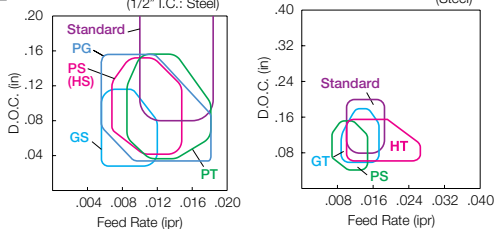
	ANSI Part Number	ISO Part Number	RE	TN610	TN620	TN60	CCX	PV710	PV720	PV730	PV7005	PV90	CA510	CA515	CA025P	CA525	CA530	CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA310	CA315	CA320	CA4505	CA4515	PR1705	PR1725	PR1425	PR1225	PR005S	PR015S	PR1305	PR1310	PR1325	PR1535	PR930	PR1005	PR1025	PR1125	PDL010	PDL025	KW10	SW05	Toolholder Page	Chipbreaker Range
Finishing-Medium	WNMG 431CQ	080404CQ	1/64	●	●			●	●	●			●	●	●	●			●	●																												
	432CQ	080408CQ	1/32	●	●	●		●	●	●		●	●	●	●	●	●	●	●	●	●																										
Up Facing	433CQ	080412CQ	3/64		●	●			●	●			●	●	●	●	●		●	●	●																									D26 D27 F101 F102	1
Finishing-Medium	WNMG 432CJ	080408CJ	1/32											●	●	●	●		●	●																												
Up Facing	433CJ	080412CJ	3/64										●	●	●	●			●	●																												
Medium-Roughing	WNMG 331GS	060404GS	1/64		●	●			●	●				●	●	●	●		●	●																											D26-D27 F100	
	332GS	060408GS	1/32		●	●			●	●			●	●	●	●	●		●	●																												
Medium-Roughing	WNMG 431GS	080404GS	1/64		●				●	●				●	●	●			●	●																												
	432GS	080408GS	1/32		●				●	●			●	●	●	●	●		●	●																												
	433GS	080412GS	3/64											●	●	●	●		●	●																												
Medium-Roughing	WNMG 431PG	080404PG	1/64	●	●			●	●	●			●	●	●	●	●																							●							
	432PG	080408PG	1/32	●	●			●	●	●			●	●	●	●	●																							●							
	433PG	080412PG	3/64										●	●	●	●	●																							●							
	434PG	080416PG	1/16										●	●	●	●	●																														
Medium-Roughing	WNMG 431PS	080404PS	1/64		●				●	●				●	●	●	●		●	●	●	●																				△						
	432PS	080408PS	1/32		●				●	●			●	●	●	●	●	●	●	●	●	●																				△						
	433PS	080412PS	3/64										●	●	●	●	●	●	●	●	●		●																									
	434PS	080416PS	1/16										●	●	●	●				●																												
Medium-Roughing	WNMG 432PT	080408PT	1/32										●	●	●	●	●	●	●	●	●	●	●																									D26 D27 F101 F102	2
High Feed Rate	433PT	080412PT	3/64										●	●	●	●	●		●	●	●	●																										
Medium-Roughing	WNMG 432GT	080408GT	1/32									●	●	●	●	●	●		●	●																												
High Feed Rate	433GT	080412GT	3/64										●	●	●	●	●		●	●																												
Medium-Roughing	WNMG 433HT	080412HT	3/64																	△																												
High Feed Rate																																															
Roughing	WNMG 431	80404	1/64	●	●	●		●	●	●			●	●	●				●	●			●	●	●	●	●												●			△					
	432	80408	1/32	●	●	●	●	●	●	●	●		●	●	●	●	●		●	●	●	●	●	●	●	●	●											●			△					
	433	80412	3/64											●	●	●	●		●	●	●	●	●	●	●	●	●												●			△					

Chipbreaker Range

1



2



● : Standard Item △ : Phaseout Item (will be removed from next catalog)

Contact your local Kyocera sales engineer to upgrade old products to new technology

Inserts sold in 10 piece boxes.

How to read this page ➔ B15

80° Trigon

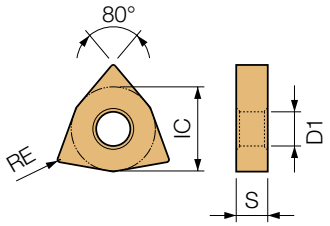
Negative Insert with Hole

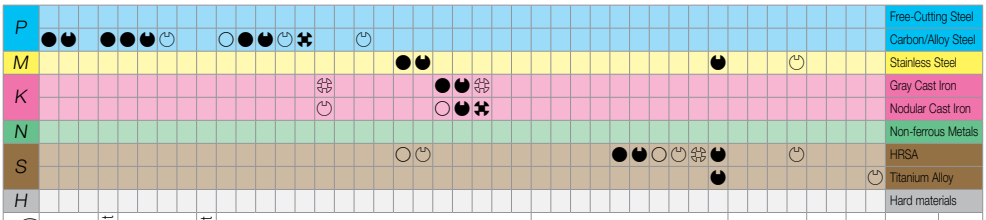
(in)

Part Number	IC	S	D1
WN_325_	3/8	5/32	0.150
WN_33_	3/8	3/16	0.150

(in)

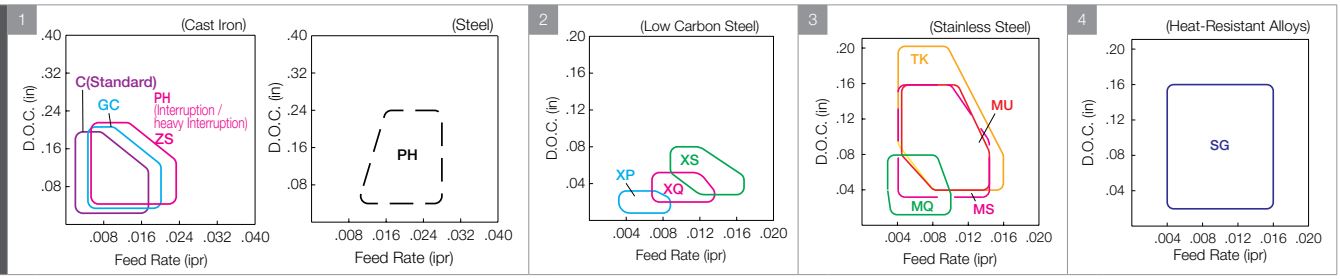
Part Number	IC	S	D1
WN_43_	1/2	3/16	0.203





		ANSI Part Number	ISO Part Number	RE	TN610	TN620	TN60	CCX	PV710	PV720	PV730	PV7005	PV90	CA510	CA515	CA025P	CA525	CA530	CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA310	CA315	CA320	CA4505	CA4515	PR1705	PR1725	PR1425	PR1225	PR005S	PR015S	PR1305	PR1310	PR1325	PR1535	PR930	PR1005	PR1025	PR1125	PDL010	PDL025	KW10	SW05	Toolholder Page	Chipbreaker Range
Roughing		WNMG 432PH	080408PH	1/32										●	●	●	●	●							●	●	●	●	●																					
		433PH	080412PH	3/64										●	●	●	●	●							●	●	●		●																					
Finishing	 Low Carbon Steel	WNMG 431XP	080404XP	1/64	●	●	△	●	●	●	●			●	●	●	●			●	●																														
		432XP	080408XP	1/32	●	●	△	●	●	●	●			●	●	●	●			●	●																														
Medium	 Low Carbon Steel	WNMG 431XQ	080404XQ	1/64	●	●		●	●	●	●				●	●	●	●			●	●																													
		432XQ	080408XQ	1/32	●	●	△	●	●	●	●				●	●	●	●			●	●																													
Roughing	 Low Carbon Steel	WNMG 432XS	080408XS	1/32		●				●	●		●		●	●	●	●			●	●																													
Medium-Roughing	 Sharp Edge	WNGG 431TK	080404TK	1/64																																△	△											●			
		432TK	080408TK	1/32																																△	△											●			
Medium-Roughing	 Stainless Steel / HRSA	WNMG 431TK	080404TK	1/64																			●	●												△	△		●				△						D26 D27 F101 F102	
		432TK	080408TK	1/32																			●	●												△	△	△	●				△							
Finishing-Medium	 Stainless Steel / HRSA	WNMG 431MQ	080404MQ	1/64																			●	●										●	●	△	△	△	●				△					●		
		432MQ	080408MQ	1/32																			●	●										●	●	△	△	△	●				△					●		
Medium-Roughing	 Stainless Steel / HRSA	WNMG 431MS	080404MS	1/64																			●	●										●	●	△	△	△	●				△					●		
		432MS	080408MS	1/32																			●	●										●	●	△	△	△	●				△					●		
		433MS	080412MS	3/64																			●	●										●	●	△	△	△	●				△					△		
Medium-Roughing	 Stainless Steel / HRSA	WNMG 431MU	080404MU	1/64																			●	●										●	●	△	△	△	●				△					●		
		432MU	080408MU	1/32																			●	●										●	●	△	△	△	●				△					●		
Roughing	 Heat-Resistant Alloy	WNMG 432SG	080408SG	1/32																														●	●				●									●		
		433SG	080412SG	3/64																														●	●				●									●		

Chipbreaker Range



For Heat-Resistant Alloys See ➔ B8

● : Standard Item △ : Phaseout Item (will be removed from next catalog)

Contact your local Kyocera sales engineer to upgrade old products to new technology

Inserts sold in 10 piece boxes.

How to read this page B15

80° Trigon

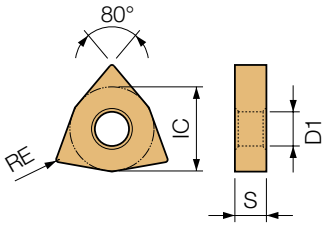
Negative Insert with Hole

(in)

Part Number	IC	S	D1
WN_325_	3/8	5/32	0.150
WN_33_	3/8	3/16	0.150

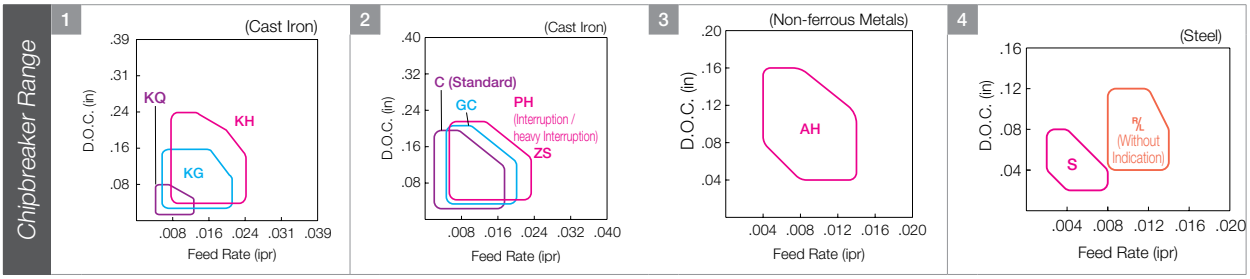
(in)

Part Number	IC	S	D1
WN_43_	1/2	3/16	0.203



	ANSI Part Number	ISO Part Number	RE	Corner Radius (in)	Cermet	CVD Cermet	MEGA COAT Cermet	PVD Cermet	CVD Coated Carbide														MEGACOAT / MEGACOAT NANO PVD Coated Carbide												PVD Coated Carbide						DLC		Carbide		Toolholder Page	Chipbreaker Range
					TN610	TN620	TN60	CCX	PV710	PV720	PV730	PV7005	PV90	CA510	CA515	CA025P	CA525	CA530	CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA310	CA315	CA320	CA4505	CA4515	PR1705	PR1725	PR1425	PR1225	PR005S	PR015S	PR1305	PR1310	PR1325	PR1535	PR930	PR1005	PR1025	PR1125	PDL010	PDL025	KW10	SW05		
Sharp Edge	Cast Iron	WNMG 431KQ	080404KQ	1/64																				●	●	●																					
			432KQ	080408KQ	1/32																				●	●	●																					
			433KQ	080412KQ	3/64																				●	●	●																					
Medium	Cast Iron	WNMG 431KG	080404KG	1/64																				●	●	●																					
			432KG	080408KG	1/32																				●	●	●																					1
			433KG	080412KG	3/64																				●	●	●																					
Medium-Roughing	Cast Iron	WNMG 432KH	080408KH	1/32																				●	●	●																					
			433KH	080412KH	3/64																				●	●	●																					
			434KH	080416KH	1/16																				●	●	●																					
Roughing	Cast Iron	WNMG 431C	080404C	1/64																				●	●	●	●	●																					
			432C	080408C	1/32														●						●	●	●	●	●																					
			433C	080412C	3/64																				●	●	●		●																					
Roughing	Cast Iron	WNMG 432ZS	080408ZS	1/32															●						●	●	●	●	●																					
			433ZS	080412ZS	3/64																				●	●	●	●	●																					
Roughing	Cast Iron	WNMG 432GC	080408GC	1/32																				●	●	●	●	●																					
			433GC	080412GC	3/64																				●	●	●		●																					
Cast Iron	Without Chipbreaker	WNMA 432	080408	1/32				●											●						●	●	●	△	●																					
			433	080412	3/64														●						●	●	●	●	●																					
Medium-Roughing	Sharp Edge Non-Ferrous	WNGG 431AH	080404AH	1/64																																								●	●	●			
			432AH	080408AH	1/32																																								●	●	●			3
Finishing	Surface Roughness Oriented	WNGG 3305R-S	060402R-S	0.008			●																																						●			
			3305L-S	060402L-S	0.008			●																																						●			
			331R-S	060404R-S	1/64			●																																						●			
			331L-S	060404L-S	1/64			●					●																																	●			
			332R-S	060408R-S	1/32			●																																									4
			332L-S	060408L-S	1/32								●																																				
Medium		WNGG 331R	060404R	1/64			●																																						●			
			331L	060404L	1/64			●																																						●			

Chipbreaker Range



● : Standard Item △ : Phaseout Item (will be removed from next catalog)

Contact your local Kyocera sales engineer to upgrade old products to new technology

Inserts sold in 10 piece boxes.

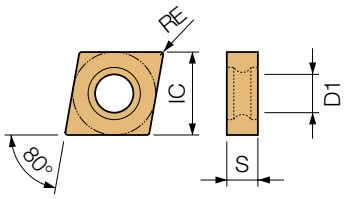
How to read this page ➔ B15

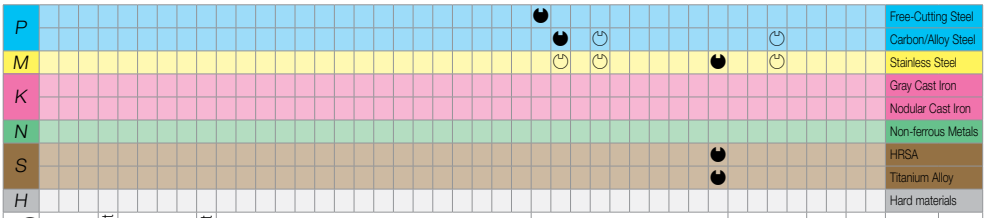
Small Double-Sided / 80° Diamond

Turning Inserts

(in)

Part Number	IC	S	D1
CN_U242_	0.295	1/8	0.142





	Right-Hand Shown where Applicable	ANSI Part Number	ISO Part Number	RE	TN610	TN620	TN60	CCX	PV710	PV720	PV730	PV7005	PV90	CA510	CA515	CA025P	CA525	CA530	CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA310	CA315	CA320	CA4505	CA4515	PR1705	PR1725	PR1425	PR1225	PR005S	PR015S	PR1305	PR1310	PR1325	PR1535	PR930	PR1005	PR1025	PR1125	PDL010	PDL025	KW10	SW05	Toolholder Page	Chipbreaker Range
Finishing-Medium	Sharp Edge	CNGU 24202MF-SK	070301MF-SK	<0.004																																					△							
		24205MF-SK	070302MF-SK	<0.008																																					△							
Finishing-Medium	Sharp Edge / Polished	CNGU 24202MFP-SK	070301MFP-SK	<0.004																											●	△	●					●										
		24205MFP-SK	070302MFP-SK	<0.008																											●	△	●					●										
Medium-Roughing	Honed Edge	CNMU 24205E-GK	070302E-GK	0.008																											●	△	●					●			△							
		2421E-GK	070304E-GK	1/64																											●	△	●					●		△	△							
Finishing	Sharp Edge	CNGU 242013MFR-F	0703005MFR-F	<0.002																											●		△															
		24202MFR-F	070301MFR-F	<0.004																											●	●	△	△				●										
		24205MFR-F	070302MFR-F	<0.008																											●	●	△	●				●			△							
		2421MFR-F	070304MFR-F	<1/64																											●	●	△					●										
Low Feed	Sharp Edge	CNGU 242013MFR-U	0703005MFR-U	<0.002																											●			●								△							
		24202MFR-U	070301MFR-U	<0.004																											●	●	△	●				●				△						
		24205MFR-U	070302MFR-U	<0.008																											●	●	△	●				●				△						
		2421MFR-U	070304MFR-U	<1/64																											●	●	△	△				●				△						

E48

See B52

1

• Insert with corner R (RE) dimension expressed with less than sign (e.g. **<0.002, <0.004, <0.008** etc.) indicate models with minus tolerance for corner R (RE).

● Small Double-Sided Tool Identification System

CNGU070301M F P - SK

- Minus Tolerance for Corner-R (RE)
- Sharp Edge
- Polished Inserts
- Chipbreakers

CNGU070301M F R - U

- Minus Tolerance for Corner-R (RE)
- Sharp Edge
- Insert Hand
- Chipbreakers

CNGU070301M E R - U

- Minus Tolerance for Corner-R (RE)
- Honed Edge
- Insert Hand
- Chipbreakers

● When minus tolerance is specified for corner-R (RE)

- If a minus tolerance is specified for the corner-R (RE) as shown in Fig.1, using an insert with corner-R = 0.008" may result in larger radius than specified.
- Use an insert whose corner-R (RE) has a minus tolerance.

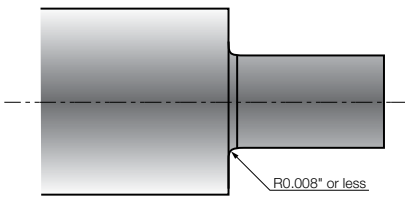


Fig.1 Example of a specified corner-R in drawing

● : Standard Item △ : Phaseout Item (will be removed from next catalog)
Contact your local Kyocera sales engineer to upgrade old products to new technology

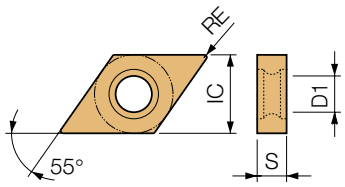
How to read this page B15

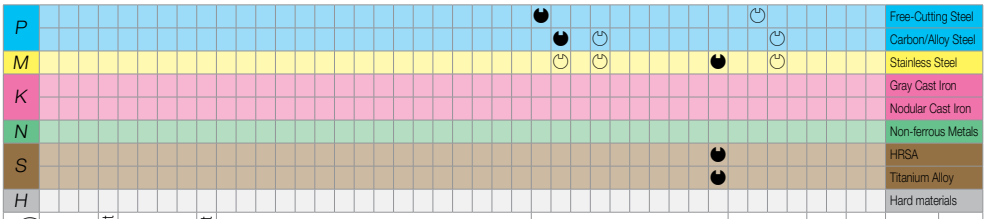
Small Double-Sided / 55° Diamond

Turning Inserts

(in)

Part Number	IC	S	D1
DN_222_	0.276	1/8	0.142



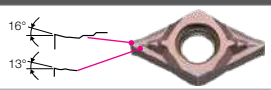
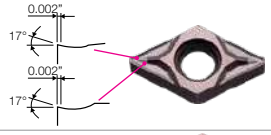
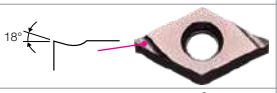
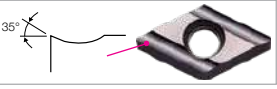


		Right-Hand Shown where Applicable	ANSI Part Number	ISO Part Number	RE	Corner Radius (in)	Cermet	CVD Cermet	MEGA COAT Cermet	PVD Cermet	CVD Coated Carbide	MEGACOAT / MEGACOAT NANO PVD Coated Carbide	PVD Coated Carbide	DLC	Carbide	Toolholder Page	Chipbreaker Range
							TN610 TN620	TN60	CCX	PV710 PV720 PV730	PV7005	PV90	CA510 CA515 CA025P CA525 CA530	CA5505 CA5515 CA5525 CA5535	CA6515 CA6525	CA310 CA315 CA320	CA4505 CA4515	PR1705 PR1725	PR1425 PR1225	PR005S PR015S	PR1305 PR1310 PR1325	PR1535	PR930 PR1005	PR1025 PR1125	PDL010 PDL025	KW10	SW05		
Finishing-Medium	DNGU	Sharp Edge	22202MF-SK	080301MF-SK	<0.004																		△					
			22205MF-SK	080302MF-SK	<0.008																		△					
			2221MF-SK	080304MF-SK	<1/64																		△					
Finishing-Medium	DNGU	Sharp Edge / Polished	22202MFP-SK	080301MFP-SK	<0.004													●	△	●								
			22205MFP-SK	080302MFP-SK	<0.008													●	△	●			●					
			2221MFP-SK	080304MFP-SK	<1/64													●	△	●			●					
Medium-Roughing	DNMU	Honed Edge	22205E-GK	080302E-GK	0.008													●	△	●			●		△			
			2221E-GK	080304E-GK	1/64													●	△	●			●		△			
Finishing	DNGU	Sharp Edge	22202MFR-F	080301MFR-F	<0.004													●	△	△			●					
			22205MFR-F	080302MFR-F	<0.008													●	●	△	●		●	△	△			
			2221MFR-F	080304MFR-F	<1/64													●	△	△			●					
Low Feed	DNGU	Sharp Edge	22202MFR-U	080301MFR-U	<0.004													●	●	△	△		●		△			
			22205MFR-U	080302MFR-U	<0.008													●	●	△	●		●	△	△			
			2221MFR-U	080304MFR-U	<1/64													●	△	●			●		△			
Low Feed	DNGU	Honed Edge	22202MER-U	080301MER-U	<0.004													●	●									
			22205MER-U	080302MER-U	<0.008													●	●						△			
			2221MER-U	080304MER-U	<1/64													●	●						△			

E48 — See B52 — 2

• Insert with corner R (RE) dimension expressed with less than sign (e.g. **<0.002, <0.004, <0.008** etc.) indicate models with minus tolerance for corner R (RE).

Chipbreaker Selection (Negative Inserts)

Cutting Range	Name	Cross-Section	Advantages
Finishing-Medium	**SK**		A low cutting force chipbreaker designed for chip control in steel and stainless steel. Cutting performance is similar to comparably sized positive inserts.
Medium-Roughing	**GK**		Chipbreaker "dot" and pocket design provide chip control at multiple depths of cut and feed rates.
Finishing	**F**		Controlled chip evacuation direction with low cutting forces.
Low Feed	**U**		Good chip control at low feed rates and varied depths of cut with low cutting forces.

● : Standard Item △ : Phaseout Item (will be removed from next catalog)
Contact your local Kyocera sales engineer to upgrade old products to new technology

Inserts sold in 10 piece boxes.

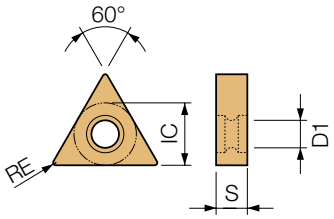
How to read this page ➡ B15

Small Double-Sided / 60° Triangle

Turning Inserts

(in)

Part Number	IC	S	D1
TN_182_	7/32	1/8	0.118

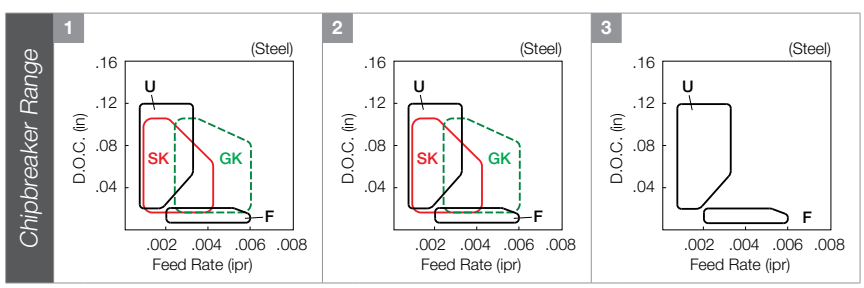


	Right-Hand Shown where Applicable	ANSI Part Number	ISO Part Number	Corner Radius (in) RE	TN610	TN620	TN60	CCX	PV710	PV720	PV730	PV7005	PV90	CA510	CA515	CA025P	CA525	CA530	CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA310	CA315	CA320	CA4505	CA4515	PR1705	PR1725	PR1425	PR1225	PR005S	PR015S	PR1305	PR1310	PR1325	PR1535	PR930	PR1005	PR1025	PR1125	PDL010	PDL025	KW10	SW05	Toolholder Page	Chipbreaker Range
					Cermet			CVD Cermet	MEGA COAT Cermet				PVD Cermet	CVD Coated Carbide																MEGACOAT / MEGACOAT NANO PVD Coated Carbide										PVD Coated Carbide				DLC		Carbide			
Finishing	 Sharp Edge	TNGU 182013MFR-F	0903005MFR-F	<0.002																													●									△							
		18202MFR-F	090301MFR-F	<0.004																										●	●	△	●						●			△							
		18205MFR-F	090302MFR-F	<0.008																										●	●	△	●						●		△	△							
		1821MFR-F	090304MFR-F	<1/64																										●	●	△	●						●		△	△							
Low Feed	 Sharp Edge	TNGU 182013MFR-U	0903005MFR-U	<0.002																													△									△							
		18202MFR-U	090301MFR-U	<0.004																											●	△	△						●			△						E49	3
		18205MFR-U	090302MFR-U	<0.008																										●	●	△	●						●		△	△							
		1821MFR-U	090304MFR-U	<1/64																										●	●	△	●						●			△							
Low Feed	 Honed Edge	TNGU 1821MER-U	090304MER-U	<1/64																										●	●											△							

P																														●											⏲							Free-Cutting Steel
																															●		⏲									⏲						Carbon/Alloy Steel
M																															⏲		⏲						●			⏲						Stainless Steel
K																																																Gray Cast Iron
																																																Nodular Cast Iron
N																																																Non-ferrous Metals
S																																							●									HRSA
																																							●									Titanium Alloy
H																																																Hard materials

• Insert with corner R (RE) dimension expressed with less than sign (e.g. **<0.002, <0.004, <0.008** etc.) indicate models with minus tolerance for corner R (RE).

Chipbreaker Range



KYOCERA

Inserts sold in 10 piece boxes.

● : Standard Item △ : Phaseout Item (will be removed from next catalog)
Contact your local Kyocera sales engineer to upgrade old products to new technology

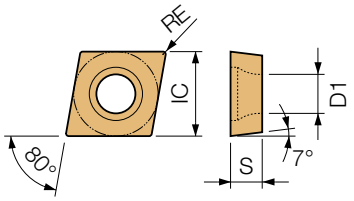
How to read this page ➔ B15

80° Diamond

Positive Insert with Hole

Part Number	IC	S	D1
	(in)		
CC_1109_	0.138	0.055	0.075
CC_1411_	0.169	0.071	0.091

Part Number	IC	S	D1
	(in)		
CC_215_	1/4	3/32	0.110
CC_325_	3/8	5/32	0.173
CC_43_	1/2	3/16	0.217



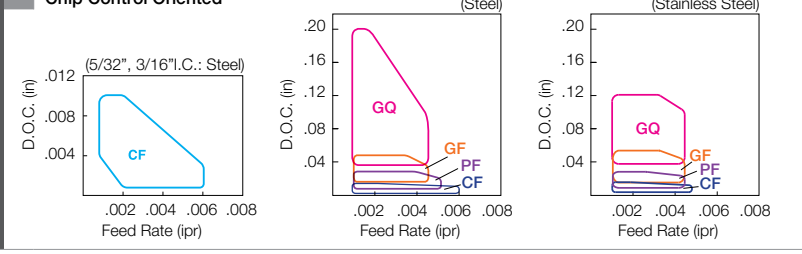
			ANSI Part Number	ISO Part Number	RE	Tooltolder Page	Chipbreaker Range
Minute D.O.C.	Sharp Edge	CCGT	110902M-CF	030101M-CF	<0.004	F29 F47 F49	
			110905M-CF	030102M-CF	<0.008		
		CCGT	141102M-CF	040101M-CF	<0.004	F29 F47	
			141105M-CF	040102M-CF	<0.008		
Minute D.O.C.	Sharp Edge / Polished	CCGT	110902MP-CF	030101MP-CF	<0.004	F29 F47 F49	
			110905MP-CF	030102MP-CF	<0.008		
		CCGT	141102MP-CF	040101MP-CF	<0.004	F29 F47	
			141105MP-CF	040102MP-CF	<0.008		
Finishing	Sharp Edge / Polished	CCGT	110902MFP-PF	030101MFP-PF	<0.004	F29 F47	
			110905MFP-PF	030102MFP-PF	<0.008		
		CCGT	141102MFP-PF	040101MFP-PF	<0.004		
			141105MFP-PF	040102MFP-PF	<0.008		
		CCGT	21502MFP-PF	060201MFP-PF	<0.004		1
			21505MFP-PF	060202MFP-PF	<0.008		
			2151MFP-PF	060204MFP-PF	<1/64		
Finishing	Sharp Edge	CCGT	21502MF-GF	060201MF-GF	<0.004		
			21505MF-GF	060202MF-GF	<0.008		
		CCGT	32502MF-GF	09T301MF-GF	<0.004		
			32505MF-GF	09T302MF-GF	<0.008		
			3251MF-GF	09T304MF-GF	<1/64		
Finishing	Sharp Edge / Polished	CCGT	21502MFP-GF	060201MFP-GF	<0.004		
			21505MFP-GF	060202MFP-GF	<0.008		
			2151MFP-GF	060204MFP-GF	<1/64		
		CCGT	32502MFP-GF	09T301MFP-GF	<0.004		
			32505MFP-GF	09T302MFP-GF	<0.008		
			3251MFP-GF	09T304MFP-GF	<1/64		
Finishing	Sharp Edge / Polished	CCGT	215013MFP-SKS	0602005MFP-SKS	<0.002	Reference Table at Top of B54	
			21502MFP-SKS	060201MFP-SKS	<0.004		
			21505MFP-SKS	060202MFP-SKS	<0.008		
		CCGT	325013MFP-SKS	09T3005MFP-SKS	<0.002		
			32502MFP-SKS	09T301MFP-SKS	<0.004		
			32505MFP-SKS	09T302MFP-SKS	<0.008		
			3251MFP-SKS	09T304MFP-SKS	<1/64		
Finishing	Sharp Edge / Polished	CCGT	21502MFP-SK	060201MFP-SK	<0.004		2
			21505MFP-SK	060202MFP-SK	<0.008		
			2151MFP-SK	060204MFP-SK	<1/64		
		CCGT	32502MFP-SK	09T301MFP-SK	<0.004		
			32505MFP-SK	09T302MFP-SK	<0.008		
			3251MFP-SK	09T304MFP-SK	<1/64		
Finishing	Sharp Edge / Polished	CCGT	21502MP-CK	060201MP-CK	<0.004		
			21505MP-CK	060202MP-CK	<0.008		
		CCGT	32502MP-CK	09T301MP-CK	<0.004		
			32505MP-CK	09T302MP-CK	<0.008		
Finishing-Medium	Sharp Edge	CCGT	21502MF-GQ	060201MF-GQ	<0.004		
			21505MF-GQ	060202MF-GQ	<0.008		
			2151MF-GQ	060204MF-GQ	<1/64		1
		CCGT	32502MF-GQ	09T301MF-GQ	<0.004		
			32505MF-GQ	09T302MF-GQ	<0.008		
			3251MF-GQ	09T304MF-GQ	<1/64		

	Corner Radius (in)	Cermet		CVD Coated Cermet	MEGA COAT Cermet		PVD Cermet	CVD Coated Carbide																MEGACOAT / MEGACOAT NANO PVD Coated Carbide										PVD Coated Carbide			DLC		Carbide		
	RE	TN610	TN620	TN60	CCX	PV710	PV720	PV730	PV7005	PV90	CA510	CA515	CA025P	CA525	CA530	CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA310	CA315	CA320	CA4505	CA4515	PR1705	PR1725	PR1425	PR1225	PR005S	PR015S	PR1305	PR1310	PR1325	PR1535	PR930	PR1005	PR1025	PR1125	PDL010	PDL025	KW10	SW05
P								●																				●									◔	◔					
M								●																			◔	◔	◔						●			◔		◔			
K																																											
N																																								●	●		
S																																			●		◔					
H																																			●							
		Free-Cutting Steel																																									
		Carbon/Alloy Steel																																									
		Stainless Steel																																									
		Gray Cast Iron																																									
		Nodular Cast Iron																																									
		Non-ferrous Metals																																									
		HRSA																																									
		Titanium Alloy																																									
		Hard materials																																									

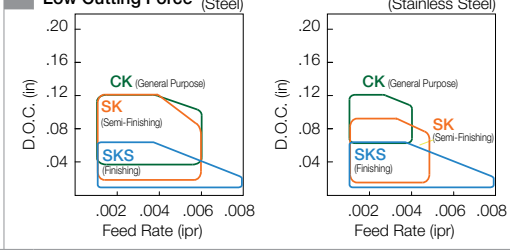
• Insert with corner R (RE) dimension expressed with less than sign (e.g. **<0.002, <0.004, <0.008** etc.) indicate models with minus tolerance for corner R (RE).

Chipbreaker Range

1 Chip Control Oriented



2 Low Cutting Force



● : Standard Item △ : Phaseout Item (will be removed from next catalog)

Contact your local Kyocera sales engineer to upgrade old products to new technology

Inserts sold in 10 piece boxes.

How to read this page ➔ B15

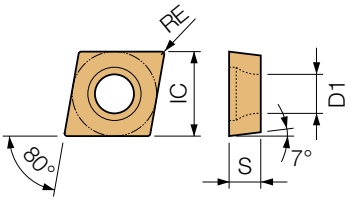
80° Diamond

Positive Insert with Hole

Part Number	Applicable Toolholder Page
CC..215	E24~E26, E45, E52, F29, F47, F49
CC..325	E24~E26, E45, E52, F47, F89

(in)

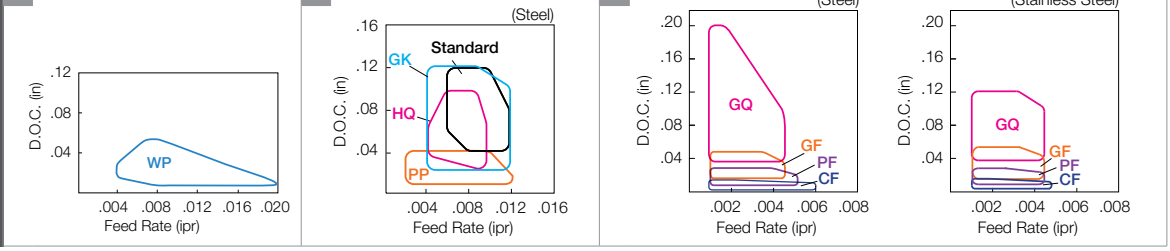
Part Number	IC	S	D1
CC_215_	1/4	3/32	0.110
CC_325_	3/8	5/32	0.173
CC_43_	1/2	3/16	0.217



					Corner Radius (in)	Cermet		CVD Cermet	MEGA COAT Cermet		PVD Cermet	CVD Coated Carbide																		MEGACOAT / MEGACOAT NANO PVD Coated Carbide									PVD Coated Carbide		DLC		Carbide		Toolholder Page	Chipbreaker Range
		ANSI Part Number	ISO Part Number	RE	TN610	TN620	TN60	CCX	PV710	PV720	PV730	PV7005	PV90	CA510	CA515	CA025P	CA525	CA530	CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA310	CA315	CA320	CA4505	CA4515	PR1705	PR1725	PR1425	PR1225	PR005S	PR015S	PR1305	PR1310	PR1325	PR1535	PR930	PR1005	PR1025	PR1125	PDL010	PDL025	KW10	SW05		
Finishing-Medium	Sharp Edge / Polished	CCGT	21502MFP-GQ	060201MFP-GQ	<0.004																								●	●	△	●						●		△					Reference Table Above	3
			21505MFP-GQ	060202MFP-GQ	<0.008																								●	●	△	●						●		△						
			2151MFP-GQ	060204MFP-GQ	<1/64																								●	●	△	●						●		△						
		CCGT	32502MFP-GQ	09T301MFP-GQ	<0.004																								●	●	△	●						●		△						
			32505MFP-GQ	09T302MFP-GQ	<0.008																								●	●	△	●						●		△						
			3251MFP-GQ	09T304MFP-GQ	<1/64																								●	●	△	●						●		△						
Finishing	Wiper Edge	CCMT	21505WP	060202WP	0.008	●	●		●	●				●	●	●	●	●											●	△	●															
			2151WP	060204WP	1/64	●	●		●	●				●	●	●	●	●											●	△	●															
			2152WP	060208WP	1/32	●	●		●	●				●	●	●	●	●											●	△	●															
		CCMT	32505WP	09T302WP	0.008	●	●		●	●				●	●	●	●	●											●	△	△															
			3251WP	09T304WP	1/64	●	●		●	●				●	●	●	●	●											●	△	●															
			3252WP	09T308WP	1/32	●	●		●	●				●	●	●	●	●											●	△	●															
Finishing		CCMT	21505PP	060202PP	0.008	●	●	●	●	●	●			●	●	●													●	△	●									●						
			2151PP	060204PP	1/64	●	●	●	●	●	●			●	●	●	●												●	△	●									●						
		CCMT	32505PP	09T302PP	0.008	●	●	●	●	●	●				●	●												●	△	●									●						
			3251PP	09T304PP	1/64	●	●	●	●	●	●			●	●	●	●	●											●	△	●									●						
			3252PP	09T308PP	1/32	●	●	●	●	●	●			●	●	●	●	●											●	△	●									●						
Finishing-Medium		CCMT	21505GK	060202GK	0.008	●	●	●	●	●	●			●	●	●	●	●	●	●	●	●	●					●	●	△									●	●	△	△			
			2151GK	060204GK	1/64	●	●	●	●	●	●			●	●	●	●	●	●	●	●	●	●	●	●	●		●	●	△									●	●	△	△			
		CCMT	32505GK	09T302GK	0.008	●	●	●	●	●	●				●	●	●	●	●	●	●	●	●					●	●	△									●	●	△	△			
			3251GK	09T304GK	1/64	●	●	●	●	●	●			●	●	●	●	●	●	●	●	●	●	●	●	●		●	●	△									●	●	△	△			
		CCMT	431GK	120404GK	1/64	●	●	●	●	●	●			●	●	●	●	●	●	●	●	●	●	●	●	●		●	●										●		△	△			
			432GK	120408GK	1/32	●	●	●	●	●	●			●	●	●	●	●	●	●	●	●	●	●	●	●		●	●										●		△	△		E26	
			433GK	120412GK	3/64			●						●	●	●	●	△		●			●					●												△		△				
Finishing-Medium		CCMT	21505HQ	060202HQ	0.008	●	●	●	●	●	●			●	●	●	●	●		●			●						●	△									●	●	△	△			
			2151HQ	060204HQ	1/64	●	●	●	●	●	●			●	●	●	●	●		●	●		●						●	△									●	●	△	△			
		CCMT	32505HQ	09T302HQ	0.008	●	●	●	●	●	●				●	●	●	●		●	●		●						●	△									●	●	△	△			
			3251HQ	09T304HQ	1/64	●	●	●	●	●	●			●	●	●	●	●		●	●		●						●	△									●	●	△	△			
			3252HQ	09T308HQ	1/32	●	●	●	●	●	●			●	●	●	●	●		●	●		●						●	△									●	●	△	△			
Medium		CCGT	21502	060201	0.004	●	●	●		●	●	●	△																									●						Reference Table Above	2
			21505	060202	0.008	●	●	●		●	●	●																									●							
			2151	060204	1/64	●	●	●		●	●	●																									●							
		CCGT	32502	09T301	0.004	●	●	●		●	●	●	●																									●							
			32505	09T302	0.008	●	●	●		●	●	●	●																									●							
			3251	09T304	1/64	●	●	●		●	●	●	●																									●							
		CCMT	3252	09T308	1/32	●	●	●	●	●	●	●	●		●	●	●	●	●	●	●		●	●	●	●	●	●	●	●	△							●	●		△	△			
		CCGT	21501M	0602005M	<0.002																																				△					
			21502M	060201M	<0.004																																				△					
			21505M	060202M	<0.008																																				△					
			2151M	060204M	<1/64																																				△					
		CCGT	32501M	09T3005M	<0.002																																				△					
			32502M	09T301M	<0.004																																				△					
			32505M	09T302M	<0.008																																				△					
			3251M	09T304M	<1/64																																				△					

• Insert with corner R (RE) dimension expressed with less than sign (e.g. **<0.002, <0.004, <0.008** etc.) indicate models with minus tolerance for corner R (RE).

Chipbreaker Range



Inserts sold in 10 piece boxes.

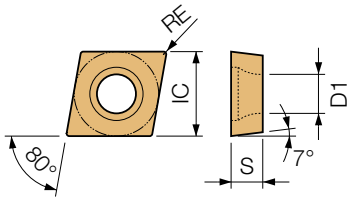
● : Standard Item △ : Phaseout Item (will be removed from next catalog)

Contact your local Kyocera sales engineer to upgrade old products to new technology

How to read this page B15

80° Diamond

Positive Insert with Hole



(in)

Part Number	IC	S	D1
CC_1109_	0.138	0.055	0.075
CC_1411_	0.169	0.071	0.091

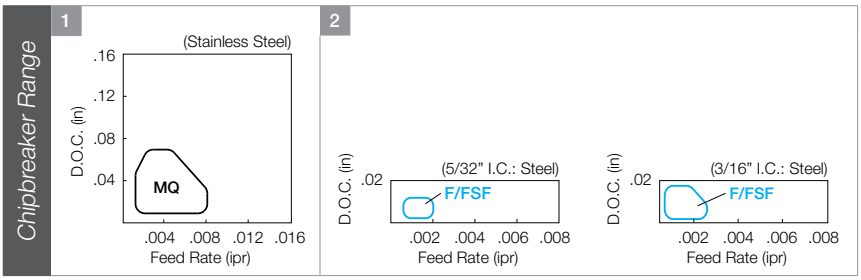
(in)

Part Number	IC	S	D1
CC_215_	1/4	3/32	0.110
CC_325_	3/8	5/32	0.173
CC_43_	1/2	3/16	0.217

			ANSI Part Number	ISO Part Number	RE	TN610	TN620	TN60	CCX	PV710	PV720	PV730	PV7005	PV90	CA510	CA515	CA025P	CA525	CA530	CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA310	CA315	CA320	CA4505	CA4515	PR1705	PR1725	PR1425	PR1225	PR005S	PR015S	PR1305	PR1310	PR1325	PR1535	PR930	PR1005	PR1025	PR1125	PDL010	PDL025	KW10	SW05	Toolholder Page	Chipbreaker Range
Corner Radius (in)						Cermet			CVD Cermet	MEGA COAT Cermet				PVD Cermet	CVD Coated Carbide																MEGACOAT / MEGACOAT NANO PVD Coated Carbide										PVD Coated Carbide				DLC		Carbide			
Medium		CCGT	215013MF	0602005MF	<0.002																			●	●					●	△	●							●									Reference Table Below	See B54
			21502MF	060201MF	<0.004																			●	●					●	△	●							●							△			
			21505MF	060202MF	<0.008																			●	●					●	△	●							●		△	△						
			2151MF	060204MF	<1/64																			●	●					●	△	●							●		△	△						
		CCGT	325013MF	09T3005MF	<0.002																			●	●					●	△	●							●							△			
			32502MF	09T301MF	<0.004																			●	●					●	△	●							●		△	△						
			32505MF	09T302MF	<0.008																			●	●					●	△	●							●		△	△						
	Sharp Edge		3251MF	09T304MF	<1/64																			●	●					●	△	●							●		△	△						
Finishing-Medium		CCMT	3251MQ	09T304MQ	1/64																			●	●									●	●	△	△	△	●				△			●		1
	Stainless Steel / HRSA		3252MQ	09T308MQ	1/32																			●	●									●	●	△	△	△	●				△			●		
Finishing	Super Fine	CCET	110901R-FSF	0301003R-FSF	0.001																																			●									
			110901L-FSF	0301003L-FSF	0.001																																			●									
			110902R-FSF	030101R-FSF	0.004																																			●									
			110902L-FSF	030101L-FSF	0.004			●																																●								F29 F47 F49	
			110905R-FSF	030102R-FSF	0.008			●																																●									
			110905L-FSF	030102L-FSF	0.008			●																																●									
			11091R-FSF	030104R-FSF	1/64																																			●									
			11091L-FSF	030104L-FSF	1/64			●																																●									
		CCET	141101L-FSF	0401003L-FSF	0.001																																			△								F29 F47	
			141102R-FSF	040101R-FSF	0.004																																			●									
			141102L-FSF	040101L-FSF	0.004			△																																●									
			141105R-FSF	040102R-FSF	0.008			●																																●									
			141105L-FSF	040102L-FSF	0.008			●																																●									
			14111L-FSF	040104L-FSF	1/64			●																																●									
		CCET	1109013MR-FSF	0301005MR-FSF	<0.002																																										2
			1109013ML-FSF	0301005ML-FSF	<0.002																																										
			110902MR-FSF	030101MR-FSF	<0.004																																										
			110902ML-FSF	030101ML-FSF	<0.004																																									F29 F47 F49	
			110905MR-FSF	030102MR-FSF	<0.008																																										
			110905ML-FSF	030102ML-FSF	<0.008																																										
			11091MR-FSF	030104MR-FSF	<1/64																																										
			11091ML-FSF	030104ML-FSF	<1/64																																										
		CCET	1411013ML-FSF	0401005ML-FSF	<0.002																																										
			141102MR-FSF	040101MR-FSF	<0.004																																										
			141102ML-FSF	040101ML-FSF	<0.004																																										
			141105MR-FSF	040102MR-FSF	<0.008																																										
			141105ML-FSF	040102ML-FSF	<0.008																																										
	Sharp Edge / Precision		14111MR-FSF	040104MR-FSF	<1/64																																										
			14111ML-FSF	040104ML-FSF	<1/64																																										

• Insert with corner R (RE) dimension expressed with less than sign (e.g. **<0.002, <0.004, <0.008** etc.) indicate models with minus tolerance for corner R (RE).

Chipbreaker Range



Part Number	Applicable Toolholder Page
CC..215	E24~E26, E45, E52, F29, F47, F49
CC..325	E24~E26, E45, E52, F47, F89

● : Standard Item △ : Phaseout Item (will be removed from next catalog)

Contact your local Kyocera sales engineer to upgrade old products to new technology

Inserts sold in 10 piece boxes.

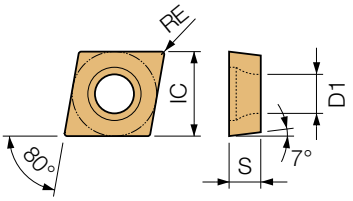
How to read this page B15

80° Diamond

Positive Insert with Hole

Part Number	IC	S	D1
	(in)		
CC_1109_	0.138	0.055	0.075
CC_1411_	0.169	0.071	0.091

Part Number	IC	S	D1
	(in)		
CC_215_	1/4	3/32	0.110
CC_325_	3/8	5/32	0.173
CC_43_	1/2	3/16	0.217



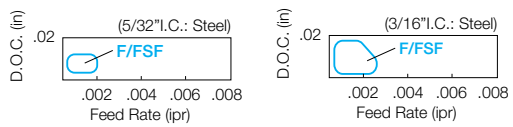
P Free-Cutting Steel; Carbon/Alloy Steel
M Stainless Steel
K Gray Cast Iron; Nodular Cast Iron
N Non-ferrous Metals
S HRSA; Titanium Alloy
H Hard materials

Left-Hand Shown where Applicable		ANSI Part Number	ISO Part Number	RE	TN610	TN620	TN60	CCX	PV710	PV720	PV730	PV7005	PV90	CA510	CA515	CA025P	CA525	CA530	CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA310	CA315	CA320	CA4505	CA4515	PR1705	PR1725	PR1425	PR1225	PR005S	PR015S	PR1305	PR1310	PR1325	PR1535	PR930	PR1005	PR1025	PR1125	PDL010	PDL025	KW10	SW05	Toolholder Page	Chipbreaker Range
		Corner Radius (in)			Cermet			CVD Coated Cermet	MEGA COAT Cermet				PVD Cermet	CVD Coated Carbide																	MEGACOAT / MEGACOAT NANO PVD Coated Carbide									PVD Coated Carbide				DLC		Carbide			
Finishing		CCET	1109013MR-F	0301005MR-F	<0.002																									●	△	●	●					●									
			1109013ML-F	0301005ML-F	<0.002																									●	△	●	△					●						●			
			110902MR-F	030101MR-F	<0.004	●				●																				●		●						●									
			110902ML-F	030101ML-F	<0.004	●	●			●	●	●																		●	△	●						●						●	●		F29 F47 F49
			110905MR-F	030102MR-F	<0.008	●				●																				●	△	●						●									
			110905ML-F	030102ML-F	<0.008	●	●			●	●	●																		●	●	●						●						●	●		
			11091MR-F	030104MR-F	<1/64	●				●																				●	△	●						●									
			11091ML-F	030104ML-F	<1/64	●	●			●	●	●																		●	△	●						●						●	●		
		CCET	141102MR-F	040101MR-F	<0.004	●				●																				●	△	●						●									
			141102ML-F	040101ML-F	<0.004	●	●			●	●	●																		●	△	●						●						●	●		
			141105MR-F	040102MR-F	<0.008	●				●																				●	△	●						●									F29 F47
			141105ML-F	040102ML-F	<0.008	●	●			●	●	●																		●	△	●						●						●	●		
			14111MR-F	040104MR-F	<1/64	●				●																				●	△	●						●									
	Sharp Edge		14111ML-F	040104ML-F	<1/64	●	●			●	●	●																		●	△	●						●						●	●		
Finishing		CCGT	110901R-F	0301003R-F	0.001																																		△								
			110901L-F	0301003L-F	0.001																																		●								
			110902R-F	030101R-F	0.004			△																															●						●		
			110902L-F	030101L-F	0.004			●																															●						●		F29 F47 F49
			110905R-F	030102R-F	0.008			●																															●						●		
			110905L-F	030102L-F	0.008			●						●																									●						●		
			11091R-F	030104R-F	1/64			●																															●						●		
			11091L-F	030104L-F	1/64			●																															●						●		
		CCGT	141101L-F	0401003L-F	0.001																																		●								1
			141102R-F	040101R-F	0.004																																		●						●		
			141102L-F	040101L-F	0.004			●																															●						●		
			141105R-F	040102R-F	0.008			●																															●						●		F29 F47
			141105L-F	040102L-F	0.008			●																															●						●		
			14111R-F	040104R-F	1/64			●																															●						●		
			14111L-F	040104L-F	1/64			●																															●						●		
		CCGT	1109013MR-F	0301005MR-F	<0.002																												△													
			1109013ML-F	0301005ML-F	<0.002																												●													
			110902MR-F	030101MR-F	<0.004																												●													
			110902ML-F	030101ML-F	<0.004																												●									△				F29 F47 F49
			110905MR-F	030102MR-F	<0.008																												●									△				
			110905ML-F	030102ML-F	<0.008																												●									△	△			
			11091MR-F	030104MR-F	<1/64																												●									△				
			11091ML-F	030104ML-F	<1/64																												●									△	△			
		CCGT	1411013ML-F	0401005ML-F	<0.002																												●													
			141102MR-F	040101MR-F	<0.004																												△													
			141102ML-F	040101ML-F	<0.004																												●									△				F29 F47
			141105MR-F	040102MR-F	<0.008																												●									△				
			141105ML-F	040102ML-F	<0.008																												●									△	△			
			14111MR-F	040104MR-F	<1/64																												●									△				
	Sharp Edge		14111ML-F	040104ML-F	<1/64																												●									△	△			

• Insert with corner R (RE) dimension expressed with less than sign (e.g. **<0.002, <0.004, <0.008** etc.) indicate models with minus tolerance for corner R (RE).

Chipbreaker Range

1



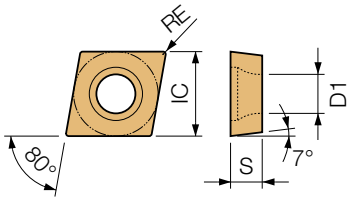
Inserts sold in 10 piece boxes.

● : Standard Item △ : Phaseout Item (will be removed from next catalog)
Contact your local Kyocera sales engineer to upgrade old products to new technology

How to read this page B15

80° Diamond

Positive Insert with Hole



(in)

Part Number	IC	S	D1
CC_1109_	0.138	0.055	0.075
CC_1411_	0.169	0.071	0.091

(in)

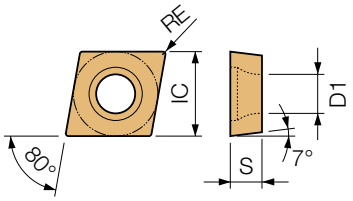
Part Number	IC	S	D1
CC_215_	1/4	3/32	0.110
CC_325_	3/8	5/32	0.173
CC_43_	1/2	3/16	0.217

| | ANSI Part Number | ISO Part Number | RE | Corner Radius (in) | Cermet | | CVD Coated Carbide | | | | | | | | | | | | | | | | | | | | | | | | | MEGACOAT / MEGACOAT NANO PVD Coated Carbide | | | | | | | | | | | | | | PVD Coated Carbide | | | | DLC | | Carbide | | Toolholder Page | Chipbreaker Range |
|---|---|---|---

How to read this page B15

80° Diamond

Positive Insert with Hole



(in)

Part Number	IC	S	D1
CC_215_	1/4	3/32	0.110
CC_325_	3/8	5/32	0.173
CC_43_	1/2	3/16	0.217

		ANSI	ISO	RE	TN610	TN620	TN60	CCX	PV710	PV720	PV730	PV7005	PV90	CA510	CA515	CA025P	CA525	CA530	CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA310	CA315	CA320	CA4505	CA4515	PR1705	PR1725	PR1425	PR1225	PR005S	PR015S	PR1305	PR1310	PR1325	PR1535	PR930	PR1005	PR1025	PR1125	PDL010	PDL025	KW10	SW05	Toolholder Page	Chipbreaker Range
		Left-Hand Shown where Applicable	Part Number	Part Number	Corner Radius (in)	Cermet		CVD Cermet	MEGA COAT Cermet				PVD Cermet	CVD Coated Carbide																		MEGACOAT / MEGACOAT NANO PVD Coated Carbide							PVD Coated Carbide				DLC		Carbide			
	CCGT	21501FR-U	0602003FR-U	0.001																																													
		21501FL-U	0602003FL-U	0.001																																													
		21502FR-U	060201FR-U	0.004		●	●																																		●					●			
		21502FL-U	060201FL-U	0.004		●	●																																		●					●			
		21505FR-U	060202FR-U	0.008			●																																		●					●			
		21505FL-U	060202FL-U	0.008			●																																		●					●			
	CCGT	32501FR-U	09T3003FR-U	0.001			●																																		●					●			
		32501FL-U	09T3003FL-U	0.001																																					●					●			
		32502FR-U	09T301FR-U	0.004		●	●																																		●					●			
		32502FL-U	09T301FL-U	0.004			●																																		●					●			
		32505FR-U	09T302FR-U	0.008			●																																		●					●			
		32505FL-U	09T302FL-U	0.008			●																																		●					●			
Low Feed	CCGT	215013MFR-U	0602005MFR-U	<0.002																																													
		215013MFL-U	0602005MFL-U	<0.002																																													
		21502MFR-U	060201MFR-U	<0.004																																						△	△						
		21502MFL-U	060201MFL-U	<0.004																																						△						
		21505MFR-U	060202MFR-U	<0.008																																						△	△						
		21505MFL-U	060202MFL-U	<0.008																																						△	△						
		2151MFR-U	060204MFR-U	<1/64																																							△						
		2151MFL-U	060204MFL-U	<1/64																																							△						
	CCGT	325013MFR-U	09T3005MFR-U	<0.002																																													
		325013MFL-U	09T3005MFL-U	<0.002																																													
		32502MFR-U	09T301MFR-U	<0.004																																						△	△						
		32502MFL-U	09T301MFL-U	<0.004																																						△						
		32505MFR-U	09T302MFR-U	<0.008																																						△	△						
		32505MFL-U	09T302MFL-U	<0.008																																						△	△						
		3251MFR-U	09T304MFR-U	<1/64																																							△						
Sharp Edge		3251MFL-U	09T304MFL-U	<1/64																																							△						

P	Free-Cutting Steel
	Carbon/Alloy Steel
M	Stainless Steel
K	Gray Cast Iron
	Nodular Cast Iron
N	Non-ferrous Metals
S	HRSA
	Titanium Alloy
H	Hard materials

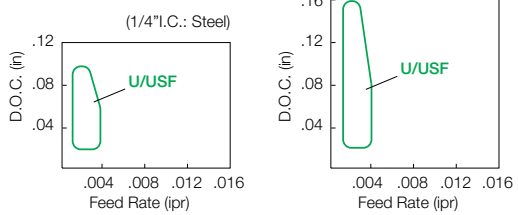
Reference Table Below

1

• Insert with corner R (RE) dimension expressed with less than sign (e.g. **<0.002, <0.004, <0.008** etc.) indicate models with minus tolerance for corner R (RE).

Chipbreaker Range

1



Part Number	Applicable Toolholder Page
CC..215	E24~E26, E45, E52, F29, F47, F49
CC..325	E24~E26, E45, E52, F47, F89

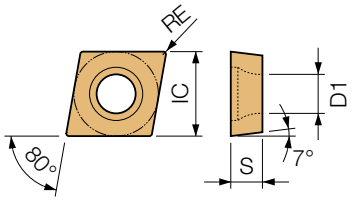
Inserts sold in 10 piece boxes.

● : Standard Item △ : Phaseout Item (will be removed from next catalog)
Contact your local Kyocera sales engineer to upgrade old products to new technology

How to read this page ➔ B15

80° Diamond

Positive Insert with Hole



(in)

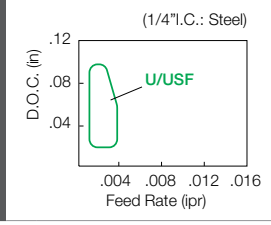
Part Number	IC	S	D1
CC_215_	1/4	3/32	0.110
CC_325_	3/8	5/32	0.173
CC_43_	1/2	3/16	0.217

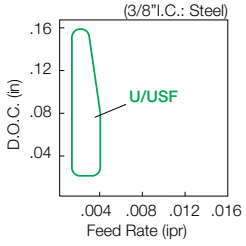
		ANSI	ISO	RE	TN610	TN620	TN60	CCX	PV710	PV720	PV730	PV7005	PV90	CA510	CA515	CA025P	CA525	CA530	CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA310	CA315	CA320	CA4505	CA4515	PR1705	PR1725	PR1425	PR1225	PR005S	PR015S	PR1305	PR1310	PR1325	PR1535	PR930	PR1005	PR1025	PR1125	PDL010	PDL025	KW10	SW05	Toolholder Page	Chipbreaker Range
	Left-Hand Shown where Applicable	Part Number	Part Number																																													
Low Feed		CCGT 21502ER-U	060201ER-U	0.004	●				●																															●								Reference Table Below	1
		21502EL-U	060201EL-U	0.004	●	●	●		●	●	●																											●									
		21505ER-U	060202ER-U	0.008	●	●	●		●	●	●																											●									
		21505EL-U	060202EL-U	0.008	●	●	●		●	●	●																											●									
		2151ER-U	060204ER-U	1/64	●	●	●		●	●	●																											●									
		2151EL-U	060204EL-U	1/64	●	●	●		●	●	●																											●									
		CCGT 32502ER-U	09T301ER-U	0.004	●	●	●		●	●	●																											●									
		32502EL-U	09T301EL-U	0.004	●	●	●		●	●	●																											●									
		32505ER-U	09T302ER-U	0.008	●	●	●		●	●	●																											●									
		32505EL-U	09T302EL-U	0.008	●	●	●		●	●	●																											●									
		3251ER-U	09T304ER-U	1/64	●	●	●		●	●	●																											●									
		3251EL-U	09T304ER-U	1/64	●	●	●		●	●	●																											●									
		CCGT 21505MER-U	060202MER-U	<0.008																											●																	
		21505MEL-U	060202MEL-U	<0.008																											●												△					
		2151MER-U	060204MER-U	<1/64																											●																	
		2151MEL-U	060204MEL-U	<1/64																											●												△					
		CCGT 32502MER-U	09T301MER-U	<0.004																											●												△					
		32505MER-U	09T302MER-U	<0.008																											●												△					
		32505MEL-U	09T302MEL-U	<0.008																											●												△					
		3251MER-U	09T304MER-U	<1/64																											●												△					
	Honed Edge	3251MEL-U	09T304MEL-U	<1/64																											●												△					
Low Feed		CCET 215013MFR-J	0602005MFR-J	<0.002																											●	△								●									2
		21502MFR-J	060201MFR-J	<0.004																											●	△	●							●									
		21502MFL-J	060201MFL-J	<0.004																											●	△	●							●									
		21505MFR-J	060202MFR-J	<0.008																											●	△	●							●									
		21505MFL-J	060202MFL-J	<0.008																											●	△	●							●									
		CCET 32502MFR-J	09T301MFR-J	<0.004																											●	△	●							●									
		32502MFL-J	09T301MFL-J	<0.004																											●	△	△							●									
		32505MFR-J	09T302MFR-J	<0.008																											●	△	●							●									
		32505MFL-J	09T302MFL-J	<0.008																											●	△	●							●									
		3251MFR-J	09T304MFR-J	<1/64																											●	△	●							●									
	Sharp Edge	3251MFL-J	09T304MFL-J	<1/64																											●	△	△							●									

• Insert with corner R (RE) dimension expressed with less than sign (e.g. **<0.002, <0.004, <0.008** etc.) indicate models with minus tolerance for corner R (RE).

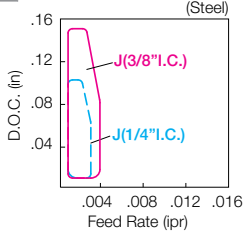
Chipbreaker Range

1





2



Part Number	Applicable Toolholder Page
CC..215	E24~E26, E45, E52, F29, F47, F49
CC..325	E24~E26, E45, E52, F47, F89

● : Standard Item △ : Phaseout Item (will be removed from next catalog)
Contact your local Kyocera sales engineer to upgrade old products to new technology

Inserts sold in 10 piece boxes.

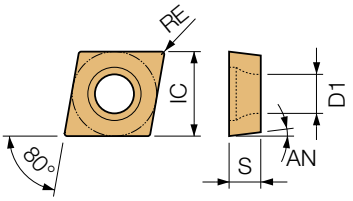
How to read this page ➔ B15

80° Diamond

Positive Insert with Hole

Part Number	IC	S	D1 (in)	AN
CC_215_	1/4	3/32	0.110	7°
CC_325_	3/8	5/32	0.173	
CC_43_	1/2	3/16	0.217	

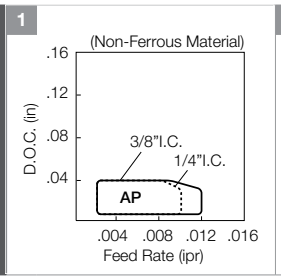
Part Number	IC	S	D1 (in)	AN
CP_215_	1/4	3/32	0.110	11°
CP_325_	3/8	5/32	0.123	

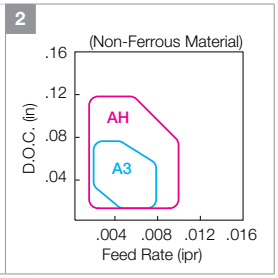


	Free-Cutting Steel	Carbon/Alloy Steel	Stainless Steel	Gray Cast Iron	Nodular Cast Iron	Non-ferrous Metals	HRSA	Titanium Alloy	Hard materials
P		●							
M			●						
K				●	●				
N						●	●	○	
S								○	
H									●

Left-Hand Shown where Applicable		ANSI Part Number	ISO Part Number	RE	Cermet TN610	Cermet TN620	Cermet TN60	CVD Cermet CCX	MEGA COAT Cermet PV710	MEGA COAT Cermet PV720	MEGA COAT Cermet PV730	PVD Cermet PV7005	PVD Cermet PV90	CVD Coated Carbide CA510	CA515	CA025P	CA525	CA530	CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA310	CA315	CA320	CA4505	CA4515	MEGACOAT / MEGACOAT NANO PVD Coated Carbide PR1705	PR1725	PR1425	PR1225	PR005S	PR015S	PR1305	PR1310	PR1325	PR1535	PVD Coated Carbide PR930	PR1005	PR1025	PR1125	DLC PDL010	DLC PDL025	Carbide KW10	Carbide SW05	Toolholder Page	Chipbreaker Range
Finishing-Medium	CCGT	21505AP	060202AP	0.008																																							●		●			
		2151AP	060204AP	1/64																																							●		●			
Sharp Edge / Polished	CCGT	32505AP	09T302AP	0.008																																							●		●			1
		3251AP	09T304AP	1/64																																							●		●			
		3252AP	09T308AP	1/32																																							●		●			
Finishing-Medium	CCGT	32505R-A3	09T302R-A3	0.008																																							●	●	●			
		32505L-A3	09T302L-A3	0.008																																							●	●	●			
		3251R-A3	09T304R-A3	1/64																																							●	●	●			
		3251L-A3	09T304L-A3	1/64																																							●	●	●			
		3252R-A3	09T308R-A3	1/32																																							●	●	●			
		3252L-A3	09T308L-A3	1/32																																							●	●	●			
	CCGT	4305R-A3	120402R-A3	0.008																																								●	●			
		4305L-A3	120402L-A3	0.008																																								●	●			
		431R-A3	120404R-A3	1/64																																								●	●			
		431L-A3	120404L-A3	1/64																																								●	●			
Sharp Edge Non-ferrous Metals		432R-A3	120408R-A3	1/32																																								●	●			
		432L-A3	120408L-A3	1/32																																								●				
Finishing-Medium	CCGT	3251AH	09T304AH	1/64																																								●	●	●			
Sharp Edge Non-ferrous Metals		3252AH	09T308AH	1/32																																								●	●	●			
Cast Iron	CCGW	21502	060201	0.004																																										●			
		21505	060202	0.008																																										●			
	CCGW	32500	09T300	0.000																																											●			
		32502	09T301	0.004																																										●			
		32505	09T302	0.008																																											●			
Without Chipbreaker		3251	09T304	1/64																																										●			-
Medium	CPGT	21505	060202	0.008					●																																		●						
		2151	060204	1/64					●																											●								●						
	CPGT	32505	09T302	0.008																																				●	●								
		3251	09T304	1/64			●																																	●	●							-	
		3252	09T308	1/32			●																																										

Chipbreaker Range





Part Number	Applicable Toolholder Page
CC..215	E24~E26, E45, E52, F29, F47, F49
CC..325	E24~E26, E45, E52, F47, F89

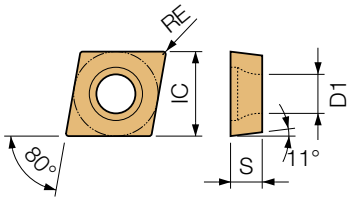
Inserts sold in 10 piece boxes.

● : Standard Item △ : Phaseout Item (will be removed from next catalog)
Contact your local Kyocera sales engineer to upgrade old products to new technology

How to read this page B15

80° Diamond

Positive Insert with Hole



(in)

Part Number	IC	S	D1
CPMT2515_	5/16	3/32	0.130
CPMT32_	3/8	1/8	0.173

(in)

Part Number	IC	S	D1
CP_2515_	5/16	3/32	0.138
CP_32_	3/8	1/8	0.177

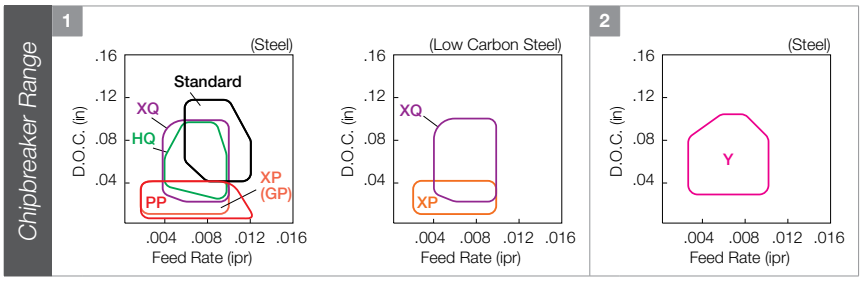
		ANSI	ISO	RE	TN610	TN620	TN60	CCX	PV710	PV720	PV730	PV7005	PV90	CA510	CA515	CA025P	CA525	CA530	CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA310	CA315	CA320	CA4505	CA4515	PR1705	PR1725	PR1425	PR1225	PR005S	PR015S	PR1305	PR1310	PR1325	PR1535	PR930	PR1005	PR1025	PR1125	PDL010	PDL025	KW10	SW05	Toolholder Page	Chipbreaker Range
	Left-Hand Shown where Applicable	Part Number	Part Number																																													
Finishing		CPMT	251505PP	080202PP	0.008	●	●		●	●	●	●			●	●	●														●	△	●																	
			25151PP	080204PP	1/64	●	●		●	●	●	●			●	●	●	●													●	△	●																	
		CPMT	3205PP	090302PP	0.008	●	●		●	●	●	●			●	●	●													●	△	●																	
			321PP	090304PP	1/64	●	●		●	●	●	●			●	●	●													●	△	●																	
			322PP	090308PP	1/32	●	●		●	●	●	●			●	●	●													●	△																	
Finishing		CPMT	25151GP	080204GP	1/64	●	●	●		●	●	●			●	●	●			●	●									●	△										●	●	△							
		CPMT	321GP	090304GP	1/64	●	●	●		●	●	●	●		●	●	●			●	●									●	△										●	●	△							
			322GP	090308GP	1/32	●	●	●		●	●	●	●		●	●	●	●		●	●									●	△										●	●							
Finishing-Medium		CPMH	25151HQ	080204HQ	1/64	●	●	●	●	●	●	●	●		●	●	●	●		●	●	●	●	●						●	△										●	●	△	△						
			25152HQ	080208HQ	1/32	●	●	●	●	●	●	●	●	●	●	●	●	●		●	●	●	●	●						●	△										●	●	△	△						
		CPMH	321HQ	090304HQ	1/64	●	●	●	●	●	●	●	●	●	●	●	●	●		●	●	●	●	●						●	△										●	●	△	△						
			322HQ	090308HQ	1/32	●	●	●	●	●	●	●	●	●	●	●	●	●		●	●	●	●	●						●	△										●	●	△	△						
Medium		CPMH	25151	080204	1/64	●	●	●	●	●	●	●			●	●	●	●		●	●			●	●	●	●	●		●	△										●	●	△	△						
			25152	080208	1/32	●	●	●	●	●	●	●	●		●	●	●	●		●	●			●	●	●	●	●		●	△										●	●	△	△						
		CPMH	321	090304	1/64	●	●	●	●	●	●	●	●	●	●	●	●	●		●	●			●	●	●	●	●	●	●	△										●	●	△	△						
			322	090308	1/32	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●			●	●	●	●	●	●	●	△										●	●	△	△						
Finishing		CPMT	25151XP	080204XP	1/64	●	●		●	●	●	●			●	●	●	●			●										●	△										●	●	△							
		CPMT	321XP	090304XP	1/64	●	●		●	●	●	●			●	●	●				●	●									●	△										●	●	△							
	Low Carbon Steel		322XP	090308XP	1/32	●	●		●	●	●	●		●	●	●	●	●			●	●									●	△										●	●	△							
Finishing-Medium		CPMT	321XQ	090304XQ	1/64	●	●		●	●	●	●		●	●	●	●	●			●	●																											
	Low Carbon Steel		322XQ	090308XQ	1/32	●	●		●	●	●	●		●	●	●	●	●			●	●																											
Finishing-Medium		CPMH	25151R-Y	080204R-Y	1/64	●	●	●		●	●	●																			●										●		△					●	
			25151L-Y	080204L-Y	1/64	●	●	●		●	●	●																			●										●		△					●	
			25152L-Y	080208L-Y	1/32																																									●	
		CPMH	321R-Y	090304R-Y	1/64	●	●	●		●	●	●	△																		●										●		△					●	2
			321L-Y	090304L-Y	1/64	●	●	●		●	●	●	△																		●										●		△					●	
			322R-Y	090308R-Y	1/32																																									●	
			322L-Y	090308L-Y	1/32			●																																						●	
Cast Iron		CPMB	251505	080202	0.008																																									●	
			25151	080204	1/64																																									●	
			25152	080208	1/32																																									●	
		CPMB	3205	090302	0.008																																									●	
			321	090304	1/64																																									●	
	Without Chipbreaker		322	090308	1/32																																									●	

Corner Radius (in) | Cermet | CVD Cermet | MEGA COAT Cermet | PVD Cermet | CVD Coated Carbide | MEGACOAT / MEGACOAT NANO PVD Coated Carbide | PVD Coated Carbide | DLC | Carbide

P	Free-Cutting Steel
	Carbon/Alloy Steel
M	Stainless Steel
K	Gray Cast Iron
	Nodular Cast Iron
N	Non-ferrous Metals
S	HRSA
	Titanium Alloy
H	Hard materials

F51
F53

Chipbreaker Range



● : Standard Item △ : Phaseout Item (will be removed from next catalog)

Contact your local Kyocera sales engineer to upgrade old products to new technology

Inserts sold in 10 piece boxes.

How to read this page ➔ B15

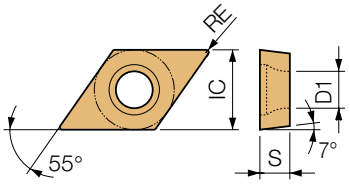
55° Diamond

Positive Insert with Hole

Part Number	Applicable Toolholder Page
DC..215	E27~E33, E46, E52, F55~F59
DC..325	E22, E27~E33, E46, E52, F55~F59, F89

(in)

Part Number	IC	S	D1
DC_215_	1/4	3/32	0.110
DC_325_	3/8	5/32	0.173



		ANSI Part Number	ISO Part Number	RE	Corner Radius (in)	Cermet	CVD Cermet	MEGA COAT Cermet	PVD Cermet	CVD Coated Carbide																		MEGACOAT / MEGACOAT NANO PVD Coated Carbide											PVD Coated Carbide			DLC		Carbide	Toolholder Page	Chipbreaker Range
						TN610	TN620	TN60	CCX	PV710	PV720	PV730	PV7005	PV90	CA510	CA515	CA025P	CA525	CA530	CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA310	CA315	CA320	CA4505	CA4515	PR1705	PR1725	PR1425	PR1225	PR005S	PR015S	PR1305	PR1310	PR1325	PR1535	PR930	PR1005	PR1025	PR1125	PDL010	PDL025	KW10	SW05		
Minute D.O.C.	Sharp Edge	DCGT	21505CF	070202CF	0.008																																		●							
			32505CF	11T302CF	0.008																																		●							
		DCGT	21502M-CF	070201M-CF	<0.004																																				△					
			21505M-CF	070202M-CF	<0.008																																			△	△					
		DCGT	32502M-CF	11T301M-CF	<0.004																																			△	△					
			32505M-CF	11T302M-CF	<0.008																																			△	△					
Minute D.O.C.	Sharp Edge / Polished	DCGT	21502MP-CF	070201MP-CF	<0.004																																				△			●	●			
			21505MP-CF	070202MP-CF	<0.008																																				△			●	●			
		DCGT	32502MP-CF	11T301MP-CF	<0.004																																				△			●	●			
			32505MP-CF	11T302MP-CF	<0.008																																				△			●	●			
Finishing	Sharp Edge	DCGT	21502MF-GF	070201MF-GF	<0.004																																				△							
			21505MF-GF	070202MF-GF	<0.008																																				△							
		DCGT	32502MF-GF	11T301MF-GF	<0.004																																				△							
			32505MF-GF	11T302MF-GF	<0.008																																				△							
			3251MF-GF	11T304MF-GF	<1/64																																				△							
Finishing	Sharp Edge / Polished	DCGT	21502MFP-GF	070201MFP-GF	<0.004																																				△							
			21505MFP-GF	070202MFP-GF	<0.008																																				△							
			2151MFP-GF	070204MFP-GF	<1/64																																											
		DCGT	32502MFP-GF	11T301MFP-GF	<0.004																																				△							
			32505MFP-GF	11T302MFP-GF	<0.008																																				△							
			3251MFP-GF	11T304MFP-GF	<1/64																																				△							
Finishing	NEW Sharp Edge / Polished	DCGT	215013MFP-SKS	0702005MFP-SKS	<0.002							●																																				
			21502MFP-SKS	070201MFP-SKS	<0.004							●																																				
			21505MFP-SKS	070202MFP-SKS	<0.008							●																																				
		DCGT	325013MFP-SKS	11T3005MFP-SKS	<0.002							●																																				
			32502MFP-SKS	11T301MFP-SKS	<0.004							●																																				
			32505MFP-SKS	11T302MFP-SKS	<0.008							●																																				
			3251MFP-SKS	11T304MFP-SKS	<1/64							●																																				
Finishing-Medium	Sharp Edge / Polished	DCGT	21502MFP-SK	070201MFP-SK	<0.004							●																																				
			21505MFP-SK	070202MFP-SK	<0.008							●																																				
			2151MFP-SK	070204MFP-SK	<1/64							●																																				
		DCGT	32502MFP-SK	11T301MFP-SK	<0.004							●																																				
			32505MFP-SK	11T302MFP-SK	<0.008							●																																				
			3251MFP-SK	11T304MFP-SK	<1/64							●																																				
Finishing	Honed Edge	DCGT	21502CK	070201CK	0.004																																		●							
			21505CK	070202CK	0.008																																		●							
		DCGT	32502CK	11T301CK	0.004																																		●							
			32505CK	11T302CK	0.008																																		●							
		DCGT	21502M-CK	070201M-CK	<0.004																																				△	△					
			21505M-CK	070202M-CK	<0.008																																				△	△					
		DCGT	32502M-CK	11T301M-CK	<0.004																																				△	△					
			32505M-CK	11T302M-CK	<0.008																																				△	△					

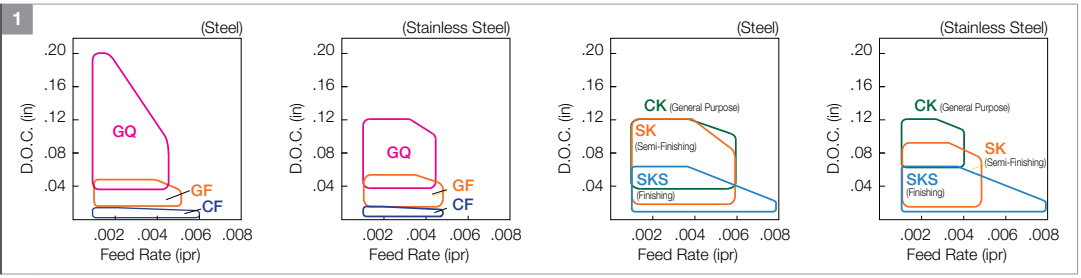
Reference Table Above

1

• Insert with corner R (RE) dimension expressed with less than sign (e.g. **<0.002, <0.004, <0.008** etc.) indicate models with minus tolerance for corner R (RE).

Chipbreaker Range

1



KYOCERA

Inserts sold in 10 piece boxes.

● : Standard Item △ : Phaseout Item (will be removed from next catalog)
Contact your local Kyocera sales engineer to upgrade old products to new technology

How to read this page B15

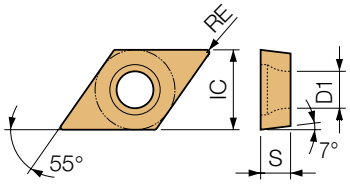
55° Diamond

Positive Insert with Hole

Part Number	Applicable Toolholder Page
DC..215	E27~E33, E46, E52, F55~F59
DC..325	E22, E27~E33, E46, E52, F55~F59, F89

(in)

Part Number	IC	S	D1
DC_215_	1/4	3/32	0.110
DC_325_	3/8	5/32	0.173



| | | |

How to read this page B15

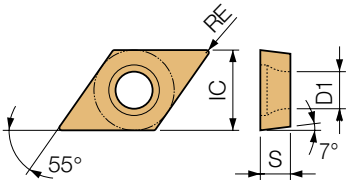
55° Diamond

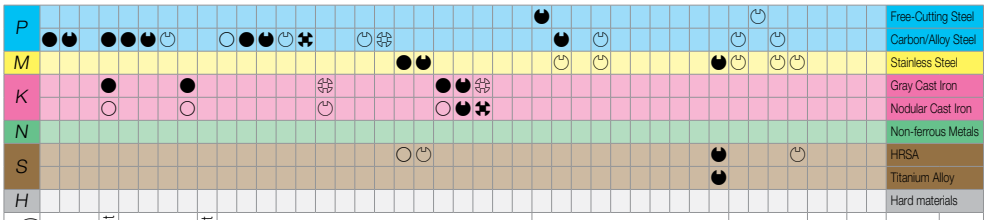
Positive Insert with Hole

Part Number	Applicable Toolholder Page
DC..215	E27~E33, E46, E52, F55~F59
DC..325	E22, E27~E33, E46, E52, F55~F59, F89

(in)

Part Number	IC	S	D1
DC_215_	1/4	3/32	0.110
DC_325_	3/8	5/32	0.173



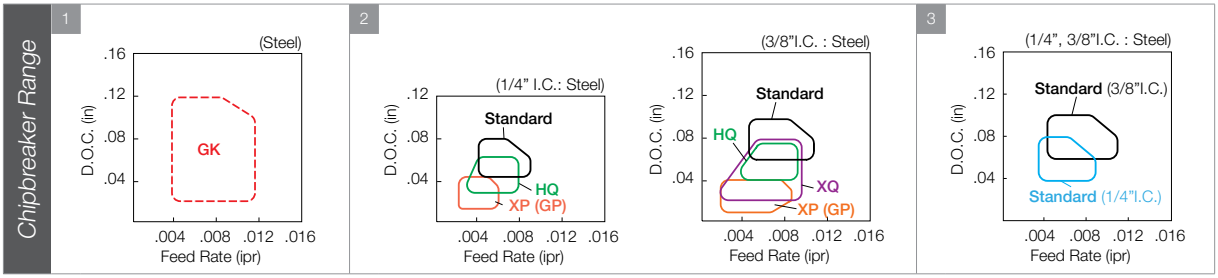


		ANSI Part Number	ISO Part Number	RE	TN610	TN620	TN60	CCX	PV710	PV720	PV730	PV7005	PV90	CA510	CA515	CA025P	CA525	CA530	CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA310	CA315	CA320	CA4505	CA4515	PR1705	PR1725	PR1425	PR1225	PR005S	PR015S	PR1305	PR1310	PR1325	PR1535	PR930	PR1005	PR1025	PR1125	PDL010	PDL025	KW10	SW05	Toolholder Page	Chipbreaker Range
Finishing-Medium	DCMT	21505GK	070202GK	0.008	●	●		●	●	●	●			△	●	●	●	●	●	●			●	●					●		●	△							●	●	△	△						
		2151GK	070204GK	1/64	●	●		●	●	●	●				●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	△							●	●	△	△						
		2152GK	070208GK	1/32	●	●		●	●	●	●				●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	△							●	●	△	△						
	DCMT	32505GK	11T302GK	0.008	●	●		●	●	●	●				●	●	●	●	●	●			●	●							●	△							●	●	△	△						
		3251GK	11T304GK	1/64	●	●		●	●	●	●			●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	△							●	●	△	△						
		3252GK	11T308GK	1/32	●	●		●	●	●	●			●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	△							●	●	△	△						
Finishing-Medium	DCMT	21505HQ	070202HQ	0.008	●	●	●	●	●	●	●				●	●	●	●	●	●			●	●							●	△							●	●	△							
		2151HQ	070204HQ	1/64	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●							●	△							●	●	△	△						
		2152HQ	070208HQ	1/32	●	●	●	●	●	●	●	●		●	●	●	●	●	●	●	●	●	●	●							●	△							●	●	△	△						
	DCMT	32505HQ	11T302HQ	0.008	●	●	●	●	●	●	●		●	●	●	●	●	●	●	●	●	●	●	●							●	△							●	●	△	△						
		3251HQ	11T304HQ	1/64	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●							●	△							●	●	△	△						
		3252HQ	11T308HQ	1/32	●	●	●	●	●	●	●	●		●	●	●	●	●	●	●	●	●	●	●							●	△							●	●	△	△						
Medium	DCGT	21502	070201	0.004	●	●	●		●	●	●	●																											●									
		21505	070202	0.008	●	●	●		●	●	●	●																											●									
		2151	070204	1/64	●	●	●		●	●	●	●																											●									
	DCGT	32502	11T301	0.004	●	●	●		●	●	●	●																											●									
		32505	11T302	0.008	●	●	●		●	●	●	●																											●									
		3251	11T304	1/64	●	●	●		●	●	●	●																											●									
	DCMT	3252	11T308	1/32	●	●	●	●	●	●	●	●						●							●	●	●	△	●	●									●		△							
	DCGT	21501M	0702005M	<0.002																																				△								
		21502M	070201M	<0.004																												●								△								
		21505M	070202M	<0.008																												●								△								
		2151M	070204M	<1/64																												●								△								
	DCGT	32501M	11T3005M	<0.002																																				△								
		32502M	11T301M	<0.004																												●								△								
		32505M	11T302M	<0.008																												●								△								
		3251M	11T304M	<1/64																												●								△								
Medium	DCGT	215013MF	0702005MF	<0.002																												●	△	●					●									
		21502MF	070201MF	<0.004																												●	△	●					●		△							
		21505MF	070202MF	<0.008																												●	△	●					●		△							
		2151MF	070204MF	<1/64																												●	△	●					●		△							
	DCGT	325013MF	11T3005MF	<0.002																												●	△	●					●									
		32502MF	11T301MF	<0.004																												●	△	●					●		△							
		32505MF	11T302MF	<0.008																												●	△	●					●		△							
		3251MF	11T304MF	<1/64																												●	△	●					●		△							
Medium	DCGT	21505FN-Z	070202FN-Z	0.008		●																																									
		2151FN-Z	070204FN-Z	1/64		●																																									
	DCGT	32505FN-Z	11T302FN-Z	0.008		●																																	●								
		3251FN-Z	11T304FN-Z	1/64		●																																	●								

Reference Table Above

• Insert with corner R (RE) dimension expressed with less than sign (e.g. **<0.002, <0.004, <0.008** etc.) indicate models with minus tolerance for corner R (RE).

Chipbreaker Range



KYOCERA

Inserts sold in 10 piece boxes.

● : Standard Item △ : Phaseout Item (will be removed from next catalog)

Contact your local Kyocera sales engineer to upgrade old products to new technology

How to read this page ➔ B15

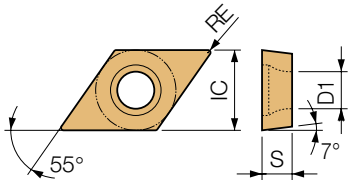
55° Diamond

Positive Insert with Hole

Part Number	Applicable Toolholder Page
DC..215	E27~E33, E46, E52, F55~F59
DC..325	E22, E27~E33, E46, E52, F55~F59, F89

(in)

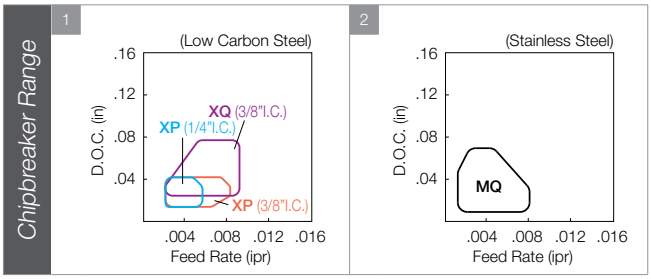
Part Number	IC	S	D1
DC_215_	1/4	3/32	0.110
DC_325_	3/8	5/32	0.173



		ANSI Part Number	ISO Part Number	RE	TN610	TN620	TN60	CCX	PV710	PV720	PV730	PV7005	PV90	CA510	CA515	CA025P	CA525	CA530	CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA310	CA315	CA320	CA4505	CA4515	PR1705	PR1725	PR1425	PR1225	PR005S	PR015S	PR1305	PR1310	PR1325	PR1535	PR930	PR1005	PR1025	PR1125	PDL010	PDL025	KW10	SW05	Toolholder Page	Chipbreaker Range
Finishing	 Low Carbon Steel	DCMT	2151XP	070204XP	1/64	●	●		●	●	●	●		△	●	●	●			●	●										●	△								●	●		△							Reference Table Above	1
		DCMT	32505XP	11T302XP	0.008	●	●		●	●	●	●			●	●	●			●	●										●	△								●	●		△								
			3251XP	11T304XP	1/64	●	●		●	●	●	●		●	●	●	●	●	●	●	●										●	△								●	●		△								
			3252XP	11T308XP	1/32	●	●		●	●	●	●		●		●	●	●	●	●	●										●	△								●	●		△								
Finishing-Medium	 Low Carbon Steel	DCMT	3251XQ	11T304XQ	1/64	●	●		●	●	●	●		●	●	●	●	●	●	●	●																												
			3252XQ	11T308XQ	1/32	●	●		●	●	●	●		●	●	●	●	●	●	●	●																												
Finishing-Medium	 Stainless Steel / HRSA	DCMT	21505MQ	070202MQ	0.008																		●	●										●	●	△	△	△	●				●			●		2
			2151MQ	070204MQ	1/64																		●	●										●	●	△	△	△	●				●			●		
		DCMT	32505MQ	11T302MQ	0.008																		●	●															●				●			●			
			3251MQ	11T304MQ	1/64																		●	●										●	●	△	△	△	●				●			●		
			3252MQ	11T308MQ	1/32																		●	●										●	●	△	△	△	●				●			●		

• Insert with corner R (RE) dimension expressed with less than sign (e.g. **<0.002, <0.004, <0.008** etc.) indicate models with minus tolerance for corner R (RE).

Chipbreaker Range



● : Standard Item △ : Phaseout Item (will be removed from next catalog)

Contact your local Kyocera sales engineer to upgrade old products to new technology

Inserts sold in 10 piece boxes.

How to read this page ➔ B15

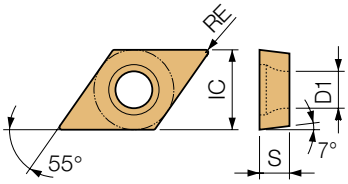
55° Diamond

Positive Insert with Hole

Part Number	Applicable Toolholder Page
DC..215	E27~E33, E46, E52, F55~F59
DC..325	E22, E27~E33, E46, E52, F55~F59, F89

(in)

Part Number	IC	S	D1
DC_215_	1/4	3/32	0.110
DC_325_	3/8	5/32	0.173

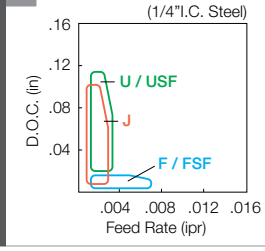


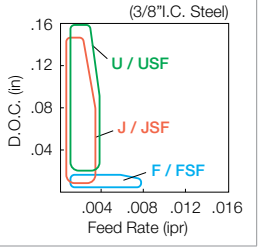
		ANSI	ISO	RE	TN610	TN620	TN60	CCX	PV710	PV720	PV730	PV7005	PV90	CA510	CA515	CA025P	CA525	CA530	CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA310	CA315	CA320	CA4505	CA4515	PR1705	PR1725	PR1425	PR1225	PR005S	PR015S	PR1305	PR1310	PR1325	PR1535	PR930	PR1005	PR1025	PR1125	PDL010	PDL025	KW10	SW05	Toolholder Page	Chipbreaker Range
		Part Number	Part Number	Corner Radius (in)	Cermet			CVD Cermet	MEGA COAT Cermet			PVD Cermet	CVD Coated Carbide																		MEGACOAT / MEGACOAT NANO PVD Coated Carbide									PVD Coated Carbide				DLC		Carbide			
Finishing	Super Fine	DCET	21501R-FSF	0702003R-FSF	0.001																																		●								Reference Table Above	1
			21501L-FSF	0702003L-FSF	0.001																																		●									
			21502R-FSF	070201R-FSF	0.004																																		●									
			21502L-FSF	070201L-FSF	0.004																																		●									
			21505R-FSF	070202R-FSF	0.008		●																																●									
			21505L-FSF	070202L-FSF	0.008		●																																●									
			2151R-FSF	070204R-FSF	1/64		●																																●									
			2151L-FSF	070204L-FSF	1/64		●																																●									
		DCET	32501R-FSF	11T3003R-FSF	0.001																																		●									
			32501L-FSF	11T3003L-FSF	0.001																																		△									
			32502R-FSF	11T301R-FSF	0.004		●																																●									
			32502L-FSF	11T301L-FSF	0.004		●																																●									
			32505R-FSF	11T302R-FSF	0.008		●																																●									
			32505L-FSF	11T302L-FSF	0.008		●																																●									
			3251R-FSF	11T304R-FSF	1/64		●																																●									
			3251L-FSF	11T304L-FSF	1/64		●																																●									
		DCET	215013MR-FSF	0702005MR-FSF	<0.002																													●														
			215013ML-FSF	0702005ML-FSF	<0.002																													●														
			21502MR-FSF	070201MR-FSF	<0.004																													●									△					
			21502ML-FSF	070201ML-FSF	<0.004																													●									△					
			21505MR-FSF	070202MR-FSF	<0.008																													●									△					
			21505ML-FSF	070202ML-FSF	<0.008																													●									△					
			2151MR-FSF	070204MR-FSF	<1/64																													●									△					
			2151ML-FSF	070204ML-FSF	<1/64																													△									△					
		DCET	325013MR-FSF	11T3005MR-FSF	<0.002																													●														
			325013ML-FSF	11T3005ML-FSF	<0.002																													△														
			32502MR-FSF	11T301MR-FSF	<0.004																													●									△					
			32502ML-FSF	11T301ML-FSF	<0.004																													△														
			32505MR-FSF	11T302MR-FSF	<0.008																													●									△					
			32505ML-FSF	11T302ML-FSF	<0.008																													●														
	Sharp Edge / Polished		3251MR-FSF	11T304MR-FSF	<1/64																													●									△					
			3251ML-FSF	11T304ML-FSF	<1/64																													△									△					
Finishing		DCET	215013MR-F	0702005MR-F	<0.002																													●	●	△					●						●		
			21502MR-F	070201MR-F	<0.004	●	●		●	●	●																							●	△					●					●	●		
			21502ML-F	070201ML-F	<0.004	●	●		●	●	●																							●	△					●					●	●		
			21505MR-F	070202MR-F	<0.008	●	●		●	●	●																							●	△					●					●	●		
			21505ML-F	070202ML-F	<0.008	●	●		●	●	●																							●	△					●					●	●		
			2151MR-F	070204R-F	<1/64	●	●		●	●	●																							●	△					●					●	●		
			2151ML-F	070204L-F	<1/64	●	●		●	●	●																							●	△					●					●	●		
		DCET	325013MR-F	11T3005MR-F	<0.002																													●	△					●					●	●		
			32502MR-F	11T301MR-F	<0.004	●	●		●	●	●																							●	△					●					●	●		
			32502ML-F	11T301ML-F	<0.004	●	●		●	●	●																							●	△					●					●	●		
			32505MR-F	11T302MR-F	<0.008	●	●		●	●	●																							●	△					●					●	●		
			32505ML-F	11T302ML-F	<0.008	●	●		●	●	●																							●	△					●					●	●		
			3251MR-F	11T304MR-F	<1/64	●	●		●	●	●																							●	△					●					●	●		
	Sharp Edge		3251ML-F	11T304ML-F	<1/64	●	●		●	●	●																							●	△					●					●	●		

• Insert with corner R (RE) dimension expressed with less than sign (e.g. **<0.002, <0.004, <0.008** etc.) indicate models with minus tolerance for corner R (RE).

Chipbreaker Range

1





Inserts sold in 10 piece boxes.

● : Standard Item △ : Phaseout Item (will be removed from next catalog)
Contact your local Kyocera sales engineer to upgrade old products to new technology

How to read this page ➔ B15

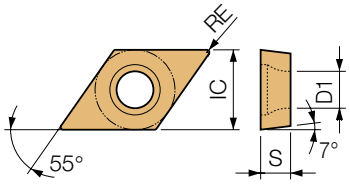
55° Diamond

Positive Insert with Hole

Part Number	Applicable Toolholder Page
DC..215	E27~E33, E46, E52, F55~F59
DC..325	E22, E27~E33, E46, E52, F55~F59, F89

(in)

Part Number	IC	S	D1
DC_215_	1/4	3/32	0.110
DC_325_	3/8	5/32	0.173



					Corner Radius (in)	Cermet		CVD Cermet	MEGA COAT Cermet		PVD Cermet	CVD Coated Carbide																				MEGACOAT / MEGACOAT NANO PVD Coated Carbide									PVD Coated Carbide			DLC		Carbide		Toolholder Page	Chipbreaker Range
	Left-Hand Shown where Applicable		ANSI Part Number	ISO Part Number	RE	TN610	TN620	TN60	CCX	PV710	PV720	PV730	PV7005	PV90	CA510	CA515	CA025P	CA525	CA530	CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA310	CA315	CA320	CA4505	CA4515	PR1705	PR1725	PR1425	PR1225	PR005S	PR015S	PR1305	PR1310	PR1325	PR1535	PR930	PR1005	PR1025	PR1125	PDL010	PDL025	KW10	SW05		
Finishing-Medium		DCGT	21505R-FS	070202R-FS	0.008		△																																									
			21505L-FS	070202L-FS	0.008		●																																									
			2151R-FS	070204R-FS	1/64		●																																									
			2151L-FS	070204L-FS	1/64		●																																									
		DCGT	32505R-FS	11T302R-FS	0.008		●																																								
			32505L-FS	11T302L-FS	0.008		●																																									
			3251R-FS	11T304R-FS	1/64		●																																								
			3251L-FS	11T304L-FS	1/64		●																																									
			3252L-FS	11T308L-FS	1/32		△																																								
Finishing		DCGT	21501R-F	0702003R-F	0.001																																									●		
			21501L-F	0702003L-F	0.001																																									●		
			21502R-F	070201R-F	0.004		△																																							●		
			21502L-F	070201L-F	0.004																																							●			●		
			21505R-F	070202R-F	0.008		●																																				●			●		
			21505L-F	070202L-F	0.008		●																																				●			●		
			2151R-F	070204R-F	1/64		●																																				●			●		
			2151L-F	070204L-F	1/64		●																																				●			●		
		DCGT	32501R-F	11T3003R-F	0.001																																				●			●		
			32501L-F	11T3003L-F	0.001																																				●			●		
			32505R-F	11T302R-F	0.008		●																																			●			●		
			32505L-F	11T302L-F	0.008		●																																			●			●		
			3251R-F	11T304R-F	1/64		●																																			●			●		
			3251L-F	11T304L-F	1/64		●																																			●			●		
		DCGT	215013MR-F	0702005MR-F	<0.002																													●													
			215013ML-F	0702005ML-F	<0.002																													●													
			21502MR-F	070201MR-F	<0.004																													●										△			
			21502ML-F	070201ML-F	<0.004																													●										△			
			21505MR-F	070202MR-F	<0.008																													●										△			
			21505ML-F	070202ML-F	<0.008																													●										△			
			2151MR-F	070204MR-F	<1/64																													●										△			
			2151ML-F	070204ML-F	<1/64																													●										△			
		DCGT	325013MR-F	11T3005MR-F	<0.002																													●													
			325013ML-F	11T3005ML-F	<0.002																													△													
			32502MR-F	11T301MR-F	<0.004																													●										△			
			32502ML-F	11T301ML-F	<0.004																													●										△			
			32505MR-F	11T302MR-F	<0.008																													●										△	△		
			32505ML-F	11T302ML-F	<0.008																													●										△	△		
			3251MR-F	11T304MR-F	<1/64																													●										△	△		
	Sharp Edge		3251ML-F	11T304ML-F	<1/64																													●										△	△		

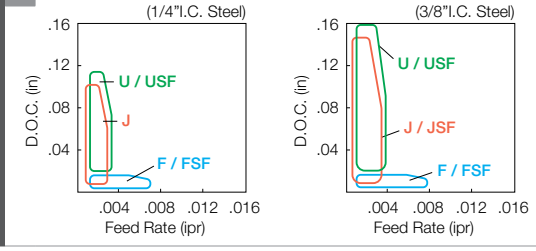
Reference Table Above

1

P	Free-Cutting Steel
M	Carbon/Alloy Steel
	Stainless Steel
K	Gray Cast Iron
	Nodular Cast Iron
N	Non-ferrous Metals
S	HRSA
	Titanium Alloy
H	Hard materials

• Insert with corner R (RE) dimension expressed with less than sign (e.g. **<0.002, <0.004, <0.008** etc.) indicate models with minus tolerance for corner R (RE).

Chipbreaker Range 1



● : Standard Item △ : Phaseout Item (will be removed from next catalog)

Contact your local Kyocera sales engineer to upgrade old products to new technology

Inserts sold in 10 piece boxes.

How to read this page ➔ B15

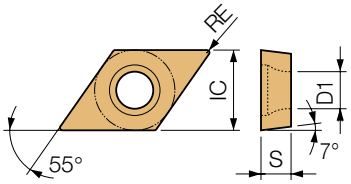
55° Diamond

Positive Insert with Hole

Part Number	Applicable Toolholder Page
DC..215	E27~E33, E46, E52, F55~F59
DC..325	E22, E27~E33, E46, E52, F55~F59, F89

(in)

Part Number	IC	S	D1
DC_215_	1/4	3/32	0.110
DC_325_	3/8	5/32	0.173



| | | |

How to read this page ➔ B15

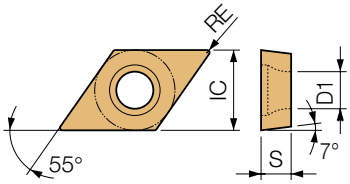
55° Diamond

Positive Insert with Hole

Part Number	Applicable Toolholder Page
DC..215	E27~E33, E46, E52, F55~F59
DC..325	E22, E27~E33, E46, E52, F55~F59, F89

(in)

Part Number	IC	S	D1
DC_215_	1/4	3/32	0.110
DC_325_	3/8	5/32	0.173



| | | |

How to read this page ➔ B15

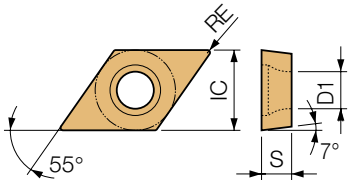
55° Diamond

Positive Insert with Hole

Part Number	Applicable Toolholder Page
DC..215	E27~E33, E46, E52, F55~F59
DC..325	E22, E27~E33, E46, E52, F55~F59, F89

(in)

Part Number	IC	S	D1
DC_215_	1/4	3/32	0.110
DC_325_	3/8	5/32	0.173



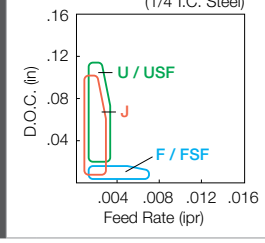
						Corner Radius (in)	Cermet		CVD Cermet	MEGA COAT Cermet		PVD Cermet	CVD Coated Carbide																MEGACOAT / MEGACOAT NANO PVD Coated Carbide										PVD Coated Carbide			DLC		Carbide	Toolholder Page	Chipbreaker Range
			ANSI Part Number	ISO Part Number		RE	TN610	TN620	TN60	CCX	PV710	PV720	PV730	PV7005	PV90	CA510	CA515	CA025P	CA525	CA530	CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA310	CA315	CA320	CA4505	CA4515	PR1705	PR1725	PR1425	PR1225	PR005S	PR015S	PR1305	PR1310	PR1325	PR1535	PR930	PR1005	PR1025	PR1125	PDL010	PDL025	KW10	SW05		
	Left-Hand Shown where Applicable																																														
Low Feed	Super Fine	DCET	32501FR-JSF	11T3003FR-JSF		0.001																																			●								
			32501FL-JSF	11T3003FL-JSF		0.001																																			●								
			32502FR-JSF	11T301FR-JSF		0.004																																			●								
			32502FL-JSF	11T301FL-JSF		0.004																																			●								
			32505FR-JSF	11T302FR-JSF		0.008																																			●								
			32505FL-JSF	11T302FL-JSF		0.008																																			●								
		DCET	325013MFR-JSF	11T3005MFR-JSF		<0.002																													●														
			325013MFL-JSF	11T3005MFL-JSF		<0.002																													△														
			32502MFR-JSF	11T301MFR-JSF		<0.004																													●											△			
			32502MFL-JSF	11T301MFL-JSF		<0.004																													△														
			32505MFR-JSF	11T302MFR-JSF		<0.008																													●											△			
	Sharp Edge / Precision		32505MFL-JSF	11T302MFL-JSF		<0.008																													●														
Low Feed		DCET	215013MFR-J	0702005MFR-J		<0.002																										●	△	●					●									
			21502MFR-J	070201MFR-J		<0.004																										●	△	●					●									
			21502MFL-J	070201MFL-J		<0.004																										●	△						●									
			21505MFR-J	070202MFR-J		<0.008																										●	△	●					●									
			21505MFL-J	070202MFL-J		<0.008																										●	△	●					●									
		DCET	325013MFR-J	11T3005MFR-J		<0.002																										●	△						●									
			32502MFR-J	11T301MFR-J		<0.004	●				●																					●	●	△					●									
			32502MFL-J	11T301MFL-J		<0.004	●				●																					●	●	△					●									
			32505MFR-J	11T302MFR-J		<0.008	●				●																					●	●	△					●									
			32505MFL-J	11T302MFL-J		<0.008	●				●																					●	●	△					●									
	Sharp Edge		3251MFR-J	11T304MFR-J		<1/64																										●	●	△					●									
Low Feed		DCGT	32501FR-J	11T3003FR-J		0.001																																			△								
			32505FR-J	11T302FR-J		0.008			●																																	●							●	
			32505FL-J	11T302FL-J		0.008			●																																	●							●	
		DCGT	325013MFR-J	11T3005MFR-J		<0.002																													●														
			325013MFL-J	11T3005MFL-J		<0.002																													△														
			32502MFR-J	11T301MFR-J		<0.004																													●											△	△		
			32502MFL-J	11T301MFL-J		<0.004																													●											△	△		
			32505MFR-J	11T302MFR-J		<0.008																													●											△	△		
			32505MFL-J	11T302MFL-J		<0.008																													●														
			3251MFR-J	11T304MFR-J		<1/64																													●											△	△		
	Sharp Edge		3251MFL-J	11T304MFL-J		<1/64																													●											△	△		

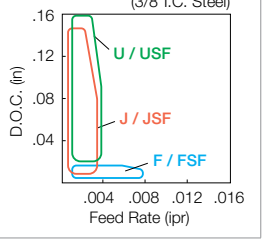
Reference Table Above

1

• Insert with corner R (RE) dimension expressed with less than sign (e.g. **<0.002, <0.004, <0.008** etc.) indicate models with minus tolerance for corner R (RE).

Chipbreaker Range 1





Inserts sold in 10 piece boxes.

● : Standard Item △ : Phaseout Item (will be removed from next catalog)
Contact your local Kyocera sales engineer to upgrade old products to new technology

How to read this page ➔ B15

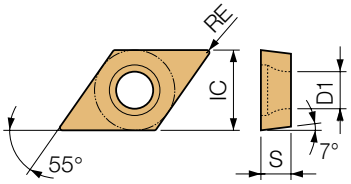
55° Diamond

Positive Insert with Hole

Part Number	Applicable Toolholder Page
DC..215	E27~E33, E46, E52, F55~F59
DC..325	E22, E27~E33, E46, E52, F55~F59, F89

(in)

Part Number	IC	S	D1
DC_215_	1/4	3/32	0.110
DC_325_	3/8	5/32	0.173

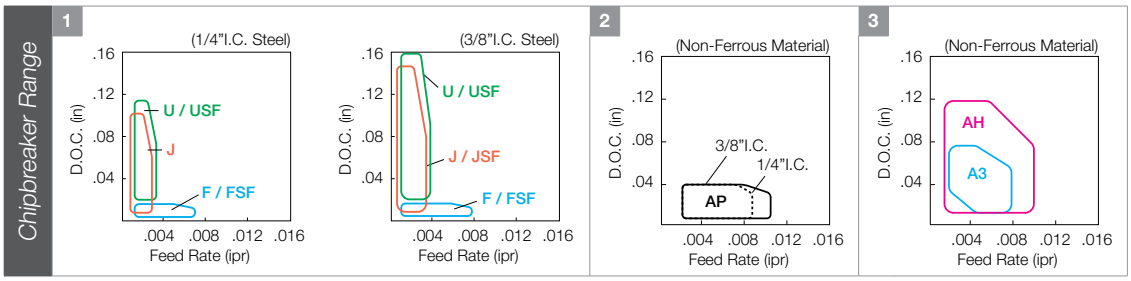


						Corner Radius (in)	Cermet		CVD Cermet	MEGA COAT Cermet		PVD Cermet	CVD Coated Carbide																				MEGACOAT / MEGACOAT NANO PVD Coated Carbide										PVD Coated Carbide			DLC		Carbide		Toolholder Page	Chipbreaker Range
		ANSI Part Number	ISO Part Number		RE	TN610	TN620	TN60	CCX	PV710	PV720	PV730	PV7005	PV90	CA510	CA515	CA025P	CA525	CA530	CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA310	CA315	CA320	CA4505	CA4515	PR1705	PR1725	PR1425	PR1225	PR005S	PR015S	PR1305	PR1310	PR1325	PR1535	PR930	PR1005	PR1025	PR1125	PDL010	PDL025	KW10	SW05		
P						●	●			●	●	◔																			●										◔	◔				◔		Free-Cutting Steel	
M																															◔										◔	◔				◔		Carbon/Alloy Steel	
K																																														✣		Stainless Steel	
N																																													●	●	◔	Gray Cast Iron	
S																																															Nodular Cast Iron	
H																																													◔		Non-ferrous Metals	
																																															HRSA	
																																															Titanium Alloy	
																																															Hard materials	
	Left-Hand Shown where Applicable																																															
Low Feed		DCGT	32501ER-J	11T3003ER-J	0.001																																				●							1
			32502ER-J	11T301ER-J	0.004	●	●	△		●	●	●																													●							
			32502EL-J	11T301EL-J	0.004	●				●																																●							
			32505ER-J	11T302ER-J	0.008	●	●	●		●	●	●																														●					●		
			32505EL-J	11T302EL-J	0.008	●		△		●																																●							
			3251ER-J	11T304ER-J	1/64	●	●	●		●	●	●																														●					●		
			3251EL-J	11T304EL-J	1/64	●	●	●		●	●	●																														●					●		
		DCGT	325013MER-J	11T3005MER-J	<0.002																											●															
			32502MER-J	11T301MER-J	<0.004																											●											△					
			32505MER-J	11T302MER-J	<0.008																											●											△					
			3251MER-J	11T304MER-J	<1/64																											●											△					
	Honed Edge		3251MEL-J	11T304MEL-J	<1/64																											●											△					
Medium-Finishing		DCGT	21505AP	070202AP	0.008																																							●		●			2
			2151AP	070204AP	1/64																																							●		●			
		DCGT	32505AP	11T302AP	0.008																																							●		●			
			3251AP	11T304AP	1/64																																							●		●			
	Sharp Edge / Polished		3252AP	11T308AP	1/32																																							●		●			
Medium-Finishing		DCGT	21505R-A3	070202R-A3	0.008																																										△		3
		DCGT	32505R-A3	11T302R-A3	0.008																																							●	●	●			
			32505L-A3	11T302L-A3	0.008																																							●	●	●			
			3251R-A3	11T304R-A3	1/64																																							●	●	●			
			3251L-A3	11T304L-A3	1/64																																							●	●	●			
	Sharp Edge / Non-ferrous Metals		3252R-A3	11T308R-A3	1/32																																							●	●				
			3252L-A3	11T308L-A3	1/32																																							●	●				
Medium-Finishing		DCGT	3251AH	11T304AH	1/64																																							●	●	●			
	Sharp Edge / Non-ferrous Metals		3252AH	11T308AH	1/32																																							●	●	●			
Cast Iron		DCGW	21502	070201	0.004																																									●		-
			21505	070202	0.008																																									●		
		DCGW	32502	11T301	0.004																																									●		
			32505	11T302	0.008																																									●		
	Without Chipbreaker		3251	11T304	1/64																																									●		

Reference Table Above

• Insert with corner R (RE) dimension expressed with less than sign (e.g. **<0.002, <0.004, <0.008** etc.) indicate models with minus tolerance for corner R (RE).

Chipbreaker Range



● : Standard Item △ : Phaseout Item (will be removed from next catalog)

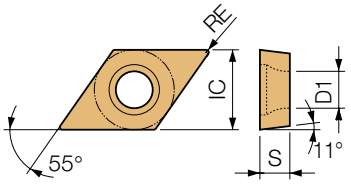
Contact your local Kyocera sales engineer to upgrade old products to new technology

Inserts sold in 10 piece boxes.

How to read this page ➔ B15

55° Diamond

Positive Insert with Hole



(in)

Part Number	IC	S	D1
DP_215_	1/4	3/32	0.110
DP_325_	3/8	5/32	0.173

		ANSI	ISO	RE	TN610	TN620	TN60	CCX	PV710	PV720	PV730	PV7005	PV90	CA510	CA515	CA025P	CA525	CA530	CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA310	CA315	CA320	CA4505	CA4515	PR1705	PR1725	PR1425	PR1225	PR005S	PR015S	PR1305	PR1310	PR1325	PR1535	PR930	PR1005	PR1025	PR1125	PDL010	PDL025	KW10	SW05	Toolholder Page	Chipbreaker Range
		Left-Hand Shown where Applicable		Part Number	Part Number																																											
Finishing	Super Fine	DPET	21501R-FSF	0702003R-FSF	0.001																																				●									
			21502R-FSF	070201R-FSF	0.004																																				●									
			21505R-FSF	070202R-FSF	0.008																																				●									
			21505L-FSF	070202L-FSF	0.008																																				●									
		DPET	32501R-FSF	11T3003R-FSF	0.001																																				●									
			32502R-FSF	11T301R-FSF	0.004																																				●									
			32505R-FSF	11T302R-FSF	0.008			●																																	●									
			32505L-FSF	11T302L-FSF	0.008			●																																	●									
		DPET	21505MR-FSF	070202MR-FSF	<0.008																																						△								
			21505ML-FSF	070202ML-FSF	<0.008																																						△								
		DPET	325013MR-FSF	11T305MR-FSF	<0.002																																													
			32502MR-FSF	11T301MR-FSF	<0.004																																						△								
	Sharp Edge / Precision		32505MR-FSF	11T302MR-FSF	<0.008																																						△								
Low Feed	Super Fine	DPET	21501FR-USF	0702003FR-USF	0.001																																				●									
			21502FR-USF	070201FR-USF	0.004																																				●									
			21502FL-USF	070201FL-USF	0.004																																				●									
			21505FR-USF	070202FR-USF	0.008																																				●									
			21505FL-USF	070202FL-USF	0.008																																				●									
		DPET	32501FR-USF	11T3003FR-USF	0.001																																				●									
			32502FR-USF	11T301FR-USF	0.004																																				●									
			32502FL-USF	11T301FL-USF	0.004																																				●									
			32505FR-USF	11T302FR-USF	0.008			●																																	●									
			32505FL-USF	11T302FL-USF	0.008			●																																	●									
		DPET	215013MFR-USF	0702005MFR-USF	<0.002																																												
			21502MFR-USF	070201MFR-USF	<0.004																																												
			21505MFR-USF	070202MFR-USF	<0.008																																												
		DPET	325013MFR-USF	11T3005MFR-USF	<0.002																																												
			32502MFR-USF	11T301MFR-USF	<0.004																																						△								
	Sharp Edge / Precision		32505MFR-USF	11T302MFR-USF	<0.008																																						△								

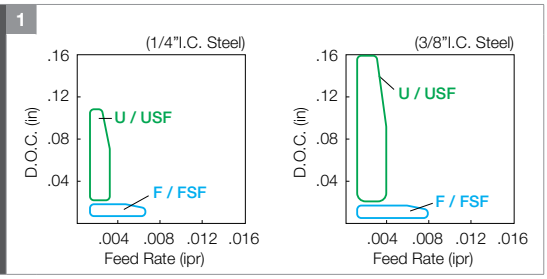
Corner Radius (in) | Cermet | CVD Cermet | MEGA COAT Cermet | PVD Cermet | CVD Coated Carbide | MEGACOAT / MEGACOAT NANO PVD Coated Carbide | PVD Coated Carbide | DLC | Carbide

P Free-Cutting Steel
M Carbon/Alloy Steel, Stainless Steel
K Gray Cast Iron, Nodular Cast Iron
N Non-ferrous Metals
S HRSA, Titanium Alloy
H Hard materials

Toolholder Page: E34
Chipbreaker Range: 1

Chipbreaker Range

1



• Insert with corner R (RE) dimension expressed with less than sign (e.g. **<0.002, <0.004, <0.008** etc.) indicate models with minus tolerance for corner R (RE).

KYOCERA

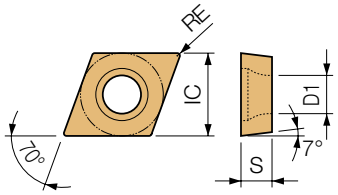
Inserts sold in 10 piece boxes.

● : Standard Item △ : Phaseout Item (will be removed from next catalog)
Contact your local Kyocera sales engineer to upgrade old products to new technology

How to read this page ➔ B15

70° Diamond

Positive Insert with Hole



(in)

Part Number	IC	S	D1
JC_1109_	0.138	0.055	0.075

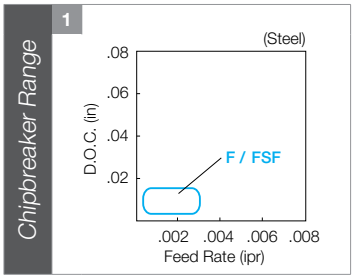
	ANSI Part Number	ISO Part Number	RE	TN610	TN620	TN60	CCX	PV710	PV720	PV730	PV7005	PV90	CA510	CA515	CA025P	CA525	CA530	CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA310	CA315	CA320	CA4505	CA4515	PR1705	PR1725	PR1425	PR1225	PR005S	PR015S	PR1305	PR1310	PR1325	PR1535	PR930	PR1005	PR1025	PR1125	PDL010	PDL025	KW10	SW05	Toolholder Page	Chipbreaker Range
Left-Hand Shown where Applicable																																															
Finishing Super Fine JCET	110902R-FSF	030101R-FSF	0.004																																			△									
	110902L-FSF	030101L-FSF	0.004																																			△									
	110905R-FSF	030102R-FSF	0.008			●																															△									
	110905L-FSF	030102L-FSF	0.008			●																															●									
	11091L-FSF	030104L-FSF	1/64																																			●									
JCET	110902MR-FSF	030101MR-FSF	<0.004																											●										△								
Sharp Edge / Precision	110902ML-FSF	030101ML-FSF	<0.004																											●										△								
Finishing JCET	110905MR-F	030102MR-F	0.008																											●	△							●									
	110905ML-F	030102ML-F	0.008																											●	△							●									
	11091MR-F	030104MR-F	1/64																											●	△							●							F60	1	
Sharp Edge	11091ML-F	030104ML-F	1/64																											●	△							●									
Finishing JCGT	110902R-F	030101R-F	0.004																																			●									
	110902L-F	030101L-F	0.004			●																																							●		
	110905R-F	030102R-F	0.008			●																																●							●		
	110905L-F	030102L-F	0.008			●																																●							●		
	11091R-F	030104R-F	1/64			●																																●									
	11091L-F	030104L-F	1/64			●																																●									
JCGT	110905ML-F	030102ML-F	<0.008																																					△							
Sharp Edge	11091ML-F	030104ML-F	<1/64																																					△							

Corner Radius (in) | Cermet | CVD Cermet | MEGA COAT Cermet | PVD Cermet | CVD Coated Carbide | MEGACOAT / MEGACOAT NANO PVD Coated Carbide | PVD Coated Carbide | DLC | Carbide

P	Free-Cutting Steel
	Carbon/Alloy Steel
M	Stainless Steel
K	Gray Cast Iron
	Nodular Cast Iron
N	Non-ferrous Metals
S	HRSA
	Titanium Alloy
H	Hard materials

• Insert with corner R (RE) dimension expressed with less than sign (e.g. **<0.002, <0.004, <0.008** etc.) indicate models with minus tolerance for corner R (RE).

Chipbreaker Range 1



● : Standard Item △ : Phaseout Item (will be removed from next catalog)
Contact your local Kyocera sales engineer to upgrade old products to new technology

Inserts sold in 10 piece boxes.

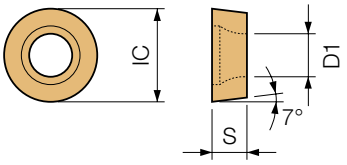
How to read this page ➔ B15

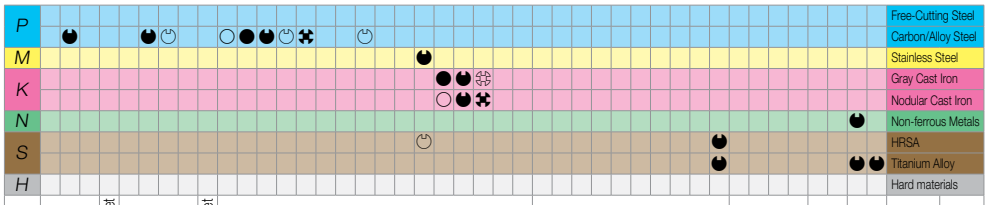
Round

Positive Insert with Hole

Part Number	IC (in)	S (in)	D1 (in)
RC_1003_	0.394	1/8	0.142
RC_1204_	0.472	3/16	0.165

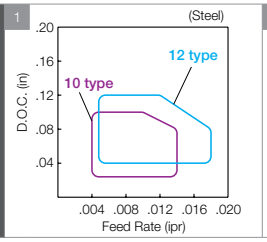
Part Number	IC (in)	S (in)	D1 (in)
RCMT43..	0.500	3/16	0.173

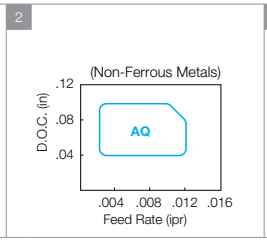


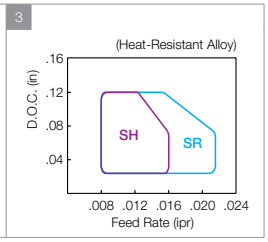


		ANSI Part Number	ISO Part Number	RE	TN610	TN620	TN60	CCX	PV710	PV720	PV730	PV7005	PV90	CA510	CA515	CA025P	CA525	CA530	CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA310	CA315	CA320	CA4505	CA4515	PR1705	PR1725	PR1225	PR005S	PR015S	PR1305	PR1310	PR1325	PR1535	PR1515	PR930	PR1005	PR1025	PR1125	PDL010	PDL025	KW10	GW15	Toolholder Page	Chipbreaker Range
Medium		RCMX	1003M0	1003M0	-	●	●				●	●			●	●	●	●	●		●	●		●																									D25	1
		RCMX	1204M0	1204M0	-	●	●				●	●			●	●	●	●	●			●		●	●	●	●		●																				
Finishing-Medium	 Non-ferrous Metals	RCGX	1003M0-AQ	1003M0-AQ	-																																								●			2
Finishing-Medium		RCMT	43SR	120400SR	-																																		●							●	-	3
		RCMT	43SH	120400SH	-																																		●									

Chipbreaker Range







*Chipbreaker shape of RCMX... varies by grade (cermet / PVD coated cermet / CVD coated carbide)

Inserts sold in 10 piece boxes.

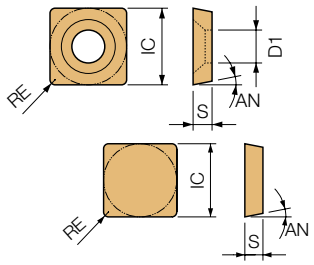
● : Standard Item △ : Phaseout Item (will be removed from next catalog)
Contact your local Kyocera sales engineer to upgrade old products to new technology

How to read this page B15

90° Square
Positive Insert

Part Number	IC	S	D1 (in)	AN
SC_325_	3/8	5/32	0.173	7°
SPGH32_	3/8	1/8	0.177	11°

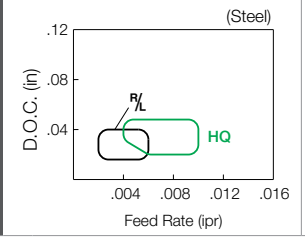
Part Number	IC	S	D1 (in)	AN
SP_32_	3/8	1/8	-	
SP_42_	1/2	1/8	-	11°
SP_43_	1/2	3/16	-	



		ANSI	ISO	RE	Cermet			MEGA COAT Cermet			PVD Cermet	CVD Coated Carbide																MEGACOAT / MEGACOAT NANO PVD Coated Carbide										PVD Coated Carbide				DLC		Carbide		Toolholder Page	Chipbreaker Range
	Left-Hand Shown where Applicable	Part Number	Part Number	Corner Radius (in)	TN610	TN620	TN60	CCX	PV710	PV720	PV730	PV7005	PV90	CA510	CA515	CA025P	CA525	CA530	CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA310	CA315	CA320	CA4505	CA4515	PR1705	PR1725	PR1425	PR1225	PR005S	PR015S	PR1305	PR1310	PR1325	PR1535	PR930	PR1005	PR1025	PR1125	PDL010	PDL025	KW10	SW05		
Finishing-Medium		SCMT	3251HQ	1/64	●	●	●		●	●	●			●	●	●	●	●		●	●	●																									-	1
			3252HQ	1/32	●	●	●		●	●	●				●	●	●	●		●	●	●																									
Finishing		SPGH	321L	1/64			●																																								
Medium		SPMR	321G	1/64		●	●			●	●		●																																			
			322G	1/32		●	●			●	●																																				
		SPMR	421G	1/64		●	●			●	●																																					
			422G	1/32		●	●			●	●																																				
Medium		SPMR	321	1/64											●	●	●			●	●			●															●				△				
			322	1/32			●								●	●	●			●	●			●															●				△				
		SPMR	421	1/64											●	●	●	●		●	●			●															●				△				2
			422	1/32											●	●	●			●	●			●															●				△				
Finishing		SPGR	321R	1/64	●	●	●		●	●																																					
			321L	1/64	●	●	●		●	●																																					
			322R	1/32	●	●	●		●	●																																					
			322L	1/32	●	●	●		●	●																																					
		SPGR	421R	1/64	●	●	●		●	●																																					
			421L	1/64	●	●	●		●	●																																					
			422R	1/32	●	●	●		●	●																																					
			422L	1/32	●	●	●		●	●																																					
Cast Iron		SPG	321	1/64																																									●	
			322	1/32	●																																								●	
		SPG	421	1/64								△																																	●	
			422	1/32		●	●					●																											●						●	
		SPM	421	1/64																					●	●	●	●																		-
			422	1/32	●	●	●		●	●									●						●	●	●	●																	●	
			423	3/64	●	●	●	●	●	●															●	●	●																		
	Without Chipbreaker	SPM	432	1/32																					●	●	●	●																		
			433	3/64																					●	●	●																		

Chipbreaker Range

1



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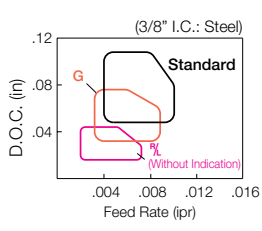
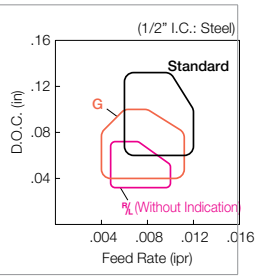




● : Standard Item △ : Phaseout Item (will be removed from next catalog)
Contact your local Kyocera sales engineer to upgrade old products to new technology

Inserts sold in 10 piece boxes.

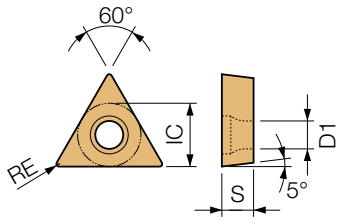
How to read this page ➔ B15

(in)

Part Number	IC	S	D1
TB_121_	5/32	1/16	0.091

60° Triangle

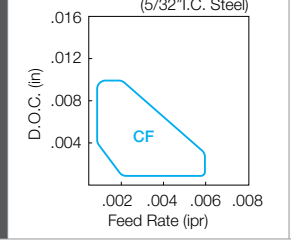
Positive Insert with Hole

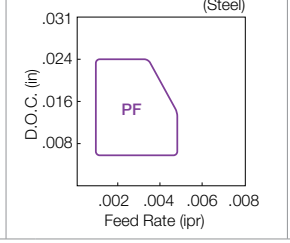


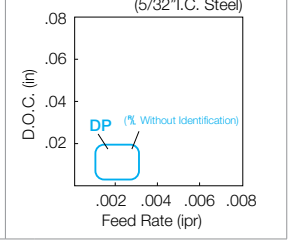
						Corner Radius (in)	Cermet		CVD Cermet	MEGA COAT Cermet			PVD Cermet	CVD Coated Carbide															MEGACOAT / MEGACOAT NANO PVD Coated Carbide											PVD Coated Carbide			DLC		Carbide	Toolholder Page	Chipbreaker Range
						RE	TN610	TN620	TN60	CCX	PV710	PV720	PV730	PV7005	PV90	CA510	CA515	CA025P	CA525	CA530	CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA310	CA315	CA320	CA4505	CA4515	PR1705	PR1725	PR1425	PR1225	PR005S	PR015S	PR1305	PR1310	PR1325	PR1535	PR930	PR1005	PR1025	PR1125	PDL010	PDL025	KW10	SW05		
		Left-Hand Shown where Applicable		ANSI Part Number	ISO Part Number																																									
Minute D.O.C.	Sharp Edge	TBGT		12105CF	060102CF	0.008																																		●							
		TBGT		12102M-CF	060101M-CF	<0.004																																					△					
				12105M-CF	060102M-CF	<0.008																																					△	△					1
Minute D.O.C.	Sharp Edge / Polished	TBGT		12102MP-CF	060101MP-CF	<0.004																											●	△	●					●								
				12105MP-CF	060102MP-CF	<0.008																										●	●	△	●					●			△					
Finishing	Sharp Edge / Polished	TBGT		12102MFP-PF	060101MFP-PF	<0.004																											●	△						●								
				12105MFP-PF	060102MFP-PF	<0.008																											●	△						●								2
				1211MFP-PF	060104MFP-PF	<1/64																											●	△						●								
Finishing		TBMT		12105DP	060102DP	0.008	●	●	●	●	●	●	●			●	●	●	●	●			●	●																								
				1211DP	060104DP	1/64	●	●	●	●	●	●	●			●	●	●	●	●			●	●																		●							
Finishing		TBET		121013MR	0601005MR	<0.002																											●	△						●								
				121013ML	0601005ML	<0.002																											●	△						●								
				12102MR	060101MR	<0.004																											●	△						●								
				12102ML	060101ML	<0.004																											●	△						●								
				12105MR	060102MR	<0.008																											●	△						●								
				12105ML	060102ML	<0.008																										●	●	△						●								
				1211MR	060104MR	<1/64																										●	●	△						●								
				1211ML	060104ML	<1/64																										●	●	△						●								
		TBGT		12101L	0601003L	0.001																																				●						
				12102R	060101R	0.004																																				●					●	
				12102L	060101L	0.004			●																																	●					●	
				12105R	060102R	0.008	●	●	●		●	●	●																													●					●	
				12105L	060102L	0.008	●	●	●		●	●	●																													●					●	
				1211R	060104R	1/64	●	●	●		●	●	●																													●					●	
				1211L	060104L	1/64	●	●	●		●	●	●																													●					●	
		TBGT		12102ML	060101ML	<0.004																																					△					
				12105MR	060102MR	<0.008																																					△					
				12105ML	060102ML	<0.008																																					△	△					
				1211MR	060104MR	<1/64																																					△	△					
				1211ML	060104ML	<1/64																																					△	△					
Cast Iron	Without Chipbreaker	TBGW		12105	060102	0.008			●																																					●		
				1211	060104	1/64			●																																					●		-

• Insert with corner R (RE) dimension expressed with less than sign (e.g. **<0.002, <0.004, <0.008** etc.) indicate models with minus tolerance for corner R (RE).

Chipbreaker Range







Inserts sold in 10 piece boxes.

● : Standard Item △ : Phaseout Item (will be removed from next catalog)

Contact your local Kyocera sales engineer to upgrade old products to new technology

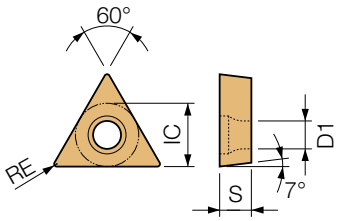
How to read this page ➔ B15

60° Triangle

Positive Insert with Hole

Part Number	IC	S	D1 (in)
TC_1515_	3/16	3/32	0.091
TC_1815_	7/32	3/32	0.098

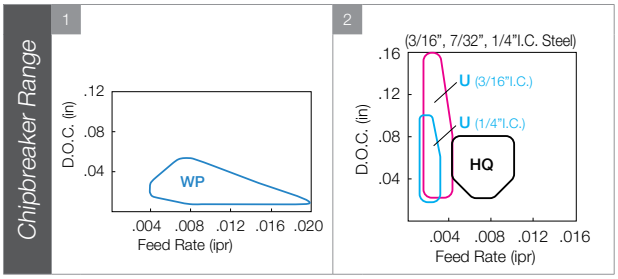
Part Number	IC	S	D1 (in)
TC_215_	1/4	3/32	0.110
TC_325_	3/8	5/32	0.173



		ANSI	ISO	RE	Corner Radius (in)	Cermet		CVD Cermet	MEGA COAT Cermet		PVD Cermet	CVD Coated Carbide														MEGACOAT / MEGACOAT NANO PVD Coated Carbide								PVD Coated Carbide			DLC		Carbide		Toolholder Page	Chipbreaker Range
	Left-Hand Shown where Applicable	Part Number	Part Number			TN610	TN620	TN60	CCX	PV710	PV720	PV730	PV7005	PV90	CA510	CA515	CA025P	CA525	CA530	CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA310	CA315	CA320	CA4505	CA4515	PR1705	PR1725	PR1425	PR1225	PR005S	PR015S	PR1305	PR1310	PR1325	PR1535	PR930	PR1005	PR1025	PR1125	PDL010	PDL025	KW10	SW05		
Finishing		TCMX	18151WP	090204WP	1/64	●	●			●	●				●	●	●	●	●													●	△	●															1
	Wiper Edge	TCMX	2151WP	110204WP	1/64	●	●			●	●				●	●	●	●	●													●	△	●															
Finishing-Medium		TCMT	181505HQ	090202HQ	0.008	●	●	●	●	●	●	●						●	●			△																									F61	
			18151HQ	090204HQ	1/64	●	●	●	●	●	●	●						●	●			●																										
		TCMT	21505HQ	110202HQ	0.008	●	●	●	●	●	●	●																																			
			2151HQ	110204HQ	1/64	●	●	●	●	●	●	●		●	●	●	●	●	●		●	●	●			●	●	●		●											●					●		
			2152HQ	110208HQ	1/32	●	●	●	●	●	●	●		●		●	●	●	●		●	●	●			●	●	●		●																●		
		TCMT	3251HQ	16T304HQ	1/64		●	●	●		●	●		●	●	●		●	●		●	●				●	●																			●		-
			3252HQ	16T308HQ	1/32		●	●	●		●	●		●	●	●		●	●		●	●				●	●																			●		
			3253HQ	16T312HQ	3/64				●									●	●			●				●	●																					
Low Feed	Super Fine	TCET	151501FR-USF	0802003FR-USF	0.001																																				●							2
			151501FL-USF	0802003FL-USF	0.001																																				●							
			151502FR-USF	080201FR-USF	0.004																																				●							
			151505FR-USF	080202FR-USF	0.008																																				●							
		TCET	2201FR-USF	1103003FR-USF	0.001																																				●							
			2201FL-USF	1103003FL-USF	0.001																																				●							
			2202FR-USF	110301FR-USF	0.004			△																																	●							E35	
			2202FL-USF	110301FL-USF	0.004																																				●							
			2205FR-USF	110302FR-USF	0.008			△																																	●							
			2205FL-USF	110302FL-USF	0.008																																				●							
		TCET	22013MFR-USF	1103005MFR-USF	<0.002																																					△						
			2202MFR-USF	110301MFR-USF	<0.004																																					△						
	Sharp Edge / Precision		2205MFR-USF	110302MFR-USF	<0.008																																					△						

• Insert with corner R (RE) dimension expressed with less than sign (e.g. **<0.002, <0.004, <0.008** etc.) indicate models with minus tolerance for corner R (RE).

Chipbreaker Range



● : Standard Item △ : Phaseout Item (will be removed from next catalog)

Contact your local Kyocera sales engineer to upgrade old products to new technology

Inserts sold in 10 piece boxes.

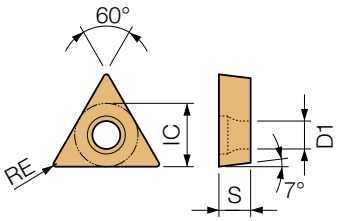
How to read this page ➔ B15

(in)

Part Number	IC	S	D1
TC_1515_	3/16	3/32	0.091
TC_22_	1/4	1/8	0.110

60° Triangle

Positive Insert with Hole



| | | |

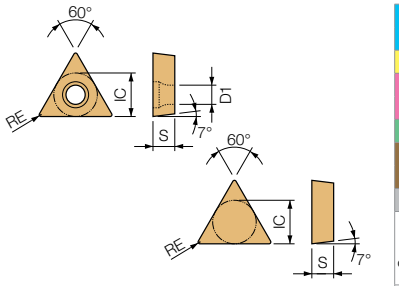
How to read this page ➔ B15

60° Triangle

Positive Insert

Part Number	IC	S	D1
	(in)		
TCG_121_	5/32	1/16	-
TC_1515_	3/16	3/32	0.091

Part Number	IC	S	D1
	(in)		
TC_215_	1/4	3/32	0.110
TC_22_	1/4	1/8	0.110



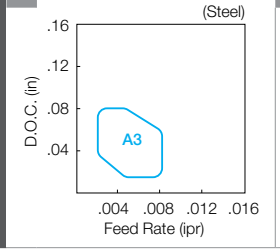
					Corner Radius (in)	Cermet		CVD Cermet	MEGA COAT Cermet		PVD Cermet	CVD Coated Carbide																						MEGACOAT / MEGACOAT NANO PVD Coated Carbide										PVD Coated Carbide			DLC		Carbide		Toolholder Page	Chipbreaker Range
					RE	TN610	TN620	TN60	CCX	PV710	PV720	PV730	PV7005	PV90	CA510	CA515	CA025P	CA525	CA530	CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA310	CA315	CA320	CA4505	CA4515	PR1705	PR1725	PR1425	PR1225	PR005S	PR015S	PR1305	PR1310	PR1325	PR1535	PR930	PR1005	PR1025	PR1125	PDL010	PDL025	KW10	SW05		
	Left-Hand Shown where Applicable	ANSI Part Number	ISO Part Number																																														
Finishing	TCGT	21505R	110202R	0.008			●																																										
		21505L	110202L	0.008			●																																										
		2151R	110204R	1/64			●																																										
		2151L	110204L	1/64			●																																										
Finishing-Medium	TCGT	2205R-A3	110302R-A3	0.008																																								●	●	●				
		2205L-A3	110302L-A3	0.008																																								●	●	●				
		221R-A3	110304R-A3	1/64																																								●	●	●				
		221L-A3	110304L-A3	1/64																																								●	●	●				
	Sharp Edge / Non-ferrous Metals	222R-A3	110308R-A3	1/32																																								●	●					
		222L-A3	110308L-A3	1/32																																								●	●					
Cast Iron	TCGW	151502	080201	0.004																																											●			
		151505	080202	0.008																																											●			
	TCGW	2202	110301	0.004																																											●			
		2205	110302	0.008																																											●			
	Without Chipbreaker	221	110304	1/64																																											●			
Finishing	TCGR	12105L-F	060102L-F	0.008			△																																										
		1211L-F	060104L-F	1/64			△																																										
	Sharp Edge																																																
Cast Iron	TCG	1211	060104	1/64			△																																										
	Without Chipbreaker																																																

P Free-Cutting Steel
Carbon/Alloy Steel
M Stainless Steel
K Gray Cast Iron
Nodular Cast Iron
N Non-ferrous Metals
S HRSA
Titanium Alloy
H Hard materials

E35

Chipbreaker Range

1



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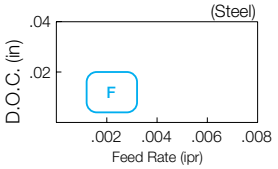


● : Standard Item △ : Phaseout Item (will be removed from next catalog)

Contact your local Kyocera sales engineer to upgrade old products to new technology

Inserts sold in 10 piece boxes.

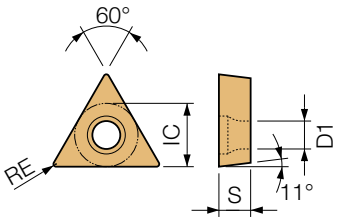
How to read this page B15

60° Triangle

Positive Insert with Hole

Part Number	IC	S	D1 (in)
TP_1515_	3/16	3/32	0.091
TPMT1815_	7/32	3/32	0.110

Part Number	IC	S	D1 (in)
TP_1815_	7/32	3/32	0.118
TP_22_	1/4	1/8	0.130
TPMT32_	3/8	1/8	0.173



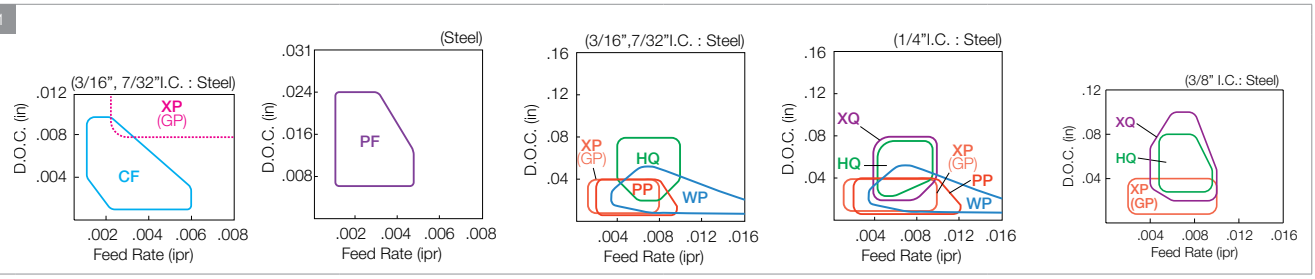
					Corner Radius (in)	Cermet			CVD Cermet	MEGA COAT Cermet			PVD Cermet	CVD Coated Carbide																		MEGACOAT / MEGACOAT NANO PVD Coated Carbide										PVD Coated Carbide			DLC		Carbide	Toolholder Page	Chipbreaker Range
		Left-Hand Shown where Applicable	ANSI Part Number	ISO Part Number	RE	TN610	TN620	TN60	CCX	PV710	PV720	PV730	PV7005	PV90	CA510	CA515	CA025P	CA525	CA530	CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA310	CA315	CA320	CA4505	CA4515	PR1705	PR1725	PR1425	PR1225	PR005S	PR015S	PR1305	PR1310	PR1325	PR1535	PR930	PR1005	PR1025	PR1125	PDL010	PDL025	KW10	SW05		
Minute D.O.C.			TPGT 151505CF	080202CF	0.008																																			●								Reference Table Below	1
			TPGT 181505CF	090202CF	0.008																																			●									
			TPGT 151502M-CF	080201M-CF	<0.004																																					△							
			151505M-CF	080202M-CF	<0.008																																					△	△						
	Sharp Edge		TPGT 181505M-CF	090202M-CF	<0.008																																					△							
Minute D.O.C.			TPGT 151502MP-CF	080201MP-CF	<0.004																												●	△	●						●			△						
			151505MP-CF	080202MP-CF	<0.008																											●	●	△	●						●			△						
			TPGT 181502MP-CF	090201MP-CF	<0.004																												●	△	●						●									
	Sharp Edge / Polished		181505MP-CF	090202MP-CF	<0.008																											●	●	△	●						●			△						
Finishing			TPGT 181502MFP-PF	090201MFP-PF	<0.004																												●	△							●									
			181505MFP-PF	090202MFP-PF	<0.008																												●	△							●									
	Sharp Edge / Polished		18151MFP-PF	090204MFP-PF	<1/64																												●	△							●									
Finishing			TPMX 181505WP	090202WP	0.008	●	●			●	●				●	●	●	●	●														●	△	△															
			18151WP	090204WP	1/64	●	●			●	●				●	●	●	●	●														●	△	●															
			18152WP	090208WP	1/32	●	●			●	●				●	●	●	●	●														●	△	△															
			TPMX 2205WP	110302WP	0.008	●	●			●	●				●	●	●	●	●														●	△	●															
			221WP	110304WP	1/64	●	●			●	●				●	●	●	●	●														●	△	●															
	Wiper Edge		222WP	110308WP	1/32	●	●			●	●				●	●	●	●	●														●	△	△															
Finishing			TPMX 221R-WP	110304R-WP	1/64																												●																	
	Wiper Edge		221L-WP	110304L-WP	1/64																												●																	
Finishing			TPMT 181505PP	090202PP	0.008	●	●		●	●	●	●				●	●																●	△	●						●									
			18151PP	090204PP	1/64	●	●		●	●	●	●			●	●	●	●	●														●	△	●						●									
			TPMT 2205PP	110302PP	0.008	●	●		●	●	●	●				●	●																●	△	●						●									
			221PP	110304PP	1/64	●	●		●	●	●	●			●	●	●	●	●														●	△	●						●									
			222PP	110308PP	1/32	●	●		●	●	●	●				●	●	●	●														●	△	△						●									

• Insert with corner R (RE) dimension expressed with less than sign (e.g. **<0.002, <0.004, <0.008** etc.) indicate models with minus tolerance for corner R (RE).

Part Number	Applicable Toolholder Page
TP_1515_	E35, F59, F63, F65, F67
TP_1815_	E35, F28, F63, F65, F67
TP_22_	E35, F63, F65, F66
TP_32_	F63, F66

Chipbreaker Range

1



Inserts sold in 10 piece boxes.

● : Standard Item △ : Phaseout Item (will be removed from next catalog)
Contact your local Kyocera sales engineer to upgrade old products to new technology

How to read this page ➔ B15

60° Triangle

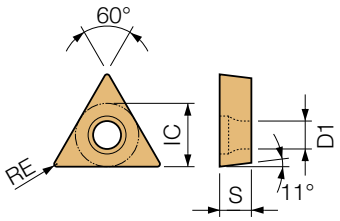
Positive Insert with Hole

(in)

Part Number	IC	S	D1
TP_1515_	3/16	3/32	0.091
TPMT1815_	7/32	3/32	0.110

(in)

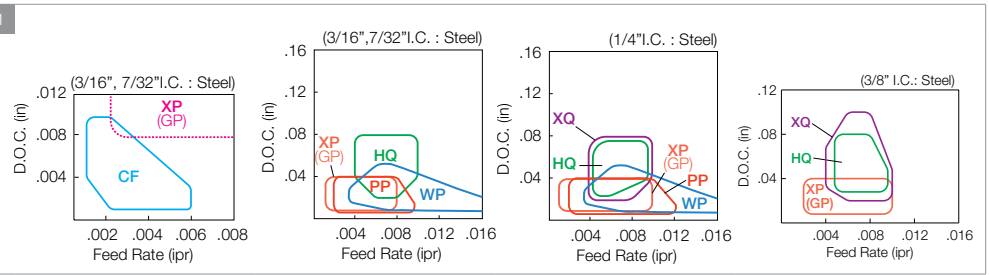
Part Number	IC	S	D1
TP_1815_	7/32	3/32	0.118
TP_22_	1/4	1/8	0.130
TPMT32_	3/8	1/8	0.173



					Corner Radius (in)	Cermet			CVD Cermet	MEGA COAT Cermet			PVD Cermet	CVD Coated Carbide																		MEGACOAT / MEGACOAT NANO PVD Coated Carbide									PVD Coated Carbide				DLC		Carbide			Toolholder Page	Chipbreaker Range
	Left-Hand Shown where Applicable	ANSI Part Number	ISO Part Number		RE	TN610	TN620	TN60	CCX	PV710	PV720	PV730	PV7005	PV90	CA510	CA515	CA025P	CA525	CA530	CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA310	CA315	CA320	CA4505	CA4515	PR1705	PR1725	PR1425	PR1225	PR005S	PR015S	PR1305	PR1310	PR1325	PR1535	PR930	PR1005	PR1025	PR1125	PDL010	PDL025	KW10	SW05		
Finishing		TPMT	181505GP	090202GP	0.008	●	●	●		●	●	●																			●	△								●	●		△					Reference Table Below	1
			18151GP	090204GP	1/64	●	●	●		●	●	●				●	●	●				●									●	△								●	●		△						
		TPMT	221GP	110304GP	1/64	●	●	●		●	●	●		●	●	●	●	●				●	●								●	△								●	●		△						
			222GP	110308GP	1/32	●	●	●		●	●	●		●		●	●	●				●	●								●	△								●	●		△						
		TPMT	321GP	160304GP	1/64	●	●	●		●	●	●		●	●	●	●	●				●									●	△								●	●		△						
Finishing-Medium		TPMT	181505HQ	090202HQ	0.008	●	●		●	●	●	●			●	●	●	●				●	●								●	△								●	●		△						
			18151HQ	090204HQ	1/64	●	●	●	●	●	●	●		●	●	●	●	●	●			●	●	●	●						●	△								●	●		△	△					
		TPMT	2205HQ	110302HQ	0.008	●	●	●	●	●	●	●				●	●	●				●	●								●	△								●	●		△						
			221HQ	110304HQ	1/64	●	●	●	●	●	●	●		●	●	●	●	●	●			●	●	●	●	●	●	●	●	●	●	△								●	●		△	△					
			222HQ	110308HQ	1/32	●	●	●	●	●	●	●		●	●	●	●	●	●			●	●	●	●	●	●	●		●	●	△								●	●		△	△					
		TPMT	3205HQ	160302HQ	0.008	●	●	●	●	●	●	●				●	●	●				●	●								●	△								●	●		△						
			321HQ	160304HQ	1/64	●	●	●	●	●	●	●			●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	△								●	●		△	△					
			322HQ	160308HQ	1/32	●	●	●	●	●	●	●		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●		●	●	△								●	●		△	△					
Finishing		TPMT	18151XP	090204XP	1/64	●	●			●	●	●				●	●	●				●									●	△								●	●		△						
		TPMT	221XP	110304XP	1/64	●	●		●	●	●	●			●	●	●	●	●			●	●								●	△								●	●		△						
			222XP	110308XP	1/32	●	●		●	●	●	●			●	●	●	●	●			●	●								●	△								●	●		△						
	Low Carbon Steel	TPMT	321XP	160304XP	1/64	●	●		●	●	●	●				●	●	●	●			●									●	△								●	●								
			322XP	160308XP	1/32	●	●		●	●	●	●				●	●	●				●	●								●	△								●	●								
Finishing-Medium		TPMT	221XQ	110304XQ	1/64	●	●		●	●	●	●		●	●	●	●	●	●			●	●								●																		
			222XQ	110308XQ	1/32	●	●		●	●	●	●		●	●	●	●	●	●			●	●								●																		
		TPMT	321XQ	160304XQ	1/64	●	●		●	●	●	●				●	●	●				●	●								●																		
	Low Carbon Steel		322XQ	160308XQ	1/32	●	●		●	●	●	●		●	●	●	●	●	●			△	●								●																		

Chipbreaker Range

1



Part Number	Applicable Toolholder Page
TP_1515_	E35, F59, F63, F65, F67
TP_1815_	E35, E28, F63, F65, F67
TP_22_	E35, F63, F65, F66
TP_32_	F63, F66

● : Standard Item △ : Phaseout Item (will be removed from next catalog)

Contact your local Kyocera sales engineer to upgrade old products to new technology

Inserts sold in 10 piece boxes.

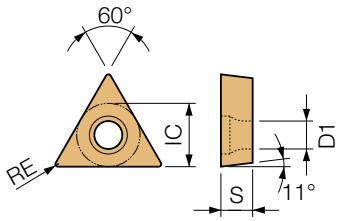
How to read this page ➔ B15

60° Triangle

Positive Insert with Hole

Part Number	IC	S	D1
	(in)	(in)	(in)
TP_1515_	3/16	3/32	0.091
TP_1815_	7/32	3/32	0.118
TP_215_	1/4	3/32	0.138

Part Number	IC	S	D1
	(in)	(in)	(in)
TP_22_	1/4	1/8	0.130
TP_32_	3/8	1/8	0.177

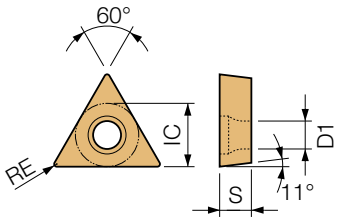


| | | |

How to read this page ➔ B15

60° Triangle

Positive Insert with Hole



(in)

Part Number	IC	S	D1
TP_1515_	3/16	3/32	0.091
TP_1815_	7/32	3/32	0.118
TP_215_	1/4	3/32	0.138

(in)

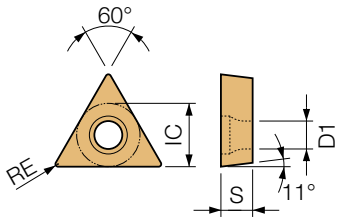
Part Number	IC	S	D1
TP_22_	1/4	1/8	0.130
TP_32_	3/8	1/8	0.177

| | | |

How to read this page ➔ B15

60° Triangle

Positive Insert with Hole



(in)

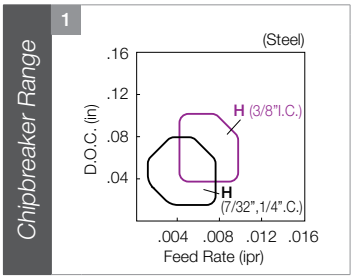
Part Number	IC	S	D1
TP_1515_	3/16	3/32	0.091
TP_1815_	7/32	3/32	0.118

(in)

Part Number	IC	S	D1
TP_22_	1/4	1/8	0.130
TP_32_	3/8	1/8	0.177
TP_33_	3/8	3/16	0.173

		ANSI	ISO	RE	TN610	TN620	TN60	CCX	PV710	PV720	PV730	PV7005	PV90	CA510	CA515	CA025P	CA525	CA530	CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA310	CA315	CA320	CA4505	CA4515	PR1705	PR1725	PR1425	PR1225	PR005S	PR015S	PR1305	PR1310	PR1325	PR1535	PR930	PR1005	PR1025	PR1125	PDL010	PDL025	KW10	SW05	Toolholder Page	Chipbreaker Range
		Left-Hand Shown where Applicable	Part Number	Part Number	Corner Radius (in)	Cermet			CVD Cermet	MEGA COAT Cermet			PVD Cermet	CVD Coated Carbide																	MEGACOAT / MEGACOAT NANO PVD Coated Carbide									PVD Coated Carbide				DLC		Carbide			
Medium		TPGH	181502L-H	090201L-H	0.004																									●	△							●								Reference Table Below	1
			181505L-H	090202L-H	0.008																									●	△							●									
			18151L-H	090204L-H	1/64																									●	△							●									
		TPGH	2205R-H	110302R-H	0.008			●																						●	△							●	●								
			2205L-H	110302L-H	0.008	●	●	●		●	●	●																		●	△							●	●						●		
			221R-H	110304R-H	1/64		●	●			●	●																		●	△							●	●						●		
			221L-H	110304L-H	1/64	●	●	●		●	●	●																		●	△							●	●						●		
			222R-H	110308R-H	1/32			●																						●	△							●	●								
			222L-H	110308L-H	1/32	●	●	●		●	●	●																		●	△							●	●						●		
		TPGH	321R-H	160304R-H	1/64			●																						●	△							●	●								
			321L-H	160304L-H	1/64	●	●	●		●	●	●																		●	△							●	●						●		
			322R-H	160308R-H	1/32																									●	△							●	●								
			322L-H	160308L-H	1/32			●																						●	△							●	●								
		TPGT	3305L-H	160402L-H	0.008	●	●			●	●	●																																			-	
			331L-H	160404L-H	1/64	●	●	●		●	●	●																																				
		TPGH	2205ML-H	110302ML-H	<0.008																									●														△			Reference Table Below	
			221ML-H	110304ML-H	<1/64																									●														△				
		TPGH	321ML-H	160304ML-H	<1/64																									●														△				

• Insert with corner R (RE) dimension expressed with less than sign (e.g. **<0.002, <0.004, <0.008** etc.) indicate models with minus tolerance for corner R (RE).



Part Number	Applicable Toolholder Page
TP_1515_	E35, F59, F63, F65, F67
TP_1815_	E35, F28, F63, F65, F67
TP_22_	E35, F63, F65, F66
TP_32_	F63, F66

Inserts sold in 10 piece boxes.

● : Standard Item △ : Phaseout Item (will be removed from next catalog)
Contact your local Kyocera sales engineer to upgrade old products to new technology

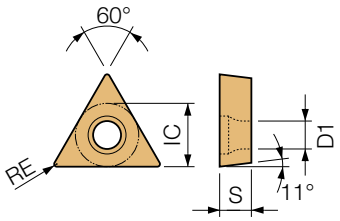
How to read this page ➔ B15

60° Triangle

Positive Insert with Hole

Part Number	IC (in)	S (in)	D1 (in)
TP_1515_	3/16	3/32	0.091
TP_1815_	7/32	3/32	0.118
TP4_	1/4	3/32	0.110

Part Number	IC (in)	S (in)	D1 (in)
TP_22_	1/4	1/8	0.130
TP_32_	3/8	1/8	0.177
TP_33_	3/8	3/16	0.173

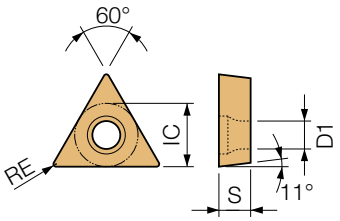


| | | |

How to read this page ➔ B15

60° Triangle

Positive Insert with Hole



Part Number	IC (in)	S (in)	D1 (in)
TP_1515_	3/16	3/32	0.091
TP_1815_	7/32	3/32	0.118
TP_215_	1/4	3/32	0.138
TP_22_	1/4	1/8	0.130
TP_32_	3/8	1/8	0.177
TP_33_	3/8	3/16	0.173

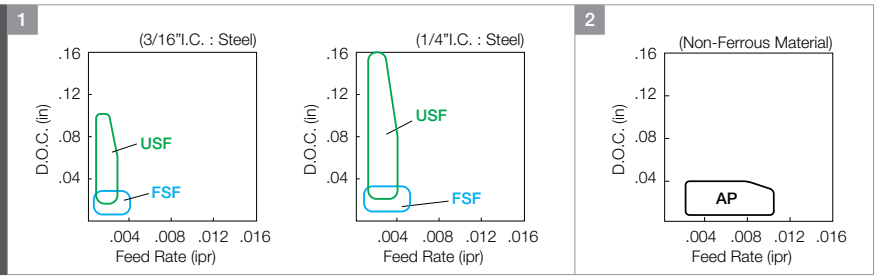
	Left-Hand Shown where Applicable	ANSI Part Number	ISO Part Number	RE	TN610	TN620	TN60	CCX	PV710	PV720	PV730	PV7005	PV90	CA510	CA515	CA025P	CA525	CA530	CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA310	CA315	CA320	CA4505	CA4515	PR1705	PR1725	PR1425	PR1225	PR005S	PR015S	PR1305	PR1310	PR1325	PR1535	PR930	PR1005	PR1025	PR1125	PDL010	PDL025	KW10	SW05	Toolholder Page	Chipbreaker Range
Finishing	Super Fine	TPET 151502FL-USF	080201FL-USF	0.004																																			●									
		151505FR-USF	080202FR-USF	0.008			●																							●									●									
		151505FL-USF	080202FL-USF	0.008			●																							●									●									
		TPET 2201FL-USF	1103003FL-USF	0.001																																			△									
		2202FR-USF	110301FR-USF	0.004			△																																●									
		2202FL-USF	110301FL-USF	0.004			●																							●									●									
		2205FR-USF	110302FR-USF	0.008			●																							●									●								1	
		2205FL-USF	110302FL-USF	0.008			●																							●									●									
		TPET 151505MFR-USF	080202MFR-USF	<0.008																										●											△							
		151505MFL-USF	080202MFL-USF	<0.008																										●											△							
		TPET 2202MFL-USF	110301MFL-USF	<0.004																										●											△							
	Sharp Edge / Precision	2205MFR-USF	110302MFR-USF	<0.008																										●											△							
		2205MFL-USF	110302MFL-USF	<0.008																										●											△							
Medium-Finishing		TPGT 181505AP	090202AP	0.008																																							●	●	●			
		18151AP	090204AP	1/64																																							●	●	●			
		18152AP	090208AP	1/32																																							●	●	●			
	Sharp Edge / Polished	TPGT 2205AP	110302AP	0.008																																							●	●	●			2	
		221AP	110304AP	1/64																																							●	●	●			
		222AP	110308AP	1/32																																							●	●	●			
Cast Iron		TPGB 151505	080202	0.008			●																																						●		
		15151	080204	1/64		●	●			●	●																																		●		
		15152	080208	1/32			●																																								
		TPGB 181505	090202	0.008			●																																						●		
		18151	090204	1/64		●	●			●	●	●																																	●		
		TPGB 21501	1102005	0.002			●																																						●		
		21502	110201	0.004			●																																						●		
		21505	110202	0.008			●																																						●		
		2151	110204	1/64	●	●	●		●	●	●																																	●		
		TPGB 22013	1103005	0.002			●																																						●		
		2202	110301	0.004			●																																								
		2205	110302	0.008	●	●	●		●	●	●																																	●		
		221	110304	1/64	●	●	●		●	●	●	●																																	●		
		222	110308	1/32	●	●	●		●	●	●	●																																	●		
	Without Chipbreaker	TPGB 321	160304	1/64	●	●	●		●	●	●	●																																	●		
		322	160308	1/32	●	●	●		●	●	●																																	●		

Corner Radius (in) — Cermet | CVD Cermet | MEGA COAT Cermet | PVD Cermet | CVD Coated Carbide | MEGACOAT / MEGACOAT NANO PVD Coated Carbide | PVD Coated Carbide | DLC | Carbide

P — Free-Cutting Steel; Carbon/Alloy Steel
M — Stainless Steel
K — Gray Cast Iron; Nodular Cast Iron
N — Non-ferrous Metals
S — HRSA; Titanium Alloy
H — Hard materials

• Insert with corner R (RE) dimension expressed with less than sign (e.g. **<0.002, <0.004, <0.008** etc.) indicate models with minus tolerance for corner R (RE).

Chipbreaker Range



Part Number	Applicable Toolholder Page
TP_1515_	E35, F59, F63, F65, F67
TP_1815_	E35, F28, F63, F65, F67
TP_22_	E35, F63, F65, F66
TP_32_	F63, F66

KYOCERA

Inserts sold in 10 piece boxes.

● : Standard Item △ : Phaseout Item (will be removed from next catalog)
Contact your local Kyocera sales engineer to upgrade old products to new technology

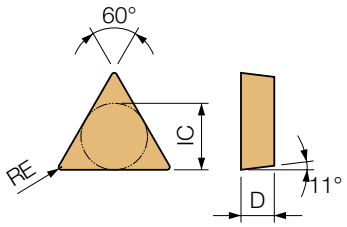
How to read this page ➔ B15

60° Triangle

Positive Insert without Hole

(in)

Part Number	IC	S	D1
TP_1815_	7/32	3/32	-
TP_22_	1/4	1/8	-
TP_32_	3/8	1/8	-

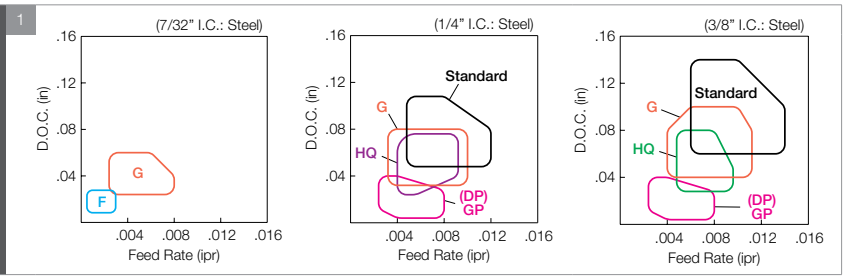


		Left-Hand Shown where Applicable	ANSI Part Number	ISO Part Number	RE	TN610	TN620	TN60	CCX	PV710	PV720	PV730	PV7005	PV90	CA510	CA515	CA025P	CA525	CA530	CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA310	CA315	CA320	CA4505	CA4515	PR1705	PR1725	PR1425	PR1225	PR005S	PR015S	PR1305	PR1310	PR1325	PR1535	PR930	PR1005	PR1025	PR1125	PDL010	PDL025	KW10	SW05	Toolholder Page	Chipbreaker Range
Finishing	TPMR		221DP	110304DP	1/64			●																																									
			222DP	110308DP	1/32			●																																									
	TPMR		321DP	160304DP	1/64			●																																									
			322DP	160308DP	1/32			●																																									
Finishing	TPMR		221GP	110304GP	1/64		●	●			●	●																																					
	TPMR		321GP	160304GP	1/64		●	△			●	●				●	●	●	●		●	●																											
Finishing-Medium	TPMR		221HQ	110304HQ	1/64		●	●			●	●				●	●	●	●		●	●			●															●			△					
			222HQ	110308HQ	1/32		●	●			●	●				●	●	●	●		●	●			●															●			△					
	TPMR		321HQ	160304HQ	1/64	●	●	●		●	●	●				●	●	●	●		●	●	●		●															●			△					
			322HQ	160308HQ	1/32	●	●	●		●	●	●		●	●	●	●	●	●		●	●	●		●															●			△				F85	1
Medium	TPMR		181505G	090202G	0.008			●																																									
			18151G	090204G	1/64			●														●	●																										
	TPMR		221G	110304G	1/64		●	●			●	●		●																																			
			222G	110308G	1/32			●																																									
	TPMR		321G	160304G	1/64		●	●			●	●																																					
			322G	160308G	1/32		●	●			●	●																																					
Medium	TPMR		221	110304	1/64	●	●	●		●	●					●	●	●			●	●			●	●	●	●		●										●			△					
			222	110308	1/32	●	●	●		●	●					●	●	●	●		●	●			●	●	●	●	●	●										●			△					
	TPMR		321	160304	1/64	●	●	●		●	●		●		●	●	●	●	●		●	●			●	●	●	●	△	●										●			△					
			322	160308	1/32	●	●	●		●	●		●		●	●	●	●	●	●	●	●			●	●	●	●	●	●										●			△					
Finishing	TPGR		181505L-F	090202L-F	0.008			●																																									
			18151R-F	090204R-F	1/64			●																																									
		Sharp Edge	18151L-F	090204L-F	1/64			●																																								

Corner Radius (in) | Cermet | CVD Cermet | MEGA COAT Cermet | PVD Cermet | CVD Coated Carbide | MEGACOAT / MEGACOAT NANO PVD Coated Carbide | PVD Coated Carbide | DLC | Carbide

P: Free-Cutting Steel, Carbon/Alloy Steel
M: Stainless Steel
K: Gray Cast Iron, Nodular Cast Iron
N: Non-ferrous Metals
S: HRSA, Titanium Alloy
H: Hard materials

Chipbreaker Range



● : Standard Item △ : Phaseout Item (will be removed from next catalog)

Contact your local Kyocera sales engineer to upgrade old products to new technology

Inserts sold in 10 piece boxes.

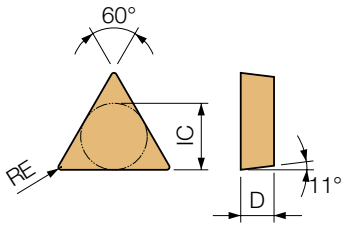
How to read this page ➔ B15

60° Triangle

Positive Insert without Hole

(in)

Part Number	IC	S	D1
TP_1815_	7/32	3/32	-
TP_22_	1/4	1/8	-
TP_32_	3/8	1/8	-



		Left-Hand Shown where Applicable	ANSI Part Number	ISO Part Number	RE	TN610	TN620	TN60	CCX	PV710	PV720	PV730	PV7005	PV90	CA510	CA515	CA025P	CA525	CA530	CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA310	CA315	CA320	CA4505	CA4515	PR1705	PR1725	PR1425	PR1225	PR005S	PR015S	PR1305	PR1310	PR1325	PR1535	PR930	PR1005	PR1025	PR1125	PDL010	PDL025	KW10	SW05	Toolholder Page	Chipbreaker Range
Finishing / Finishing-Medium / Medium	TPGR		2205R-A	110302R-A	0.008			●																																									
			2205L-A	110302L-A	0.008	●	●	●		●	●	●																																				
			221R-A	110304R-A	1/64			●																																									
			221L-A	110304L-A	1/64	●	●	●		●	●	●																																				
	TPGR		221R-B	110304R-B	1/64			●																																									
			221L-B	110304L-B	1/64	●	●	●		●	●	●																																				
			222R-B	110308R-B	1/32			●																																									
			222L-B	110308L-B	1/32	●	●	●		●	●	●																																				
	TPGR		3205R-B	160302R-B	0.008	●	●	●		●	●	●																																				
			3205L-B	160302L-B	0.008	●	●	●		●	●	●																																				
			321R-B	160304R-B	1/64	●	●	●		●	●	●																																				
			321L-B	160304L-B	1/64	●	●	●		●	●	●	●	●																																			
			322R-B	160308R-B	1/32	●	●	●		●	●	●																																				
			322L-B	160308L-B	1/32	●	●	●		●	●	●																																				
	TPGR		321R-C	160304R-C	1/64	●	●	●		●	●	●																																				
			321L-C	160304L-C	1/64	●	●	●		●	●	●																																				
			322R-C	160308R-C	1/32	●	●	●		●	●	●																																				
			322L-C	160308L-C	1/32	●	●	●		●	●	●																																				
Cast Iron	TPG		181505	90202	0.008																																												
			18151	90204	1/64	●		●																																										
			18152	90208	1/32			△																																									
	TPG		2205	110302	0.008			●																																									
			221	110304	1/64	●	●	●		●	●		●																																				
			222	110308	1/32	●	●	●		●	●		●																																				
	TPG		321	160304	1/64	●	●	●		●	●		●																																				
			322	160308	1/32	●	●	●		●	●		●																																				
			323	160312	3/64	●		●																																									
	TPM		221	110304	1/64																					●	●	●		●																		
			222	110308	1/32															●						●	●	●	●	●																		
	TPM		321	160304	1/64															●						●	●	●		●																		
			322	160308	1/32															●						●	●	●		●																		
		Without Chipbreaker	323	160312	3/64																					●	●	●		●																		

Corner Radius (in)

Cermet | CVD Cermet | MEGA COAT Cermet | PVD Cermet | CVD Coated Carbide | MEGACOAT / MEGACOAT NANO PVD Coated Carbide | PVD Coated Carbide | DLC | Carbide

-A : Finishing
-B : Finishing-Medium
-C : Medium

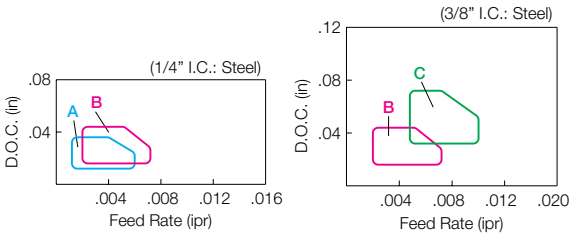
Toolholder Page: F85

Chipbreaker Range: 1 | -

P Free-Cutting Steel
P Carbon/Alloy Steel
M Stainless Steel
K Gray Cast Iron
K Nodular Cast Iron
N Non-ferrous Metals
S HRSA
S Titanium Alloy
H Hard materials

Chipbreaker Range

1



KYOCERA

Inserts sold in 10 piece boxes.

● : Standard Item △ : Phaseout Item (will be removed from next catalog)

Contact your local Kyocera sales engineer to upgrade old products to new technology

How to read this page ➔ B15

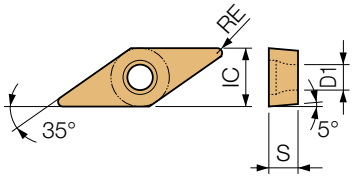
(in)

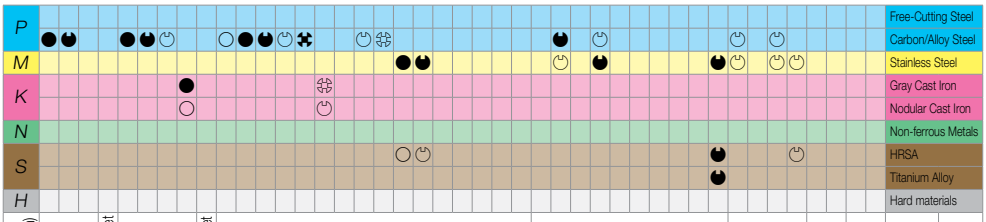
35° Diamond

Positive Insert with Hole

Part Number	Applicable Toolholder Page
VB..22_	E36~E39, E47, E52, F68~F75
VB..33_	E38~E39, F68~F75

Part Number	IC	S	D1
VB_22_	1/4	1/8	0.110
VB_33_	3/8	3/16	0.173



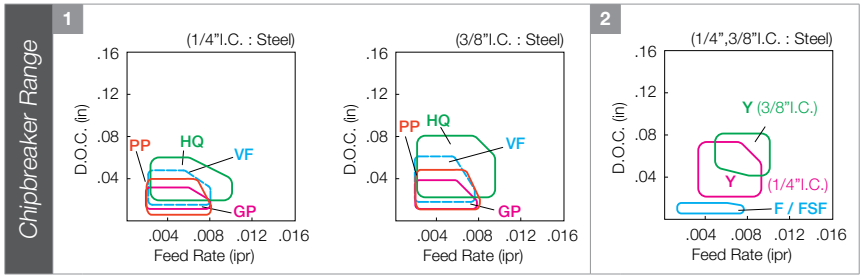


	Left-Hand Shown where Applicable	ANSI Part Number	ISO Part Number	RE	TN610	TN620	TN60	CCX	PV710	PV720	PV730	PV7005	PV90	CA510	CA515	CA025P	CA525	CA530	CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA310	CA315	CA320	CA4505	CA4515	PR1705	PR1725	PR1425	PR1225	PR005S	PR015S	PR1305	PR1310	PR1325	PR1535	PR930	PR1005	PR1025	PR1125	PDL010	PDL025	KW10	SW05	Toolholder Page	Chipbreaker Range
Corner Radius (in)					Cermet			CVD Cermet	MEGA COAT Cermet				PVD Cermet	CVD Coated Carbide																	MEGACOAT / MEGACOAT NANO PVD Coated Carbide									PVD Coated Carbide				DLC		Carbide			
Finishing	VBMT	2205PP	110302PP	0.008	●	●		●	●	●	●			●	●	●	●	●													●	△	●						●									
		221PP	110304PP	1/64	●	●		●	●	●	●			●	●	●	●	●													●	△	●						●									
		222PP	110308PP	1/32	●	●		●	●	●	●			●	●	●	●	●													●	△	●						●									
	VBMT	331PP	160404PP	1/64	●	●		●	●	●	●			●	●	●	●	●													●	△	●						●									
		332PP	160408PP	1/32	●	●		●	●	●	●			●	●	●	●	●													●	△	●						●									
		333PP	160412PP	3/64	●	●		●	●	●				●	●	●	●	●													●	△	△						●									
Finishing	VBMT	221GP	110304GP	1/64	●	●	●		●	●	●		●	●	●	●	●	●		●	●										●	△							●	●		△						
	VBMT	331GP	160404GP	1/64	●	●	●		●	●	●		●	●	●	●	●	●		●	●										●									●		△						
		332GP	160408GP	1/32	●	●	●		●	●	●		●		●	●	●	●		●	●										●									●		△						
Finishing	VBMT	2205VF	110302VF	0.008	●	●		●	●	●	●			●	●	●	●			●	●										●	△							●	●		△						1
		221VF	110304VF	1/64	●	●		●	●	●	●		△	●	●	●	●	●	●	●	●	●									●	△							●	●		△						
		222VF	110308VF	1/32	●	●		●	●	●	●			●	●	●	●	●	●	●	●	●									●	△							●	●		△						
	VBMT	3305VF	160402VF	0.008	●	●		●	●	●	●			●	●	●	●	●	●	●	●										●									●		△						
		331VF	160404VF	1/64	●	●		●	●	●	●			●	●	●	●	●	●	●	●	●									●									●		△						
		332VF	160408VF	1/32	●	●		●	●	●	●			●	●	●	●	●	●	●	●	●									●									●		△						
		333VF	160412VF	3/64	●	●		●	●	●				●	●	●	●	●		●	●										●											△						
Finishing-Medium	VBMT	221HQ	110304HQ	1/64	●	●	●	●	●	●	●	●	●	●	●	●	●	●		●	●	●	●	●							●	△							●	●		△	△					
		222HQ	110308HQ	1/32	●	●	●	●	●	●	●	●	●	●	●	●	●	●		●	●	●	●	●							●	△							●	●		△	△					
	VBMT	331HQ	160404HQ	1/64	●	●	●	●	●	●	●	●	●	●	●	●	●	●		●	●	●	●	●							●									●		△	△					
		332HQ	160408HQ	1/32	●	●	●	●	●	●	●	●	●	●	●	●	●	●		●	●	●	●	●							●									●		△	△					
		333HQ	160412HQ	3/64	●	●		●	●	●	●		●	●	●	●	●	●		●	●	●									●									△		△						
Finishing	Super Fine VBET	2201R-FSF	1103003R-FSF	0.001			●																																●								
		2201L-FSF	1103003L-FSF	0.001			●																																●								
		2202R-FSF	110301R-FSF	0.004			●																																●								
		2202L-FSF	110301L-FSF	0.004			●																																●								
		2205R-FSF	110302R-FSF	0.008			●																																●								
		2205L-FSF	110302L-FSF	0.008			●																																●								
	VBET	22013MR-FSF	1103005MR-FSF	<0.002																												●								△						2
		22013ML-FSF	1103005ML-FSF	<0.002																												●								△						
		2202MR-FSF	110301MR-FSF	<0.004																												●								△						
		2202ML-FSF	110301ML-FSF	<0.004																												●								△						
		2205MR-FSF	110302MR-FSF	<0.008																												●								△						
	Sharp Edge / Precision	2205ML-FSF	110302ML-FSF	<0.008																												●								△						

Reference Table Above

• Insert with corner R (RE) dimension expressed with less than sign (e.g. **<0.002, <0.004, <0.008** etc.) indicate models with minus tolerance for corner R (RE).

Chipbreaker Range



● : Standard Item △ : Phaseout Item (will be removed from next catalog)

Contact your local Kyocera sales engineer to upgrade old products to new technology

Inserts sold in 10 piece boxes.

How to read this page ➔ B15

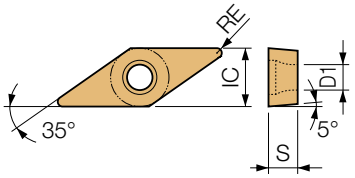
35° Diamond

Positive Insert with Hole

Part Number	Applicable Toolholder Page
VB..22_	E36~E39, E47, E52, F68~F75
VB..33_	E38~E39, F68~F75

(in)

Part Number	IC	S	D1
VB_22_	1/4	1/8	0.110
VB_33_	3/8	3/16	0.173



| | | |

How to read this page ➔ B15

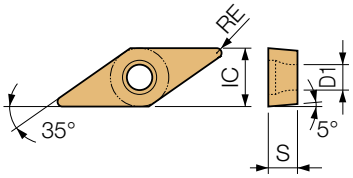
35° Diamond

Positive Insert with Hole

Part Number	Applicable Toolholder Page
VB..22_	E36~E39, E47, E52, F68~F75
VB..33_	E38~E39, F68~F75

(in)

Part Number	IC	S	D1
VB_22_	1/4	1/8	0.110
VB_33_	3/8	3/16	0.173



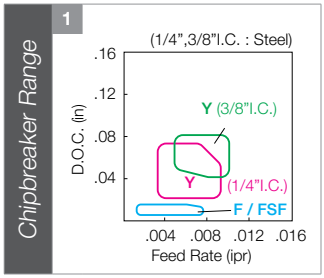
		Left-Hand Shown where Applicable	ANSI Part Number	ISO Part Number	RE	TN610	TN620	TN60	CCX	PV710	PV720	PV730	PV7005	PV90	CA510	CA515	CA025P	CA525	CA530	CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA310	CA315	CA320	CA4505	CA4515	PR1705	PR1725	PR1425	PR1225	PR005S	PR015S	PR1305	PR1310	PR1325	PR1535	PR930	PR1005	PR1025	PR1125	PDL010	PDL025	KW10	SW05	Toolholder Page	Chipbreaker Range
Finishing-Medium	VBGT		2201R-Y	1103003R-Y	0.001																																			●					●			
			2201L-Y	1103003L-Y	0.001																																			●					●			
			2202R-Y	110301R-Y	0.004		●	●			●	●																											●					●			
			2202L-Y	110301L-Y	0.004			●																															●					●			
			2205R-Y	110302R-Y	0.008		●	●			●	●																											●					●			
			2205L-Y	110302L-Y	0.008		●	●			●	●																											●					●			
			221R-Y	110304R-Y	1/64		●	●			●	●																											●					●			
			221L-Y	110304L-Y	1/64		●	●			●	●																											●					●			
			222R-Y	110308R-Y	1/32			●																															●					●			
			222L-Y	110308L-Y	1/32			●																															●					●			
	VBGT		3305R-Y	160402R-Y	0.008	●	●	●		●	●	●																											●					●			
			3305L-Y	160402L-Y	0.008	●	●	●		●	●	●																											●					●			
			331R-Y	160404R-Y	1/64	●	●	●		●	●	●																											●					●			
			331L-Y	160404L-Y	1/64	●	●	●		●	●	●																											●					●			
			332R-Y	160408R-Y	1/32			●																															●					●			
			332L-Y	160408L-Y	1/32			●																															●					●			
	VBGT		22013MR-Y	1103005MR-Y	<0.002																										●		●								△	△						Reference Table Above	1
			22013ML-Y	1103005ML-Y	<0.002																												●									△							
			2202MR-Y	110301MR-Y	<0.004																										●		●								△	△							
			2202ML-Y	110301ML-Y	<0.004																												●									△							
			2205MR-Y	110302MR-Y	<0.008																										●		●								△	△							
			2205ML-Y	110302ML-Y	<0.008																										●		●								△	△							
			221MR-Y	110304MR-Y	<1/64																										●		●								△	△							
			221ML-Y	110304ML-Y	<1/64																										●		●								△	△							
			222MR-Y	110308MR-Y	<1/32																												●																
			222ML-Y	110308ML-Y	<1/32																												●																
	VBGT		3305MR-Y	160402MR-Y	<0.008																										●		●								△	△							
			3305ML-Y	160402ML-Y	<0.008																												●									△							
			331MR-Y	160404MR-Y	<1/64																										●		●								△	△							
			331ML-Y	160404ML-Y	<1/64																												●									△							
			332MR-Y	160408MR-Y	<1/32																												●									△							
			332ML-Y	160408ML-Y	<1/32																												●									△							

Corner Radius (in) | Cermet | CVD Cermet | MEGA COAT Cermet | PVD Cermet | CVD Coated Carbide | MEGACOAT / MEGACOAT NANO PVD Coated Carbide | PVD Coated Carbide | DLC | Carbide

P: Free-Cutting Steel, Carbon/Alloy Steel
M: Stainless Steel
K: Gray Cast Iron, Nodular Cast Iron
N: Non-ferrous Metals
S: HRSA, Titanium Alloy
H: Hard materials

• Insert with corner R (RE) dimension expressed with less than sign (e.g. **<0.002, <0.004, <0.008** etc.) indicate models with minus tolerance for corner R (RE).

Chipbreaker Range



● : Standard Item △ : Phaseout Item (will be removed from next catalog)

Contact your local Kyocera sales engineer to upgrade old products to new technology

Inserts sold in 10 piece boxes.

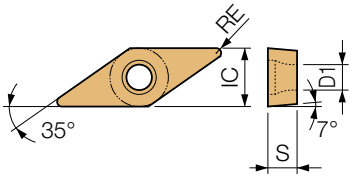
How to read this page ➔ B15

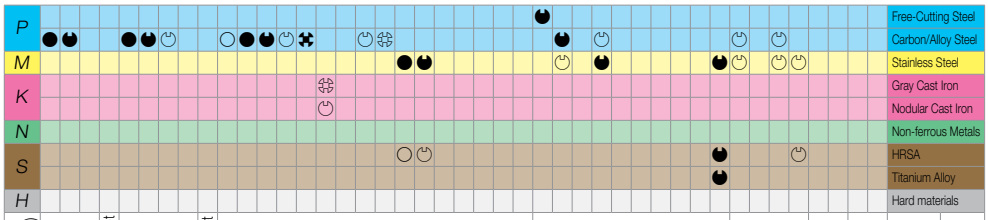
35° Diamond

Positive Insert with Hole

(in)

Part Number	IC	S	D1
VC_1515_	3/16	3/32	0.091
VC_22_	1/4	1/8	0.110
VC_33_	3/8	3/16	0.173

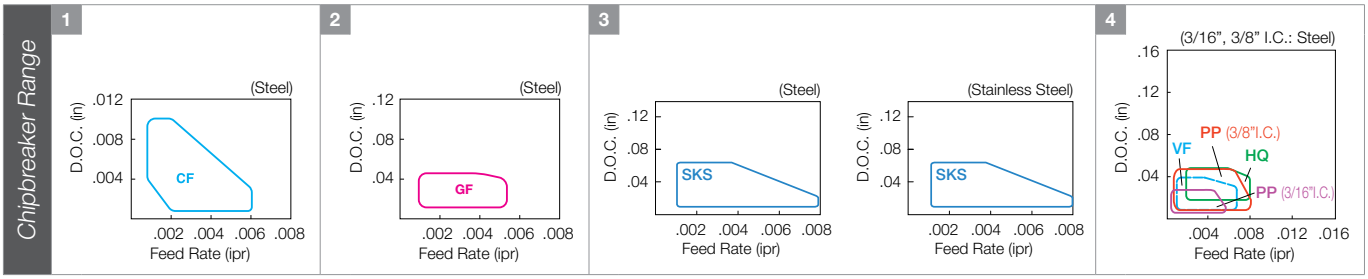




	Left-Hand Shown where Applicable	ANSI Part Number	ISO Part Number	RE	Toolholder Page	Chipbreaker Range
Minute D.O.C.	 Sharp Edge Polished	VCGT 2202MP-CF	110301MP-CF	<0.004		1
		2205MP-CF	110302MP-CF	<0.008		
Finishing	 Sharp Edge Polished	VCGT 2202MFP-GF	110301MFP-GF	<0.004	E40 E41 E47	2
		2205MFP-GF	110302MFP-GF	<0.008		
Finishing	 Sharp Edge Polished	VCGT 2202MFP-SKS	110301MFP-SKS	<0.004		3
		2205MFP-SKS	110302MFP-SKS	<0.008		
		221MFP-SKS	110304MFP-SKS	<1/64		
Finishing		VCMT 151505PP	080202PP	0.008	E47 F68 F70~F75	4
		15151PP	080204PP	1/64		
		VCMT 331PP	160404PP	1/64	E38-E39 F68 F70~F75	
		332PP	160408PP	1/32		
Finishing		VCMT 151505VF	080202VF	0.008	E47 F68 F70~F75	
		15151VF	080204VF	1/64		
Finishing-Medium		VCMT 151505HQ	080202HQ	0.008		
		15151HQ	080204HQ	1/64		
		VCMT 221HQ	110304HQ	1/64		
		VCMT 331HQ	160404HQ	1/64	E38-E39 F68 F70~F75	
		332HQ	160408HQ	1/32		

Corner Radius (in)	Cermet		CVD Cermet	MEGA COAT Cermet	PVD Cermet	CVD Coated Carbide																MEGACOAT / MEGACOAT NANO PVD Coated Carbide										PVD Coated Carbide			DLC			Carbide		
RE	TN610	TN620	TN60	CCX	PV710	PV720	PV730	PV7005	PV90	CA510	CA515	CA025P	CA525	CA530	CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA310	CA315	CA320	CA4505	CA4515	PR1705	PR1725	PR1425	PR1225	PR005S	PR015S	PR1305	PR1310	PR1325	PR1535	PR930	PR1005	PR1025	PR1125	PDL010	PDL025	KW10	SW05

• Insert with corner R (RE) dimension expressed with less than sign (e.g. **<0.002, <0.004, <0.008** etc.) indicate models with minus tolerance for corner R (RE).



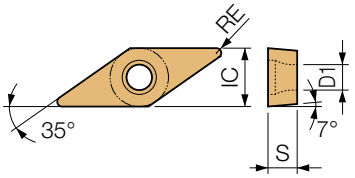
Inserts sold in 10 piece boxes.

● : Standard Item △ : Phaseout Item (will be removed from next catalog)
Contact your local Kyocera sales engineer to upgrade old products to new technology

How to read this page ➔ B15

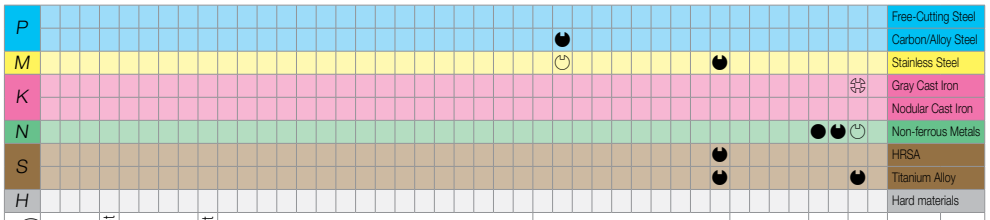
35° Diamond

Positive Insert with Hole



(in)

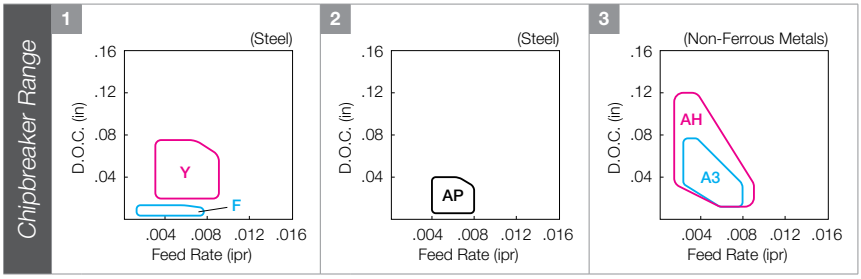
Part Number	IC	S	D1
VC_1515_	3/16	3/32	0.091
VC_22_	1/4	1/8	0.110
VC_33_	3/8	3/16	0.173



					Corner Radius (in)	Cermet		CVD Cermet	MEGA COAT Cermet			PVD Cermet	CVD Coated Carbide																				MEGACOAT / MEGACOAT NANO PVD Coated Carbide								PVD Coated Carbide					DLC		Carbide			Toolholder Page	Chipbreaker Range
	Left-Hand Shown where Applicable		ANSI Part Number	ISO Part Number	RE	TN610	TN620	TN60	CCX	PV710	PV720	PV730	PV7005	PV90	CA510	CA515	CA025P	CA525	CA530	CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA310	CA315	CA320	CA4505	CA4515	PR1705	PR1725	PR1425	PR1225	PR005S	PR015S	PR1305	PR1310	PR1325	PR1535	PR930	PR1005	PR1025	PR1125	PDL010	PDL025	KW10	SW05		
Finishing		VCET	2202MR-F	110301MR-F	<0.004																									●	△								●										
			2202ML-F	110301ML-F	<0.004																									●	△								●										
			2205MR-F	110302MR-F	<0.008																									●	△								●										
			2205ML-F	110302ML-F	<0.008																									●	△								●										
			221MR-F	110304MR-F	<1/64																									●	△								●										
	Sharp Edge		221ML-F	110304ML-F	<1/64																									●	△								●										
Finishing-Medium		VCET	22013MR-Y	1103005MR-Y	<0.002																									●	△								●										
			22013ML-Y	1103005ML-Y	<0.002																									●	△								●										
			2202MR-Y	110301MR-Y	<0.004																									●	△								●										
			2202ML-Y	110301ML-Y	<0.004																									●	△								●										
			2205MR-Y	110302MR-Y	<0.008																									●	△								●										
			2205ML-Y	110302ML-Y	<0.008																									●	△								●										
			221MR-Y	110304MR-Y	<1/64																									●	△								●										
	Sharp Edge		221ML-Y	110304ML-Y	<1/64																									●	△								●										
Finishing	Sharp Edge Non-ferrous Metals	VCGT	331AP	160404AP	1/64																																							●		●				
Finishing-Medium		VCGT	331R-A3	160404R-A3	1/64																																							●	●	●				
			331L-A3	160404L-A3	1/64																																							●	●	●				
			332R-A3	160408R-A3	1/32																																							●	●	●				
	Sharp Edge Non-ferrous Metals		332L-A3	160408L-A3	1/32																																							●	●	●				
Finishing-Medium	Sharp Edge Non-ferrous Metals	VCGT	331AH	160404AH	1/64																																							●	●	●				
Medium		VCGT	2202FN-Z	110301FN-Z	0.004			●																																										
			2205FN-Z	110302FN-Z	0.008			●																																										
	Sharp Edge		221FN-Z	110304FN-Z	1/64			●																																										
Medium-Roughing	Non-ferrous Metals	VCGT	333	160412	3/64																																									●					

• Insert with corner R (RE) dimension expressed with less than sign (e.g. **<0.002, <0.004, <0.008** etc.) indicate models with minus tolerance for corner R (RE).

Chipbreaker Range



● : Standard Item △ : Phaseout Item (will be removed from next catalog)

Contact your local Kyocera sales engineer to upgrade old products to new technology

Inserts sold in 10 piece boxes.

How to read this page ➔ B15

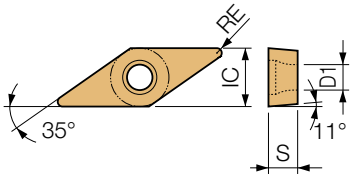
35° Diamond

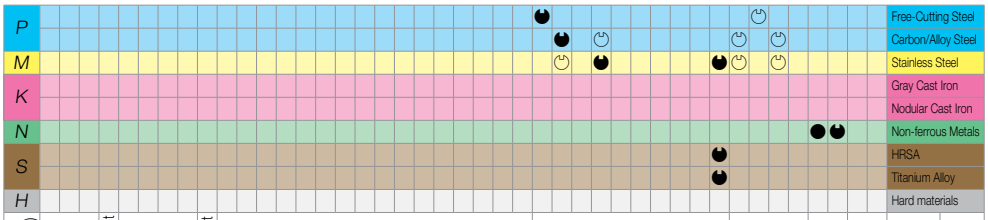
Positive Insert with Hole

Part Number	Applicable Toolholder Page
VP_1515_	E42, E44, F68
VP_22_	E23, E42~E44

(in)

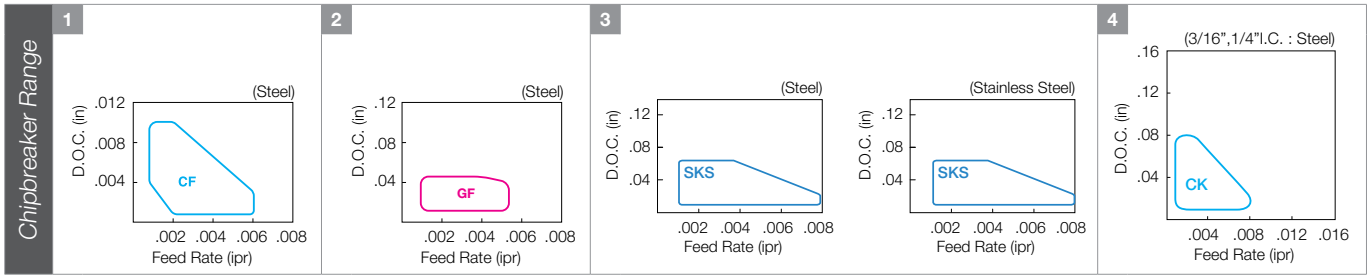
Part Number	IC	S	D1
VP_1515_	3/16	3/32	0.091
VP_22_	1/4	1/8	0.110





		ANSI Part Number	ISO Part Number	RE	Cermet			CVD Cermet	MEGA COAT Cermet			PVD Cermet	CVD Coated Carbide																				MEGACOAT / MEGACOAT NANO PVD Coated Carbide											PVD Coated Carbide			DLC		Carbide		Toolholder Page	Chipbreaker Range
				Corner Radius (in)																																													
					TN610	TN620	TN60	CCX	PV710	PV720	PV730	PV7005	PV90	CA510	CA515	CA025P	CA525	CA530	CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA310	CA315	CA320	CA4505	CA4515	PR1705	PR1725	PR1425	PR1225	PR005S	PR015S	PR1305	PR1310	PR1325	PR1535	PR930	PR1005	PR1025	PR1125	PDL010	PDL025	KW10	SW05		
Minute D.O.C.	Sharp Edge	VPGT	2205CF	110302CF	0.008																																		●									
		VPGT	2202M-CF	110301M-CF	<0.004																																			△	△								
			2205M-CF	110302M-CF	<0.008																																			△	△							1	
Minute D.O.C.	Sharp Edge / Polished	VPGT	2202MP-CF	110301MP-CF	<0.004																																			△				●	●				
			2205MP-CF	110302MP-CF	<0.008																																			△				●	●				
Finishing	Sharp Edge	VPGT	2202MF-GF	110301MF-GF	<0.004																																			△									
			2205MF-GF	110302MF-GF	<0.008																																			△								2	
Finishing	Sharp Edge / Polished	VPGT	2202MFP-GF	110301MFP-GF	<0.004																																			△				●	●				
			2205MFP-GF	110302MFP-GF	<0.008																																			△				●	●				
Finishing	Sharp Edge Polished	VPGT	2202MFP-SKS	110301MFP-SKS	<0.004																																							●	●				
			2205MFP-SKS	110302MFP-SKS	<0.008																																							●	●				
			221MFP-SKS	110304MFP-SKS	<1/64																																							●	●			3	
Finishing		VPGT	151502CK	080201CK	0.004																																		●									
			151505CK	080202CK	0.008																																		●									
		VPGT	2202CK	110301CK	0.004																																		●									
			2205CK	110302CK	0.008																																		●									
		VPGT	151502M-CK	080201M-CK	<0.004																																			△	△								
			151505M-CK	080202M-CK	<0.008																																			△	△							4	
		VPGT	2202M-CK	110301M-CK	<0.004																																			△	△								
			2205M-CK	110302M-CK	<0.008																																			△	△								
Finishing		VPGT	151502MP-CK	080201MP-CK	<0.004																																		●	●	△	●			△		●	●		
			151505MP-CK	080202MP-CK	<0.008																																		●	●	△	●			△		●	●		
	Sharp Edge / Polished	VPGT	2202MP-CK	110301MP-CK	<0.004																																		●	●	△	●			△		●	●		
			2205MP-CK	110302MP-CK	<0.008																																		●	●	△	●			△		●	●		

• Insert with corner R (RE) dimension expressed with less than sign (e.g. **<0.002, <0.004, <0.008** etc.) indicate models with minus tolerance for corner R (RE).



KYOCERA

Inserts sold in 10 piece boxes.

● : Standard Item △ : Phaseout Item (will be removed from next catalog)

Contact your local Kyocera sales engineer to upgrade old products to new technology

How to read this page ➔ B15

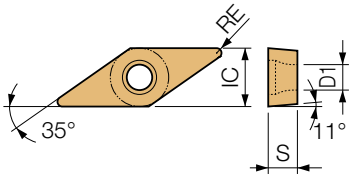
35° Diamond

Positive Insert with Hole

Part Number	Applicable Toolholder Page
VP..22_	E42, E44, F68
VP..33_	E23, E42~E44

(in)

Part Number	IC	S	D1
VP_1515_	3/16	3/32	0.091
VP_22_	1/4	1/8	0.110



| | | |

How to read this page B15

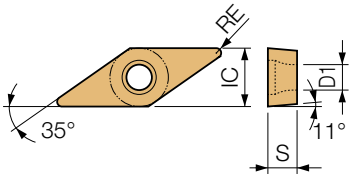
35° Diamond

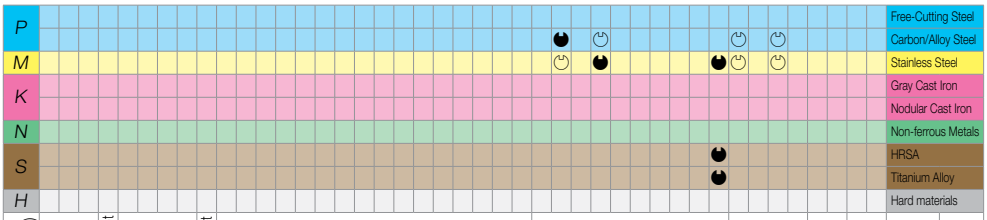
Positive Insert with Hole

Part Number	Applicable Toolholder Page
VP..22_	E42, E44, F68
VP..33_	E23, E42~E44

(in)

Part Number	IC	S	D1
VP_1515_	3/16	3/32	0.091
VP_22_	1/4	1/8	0.110





		ANSI Part Number	ISO Part Number	RE	Cermet TN610	Cermet TN620	Cermet TN60	CVD Cermet CCX	MEGA COAT Cermet PV710	MEGA COAT Cermet PV720	MEGA COAT Cermet PV730	PVD Cermet PV7005	PVD Cermet PV90	CVD Coated Carbide CA510	CVD Coated Carbide CA515	CVD Coated Carbide CA025P	CVD Coated Carbide CA525	CVD Coated Carbide CA530	CVD Coated Carbide CA5505	CVD Coated Carbide CA5515	CVD Coated Carbide CA5525	CVD Coated Carbide CA5535	CVD Coated Carbide CA6515	CVD Coated Carbide CA6525	CVD Coated Carbide CA310	CVD Coated Carbide CA315	CVD Coated Carbide CA320	CVD Coated Carbide CA4505	CVD Coated Carbide CA4515	MEGACOAT / MEGACOAT NANO PVD Coated Carbide PR1705	MEGACOAT / MEGACOAT NANO PVD Coated Carbide PR1725	MEGACOAT / MEGACOAT NANO PVD Coated Carbide PR1425	MEGACOAT / MEGACOAT NANO PVD Coated Carbide PR1225	MEGACOAT / MEGACOAT NANO PVD Coated Carbide PR005S	MEGACOAT / MEGACOAT NANO PVD Coated Carbide PR015S	MEGACOAT / MEGACOAT NANO PVD Coated Carbide PR1305	MEGACOAT / MEGACOAT NANO PVD Coated Carbide PR1310	MEGACOAT / MEGACOAT NANO PVD Coated Carbide PR1325	MEGACOAT / MEGACOAT NANO PVD Coated Carbide PR1535	PVD Coated Carbide PR930	PVD Coated Carbide PR1005	PVD Coated Carbide PR1025	PVD Coated Carbide PR1125	DLC PDL010	DLC PDL025	Carbide KW10	Carbide SW05	Toolholder Page	Chipbreaker Range
Left-Hand Shown where Applicable																																														
Low Feed	Super Fine	VPET	151502FR-USF	080201FR-USF	0.004								●																							●											
			151502FL-USF	080201FL-USF	0.004								●																							●											
			151505FR-USF	080202FL-USF	0.008			●					●																							●											
			151505FL-USF	080202FL-USF	0.008			●					●																							●											
		VPET	2201FR-USF	1103003FR-USF	0.001								●																							●											
			2201FL-USF	1103003FL-USF	0.001								●																							●											
			2202FR-USF	110301FR-USF	0.004			●					●																							●											
			2202FL-USF	110301FL-USF	0.004			●					●																							●											
			2205FR-USF	110302FL-USF	0.008			●					●																							●											
			2205FL-USF	110302FL-USF	0.008			●					●																							●											
		VPET	151502MFR-USF	080201MFR-USF	<0.004																												●					△							
			151505MFR-USF	080202MFR-USF	<0.008																												●					△							
			151505MFL-USF	080202MFL-USF	<0.008																												●					△							
		VPET	22013MFR-USF	1103005MFR-USF	<0.002																												●					△							
			22013MFL-USF	1103005MFL-USF	<0.002																												△												
			2202MFR-USF	110301MFR-USF	<0.004																												●					△							
			2202MFL-USF	110301MFL-USF	<0.004																												●					△							
	Sharp Edge / Precision		2205MFR-USF	110302MFR-USF	<0.008																												●					△							
			2205MFL-USF	110302MFL-USF	<0.008																												△					△							
Low Feed		VPET	151502MFR-U	080201MFR-U	<0.004																										●	△					●							
			151502MFL-U	080201MFL-U	<0.004																										●	△					●							
			151505MFR-U	080202MFR-U	<0.008																										●	△					●							
			151505MFL-U	080202MFL-U	<0.008																										●	△					●							
		VPET	22013MFR-U	1103005MFR-U	<0.002																										●	△					●							
			22013MFL-U	1103005MFL-U	<0.002																										●	△					●							
			2202MFR-U	110301MFR-U	<0.004																										●	△					●							
			2202MFL-U	110301MFL-U	<0.004																										●	△					●							
			2205MFR-U	110302MFR-U	<0.008																										●	△					●							
	Sharp Edge		2205MFL-U	110302MFL-U	<0.008																										●	△					●							
Low Feed		VPET	2201MFR-J	1103005MFR-J	<0.002																										●	△	●				●							
			2202MFR-J	110301MFR-J	<0.004																										●	△	●				●							
			2202MFL-J	110301MFL-J	<0.004																										●	△	△				●							
			2205MFR-J	110302MFR-J	<0.008																										●	△	●				●							
	Sharp Edge		2205MFL-J	110302MFL-J	<0.008																										●	△	△				●							

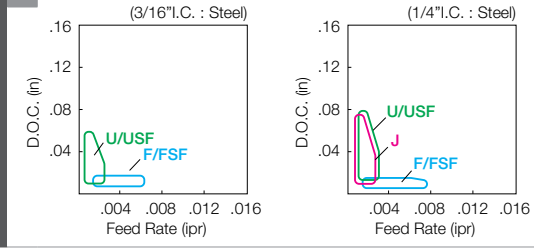
Reference Table Above

1

• Insert with corner R (RE) dimension expressed with less than sign (e.g. **<0.002, <0.004, <0.008** etc.) indicate models with minus tolerance for corner R (RE).

Chipbreaker Range

1



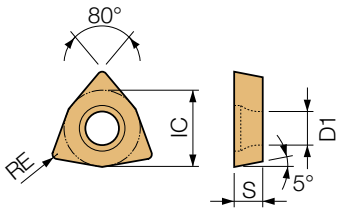
Inserts sold in 10 piece boxes.

● : Standard Item △ : Phaseout Item (will be removed from next catalog)
Contact your local Kyocera sales engineer to upgrade old products to new technology

How to read this page ➔ B15

80° Trigon

Positive Insert with Hole



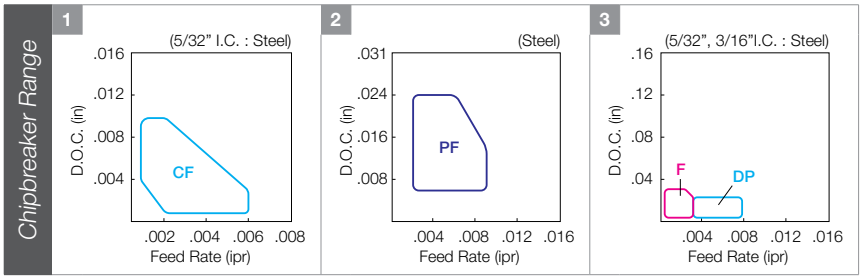
(in)

Part Number	IC	S	D1
WB_121_	5/32	1/16	0.091
WB_1515_	3/16	3/32	0.091

		ANSI Part Number	ISO Part Number	RE	TN610	TN620	TN60	CCX	PV710	PV720	PV730	PV7005	PV90	CA510	CA515	CA025P	CA525	CA530	CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA310	CA315	CA320	CA4505	CA4515	PR1705	PR1725	PR1425	PR1225	PR005S	PR015S	PR1305	PR1310	PR1325	PR1535	PR930	PR1005	PR1025	PR1125	PDL010	PDL025	KW10	SW05	Toolholder Page	Chipbreaker Range
Minute D.O.C.	WBGT	12105ML-CF	060102ML-CF	<0.008																																				△	△							
Minute D.O.C.	WBGT	12102MPR-CF	060101MPR-CF	<0.004																										●	△	△						●										1
		12102MPL-CF	060101MPL-CF	<0.004																										●	△	△						●										
		12105MPR-CF	060102MPR-CF	<0.008																										●	△	●						●										
		12105MPL-CF	060102MPL-CF	<0.008																										●	●	△	●					●			△							
Finishing	WBGT	12102MFPR-PF	060101MFPR-PF	<0.004																										●	△						●										2
		12102MFPL-PF	060101MFPL-PF	<0.004																										●	△						●										
		12105MFPR-PF	060102MFPR-PF	<0.008																										●	△						●										
		12105MFPL-PF	060102MFPL-PF	<0.008																										●	△						●										
	WBGT	151502MFPR-PF	080201MFPR-PF	<0.004																										●	△						●										
		151502MFPL-PF	080201MFPL-PF	<0.004																										●	△						●										
		151505MFPR-PF	080202MFPR-PF	<0.008																										●	△						●										
		151505MFPL-PF	080202MFPL-PF	<0.008																										●	△						●										
Finishing	WBMT	12105R-DP	060102R-DP	0.008		●	●	●		●	●										●	●								●	△						●				●	●		△					F31 F77 F78 F79	
		12105L-DP	060102L-DP	0.008	●	●	●	●	●	●	●			●	●	●	●			●	●									●	△						●				●	●		△						
		1211R-DP	060104R-DP	1/64		●	●	●		●	●										●	●								●	△						●				●	●		△						
		1211L-DP	060104L-DP	1/64	●	●	●	●	●	●	●			●	●	●				●	●									●	△						●				●	●		△						
	WBMT	151505R-DP	080202R-DP	0.008		●	△	●		●	●											●								●	△						●				●	●		△						
		151505L-DP	080202L-DP	0.008	●	●	●	●	●	●	●			●	●	●	●					●								●	△						●				●	●		△						
		15151R-DP	080204R-DP	1/64		●	●	●		●	●									●	●									●	△						●				●	●		△						
		15151L-DP	080204L-DP	1/64	●	●	●	●	●	●	●			●	●	●	●			●	●									●	△						●				●	●		△						
Finishing	WBET	121013ML-F	0601005ML-F	<0.002																										●	△						●										3
		12102MR-F	060101MR-F	<0.004																										●	△						●										
		12102ML-F	060101ML-F	<0.004																										●	●	△						●										
		12105MR-F	060102MR-F	<0.008	●				●																					●	△						●										
		12105ML-F	060102ML-F	<0.008	●	●			●	●	●																			●	●	△						●										
		1211MR-F	060104MR-F	<1/64	●				●																					●	△						●										
		1211ML-F	060104ML-F	<1/64	●	●			●	●	●																			●	●	△						●										
	WBET	151502MR-F	080201MR-F	<0.004	●				●																					●	△						●										
		151502ML-F	080201ML-F	<0.004	●				●																					●	△						●										
		151505MR-F	080202MR-F	<0.008	●				●																					●	△						●										
		151505ML-F	080202ML-F	<0.008	●	●			●	●	●																			●	△						●										
		15151MR-F	080204MR-F	<1/64	●				●																					●	△						●										
Sharp Edge		15151ML-F	080204ML-F	<1/64	●	●			●	●	●																			●	△						●										

• Insert with corner R (RE) dimension expressed with less than sign (e.g. **<0.002, <0.004, <0.008** etc.) indicate models with minus tolerance for corner R (RE).

Chipbreaker Range



● : Standard Item △ : Phaseout Item (will be removed from next catalog)

Contact your local Kyocera sales engineer to upgrade old products to new technology

Inserts sold in 10 piece boxes.

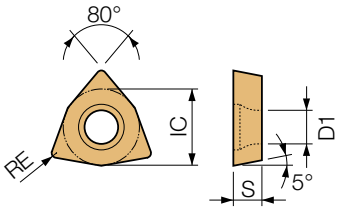
How to read this page ➔ B15

80° Trigon

Positive Insert with Hole

(in)

Part Number	IC	S	D1
WB_121_	5/32	1/16	0.091
WB_1515_	3/16	3/32	0.091



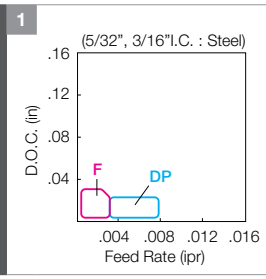
				ANSI	ISO		Corner Radius (in)	Cermet		CVD Cermet	MEGA COAT Cermet		PVD Cermet	CVD Coated Carbide																		MEGACOAT / MEGACOAT NANO PVD Coated Carbide									PVD Coated Carbide			DLC		Carbide		Toolholder Page	Chipbreaker Range
				Part Number	Part Number		RE	TN610	TN620	TN60	CCX	PV710	PV720	PV730	PV7005	PV90	CA510	CA515	CA025P	CA525	CA530	CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA310	CA315	CA320	CA4505	CA4515	PR1705	PR1725	PR1425	PR1225	PR005S	PR015S	PR1305	PR1310	PR1325	PR1535	PR930	PR1005	PR1025	PR1125	PDL010	PDL025	KW10	SW05		
Finishing		WBGT	12101L-F	0601003L-F	0.001			△																																●								
			12102R-F	060101R-F	0.004																																				●								
			12102L-F	060101L-F	0.004			●																																	●								
			12105R-F	060102R-F	0.008			●																																	●								
			12105L-F	060102L-F	0.008			●																																	●								
			1211R-F	060104R-F	1/64			●																																	●								
			1211L-F	060104L-F	1/64			●								△																									●								
		WBGT	151501L-F	0802003L-F	0.001																																				△								
			151502L-F	080201L-F	0.004			●																																	●								
			151505R-F	080202R-F	0.008			●																																	●								
			151505L-F	080202L-F	0.008			●																																	●								
			15151R-F	080204R-F	1/64			●																																	●								
			15151L-F	080204L-F	1/64		●	●																																	●								
		WBGT	12102ML-F	060101ML-F	<0.004																																					△	△							
			12105ML-F	060102ML-F	<0.008																																					△	△							
			1211MR-F	060104MR-F	<1/64																																						△							
			1211ML-F	060104ML-F	<1/64																																					△	△							
		WBGT	151502ML-F	080201ML-F	<0.004																																						△							
			151505ML-F	080202ML-F	<0.008																																						△							
	Sharp Edge		15151ML-F	080204ML-F	<1/64																																						△							
Finishing		WBET	151502MR-P	080201MR-P	<0.004																																					●	△							
			151502ML-P	080201ML-P	<0.004																																					●	△							
			151505MR-P	080202MR-P	<0.008																																					●	△							
			151505ML-P	080202ML-P	<0.008																																					●	△							
			15151MR-P	080204MR-P	<1/64																																					●	△							
	Sharp Edge		15151ML-P	080204ML-P	<1/64																																					●	△							
Cast Iron		WBGW	12105L	060102L	0.008			●																																	●								
			1211L	060104L	1/64			△																																										
		WBGW	151505L	080202L	0.008			●																																	●								
	Without Chipbreaker		15151L	080204L	1/64			●																																									

F31
F77
F78
F79

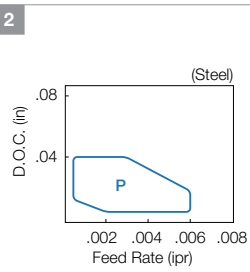
• Insert with corner R (RE) dimension expressed with less than sign (e.g. **<0.002, <0.004, <0.008** etc.) indicate models with minus tolerance for corner R (RE).

Chipbreaker Range

1



2



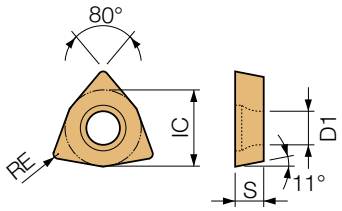
Inserts sold in 10 piece boxes.

● : Standard Item △ : Phaseout Item (will be removed from next catalog)
Contact your local Kyocera sales engineer to upgrade old products to new technology

How to read this page ➔ B15

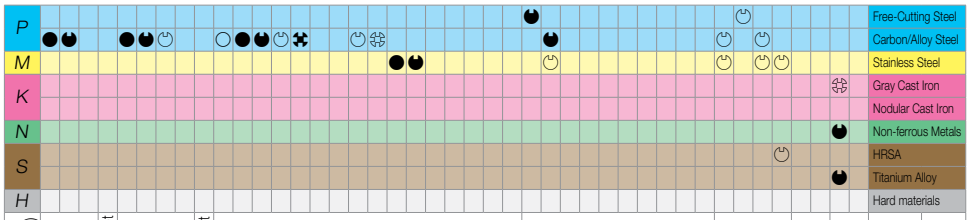
80° Trigon

Positive Insert with Hole



(in)

Part Number	IC	S	D1
WP_215_	1/4	3/32	0.110
WP_32_	3/8	1/8	0.173

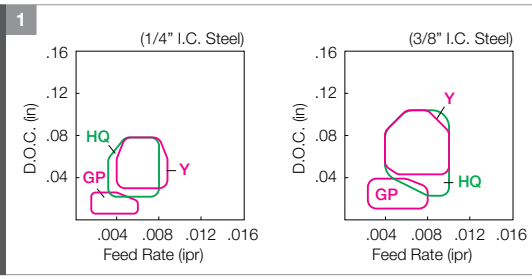


Left-Hand Shown where Applicable	ANSI Part Number	ISO Part Number	RE	Corner Radius (in)	Cermet	CVD Cermet	MEGA COAT Cermet	PVD Cermet	CVD Coated Carbide	MEGACOAT / MEGACOAT NANO PVD Coated Carbide	PVD Coated Carbide	DLC	Carbide	Toolholder Page	Chipbreaker Range
					TN610	TN620	TN60	CCX	PV710	PV720	PV730	PV7005	PV90	CA510	CA515	CA025P	CA525	CA530	CA5505	CA5515	CA5525	CA5535	CA6515	CA6525	CA310	CA315	CA320	CA4505	CA4515	PR1705	PR1725	PR1425	PR1225	PR005S	PR015S	PR1305	PR1310	PR1325	PR1535	PR930	PR1005	PR1025	PR1125	PDL010	PDL025	KW10	SW05		
Finishing		WPMT 2151GP	110204GP	1/64	●	●			●	●						●	●				●									●									●		△					F77	1
		WPMT 321GP	160304GP	1/64	●	△			●	●				△	●	●	●		●	●										●											△						
Finishing-Medium		WPMT 21505HQ	110202HQ	0.008	●	●	●		●	●					●	●	●				●									●									●		△						
		2151HQ	110204HQ	1/64	●	●	●	●	●	●	●				●	●	●				●	●		●	●					●									●		△	△					
		WPMT 321HQ	160304HQ	1/64	●	●	●	●	●	●	●				●	●	●				●	●		●	●					●									●		△	△					
		322HQ	160308HQ	1/32	●	●	●	●	●	●	●				●	●	●	●			●	●	●	●	●					●									●		△	△					
Finishing-Medium		WPGT 21505L-Y	110202L-Y	0.008			●																							●									●						●		1
		2151R-Y	110204R-Y	1/64																										●									●								
		2151L-Y	110204L-Y	1/64			●																							●									●						●	F77	
		WPGT 321R-Y	160304R-Y	1/64			●																																								
		321L-Y	160304L-Y	1/64			●																																	●						●		
		322L-Y	160308L-Y	1/32																																				●						●		
		WPGT 2151MR-Y	110204MR-Y	<1/64																										●											△						
		2151ML-Y	110204ML-Y	<1/64																										●	●											△	△					
		WPGT 321MR-Y	160304MR-Y	<1/64																																						△						
Cast Iron		WPGW 21505	110202	0.008																																										●		
		2151	110204	1/64																																										●		
		WPGW 321	160304	1/64																																										●		-
	Without Chipbreaker	322	160308	1/32																																										●		

• Insert with corner R (RE) dimension expressed with less than sign (e.g. **<0.002, <0.004, <0.008** etc.) indicate models with minus tolerance for corner R (RE).

Chipbreaker Range

1



● : Standard Item △ : Phaseout Item (will be removed from next catalog)

Contact your local Kyocera sales engineer to upgrade old products to new technology

Inserts sold in 10 piece boxes.

ZBMT Series NEW

25° Insert Profiling Tools

Unique clamping structure and a wide lineup of external toolholders and boring bars.

High precision and stable machining in a wide range of applications including copying, undercutting, tapering, V-slotting, spherical machining, and more.

Newly Developed Self-Clamping Mechanism Achieves a Higher Rigidity

Side Lock Mechanism

Unique design holds insert at 2 points
Safe even for insert with small tip angle that is difficult to mount

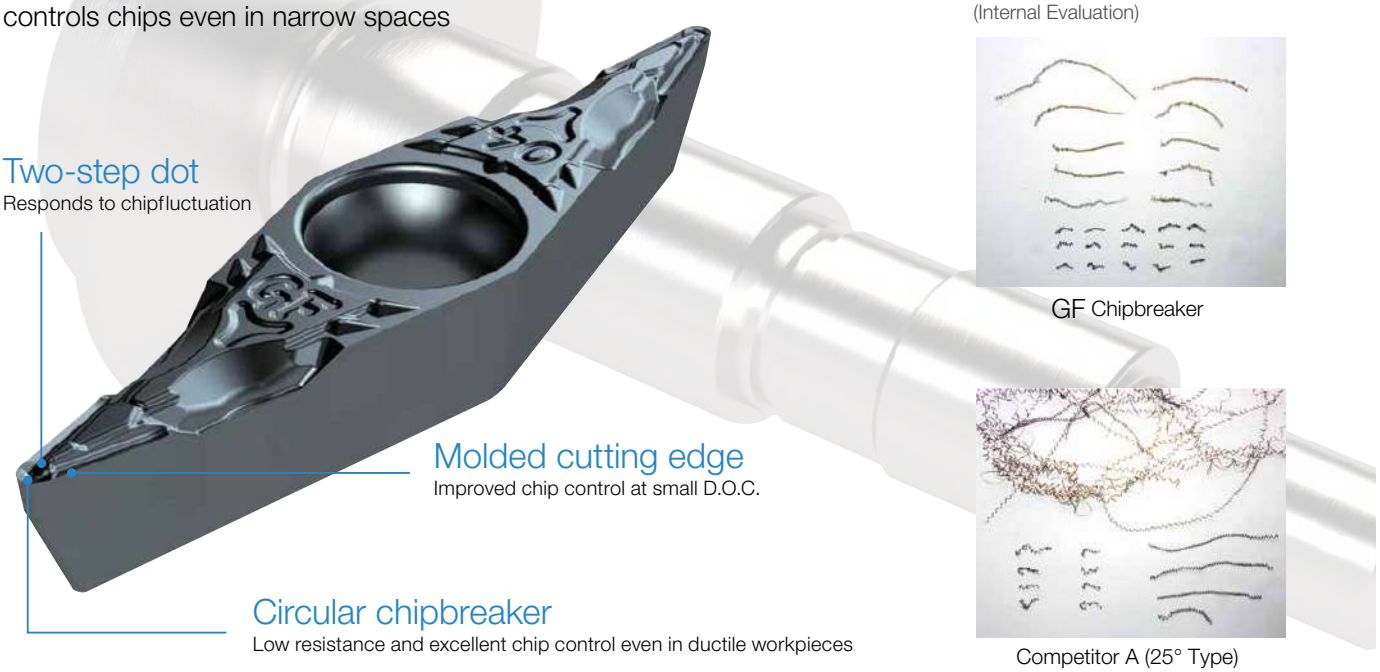




GF Chipbreaker — Solving chip control issues leads to high-quality surface finishes

New GF Chipbreaker for ZBMT Reduces Chip Control Issues at minute D.O.C.

The thin molded chipbreaker extends near the corner and reliably controls chips even in narrow spaces



Two-step dot
Responds to chipfluctuation

Molded cutting edge
Improved chip control at small D.O.C.

Circular chipbreaker
Low resistance and excellent chip control even in ductile workpieces

Chip Control Comparison
(Internal Evaluation)

GF Chipbreaker

Competitor A (25° Type)

Cutting Conditions : Vc = 750 sfm, f = 0.006 ipr, D.O.C. = 0.008" - 0.020", Wet Workpiece 4137 Facing

Inserts sold in 10 piece boxes.

● : Standard Item △ : Phaseout Item (will be removed from next catalog)
Contact your local Kyocera sales engineer to upgrade old products to new technology

How to read this page B15

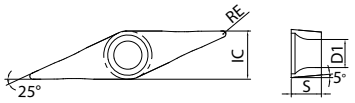
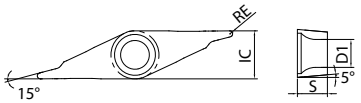
25° / 15° Diamond

Positive Insert with Hole

P	Free-Cutting Steel		
	Carbon Steel / Alloy Steel	●	◔
M	Stainless Steel	◔	●
K	Gray Cast Iron		
	Nodular Cast Iron		

ZBMT Inserts

for Copying, profiling, undercutting, tapering, and V-slotting

		ISO Part Number	Dimensions (in) IC	S	D1	RE	MEGACOAT NANO PR1725	PR1535	Toolholder Page
NEW  Tip Angle 25°		ZBMT 13T302GF	1/2	0.156	0.209	0.008	●	●	D30 F81
		ZBMT 13T304GF				1/64	●	●	
		ZBMT 13T308GF				1/32	●	●	
NEW  Tip Angle 15° (Right-Hand)		ZBMT 13T304R-GF-15D	1/2	0.156	0.209	1/64	●	●	

Because insert has a molded shape, the tip angle may be 24° depending on the measurement location.

Recommended Cutting Conditions

Workpiece	Insert tip angle	Corner-R (RE) (in)	Insert Grade	Vc (sfm)	D.O.C. (in)	f (ipr)
Carbon Steel / Alloy Steel	25°	0.008	PR1725	200 - **490** - 660	0.008 - **0.012** - 0.059	0.002 - **0.004** - 0.006
			PR1535	200 - **390** - 590	0.008 - **0.012** - 0.059	0.002 - **0.004** - 0.006
		1/64 - 1/32	PR1725	200 - **490** - 660	0.008 - **0.012** - 0.079	0.002 - **0.006** - 0.010
			PR1535	200 - **390** - 590	0.008 - **0.012** - 0.079	0.002 - **0.006** - 0.010
	15°	1/64	PR1725	200 - **490** - 660	0.008 - **0.012** - 0.039	0.002 - **0.004** - 0.006
			PR1535	200 - **390** - 590	0.008 - **0.012** - 0.039	0.002 - **0.004** - 0.006
Stainless Steel	25°	0.008	PR1725	200 - **490** - 590	0.008 - **0.012** - 0.039	0.002 - **0.004** - 0.006
			PR1535	200 - **390** - 490	0.008 - **0.012** - 0.039	0.002 - **0.004** - 0.006
		1/64 - 1/32	PR1725	200 - **490** - 590	0.008 - **0.012** - 0.039	0.002 - **0.006** - 0.010
			PR1535	200 - **390** - 490	0.008 - **0.012** - 0.039	0.002 - **0.006** - 0.010
	15°	1/64	PR1725	200 - **490** - 590	0.008 - **0.012** - 0.039	0.002 - **0.004** - 0.006
			PR1535	200 - **390** - 490	0.008 - **0.012** - 0.039	0.002 - **0.004** - 0.006
Cast Iron	25°	0.008	PR1725	200 - **490** - 590	0.008 - **0.012** - 0.059	0.002 - **0.004** - 0.006
		1/64 - 1/32	PR1725	200 - **490** - 590	0.008 - **0.012** - 0.079	0.002 - **0.006** - 0.010
	15°	1/64	PR1725	200 - **490** - 590	0.008 - **0.012** - 0.039	0.002 - **0.004** - 0.006

When machining at D.O.C. 0.059" or more, reduce the feed by about 50%.

How to read this page ➔ B15

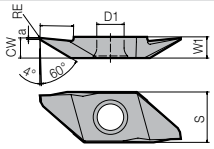
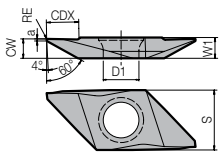
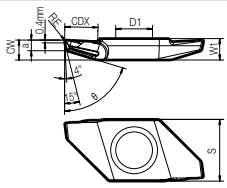
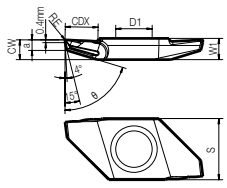
Back Turning

Turning Inserts (Small Tools)

		PR1725	PR1425	PR1535	PR1225	PR1025	KW10
P	Free-Cutting Steel						
	Carbon Steel / Alloy Steel	●	◔	◔	◔	◔	
M	Stainless Steel	◔	◔	●	◔	◔	
K	Gray Cast Iron						●
	Nodular Cast Iron						◔
N	Non-ferrous Metals						●
S	Heat-Resistant Alloys		◔	●	◔	◔	
	Titanium Alloy			●			◔
H	Hard materials						

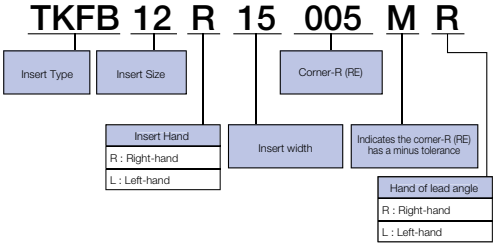
MEGACOAT NANO | PVD Coated Carbide | Carbide

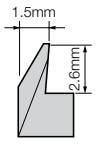
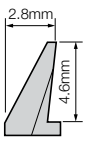
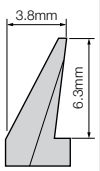
TKFB Inserts
(for KTKF Toolholders)

		ANSI Part Number	CW	a	CDX	RE	W1	S	D1	θ	PR1725	PR1425	PR1535	PR1225	PR1025	KW10	Toolholder Page
	 • Right-handed insert shown	TKFB 12R15005M	0.059	0.010	0.102	<0.002	0.118	0.343	0.205	-	●	△	●	●	△	●	
		12R28005M	0.110	0.012	0.181	<0.002	0.118	0.343	0.205	-	●	△	●	●	△	●	
		12R28010M	0.110	0.012	0.181	<0.004	0.118	0.343	0.205	-	●	△	●	●	△	●	
		TKFB 16R38005M	0.150	0.012	0.248	<0.002	0.157	0.374	0.205	-	●	△	●	●	△	●	
		16R38010M	0.150	0.012	0.248	<0.004	0.157	0.374	0.205	-	●	△	●	●	△	●	
	 • Left-handed insert shown	TKFB 12L28005MR	0.110	0.012	0.181	<0.002	0.118	0.343	0.205	-			●	●			
		12L28010MR	0.110	0.012	0.181	<0.004	0.118	0.343	0.205	-			●	●			
		TKFB 16L38005MR	0.150	0.012	0.248	<0.002	0.157	0.374	0.205	-			●	●			
		16L38010MR	0.150	0.012	0.248	<0.004	0.157	0.374	0.205	-			●	●			
 Polished	 • Right-handed insert shown	TKFB 12R28005P-GQ	0.110	0.059	0.181	0.002	0.118	0.343	0.205	74°	●	△	●	●			E12 E14
		12R28015P-GQ	0.110	0.059	0.181	0.006	0.118	0.343	0.205	74°	●	△	●	●			
		TKFB 16R38005P-GQ	0.150	0.071	0.248	0.002	0.157	0.374	0.205	72°	●	△	●	●			
		16R38015P-GQ	0.150	0.071	0.248	0.006	0.157	0.374	0.205	72°	●	△	●	●			
	 • Right-handed insert shown	TKFB 12R28005-GQ	0.110	0.059	0.181	0.002	0.118	0.343	0.205	74°	●	△	●	●			
		12R28015-GQ	0.110	0.059	0.181	0.006	0.118	0.343	0.205	74°	●	△	●	●			
		TKFB 16R38005-GQ	0.150	0.071	0.248	0.002	0.157	0.374	0.205	72°	●	△	●	●			
		16R38015-GQ	0.150	0.071	0.248	0.006	0.157	0.374	0.205	72°	●	△	●	●			

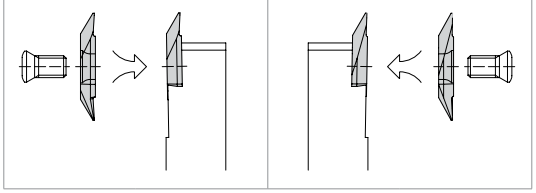
• Insert with corner R (RE) dimension expressed with less than sign (e.g. **<0.002, <0.004, <0.008** etc.) indicate models with minus tolerance for corner R (RE).

● Insert Identification System
(See Tables Below)

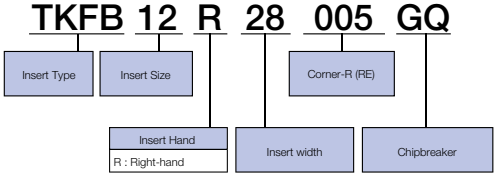


Small D.O.C.	General Purpose	Large D.O.C.
		
TKFB12R15..	TKFB12R28..	TKFB16R38..

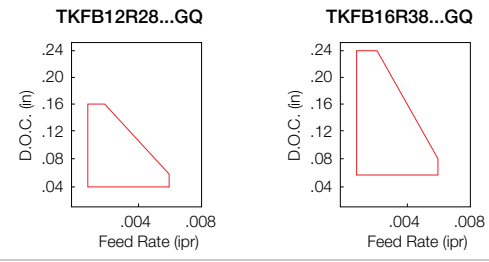
Tooholder	Right-hand (R)	Toolholder	Left-hand (L)
Insert	Right-hand (R)	Insert	Left-hand (L)
Lead Angle	Right-hand (R)	Lead Angle	Right-hand (R)



● Insert Identification System
(See Tables Below)



Chipbreaker Range



Inserts sold in 10 piece boxes.

● : Standard Item △ : Phaseout Item (will be removed from next catalog)
Contact your local Kyocera sales engineer to upgrade old products to new technology

NEW ITEMS!

How to read this page B15

Back Turning

Turning Inserts (Small Tools)

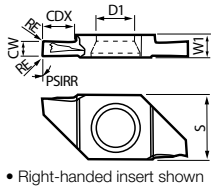
P	Free-Cutting Steel		
	Carbon Steel / Alloy Steel	●	◔
M	Stainless Steel	◔	●
K	Gray Cast Iron		
	Nodular Cast Iron		
N	Non-ferrous Metals		
S	Heat-Resistant Alloys		●
	Titanium Alloy		●
H	Hard materials		

TKF Inserts (GTP Chipbreaker)

(for KTKF Toolholders)

ANSI ***Part Number***

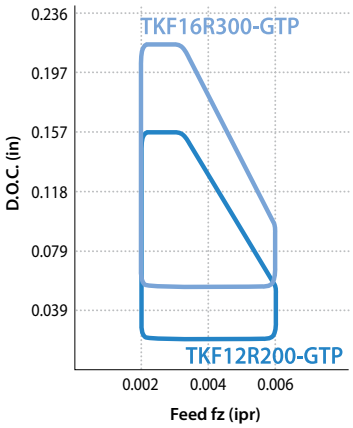




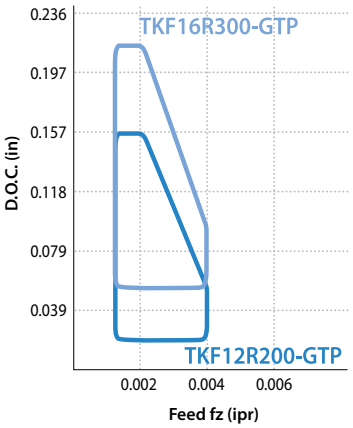
• Right-handed insert shown

		Dimensions (in)								MEGACOAT NANO		Toolholder Page
		CW		CUTDIA	RE	W1	S	D1	PSIRR	PR1725	PR1535	
		in	mm									
TKF	12R200-GTP	0.079	2.0	0.181	0.003	0.118	0.343	0.197	0°	●	●	E12 E14
TKF	16R300-GTP	0.118	3.0	0.236	0.003	0.157	0.374	0.197	0°	●	●	

Chipbreaker Range (Steel)



Chipbreaker Range (Stainless Steel)





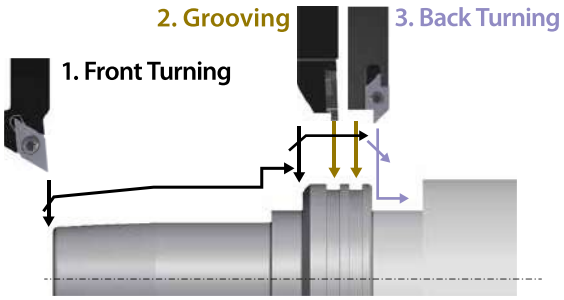
Integrated Tooling Solutions with GTP chipbreaker

The GTP chipbreaker can be used for external turning, grooving, and back turning operations

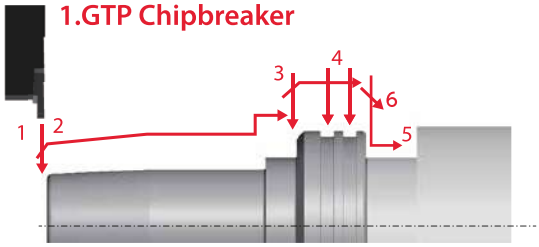


Workpiece Example

Conventional Tools



GTP Chipbreaker



* Max. Grooving Width / Max. D.O.C. = TKF12R200-GTP (2.0mm / 4.0mm), TKF16R300-GTP (3.0mm / 5.5mm)

● : Standard Item △ : Phaseout Item (will be removed from next catalog)

Contact your local Kyocera sales engineer to upgrade old products to new technology

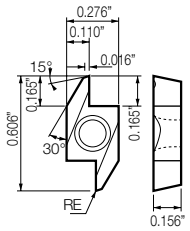
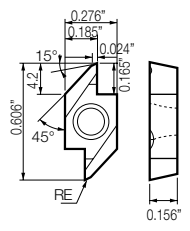
Inserts sold in 10 piece boxes.

Back Turning

Turning Inserts (Small Tools)

P		●					◔			Free-Cutting Steel
			●	◔	◔	◔		◔		Carbon Steel / Alloy Steel
M			◔	◔	●	◔		◔		Stainless Steel
K									●	Gray Cast Iron
									◔	Nodular Cast Iron
N									●	Non-ferrous Metals
S				◔	●					Heat-Resistant Alloys
									●	Titanium Alloy
H										Hard materials

AABS / SABS / AABW / SABW Inserts

		ANSI Part Number	Corner Radius (in) RE	Cermet	MEGACOAT NANO				PVD Coated Carbide			Carbide	Toolholder Page
				TC60	PR1705	PR1725	PR1425	PR1225	PR930	PR1005	PR1025	KW10	
		ABS	15R4005	0.002	●				●			●	E19
			15R4015	0.006	●				●			●	
		ABS	15R4005M	<0.002		●	●	△	●		△	△	
			15R4015M	<0.006		●	●	△	●		△	△	
		ABW	15R4005	0.002	●				●			●	E20
			15R4015	0.006	●				●			●	
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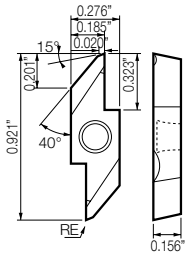
		ABW	23R5005	0.002	●				●			●	E21
			23R5015	0.006	●				●			●	
		ABW	23R5005M	<0.002			●	△	●			△	
			23R5015M	<0.006		●	●	△	●		△	△	

• Insert with corner R (RE) dimension expressed with less than sign (e.g. **<0.002, <0.004, <0.008** etc.) indicate models with minus tolerance for corner R (RE).

Inserts sold in 10 piece boxes.

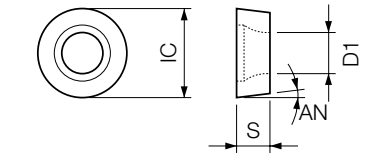
● : Standard Item △ : Phaseout Item (will be removed from next catalog)

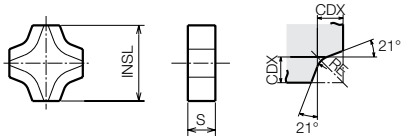
Contact your local Kyocera sales engineer to upgrade old products to new technology

How to read this page ➔ B15

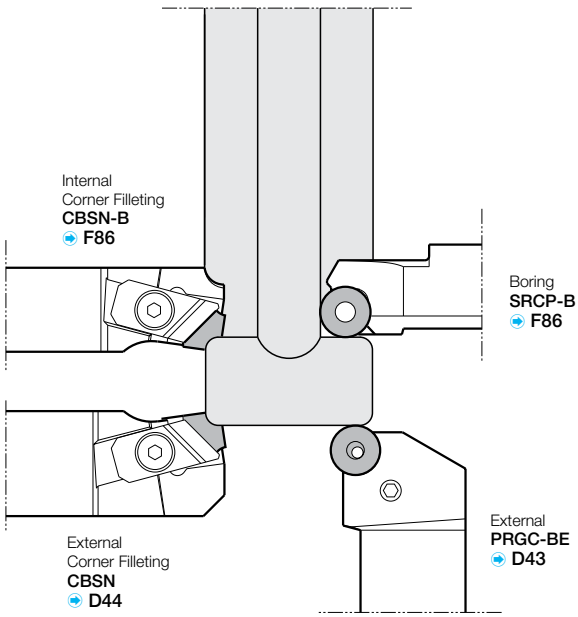
Bearing Machining

		ISO/ANSI Part Number	Dimension (mm) IC	S	D1	RE	Relief Angle AN	Cermet TN90	Toolholder Page
External / Boring / Facing		RCMT 1204M0-BB	12.0	4.76	4.2	-	7°	●	D43
		1606M0-BB	16.0	6.35	5.5	-	7°	●	
		RPMT 42M0-BB	12.0	3.18	4.4	-	11°	●	F86
		1604M0-BB	16.0	4.76	5.5	-	11°	●	
			INSL	S	CDX	RE			
Corner Filleting		SNMF 120406-21	12.70	4.76	1.5	0.6		●	D44 F86
		120410-21	12.70	4.76	3.0	1.0		●	
		120416-21	12.70	4.76	3.1	1.6	-	●	
		120421-21	12.70	4.76	3.2	2.1		●	
		120426-21	12.70	4.76	3.3	2.6		●	





Tooling for Bearing Machining

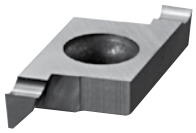
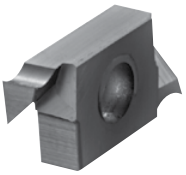


● : Standard Item △ : Phaseout Item (will be removed from next catalog)
Contact your local Kyocera sales engineer to upgrade old products to new technology

Inserts sold in 10 piece boxes.

Micro Boring

Twin Bars

Micro Boring	Micro Face Grooving
TWB Twin-Bars → F44	**TWFG** Twin-Bars → G10
	
TWBT Twin-Bars → F45	**TWFGT** Twin-Bars → G101
	

Solid Micro Boring Bars

Micro Boring	
MBS Micro Bars → F14	**MBE** Micro Bars → F15
	

EZ Bars / System Tip-Bars / Tip-Bars

Micro Boring		Micro Back Boring
EZB EZ Bars → F18	**EZVB** EZ Bars → F23	**EZBT** EZ Bars → F23
		
EZBF EZ Bars → F22	NEW **EZBP** EZ Bars → F25	NEW **EZBC** EZ Bars → F26
		
VNB-S / VNB System Tip-Bars → F38	**VNBX-S** System Tip-Bars → F42	**VNBT** System Tip-Bars → F39
		

Solid Tip-Bars (Grooving / Threading)

Micro Grooving	Micro Face Grooving	Micro Internal Threading
EZG EZ Bars → G63	**EZFG** EZ Bars → G96	**EZT** EZ Bars → J32
		
VNG System Tip-Bars → G65	**VNFG** System Tip-Bars → G98	**VNT** System Tip-Bars → J36
		

KS6015 / KS6050 / CS7050 High Speed Machining of Cast Iron

- Improved fracture resistance by high aspect ratio constituents
- Resists chipping due to scale and interrupted machining
- High speed machining of cast iron by controlling grain boundary phase (good wear resistance)

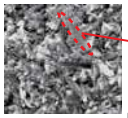
KS6015 NEW

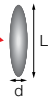
Wear Resistant Machining

KS6050

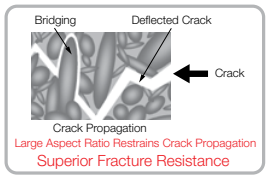
General Purpose Interrupted Machining


Conventional A


KS6050

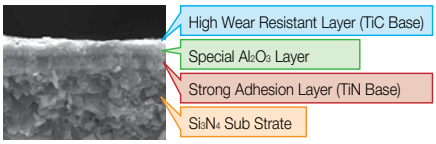


Large Aspect Ratio= L/d
KS6050 has a higher aspect ratio compared with the conventional product A.

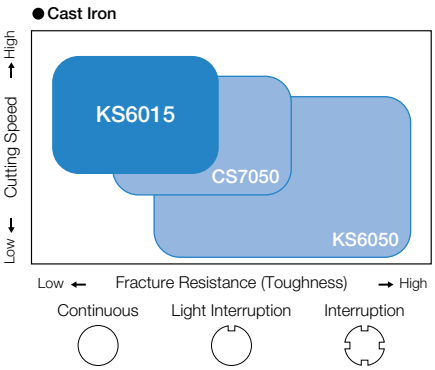


CS7050 (Coated Si3N4)

Superior wear resistance attained
with strong coating adherence
Applicable to high speed machining



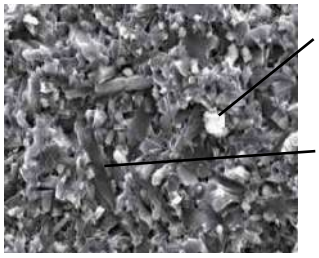
Application Map



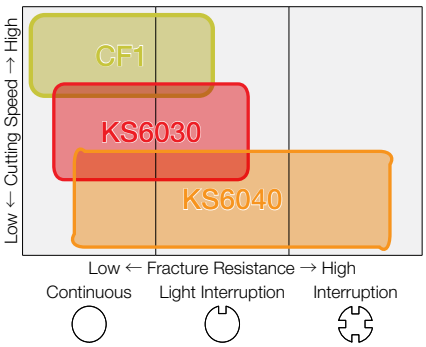
KS6030/KS6040 SiAlON Ceramic Heat-Resistant Alloy Machining

Improved wear and fracture resistance due to the mixture of the hard and acicular particles

Superior balance in heat resistant alloys machining achieves optimum balance between wear and fracture resistance.



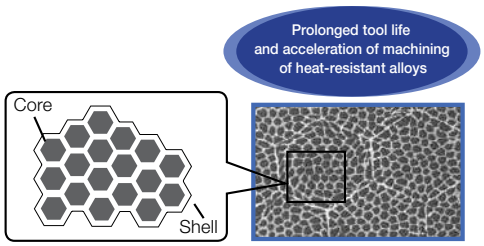
HRSA Application Map



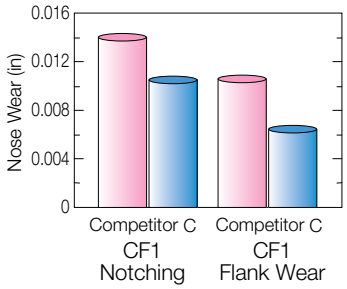
CF1 Honeycomb Structure Ceramic Heat-Resistant Alloy Machining

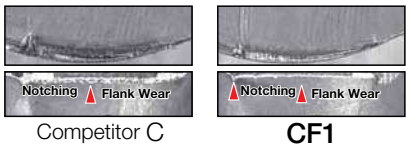
What is Honeycomb structure ceramic?

Honeycomb structure ceramic is a composite material consisting of a core (gray portion) and shell (white portion)



Comparison of Wear Resistance





Competitor C CF1

<Cutting Conditions>
Workpiece Material: Ni-base Heat-Resistant Alloys
Tool Geometry: RNGN120400
Vc = 490sfm, D.O.C. = 0.039"
Feed Rate f =0.006ipr Wet

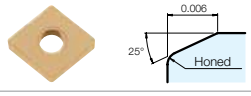
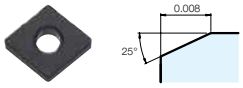
Ceramic Insert Identification System

C	N	G	A	12	04	04	S01525

Refer to ➔ **B2** for "Indexable Turning Inserts Identification System"

Edge Prep.

How to Identify Edge Preparation

	Symbol	Cutting Edge Spec.	Example		Shape
Edge Prep.	S	Chamfered and Honed Cutting edge	S00625	0.006" X 25° Chamfered and Honed Cutting edge	
	T	Chamfered Cutting edge	T00825	0.008" X 25° Chamfered Cutting edge	

● Refer to ➔ B3 for insert color

How to read this page ➔ B15

80° Diamond

Negative Insert

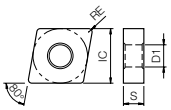
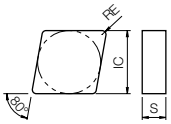
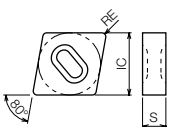
(in)

Part Number	IC	S	D1
CN_A 43_	1/2	3/16	0.203
CN_ 43_	1/2	3/16	-
CN_ 45_	1/2	5/16	-

(in)

Part Number	IC	S	D1
CNG 55_	5/8	5/16	-
CNGX 45_	1/2	5/16	-

Edge Prep.			
Symbol	Cutting Edge Spec.	Example	
S	Chamfered and Honed Cutting Edge	S00625	0.006" X 25° Chamfered and Honed Cutting Edge
T	Chamfered Cutting Edge	T00625	0.006" X 25° Chamfered Cutting Edge

		Gray Cast Iron (With Scale)	Gray Cast Iron (Without Scale)	Nodular Cast Iron (With Scale)	Nodular Cast Iron (Without Scale)	Heat-resistant Alloys	Hard Materials
		K	K	K	K	S	H
Insert	ANSI Part Number	Edge Prep (in)	ISO Part Number	Corner Radius (in) RE	Aluminum Oxide Ceramic KA30	Aluminum Oxide Ceramic A65	Aluminum Oxide Ceramic KT66	PVD Coated Ceramic MEGACOAT Ceramic A66N	PVD Coated Ceramic MEGACOAT Ceramic PT600M	Silicon Nitride Ceramic KS6015	Silicon Nitride Ceramic KS6050	CVD Coated Silicon Nitride Ceramic CS7050	SiAlON Ceramic KS6030	SiAlON Ceramic KS6040	Honeycomb Structure Ceramic Whisker Reinforced Ceramic CF1	Honeycomb Structure Ceramic Whisker Reinforced Ceramic KXW1	Toolholder Page
		CNGA 433T00425AA	S00425	CNGA 120412S01025	3/64	●											
		CNGA 431T00625AA	S00625	CNGA 120404S01525	1/64				●								
		432T00625AA		120408S01525	1/32				●								
		433T00625AA		120412S01525	3/64				●								
		CNGA 431S00825	S00825	CNGA 120404S02025	1/64					●							
		432S00825		120408S02025	1/32					●							
		433S00825		120412S02025	3/64					●							
		CNGA 431T01230AA	S01230	CNGA 120404S03030	1/64				●								
		432T01230AA		120408S03030	1/32				●								
		433T01230AA		120412S03030	3/64				●								
		CNGA 431T00625	T00625	CNGA 120404T01525	1/64				●								
		432T00625		120408T01525	1/32				●								
		433T00625		120412T01525	3/64				●								
		CNGA 431T00825	T00825	CNGA 120404T02025	1/64		●	●		●							
		432T00825		120408T02025	1/32		●			●	●	●	●				
		433T00825		120412T02025	3/64		●	●		●	●	●	●				
		CNGA 543T00825	T00825	CNGA 160612T02025	3/64				●								
		CNMA 432T00625AA	S00625	CNMA 120408S01525	1/32				●								
		CNMA 432T01230AA	S01230	CNMA 120408S03030	1/32				●								
		433T01230AA		120412S03030	3/64				●								
		CNG 432T00425AA	S00425	CNGN 120408S01025	1/32	△											
		433T00425AA		120412S01025	3/64	●											
		CNG 432T00420	T00420	CNGN 120408T01020	1/32									●	△		
		433T00420		120412T01020	3/64										△		
		CNG 432T00825	T00825	CNGN 120408T02025	1/32		●			●	●			△			
		433T00825		120412T02025	3/64					●	●	△					
		434T00825		120416T02025	1/16		●					●					
		CNG 452T00625AA	S00625	CNGN 120708S01525	1/32				●								
		453T00625AA		120712S01525	3/64				●								
		CNG 452T00420	T00420	CNGN 120708T01020	1/32										△	●	
		453T00420		120712T01020	3/64										△		
		CNG 451T00825	T00825	CNGN 120704T02025	1/64		●										
		452T00825		120708T02025	1/32		●					●					
		453T00825		120712T02025	3/64		●										
		454T00825		120716T02025	1/16		●					●					
		CNG 552T00825	T00825	CNGN 160708T02025	1/32		●										
		553T00825		160712T02025	3/64		●										
		554T00825		160716T02025	1/16		●										
		CNM 452T00825	T00825	CNMN 120708T02025	1/32		●										
		453T00825		120712T02025	3/64		△										
		CNGX 453T00825	T00825	CNGX 120712T02025	3/64							△					
		454T00825		120716T02025	1/16						△	△					

D8-D9
F87
F91
F92
D32

KYOCERA

Inserts sold in 10 piece boxes.

● : Standard Item △ : Phaseout Item (will be removed from next catalog)

Contact your local Kyocera sales engineer to upgrade old products to new technology

How to read this page ➔ B15

55° / 75° Diamond

Negative Insert

(in)

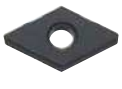
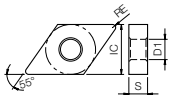
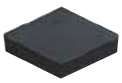
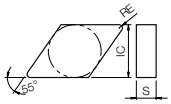
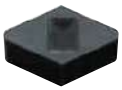
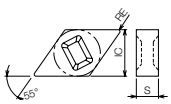
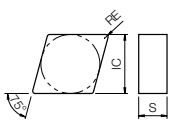
Part Number	IC	S	D1
DNGA 43_	1/2	3/16	0.203
DNGA 44_	1/2	1/4	0.203
DNG 43_	1/2	3/16	-
DNG 45_	1/2	5/16	-

(in)

Part Number	IC	S	D1
DNGX 35_	0.394	5/16	-
DNGX 45_	1/2	5/16	-
ENG 45_	1/2	5/16	-

Edge Prep.			
Symbol	Cutting Edge Spec.	Example	
S	Chamfered and Honed Cutting Edge	S00525	0.005" X 25° Chamfered and Honed Cutting Edge
T	Chamfered Cutting Edge	T00315	0.003" X 15° Chamfered Cutting Edge

		Aluminum Oxide Ceramic			PVD Coated Ceramic	MEGACOAT Ceramic	Silicon Nitride Ceramic		CVD Coated Silicon Nitride Ceramic	SiAlON Ceramic		Honeycomb Structure Ceramic	Whisker Reinforced Ceramic	
		KA30	A65	KT66	A66N	PT600M	KS6015	KS6050	CS7050	KS6030	KS6040	CF1	KXW1	
K	Gray Cast Iron (With Scale)							✖	◔					
	Gray Cast Iron (Without Scale)	●		◔		◔		◔	◕					
	Nodular Cast Iron (With Scale)								◔					
	Nodular Cast Iron (Without Scale)								◔					
S	Heat-resistant Alloys													
H	Hard Materials				○	●								

Insert	ANSI Part Number	Edge Prep (in)	ISO Part Number	Corner Radius (in) RE	KA30	A65	KT66	A66N	PT600M	KS6015	KS6050	CS7050	KS6030	KS6040	CF1	KXW1	Toolholder Page
 	DNGA 432T00425AA	S00425	DNGA 150408S01025	1/32	△												D12 D13 F88 F94 F95
	DNGA 431T00625AA	S00625	DNGA 150404S01525	1/64				●									
	432T00625AA		150408S01525	1/32				●									
	DNGA 431S00825	S00825	DNGA 150404S02025	1/64					●								
	432S00825		150408S02025	1/32					●								
	DNGA 432T01230AA	S01230	DNGA 150408S03030	1/32				●									
	DNGA 431T00825	T00825	DNGA 150404T02025	1/64		●			●								
	432T00825		150408T02025	1/32		●	△		●								
	433T00825		150412T02025	3/64		●	△		●								
	434T00825		150416T02025	1/16		●											
	DNGA 442T00625AA	S00625	DNGA 150608S01525	1/32				●									
	443T00625AA		150612S01525	3/64				●									
	444T00625AA		150616S01525	1/16				●									
	DNGA 441T00825	T00825	DNGA 150604T02025	1/64		●			●								D12 D13 F88
	442T00825		150608T02025	1/32		●	△		●								
	443T00825		150612T02025	3/64		●			●								
 	DNG 451T00625AA	S00625	DNGN 150704S01525	1/64				●									D33
	452T00625AA		150708S01525	1/32				●									
	453T00625AA		150712S01525	3/64				●									
	DNG 452S00825	S00825	DNGN 150708S02025	1/32					●								
	DNG 451T00825	T00825	DNGN 150704T02025	1/64		●											
	452T00825		150708T02025	1/32		●											
	453T00825		150712T02025	3/64		●											
	454T00825		150716T02025	1/16		●											
 	DNGX 352T00825	T00825	DNGX 120708T02025	1/32							△						-
	DNGX 454T00825		DNGX 150716T02025	1/16							●						
 	ENG 452T00625AA	S00625	ENGN 130708S01525	1/32				●									
	453T00625AA		130712S01525	3/64				△									
	ENG 451T00825	T00825	ENGN 130704T02025	1/64		●											D33 F103
	452T00825		130708T02025	1/32		●											
	453T00825		130712T02025	3/64		●			△								
	454T00825		130716T02025	1/16		●											
	455T00825		130720T02025	5/64		●											

● : Standard Item △ : Phaseout Item (will be removed from next catalog)

Contact your local Kyocera sales engineer to upgrade old products to new technology

Inserts sold in 10 piece boxes.

How to read this page B15

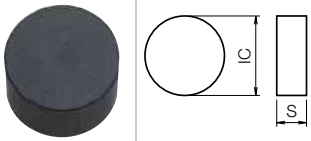
Round

Negative Insert

Part Number	IC	S	D1 (in)
RNG 32_	3/8	1/8	-
RNG 33_	3/8	3/16	-
RNG 35_	3/8	5/16	-
RNG 43_	1/2	3/16	-
RNG 45_	1/2	5/16	-
RNG 55_	5/8	5/16	-
RNG 65_	3/4	5/16	-
RNG 85_	1	5/16	-

Edge Prep.			
Symbol	Cutting Edge Spec.	Example	
S	Chamfered and Honed Cutting Edge	S00525	0.005" X 25° Chamfered and Honed Cutting Edge
T	Chamfered Cutting Edge	T00315	0.003" X 15° Chamfered Cutting Edge

		Aluminum Oxide Ceramic			PVD Coated Ceramic	MEGACOAT Ceramic	Silicon Nitride Ceramic		CVD Coated Silicon Nitride Ceramic	SiAlON Ceramic		Honeycomb Structure Ceramic	Whisker Reinforced Ceramic	
		KA30	A65	KT66	A66N	PT600M	KS6015	KS6050	CS7050	KS6030	KS6040	CF1	KXW1	
K	Gray Cast Iron (With Scale)						●	✠	◔					
	Gray Cast Iron (Without Scale)			◔		◔		◔	◕					
	Nodular Cast Iron (With Scale)								◔					
	Nodular Cast Iron (Without Scale)								◔					
S	Heat-resistant Alloys									◕	✠	◔	●	
H	Hard Materials				○	●								○

Insert	*Edge Prep (in)	ANSI Part Number	ISO Part Number	Corner Radius (in) RE	Toolholder Page
	E001	RNG 32E001	RNGN 090300E003	-	
	T00420	32T00420	090300T01020	-	
	S00625	RNG 33T00625AA	RNGN 090400S01525	-	D33
	S00825	33S00825	090400S02025	-	
	T00420	33T00420	090400T01020	-	
	T00825	33T00825	090400T02025	-	
	T00420	RNG 35T00420	RNGN 090700T01020	-	-
	E001	RNG 43E001	RNGN 120400E003	-	
	S00625	43T00625AA	120400S01525	-	
	S00825	43S00825	120400S02025	-	
	T00420	43T00420	120400T01020	-	
	T00625	43T00625	120400T01525	-	
	T00825	43T00825	120400T02025	-	
	E001	RNG 45E001	RNGN 120700E003	-	D37 D39
	E002	45E002	120700E005	-	
	K06015	45K06015	120700K15015	-	
	S00625	45T00625AA	120700S01525	-	
	S00825	45S00825	120700S02025	-	
	T00420	45T00420	120700T01020	-	
	T00625	45T00625	120700T01525	-	
	T00825	45T00825	120700T02025	-	
	S00625	RNG 55T00625AA	RNGN 150700S01525	-	
	S00825	55S00825	150700S02025	-	D37
	T00825	55T00825	150700T02025	-	
	E001	RNG 65E001	RNGN 190700E003	-	
	T00420	65T00420	190700T01020	-	-
	E001	RNG 85E001	RNGN 250700E003	-	
	T00420	85T00420	250700T01020	-	

* For cutting edge "E" and "K", please refer to the table below.

Edge Prep.			
Symbol	Cutting Edge Spec.	Example	
E	R-honed Cutting Edge	E002	R0.002" Honed
K	Double Chamfered Cutting Edges	K06015	0.060" X 15° Chamfered Cutting Edge

- Note: Symbol "K" describe only the largest chamfer width and its angle.

Inserts sold in 10 piece boxes.

● : Standard Item △ : Phaseout Item (will be removed from next catalog)
Contact your local Kyocera sales engineer to upgrade old products to new technology

How to read this page ➔ B15

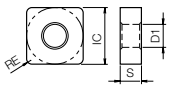
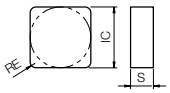
90° Square
Negative Insert

(in)

Part Number	IC	S	D1
SN_A 43_	1/2	3/16	0.203
SNG 43_	1/2	3/16	-
SNG 45_	1/2	5/16	-

Edge Prep.			
Symbol	Cutting Edge Spec.	Example	
S	Chamfered and Honed Cutting Edge	S00525	0.005" X 25° Chamfered and Honed Cutting Edge
T	Chamfered Cutting Edge	T00315	0.003" X 15° Chamfered Cutting Edge

		Aluminum Oxide Ceramic			PVD Coated Ceramic	MEGACOAT Ceramic	Silicon Nitride Ceramic		CVD Coated Silicon Nitride Ceramic	SiAlON Ceramic		Honeycomb Structure Ceramic	Whisker Reinforced Ceramic	
		KA30	A65	KT66	A66N	PT600M	KS6015	KS6050	CS7050	KS6030	KS6040	CF1	KXW1	
K	Gray Cast Iron (With Scale)						●	✠	◔					
	Gray Cast Iron (Without Scale)	●		◔		◔		◔	◕					
	Nodular Cast Iron (With Scale)								◔					
	Nodular Cast Iron (Without Scale)								◔					
S	Heat-resistant Alloys										✠	◕	●	
H	Hard Materials				○	●						◔	○	

Insert	ANSI Part Number	Edge Prep (in)	ISO Part Number	Corner Radius (in) RE	Toolholder Page
 	SNGA 432T00625AA	S00625	SNGA 120408S01525	1/32	D14 D15 D35 F97
	433T00625AA		120412S01525	3/64	
	SNGA 432S00825	S00825	SNGA 120408S02025	1/32	
	433S00825		120412S02025	3/64	
	SNGA 432T00625	T00625	SNGA 120408T01525	1/32	
	433T00625		120412T01525	3/64	
	SNGA 432T00825	T00825	SNGA 120408T02025	1/32	
	433T00825		120412T02025	3/64	
	434T00825		120416T02025	1/16	
	SNMA 432T01230AA	S01230	SNMA 120408S03030	1/32	
 	SNG 432T00425AA	S00425	SNGN 120408S01025	1/32	D35 D40 D41
	433T00425AA		120412S01025	3/64	
	434T00425AA		120416S01025	1/16	
	435T00425AA		120420S01025	5/64	
	SNG 432T00625AA	S00625	SNGN 120408S01525	1/32	
	433T00625AA		120412S01525	3/64	
	434T00625AA		120416S01525	1/16	
	SNG 432S00825	S00825	SNGN 120408S02025	1/32	
	433S00825		120412S02025	3/64	
	434S00825		120416S02025	1/16	
	SNG 434T01230AA	S01230	SNGN 120416S03030	1/16	
	SNG 432T00220	T00220	SNGN 120408T00520	1/32	
	SNG 432T00420	T00420	SNGN 120408T01020	1/32	
	433T00420		120412T01020	3/64	
	434T00420		120416T01020	1/16	
	435T00420		120420T01020	5/64	
	SNG 431T00825	T00825	SNGN 120404T02025	1/64	
	432T00825		120408T02025	1/32	
	433T00825		120412T02025	3/64	
	434T00825		120416T02025	1/16	
	435T00825		120420T02025	5/64	
	SNG 452T00425AA	S00425	120708S01025	1/32	
	453T00425AA		120712S01025	3/64	
	454T00425AA		120716S01025	1/16	
	SNG 451T00625AA	S00625	SNGN 120704S01525	1/64	
	452T00625AA		120708S01525	1/32	
	453T00625AA		120712S01525	3/64	
	454T00625AA		120716S01525	1/16	
	455T00625AA		120720S01525	5/64	
	SNG 452S00825	S00825	SNGN 120708S02025	1/32	
	453S00825		120712S02025	3/64	
	454S00825		120716S02025	1/16	
	455S00825		120720S02025	5/64	
	SNG 452T00420	T00420	SNGN 120708T01020	1/32	
	453T00420		120712T01020	3/64	
	454T00420		120716T01020	1/16	
	455T00420		120720T01020	5/64	

● : Standard Item △ : Phaseout Item (will be removed from next catalog)
Contact your local Kyocera sales engineer to upgrade old products to new technology

Inserts sold in 10 piece boxes.

How to read this page B15

90° Square

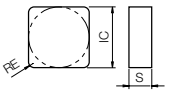
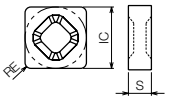
Negative Insert

(in)

Part Number	IC	S	D1
SN_45_	1/2	5/16	-
SN_55_	5/8	5/16	-

Edge Prep.			
Symbol	Cutting Edge Spec.	Example	
S	Chamfered and Honed Cutting Edge	S00525	0.005" X 25° Chamfered and Honed Cutting Edge
T	Chamfered Cutting Edge	T00315	0.003" X 15° Chamfered Cutting Edge

		Aluminum Oxide Ceramic			PVD Coated Ceramic	MEGACOAT Ceramic	Silicon Nitride Ceramic		CVD Coated Silicon Nitride Ceramic	SiAlON Ceramic		Honeycomb Structure Ceramic	Whisker Reinforced Ceramic	
		KA30	A65	KT66	A66N	PT600M	KS6015	KS6050	CS7050	KS6030	KS6040	CF1	KXW1	
K	Gray Cast Iron (With Scale)					●		✠	◔					
	Gray Cast Iron (Without Scale)					◔		◔	◕					
	Nodular Cast Iron (With Scale)								◔					
	Nodular Cast Iron (Without Scale)								◔					
S	Heat-resistant Alloys										✠			
H	Hard Materials					●								

Insert		ANSI Part Number	Edge Prep (in)	ISO Part Number	Corner Radius (in) RE													Toolholder Page
		SNG 451T00825	T00825	SNGN 120704T02025	1/64		●											D35 D40 D41
		452T00825		120708T02025	1/32		●			△								
		453T00825		120712T02025	3/64		●			●								
		454T00825		120716T02025	1/16		●			●	●	●						
		455T00825		120720T02025	5/64		●			●								
		SNM 454T00825	T00825	SNMN 120716T02025	1/16		●											
		SNG 553T00825	T00825	SNGN 150712T02025	3/64		●			△								D35
		554T00825		150716T02025	1/16		●				●							
		SNGX 454T00825	T00825	SNGX 120716T02025	1/16							△						-
		SNGX 552T00825	T00825	SNGX 150708T02025	1/32						△							
		553T00825		150712T02025	3/64						●							

Inserts sold in 10 piece boxes.

● : Standard Item △ : Phaseout Item (will be removed from next catalog)

Contact your local Kyocera sales engineer to upgrade old products to new technology

How to read this page ➔ B15

60° Triangle

Negative Insert

(in)

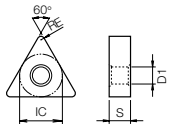
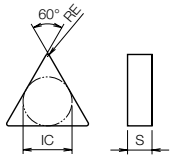
Part Number	IC	S	D1
TNGA 33_	3/8	3/16	0.150
TNG 22_	1/4	1/8	-

(in)

Part Number	IC	S	D1
TNG 33_	3/8	3/16	-
TNG 35_	3/8	5/16	-
TNG 43_	1/2	3/16	-

Edge Prep.			
Symbol	Cutting Edge Spec.	Example	
S	Chamfered and Honed Cutting Edge	S00525	0.005" X 25° Chamfered and Honed Cutting Edge
T	Chamfered Cutting Edge	T00315	0.003" X 15° Chamfered Cutting Edge

		Gray Cast Iron (With Scale)	Gray Cast Iron (Without Scale)	Nodular Cast Iron (With Scale)	Nodular Cast Iron (Without Scale)	Heat-resistant Alloys	Hard Materials
		K	K	K	K	S	H

Insert	ANSI Part Number	Edge Prep (in)	ISO Part Number	Corner Radius (in) RE	Aluminum Oxide Ceramic KA30	Aluminum Oxide Ceramic A65	Aluminum Oxide Ceramic KT66	PVD Coated Ceramic A66N	MEGACOAT Ceramic PT600M	Silicon Nitride Ceramic KS6015	Silicon Nitride Ceramic KS6050	CVD Coated Silicon Nitride Ceramic CS7050	SiAlON Ceramic KS6030	SiAlON Ceramic KS6040	Honeycomb Structure Ceramic CF1	Whisker Reinforced Ceramic KXW1	Toolholder Page
 	TNGA 332T00425AA	S00425	TNGA 160408S01025	1/32	△												D16 D17 D18 F88 F98 F99
	TNGA 331T00625AA	S00625	TNGA 160404S01525	1/64				●									
	332T00625AA		160408S01525	1/32				●									
	333T00625AA		160412S01525	3/64				●									
	TNGA 331S00825	S00825	TNGA 160404S02025	1/64					●								
	332S00825		160408S02025	1/32					●								
	333S00825		160412S02025	3/64					●								
	TNGA 332T01230AA	S01230	TNGA 160408S03030	1/32				●									
	TNGA 332T00220	T00220	TNGA 160408T00520	1/32	●												
	TNGA 331T00625	T00625	TNGA 160404T01525	1/64				●									
	332T00625		160408T01525	1/32				●									
	333T00625		160412T01525	3/64				●									
	TNGA 331T00825	T00825	TNGA 160404T02025	1/64		●	●		●								
	332T00825		160408T02025	1/32		●	●		●	●	●						
	333T00825		160412T02025	3/64			●		●	●	●	△					
	TNGA 432T00825		TNGA 220408T02025	1/32			●										D16 D17 D18
	433T00825		220412T02025	3/64		●											
 	TNG 221T00220	T00220	TNGN 110304T00520	1/64		●			●								D42 F104
	222T00220		110308T00520	1/32		●		●	●								
	TNG 331T00425AA	S00425	TNGN 160404S01025	1/64	●												
	332T00425AA		160408S01025	1/32	●												
	333T00425AA		160412S01025	3/64	●												
	334T00425AA		160416S01025	1/16	△												
	335T00425AA		160420S01025	5/64	△												
	TNG 331T00625AA	S00625	TNGN 160404S01525	1/64				●									
	332T00625AA		160408S01525	1/32				●									
	333T00625AA		160412S01525	3/64				●									
	TNG 331S00825	S00825	TNGN 160404S02025	1/64					●								
	332S00825		160408S02025	1/32					●								
	333S00825		160412S02025	3/64					●								
	TNG 331T00220	T00220	TNGN 160404T00520	1/64		●											D36
	332T00220		160408T00520	1/32		●											
	333T00220		160412T00520	3/64	●												
	TNG 331T00825	T00825	TNGN 160404T02025	1/64		●			△								
	332T00825		160408T02025	1/32		●			●	●	●						
	333T00825		160412T02025	3/64		●				●	●						
	TNG 351T00825	T00825	TNGN 160704T02025	1/64		●			△								
	352T00825		160708T02025	1/32		●			△								
	353T00825		160712T02025	3/64		●											
	354T00825		160716T02025	1/16		△											
	355T00825		160720T02025	5/64		△											
	TNG 432T00825	T00825	TNGN 220408T02025	1/32		●											
	434T00825		220416T02025	1/16		●											

● : Standard Item △ : Phaseout Item (will be removed from next catalog)

Contact your local Kyocera sales engineer to upgrade old products to new technology

Inserts sold in 10 piece boxes.

How to read this page B15

35° Diamond / 80°Trigon

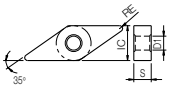
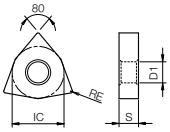
Negative Insert

(in)

Part Number	IC	S	D1
VN_A 33_	3/8	3/16	0.150
WNGA 43_	1/2	3/16	0.203

Edge Prep.			
Symbol	Cutting Edge Spec.	Example	
S	Chamfered and Honed Cutting Edge	S00525	0.005" X 25° Chamfered and Honed Cutting Edge
T	Chamfered Cutting Edge	T00315	0.003" X 15° Chamfered Cutting Edge

		Gray Cast Iron (With Scale)	Gray Cast Iron (Without Scale)	Nodular Cast Iron (With Scale)	Nodular Cast Iron (Without Scale)	Heat-resistant Alloys	Hard Materials
		K	K	K	K	S	H
			◔		●		○ ●

Insert	ANSI Part Number	Edge Prep (in)	ISO Part Number	Corner Radius (in) RE	Aluminum Oxide Ceramic KA30	Aluminum Oxide Ceramic A65	Aluminum Oxide Ceramic KT66	PVD Coated Ceramic A66N	MEGACOAT Ceramic PT600M	Silicon Nitride Ceramic KS6015	Silicon Nitride Ceramic KS6050	CVD Coated Silicon Nitride Ceramic CS7050	SiAlON Ceramic KS6030	SiAlON Ceramic KS6040	Honeycomb Structure Ceramic CF1	Whisker Reinforced Ceramic KXW1	Toolholder Page
 	VNGA 331T00625AA	S00625	VNGA 160404S01525	1/64				●									D20 D21 D22 D24
	332T00625AA		160408S01525	1/32				●									
	VNGA 331S00825	S00825	VNGA 160404S02025	1/64					●								
	332S00825		160408S02025	1/32					●								
	VNGA 331T00825	T00825	VNGA 160404T02025	1/64		●	●		●								
	332T00825		160408T02025	1/32		●	●		●								
	333T00825		160412T02025	3/64		●			●								
	VNMA 332T00625AA	S00625	VNMA 160408S01525	1/32				●									
 	WNGA 432T00625AA	S00625	WNGA 080408S01525	1/32				●									D26 D27 F101 F102
	WNGA 431T00625	T00625	WNGA 080404T01525	1/64				●									
	432T00625		080408T01525	1/32				●									
	433T00625		080412T01525	3/64				●									

Inserts sold in 10 piece boxes.

● : Standard Item △ : Phaseout Item (will be removed from next catalog)

Contact your local Kyocera sales engineer to upgrade old products to new technology

How to read this page B15

Positive

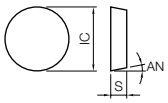
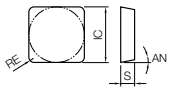
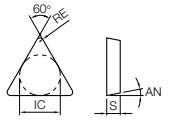
Positive Insert

Part Number	IC	S	AN
RPG 32	3/8	1/8	11°
RPG 43	1/2	3/16	
SPG 32_	3/8	1/8	
SPG 42_	1/2	1/8	

Part Number	IC	S	AN
TBG 121_	5/32	1/16	5°
TCG 33_	3/8	3/16	7°
TPG 1815_	7/32	3/32	11°
TPG 22_	1/4	1/8	
TPG 32_	3/8	1/8	

Edge Prep.			
Symbol	Cutting Edge Spec.	Example	
S	Chamfered and Honed Cutting Edge	S00525	0.005" X 25° Chamfered and Honed Cutting Edge
T	Chamfered Cutting Edge	T00315	0.003" X 15° Chamfered Cutting Edge

K	Gray Cast Iron (With Scale)	●
	Gray Cast Iron (Without Scale)	◔
	Nodular Cast Iron (With Scale)	●
	Nodular Cast Iron (Without Scale)	●
S	Heat-resistant Alloys	◕ ✱ ●
H	Hard Materials	○ ● ○

Insert		ANSI Part Number	*Edge Prep (in)	ISO Part Number	Corner Radius (in) RE	Aluminum Oxide Ceramic KA30	Aluminum Oxide Ceramic A65	Aluminum Oxide Ceramic KT66	PVD Coated Ceramic A66N	MEGACOAT Ceramic PT600M	Silicon Nitride Ceramic KS6015	Silicon Nitride Ceramic KS6050	CVD Coated Silicon Nitride Ceramic CS7050	SiAlON Ceramic KS6030	SiAlON Ceramic KS6040	Honeycomb Structure Ceramic CF1	Whisker Reinforced Ceramic KXW1	Toolholder Page
		RPG 32E001	E001	RPGN 090300E003	-									●				-
		32T00420	T00420	090300T01020	-									●				
		RPG 43E001	E001	RPGN 120400E003	-									●				
		43T00420	T00420	120400T01020	-									●	△			
		SPG 322T00320AA	S00320	SPGN 090308S00820	1/32				●									F84
		SPG 322T00320	T00320	SPGN 090308T00820	1/32		●			△								
		SPG 422T00320	T00320	SPGN 120308T00820	1/32		●											
		423T00320		120312T00820	3/64		●											
		TBG 12105T00320AA	S00320	TBGN 060102S00820	0.008				△									-
		1211T00320AA		060104S00820	1/64				●									
		1212T00320AA		060108S00820	1/32				●									
		TCG 332T00320	T00320	TCGN 160408T00820	1/32		△											
		TPG 18151T00320	T00320	TPGN 090204T00820	1/64			△		●								F85
		18152T00320		090208T00820	1/32					●								
		TPG 2205T00320AA	S00320	TPGN 110302S00820	0.008				●									
		TPG 221T00320AA		TPGN 110304S00820	1/64				●									
		222T00320AA		110308S00820	1/32				●									
		TPG 221T00320	T00320	TPGN 110304T00820	1/64		●		●	●								
		222T00320		110308T00820	1/32		●		●	●								
		TPG 321T00320AA	S00320	TPGN 160304S00820	1/64				●									
		322T00320AA		160308S00820	1/32				●									
		323T00320AA		160312S00820	3/64				●									
		TPG 3205T00320	T00320	TPG 160302T00820	0.008		●											
		321T00320		160304T00820	1/64		●		●	●								
		322T00320		160308T00820	1/32		●		●	●								
		323T00320		160312T00820	3/64		△											

* For cutting edge "E", please refer to the table below.

Edge Prep.			
Symbol	Cutting Edge Spec.	Example	
E	R-honed Cutting Edge	E002	R0.002" Honed

● : Standard Item △ : Phaseout Item (will be removed from next catalog)

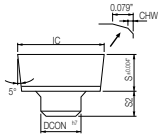
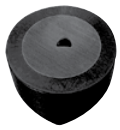
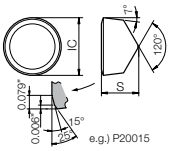
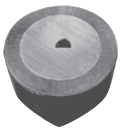
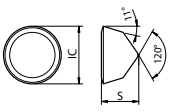
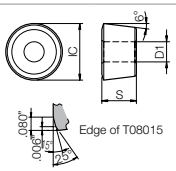
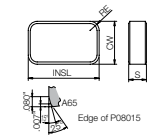
Contact your local Kyocera sales engineer to upgrade old products to new technology

Inserts sold in 10 piece boxes.

Inserts for Roll Machining

Edge Prep.			
Symbol	Cutting Edge Spec.	Example	
S	Chamfered and Honed Cutting Edge	S00525	0.005" X 25° Chamfered and Honed Cutting Edge
T	Chamfered Cutting Edge	T00315	0.003" X 15° Chamfered Cutting Edge

K	Gray Cast Iron (With Scale)	✠
	Gray Cast Iron (Without Scale)	
	Nodular Cast Iron (With Scale)	
	Nodular Cast Iron (Without Scale)	
S	Heat-resistant Alloys	● ✠ ◔ ●
H	Hard Materials	◔ ● ○

Insert	ANSI Part Number	*Edge Prep (in)	ISO Part Number	Dimensions (in) IC	D1	S	S2	CHW	KA30	A65	KT66	A66N	PT600M	KS6015	KS6050	CS7050	KS6030	KS6040	CF1	KXW1	Toolholder Page
 	RBG 16K20003	K20003	16K20003	16mm	8mm	8mm	5mm	0.2mm					●								-
 	RCGX 24E001	E001	RCGX 060600E003	1/4	-	1/4	-	-									△				D37
	24E002	E002	060600E005	1/4	-	1/4	-	-										●			
	24T00420	T00420	060600T01020	1/4	-	1/4	-	-									●	●			
	102T04015 *1	T04015	060400 *1	1/4	-	0.180	-	-		●		●									
	102H315T04015		060700	1/4	-	0.315	-	-		●		●									-
	35E001	E001	090700E003	3/8	-	0.315	-	-									△				
	35E002	E002	090700E005	3/8	-	0.315	-	-										△			
	103T08015625AA	P08015	090700P20015	3/8	-	0.315	-	-		●		●	●								
	103S00420	S00420	090700S01020	3/8	-	0.315	-	-											△		
	35T00420	T00420	090700T01020	3/8	-	0.315	-	-									●	●			D37
	45E001	E001	120700E003	1/2	-	0.315	-	-									●				
	104T08015625AA	P08015	120700P20015	1/2	-	0.315	-	-		●		●	●								
	104S00420	S00420	120700S01020	1/2	-	0.315	-	-											△		
	45T00420	T00420	120700T01020	1/2	-	0.315	-	-									●				
	106T08015625AA	P08015	191000P20015	3/4	-	0.394	-	-		●		●									
 	RPGX 24E001	E001	RPGX 060600E003	1/4	-	1/4	-	-									●				
	24T00420	T00420	060600T01020	1/4	-	1/4	-	-									●				
	35E001	E001	090700E003	3/8	-	0.315	-	-									●				
	35T00420	T00420	090700T01020	3/8	-	0.315	-	-									●	△		●	
	45E001	E001	120700E003	1/2	-	0.315	-	-									●				
	45E002	E002	120700E005	1/2	-	0.315	-	-										△			
	45T00420	T00420	120700T01020	1/2	-	0.315	-	-									△	△		●	
 	RCMA 66T08015625AA	P08015	RCMA 190900P20015	3/4	0.250	3/8	-	-		●		●									-
	88T08015625AA		251200P20015	1	0.266	1/2	-	-		●											
	106T08015625AA		310900P20015	1 1/4	0.390	3/8	-	-		●		●									
	1012T08015625AA		311800P20015	1 1/4	0.390	3/4	-	-		△											
 	LNU 6688T08015625A	P08015	LNUN 381232P20015	CW	S	INSL	RE	-	KA30	A65	KT66	A66N	PT600M	KS6015	KS6050	CS7050	KS6030	KS6040	CF1	KXW1	
				3/4	1/2	1 1/2	1/8	-		△											

*1 IC may differ based on edge prep.

For cutting edge "E", "K" and "P" please refer to the table below.

Edge Prep.			
Symbol	Cutting Edge Spec.	Example	
E	R-honed Cutting Edge	E002	R0.002" Honed
K	Double Chamfered Cutting Edges	K20003	2.00mm X 3° Chamfered Cutting Edge
P	Double Chamfered + Honed Cutting Edge	P20015	2.00mm X 15° Chamfered + Honed Cutting Edge

· Note: Symbol "K" and "P" describe only the largest chamfer width and its angle.

RBG Inserts are sold in 1 piece boxes

Inserts sold in 10 piece boxes.

● : Standard Item △ : Phaseout Item (will be removed from next catalog)
Contact your local Kyocera sales engineer to upgrade old products to new technology

How to read this page ➔ B15

Grooving Inserts

Edge Prep.			
Symbol	Cutting Edge Spec.	Example	
S	Chamfered and Honed Cutting Edge	S00525	0.005" X 25° Chamfered and Honed Cutting Edge
T	Chamfered Cutting Edge	T00315	0.003" X 15° Chamfered Cutting Edge

| | | |

CBN & PCD INSERTS

C

C1 - C34

CBN INSERTS & BARS		**C2 - C21**
IDENTIFICATION SYSTEM		C2
HOW TO IDENTIFY EDGE PREPARATION		C2
MEGACOAT CBN		C3
APPLICATION MAPS		C4
RECOMMENDED CUTTING CONDITIONS		C4
CASE STUDIES		C5
NEGATIVE TURNING INSERTS		C6
POSITIVE TURNING INSERTS		C14
NEGATIVE TURNING INSERTS (WITHOUT HOLE)		C19
EXTERNAL GROOVING INSERTS		C20
SOLID TIP-BARS FOR MICRO BORING	EZ Bars / Tip-Bars	C21
PCD INSERTS & BARS		**C22 - C34**
PCD GRADES AND FEATURES		C22
IDENTIFICATION SYSTEM		C22
RECOMMENDED CUTTING CONDITIONS		C22
NEGATIVE TURNING INSERTS		C23
POSITIVE TURNING INSERTS		C24
EXTERNAL GROOVING		C30
FOR ALUMINUM WHEEL		C31
TURNING / GROOVING		C32
SOLID TIP-BARS FOR MICRO BORING	EZ Bars	C33
	System Tip-Bars / Tip-Bars	C34

MEGACOAT CBN



Innovative CBN Tools

Extended Tool Life | **Improved Stability** | **High Speed Cutting**

For CBN Variation and Features See Page A16

Various Insert Edge Preparations Available in High Performance MEGACOAT CBN

Turning Insert Identification System

C	N	G	A	4	3	1	S00525	ME

Refer to B2 for "Turning Indexable Inserts Identification System"

Insert Type	Part Number	Edge Prep.	Manufacture's Option	Cutting Edge Length	No. of Edges	Re-Grinding
Negative	CNGA431MEF	F	MEF	Short (Small Edge)	2	Not Recommended
	CNGA431ME4	S00525	ME4		4 (Double-sided)	
	CNGA431S00525ME		ME		2	
	CNGA431S00245MEP	S00245	MEP		2	
	CNGA431S00525SE	S00525	SE		1	
	CNMN431S00820	S00820	No Indication (Only KBN900)	Long	Multiple Edge	Possible
Positive	CCMW3251MEF	F	MEF	Short (Small Edge)	2	Not Recommended
	CCMW3251T00315ME	T00315	ME		2	
	CCMW3251S00525MES	S00525	MES		2	
	CCMW3251T00315SE	T00315	SE		1	

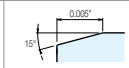
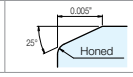
Refer to Page B3 for insert color.

• Re-Grinding

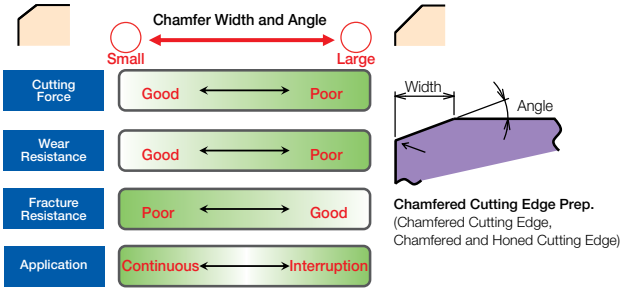
1) Regrinding is possible for inserts without any indication in manufacturer's option. Regrinding may not be available depending on the edge condition.

2) Regrinding is not recommended for inserts with manufacturer's symbol like "ME" or "SE".

How To Identify Edge Preparation

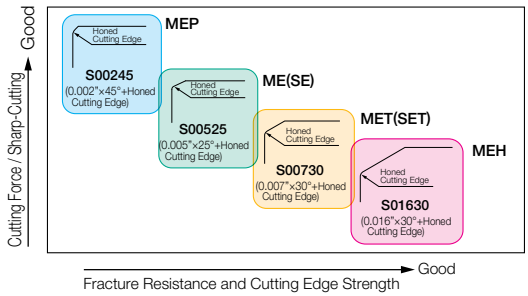
Edge Prep.				
Symbol	Cutting Edge Spec.	Example		Shape
F	Sharp Edge	F	Sharp Edge	
E	Honed Cutting Edge	E003	R0.003" Honed Cutting Edge	
T	Chamfered Cutting Edge	T00515	0.005" X 15° Chamfered Cutting Edge	
S	Chamfered and Honed Cutting Edge	S00525	0.005" X 25° Chamfered + Honed Cutting Edge	

Features of Chamfer Width & Angle

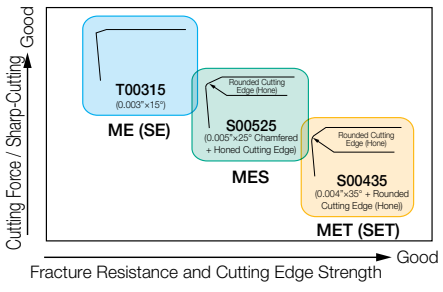


Chamfered Cutting Edge Prep.
(Chamfered Cutting Edge, Chamfered and Honed Cutting Edge)

① Standard Cutting Edge Prep. of Negative inserts



② Standard Cutting Edge Prep. of Positive Inserts



Manufacturer's Option	Cutting Edge Prep.		Application & Features
MEP	S00245	0.002" X 45° + Honed Cutting Edge	High speed, continuous machining Excellent crater wear resistance
ME	S00525	0.005" X 25° + Honed Cutting Edge	General Purpose
MET	S00730	0.007" X 30° + Honed Cutting Edge	Superior fracture resistance
MEH	S01630	0.016" X 30° + Honed Cutting Edge	Interrupted high feed machining Prevention of flaking

Manufacturer's Option	Cutting Edge Prep.		Application & Features
ME	T00315	0.003" X 15°	Chamfered Sharp cutting oriented, less burring
MES	S00525	0.005" X 25° + Rounded Cutting Edge (Hone)	General Purpose
MET	S00435	0.004" X 35° + Rounded Cutting Edge (Hone)	Interrupted Cutting Stable cutting oriented

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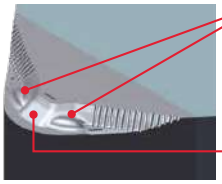
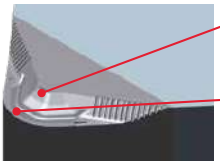
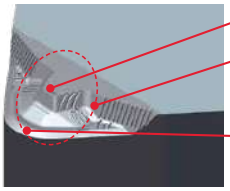
H Chipbreaker Series

CBN Inserts for Machining Hardened Material

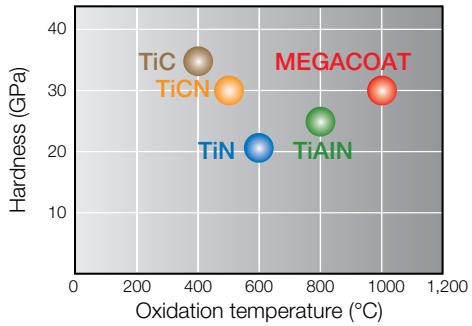
Unique Molded Chipbreaker Provides Excellent Chip Control when Machining Hardened Material

3 Chipbreaker Styles Available for a Wide Range of Machining Applications

Chipbreaker	Application	Recommended Cutting Range
HH (1st Recommendation)  Twin Dots: Breaks chips into small pieces Wide Bump: Provides stable chip curls	Hardened Steel Finishing 55HRC or more	Small D.O.C. (D.O.C. = 0.004" ~ 0.012")
HL  Wide Bump Rake Surface: Stable chip control for softer interior of hardened materials	Hardened Steel Finishing 55HRC or less	
HD  Wide Bump Multi-step Structure: Good for a wide range of conditions Rake Surface: Stable chip control for softer interior of hardened materials	Removing the Carburized Layer (From Carburized Layer to Unhardened Layer)	Large D.O.C. (ap = 0.012" ~ 0.028")

MEGACOAT CBN

PVD Layer Coating Properties

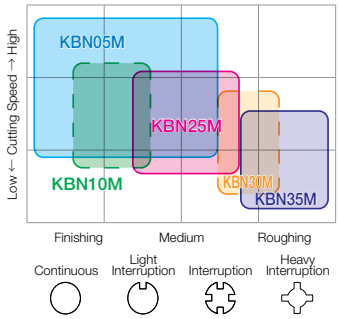


Advantages of MEGACOAT

- Long tool life and stable machining due to superior heat-resistance and hardness
- Stability improvement through prevention of crater wear (oxidation, diffusional wear)
- High thermal stability and surface smoothness provide excellent surface finish

Application Maps

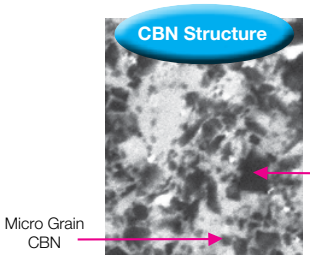
Hardened Materials

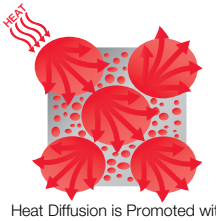


KBN05M
1st recommended grade for a wide range of applications from continuous (high speed finishing) to interrupted cutting.

Hybrid Grain Structure (KBN05M)

Mixed structure of micro grain CBN and coarse grain CBN
➡CBN possesses high hardness, toughness, and thermal resistance characteristics.





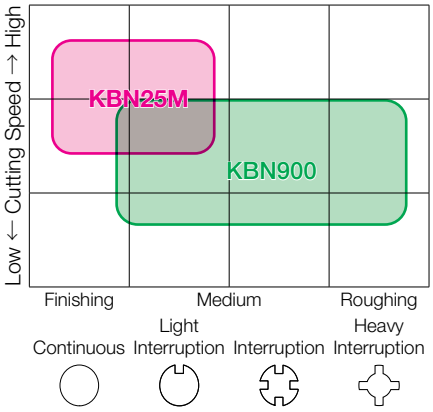
Heat Diffusion is Promoted with Coarse Grain CBN
➡ High Thermal Conductivity

KBN25M: High Stability for General Cutting

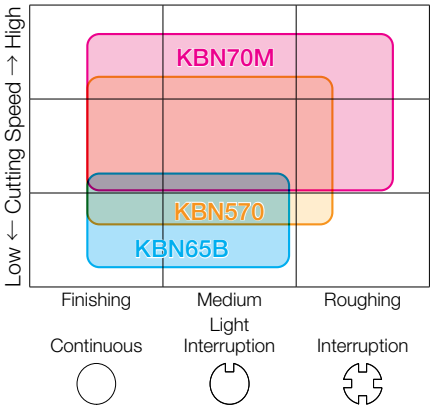
KBN30M: High Stability During Interrupted Cutting

KBN35M: Honeycomb Structure CBN with Superior Fracture Resistance in Heavy Interrupted Cutting

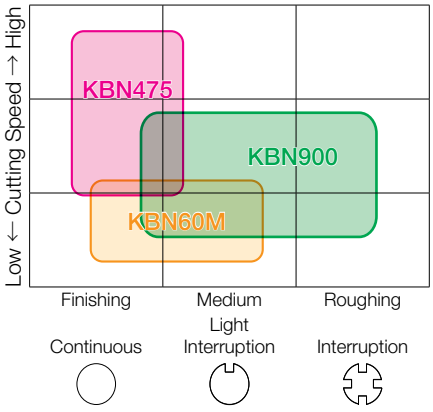
Roll Materials (Chilled Cast Iron)



Powdered Steel



Cast Iron



Recommended Cutting Conditions

Workpiece Material	Hardness	Applications		Recommended Insert Grade	Cutting Conditions		
					Vc (sfm)	D.O.C. (in)	f (ipr)
Heat Treated Steel	Over 55HRC	General Finishing	Continuous~Interruption	KBN05M	330 ~ **490** ~ 660	0.002 ~ **0.012** ~ 0.020	0.002 ~ **0.003** ~ 0.004
		Finishing (HH Chipbreaker)	Continuous~Interruption	KBN05M	330 ~ **490** ~ 660	0.004 ~ **0.008** ~ 0.012	0.004 ~ **0.006** ~ 0.010
		High Efficiency Stable Machining	Light Interruption~Interruption	KBN25M	260 ~ **390** ~ 520	0.002 ~ **0.012** ~ 0.020	0.002 ~ **0.003** ~ 0.004
		Interruption (Small D.O.C.)	Interruption~Heavy interruption	KBN35M	200 ~ **330** ~ 490	0.002 ~ **0.008** ~ 0.016	0.002 ~ **0.003** ~ 0.004
		Heavy Machining	Continuous~Interruption	KBN900	230 ~ **300** ~ 360	0.020 ~ **0.039** ~ 0.079	0.002 ~ **0.004** ~ 0.008
	Under 55HRC	Finishing (HL Chipbreaker)	Continuous~Interruption	KBN05M	330 ~ **490** ~ 660	0.004 ~ **0.008** ~ 0.012	0.004 ~ **0.006** ~ 0.010
		Finishing	Continuous	*PT600M	200 ~ **260** ~ 390	0.008 ~ **0.020** ~ 0.028	0.002 ~ **0.004** ~ 0.006
	Machining carburized layer to unhardened layer	Remove Carburized Layer (HD Chipbreaker)	Continuous~Interruption	KBN05M	330 ~ **490** ~ 660	0.012 ~ **0.020** ~ 0.028	0.004 ~ **0.006** ~ 0.010
Gray Cast Iron	Under 250HB	Finishing	Continuous~Light interruption	KBN475	1310 ~ **2620** ~ 3940	0.002 ~ **0.008** ~ 0.020	0.004 ~ **0.008** ~ 0.012
		Finishing	Continuous~Light interruption	KBN60M	980 ~ **1640** ~ 2300	0.002 ~ **0.008** ~ 0.020	0.004 ~ **0.008** ~ 0.012
		High Efficiency Finishing	Continuous~Light interruption	KBN900	1640 ~ **2950** ~ 3940	0.004 ~ **0.020** ~ 0.039	0.002 ~ **0.004** ~ 0.008
		Heavy Machining	Continuous~Interruption	KBN900	1640 ~ **2300** ~ 2950	0.020 ~ **0.059** ~ 0.118	0.004 ~ **0.012** ~ 0.020
Roll Materials (Chilled Cast Iron)	Over 55HRC	Finishing	Continuous~Interruption	KBN25M	260 ~ **390** ~ 520	0.002 ~ **0.012** ~ 0.020	0.002 ~ **0.003** ~ 0.004
		Heavy Machining	Continuous~Interruption	KBN900	230 ~ **300** ~ 360	0.012 ~ **0.028** ~ 0.039	0.002 ~ **0.004** ~ 0.006
Sintered Steel	-	Finishing	Continuous~Light interruption	KBN570	160 ~ **490** ~ 820	0.002 ~ **0.006** ~ 0.010	0.001 ~ **0.004** ~ 0.008
	-	Finishing	Continuous~Interruption	KBN70M	330 ~ **660** ~ 820	0.002 ~ **0.008** ~ 0.012	0.002 ~ **0.006** ~ 0.010

*PT600M : MEGACOAT on Al_2O_3+TiC Ceramic

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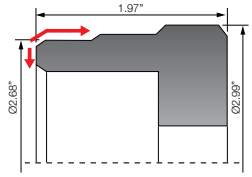
Case Studies

5120H (58HRC)

Gear
- External and Face machining and Chamfering
- Vc=427 sfm
- D.O.C.=0.024"
- f=0.005 ipr
- WET
- CNGA432S00525ME (KBN05M)



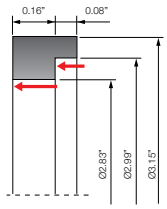
KBN05M	300 pcs/edge
Competitor C	200 pcs/edge

KBN05M achieved 1.5 times longer tool life than competitor C.
➡ Its longer tool life contributes to cost-cutting.

User Evaluation

4131 (55HRC)

Stator
- Boring
- Vc=558 sfm
- D.O.C.=0.016"
- f=0.004 ipr
- WET
- CNGA432S00525ME (KBN05M)



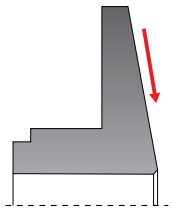
KBN05M	600 pcs/edge
Competitor D	300 pcs/edge

KBN05M achieved twise longer tool life than competitor D.
➡Its longer tool life contributes to cost-cutting.

User Evaluation

5120H (58HRC)

Pulley
- Face machining (Continuous)
- Vc=394 sfm
- D.O.C.=0.006"~0.008"
- f=0.009 ipr
- WET
- DNGA432S00245MEP (KBN05M)



KBN05M-MEP (Edge Preparation : 0.002"×45°)	150 pcs/edge
KBN05M-ME (Edge Preparation : 0.005"×25°)	100 pcs/edge
Competitor E	100 pcs/edge

Tool life of KBN05M-ME type (Edge prep.: 0.005"×25° Chamfered + R honed) is same as competitor E.'s.
KBN05M-MEP (Edge prep.: 0.0020"×45° Chamfered + R honed) type achieved 1.5 times longer tool life, preventing crater wear.


KBN05M-MEP

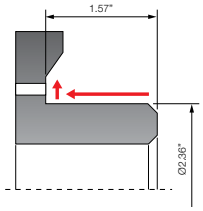

KBN05M-ME


Competitor E

User Evaluation

5120 (61~65HRC)

Gear
- External and Face machining (Interrupted)
- Vc=394 sfm
- D.O.C.=0.006"
- f=0.004~0.006 ipr (External)
- WET
- CNGA432S01630MEH (KBN05M)



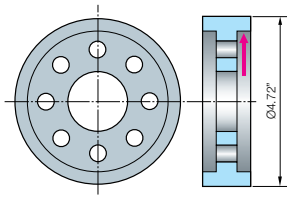
KBN05M-MEH (Edge Preparation : 0.016"×30°)	150 pcs/edge
Competitor F	100 pcs/edge

Compared to competitor. F, KBN05M-MEH type (Edge prep.: 0.016"×30° Chamfered + R-honed) achieved 1.5 times longer tool life.
No chipping in interrupted machining, and improved productivity.
(Comp. F's cutting edge had multiple chips.)
Feed rate could be increased from 0.006 to 0.010 ipr in facing.
➡Achieved cycle time and cost reduction.

User Evaluation

4131 (60HRC)

Gear Parts
- Face machining (Interrupted)
- Vc=295 sfm
- D.O.C.=0.020"
- f=0.005 ipr
- WET_DRY
- CNGA432S00525ME (KBN25M)



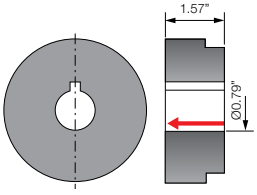
KBN25M	70 pcs/edge
Competitor G	30 pcs/edge (Unstable)

KBN25M improved tool life up to 70 pieces/edge (two times more than competitor's G CBN tool). Also, KBN25M had increased tool life up to 250 pieces/edge by changing from wet machining to dry machining.

User Evaluation

4131 (58HRC)

Sleeve
- Internal machining (Heavy interruption)
- Vc=328sfm
- D.O.C.=0.020"
- f=0.004 ipr
- WET
- TPGB222S00435MET (KBN35M)



KBN35M	115 pcs/edge
Competitor H	100 pcs/edge

KBN35M achieved 15% Longer tool life in heavy interrupted machining compared with competitor H.
Furthermore it still keeps the insert in a good condition and so provides stable machining result.
➡Its longer tool life and capability of providing stable result can contribute to cost-cutting and improved efficiency in machining.

User Evaluation

How to read this page ➔ **B15**

80° Diamond

Negative Insert with Hole

(in)

Part Number	IC	S	D1
CNGA 43_	1/2	3/16	0.203
CNGM 43_	1/2	3/16	0.203

Edge Prep.			
Symbol	Cutting Edge Spec.	Example	
F	Sharp Edge		
E	Rounded Cutting Edge (Hone)	E003	R0.003" Honed
T	Chamfered Cutting Edge	T00515	0.005" X 15° Chamfered Cutting Edge
S	Chamfered and Honed Cutting Edge	S00525	0.005" X 25° Chamfered and Honed Cutting Edge

		Gray Cast Iron (with Scale)	Nodular Cast Iron (without Scale)	Nodular Cast Iron (with Scale)	Hard Materials (Roughing)	Hard Materials (Finishing)	Hard Materials (Chip Control)	Powdered Steel
		K	K	K	H	H	H	
Insert	ANSI Part Number	Edge Prep (in)	ISO Part Number	RE	LE	No. of Edges	KBN05M	KBN10M	KBN25M	KBN35M	KBN60M	KBN70M	KBN510	KBN525	KBN475	KBN570	Toolholder Page
Multi Edge With Wiper Edge	CNGA 431S00515MEW	S00515	CNGA 120404S01215MEW	1/64	0.102	2	●		●								D8-D9 F87 F91 F92
	432S00515MEW		120408S01215MEW	1/32	0.098		●	●	●	●							
	433S00515MEW		120412S01215MEW	3/64	0.098		●	●	●								
Multi Edge Finishing	CNGA 431S00245MEP	S00245	CNGA 120404S00545MEP	1/64	0.102	2	●										
	432S00245MEP		120408S00545MEP	1/32	0.102		●										
	433S00245MEP		120412S00545MEP	3/64	0.098		●										
	434S00245MEP		120416S00545MEP	1/16	0.134		●										
	435S00245MEP		120420S00545MEP	5/64	0.134		●										
	436S00245MEP		120424S00545MEP	3/32	0.130		●										
Multi Edge Sharp Edge	CNGA 431MEF	F	CNGA 120404MEF	1/64	0.102	2									●	●	
	432MEF		120408MEF	1/32	0.102										●	●	
	433MEF		120412MEF	3/64	0.098										●		
Double-Sided Multi-Edge	CNGA 431ME4	S00525	CNGA 120404ME4	1/64	0.102	4	●										
	432ME4		120408ME4	1/32	0.102		●										
	433ME4		120412ME4	3/64	0.098		●										
Multi Edge	CNGA 4305S00525ME	S00525	CNGA 120402S01225ME	0.008	0.102	2	●		●		●						
	431S00525ME		120404S01225ME	1/64	0.102		●	●	●	●	●				●		
	432S00525ME		120408S01225ME	1/32	0.102		●	●	●	●	●		●		●		
	433S00525ME		120412S01225ME	3/64	0.098		●	●	●	●	●				●		
	434S00525ME		120416S01225ME	1/16	0.134		●										
	435S00525ME		120420S01225ME	5/64	0.134		●										
	436S00525ME		120424S01225ME	3/32	0.130		●										
	CNGA 431T00515ME	T00515	CNGA 120404T01215ME	1/64	0.102	2						●			●		
	432T00515ME		120408T01215ME	1/32	0.102							●			●		
	433T00515ME		120412T01215ME	3/64	0.098							●			●		
Multi Edge Tough	CNGA 431S00730MET	S00730	CNGA 120404S01730MET	1/64	0.102	2	●		●	●							
	432S00730MET		120408S01730MET	1/32	0.102		●	△	●	●							
	433S00730MET		120412S01730MET	3/64	0.098		●		●	●							
	434S00730MET		120416S01730MET	1/16	0.134		●										
	435S00730MET		120420S01730MET	5/64	0.134		●										
	436S00730MET		120424S01730MET	3/32	0.130		●										
Multi Edge Interruption	CNGA 431S01630MEH	S01630	CNGA 120404S04030MEH	1/64	0.102	2	●										
	432S01630MEH		120408S04030MEH	1/32	0.102		●										
	433S01630MEH		120412S04030MEH	3/64	0.098		●										
	434S01630MEH		120416S04030MEH	1/16	0.134		●										
	435S01630MEH		120420S04030MEH	5/64	0.134		●										
	436S01630MEH		120424S04030MEH	3/32	0.130		●										

KYOCERA

CBN & PCD Inserts sold in 1 piece boxes.

● : Standard Item △ : Phaseout Item (will be removed from next catalog)
Contact your local Kyocera sales engineer to upgrade old products to new technology

How to read this page ➔ B15

80° Diamond

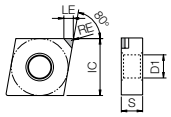
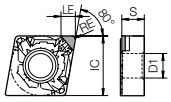
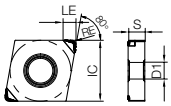
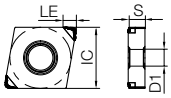
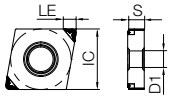
Negative Insert with Hole

(in)

Part Number	IC	S	D1
CNGA 43_	1/2	3/16	0.203
CNGM 43_	1/2	3/16	0.203

Edge Prep.			
Symbol	Cutting Edge Spec.	Example	
F	Sharp Edge		
E	Rounded Cutting Edge (Hone)	E003	R0.003" Honed
T	Chamfered Cutting Edge	T00515	0.005" X 15° Chamfered Cutting Edge
S	Chamfered and Honed Cutting Edge	S00525	0.005" X 25° Chamfered and Honed Cutting Edge

K	Gray Cast Iron (with Scale)	
	Nodular Cast Iron (without Scale)	
	Nodular Cast Iron (with Scale)	
H	Hard Materials (Roughing)	
	Hard Materials (Finishing)	● ○ ◕ ○ ◔
	Hard Materials (Chip Control)	● ○ ◕
	Powdered Steel	

Insert		ANSI Part Number	Edge Prep (in)	ISO Part Number	Dimensions (in) RE	Dimensions (in) LE	No. of Edges	MEGACOAT CBN KBN05M	KBN10M	KBN25M	KBN35M	KBN60M	KBN70M	CBN KBN510	KBN525	KBN475	KBN570	Toolholder Page
Small Edge Tough		CNGA 431S00730SET	S00730	CNGA 120404S01730SET	1/64	0.102	1			△								D8-D9 F87 F91 F92
Chip Control		CNGM 432S00325BB1	S00325	CNGM 120408S00825BB1	1/32	0.079				△								
		433S00325BB1		120412S00825BB1	3/64	0.087				△								
		CNGM 431S00525BB2	S00525	CNGM 120404S01225BB2	1/64	0.087	1			△								
		432S00525BB2		120408S01225BB2	1/32	0.094				△								
		CNGM 431S00625BB3		CNGM 120404S01625BB3	1/64	0.102				△								
		432S00625BB3	S00625	120408S01625BB3	1/32	0.110	1			△								
		433S00625BB3		120412S01625BB3	3/64	0.118				△								
Small D.O.C. (55HRC~)		CNGM 431ME-HH		CNGM 120404ME-HH	1/64	0.102		●										
		432ME-HH	E	120408ME-HH	1/32	0.102	2	●										
		433ME-HH		120412ME-HH	3/64	0.098		●										
Small D.O.C. (~55HRC)		CNGM 431ME-HL		CNGM 120404ME-HL	1/64	0.102		●										
		432ME-HL	E	120408ME-HL	1/32	0.102	2	●										
		433ME-HL		120412ME-HL	3/64	0.098		●										
Large D.O.C.		CNGM 431ME-HD		CNGM 120404ME-HD	1/64	0.102		●										
		432ME-HD	S00535	120408ME-HD	1/32	0.102	2	●										
		433ME-HD		120412ME-HD	3/64	0.098		●										

● : Standard Item △ : Phaseout Item (will be removed from next catalog)

Contact your local Kyocera sales engineer to upgrade old products to new technology

CBN & PCD Inserts sold in 1 piece boxes.

How to read this page ➔ **B15**

55° Diamond

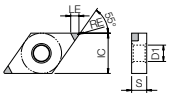
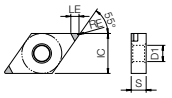
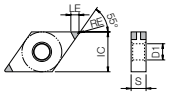
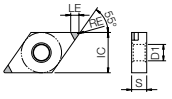
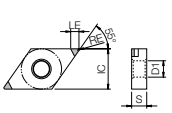
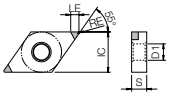
Negative Insert with Hole

(in)

Part Number	IC	S	D1
DNGA 43_	1/2	3/16	0.203
DNGA 44_	1/2	1/4	0.203

Edge Prep.			
Symbol	Cutting Edge Spec.	Example	
F	Sharp Edge		
E	Rounded Cutting Edge (Hone)	E003	R0.003" Honed
T	Chamfered Cutting Edge	T00515	0.005" X 15° Chamfered Cutting Edge
S	Chamfered and Honed Cutting Edge	S00525	0.005" X 25° Chamfered and Honed Cutting Edge

K	Gray Cast Iron (with Scale)	
	Nodular Cast Iron (without Scale)	●
	Nodular Cast Iron (with Scale)	
H	Hard Materials (Roughing)	✠
	Hard Materials (Finishing)	● ○ ◕
	Hard Materials (Chip Control)	● ◕
Powdered Steel		✠ ◕

Insert		ANSI Part Number	Edge Prep (in)	ISO Part Number	Dimensions (in) RE	Dimensions (in) LE	No. of Edges	MEGACOAT CBN KBN05M	KBN10M	KBN25M	KBN35M	KBN60M	KBN70M	CBN KBN510	KBN525	KBN475	KBN570	Toolholder Page
Multi Edge Finishing		DNGA 431S00245MEP	S00245	DNGA 150404S00545MEP	1/64	0.102	2	●										
		432S00245MEP		150408S00545MEP	1/32	0.087		●										
		433S00245MEP		150412S00545MEP	3/64	0.075		●										
		434S00245MEP		150416S00545MEP	1/16	0.150		●										
		435S00245MEP		150420S00545MEP	5/64	0.138		●										
		436S00245MEP		150424S00545MEP	3/32	0.122		●										
Multi Edge Sharp Edge		DNGA 431MEF	F	DNGA 150404MEF	1/64	0.102	2									●	●	
		432MEF		150408MEF	1/32	0.087										●	●	
		433MEF		150412MEF	3/64	0.075										●		
Double-Sided Multi-Edge		DNGA 431ME4	S00525	DNGA 150404ME4	1/64	0.102	4	●										D12 D13 F88 F94 F95
		432ME4		150408ME4	1/32	0.087		●										
		433ME4		150412ME4	3/64	0.075		●										
Multi Edge		DNGA 4302S00525ME	S00525	DNGA 150401S01225ME	0.004	0.110	2	●		●		△				●		
		4305S00525ME		150402S01225ME	0.008	0.106		●		●		△						
		431S00525ME		150404S01225ME	1/64	0.102		●	●	●	●	●				●		
		432S00525ME		150408S01225ME	1/32	0.087		●		●	●	●				●		
		433S00525ME		150412S01225ME	3/64	0.075		●		●						●		
		434S00525ME		150416S01225ME	1/16	0.150		●										
		435S00525ME		150420S01225ME	5/64	0.138		●										
		436S00525ME		150424S01225ME	3/32	0.122		●										
		DNGA 431T00515ME	T00515	DNGA 150404T01215ME	1/64	0.102	2						●			●		
		432T00515ME		150408T01215ME	1/32	0.087							●			●		
		433T00515ME		150412T01215ME	3/64	0.075							△			●		
		DNGA 441S00525ME	S00525	DNGA 150604S01225ME	1/64	0.102	2	●		●								D12 D13 F88
		442S00525ME		150608S01225ME	1/32	0.087		●		●	●	●						
		443S00525ME		150612S01225ME	3/64	0.075		●			●							
		DNGA 441T00515ME	T00515	DNGA 150604T01215ME	1/64	0.102	2						●					
		442T00515ME		150608T01215ME	1/32	0.087							△					
Multi Edge Tough		DNGA 431S00730MET	S00730	DNGA 150404S01730MET	1/64	0.102	2	●		●	●							D12 D13 F88 F94 F95
		432S00730MET		150408S01730MET	1/32	0.087		●		●	●							
		433S00730MET		150412S01730MET	3/64	0.075		●		●	△							
		434S00730MET		150416S01730MET	1/16	0.150		●										
		435S00730MET		150420S01730MET	5/64	0.138		●										
		436S00730MET		150424S01730MET	3/32	0.122		●										
		DNGA 441S00730MET	S00730	DNGA 150604S01730MET	1/64	0.102	2	●	●	●	●							D12 D13 F88
		442S00730MET		150608S01730MET	1/32	0.075		●	●	●	●							
		443S00730MET		150612S01730MET	3/64	0.075		●			△							
Multi Edge Interruption		DNGA 431S01630MEH	S01630	DNGA 150404S04030MEH	1/64	0.102	2	●										D12 D13 F88 F94 F95
		432S01630MEH		150408S04030MEH	1/32	0.087		●										
		433S01630MEH		150412S04030MEH	3/64	0.075		●										
		434S01630MEH		150416S04030MEH	1/16	0.150		●										
		435S01630MEH		150420S04030MEH	5/64	0.138		●										
		436S01630MEH		150424S04030MEH	3/32	0.122		●										

KYOCERA

CBN & PCD Inserts sold in 1 piece boxes.

● : Standard Item △ : Phaseout Item (will be removed from next catalog)

Contact your local Kyocera sales engineer to upgrade old products to new technology

How to read this page B15

55° Diamond

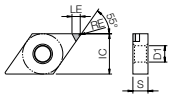
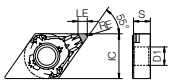
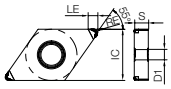
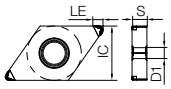
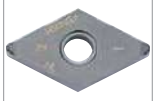
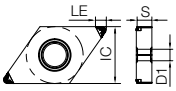
Negative Insert with Hole

(in)

Part Number	IC	S	D1
DNGA 43_	1/2	3/16	0.203
DNGA 44_	1/2	1/4	0.203
DNGM 43_	1/2	3/16	0.203

Edge Prep.			
Symbol	Cutting Edge Spec.	Example	
F	Sharp Edge		
E	Rounded Cutting Edge (Hone)	E003	R0.003" Honed
T	Chamfered Cutting Edge	T00515	0.005" X 15° Chamfered Cutting Edge
S	Chamfered and Honed Cutting Edge	S00525	0.005" X 25° Chamfered and Honed Cutting Edge

		MEGACOAT CBN						CBN				
		KBN05M	KBN10M	KBN25M	KBN35M	KBN60M	KBN70M	KBN510	KBN525	KBN475	KBN570	
K	Gray Cast Iron (with Scale)											
K	Nodular Cast Iron (without Scale)											
K	Nodular Cast Iron (with Scale)											
H	Hard Materials (Roughing)											
H	Hard Materials (Finishing)	●		●				○	◔			
H	Hard Materials (Chip Control)	●		●								
	Powdered Steel											

Insert		ANSI Part Number	Edge Prep (in)	ISO Part Number	Dimensions (in) RE	Dimensions (in) LE	No. of Edges	MEGACOAT CBN KBN05M	MEGACOAT CBN KBN10M	MEGACOAT CBN KBN25M	MEGACOAT CBN KBN35M	MEGACOAT CBN KBN60M	MEGACOAT CBN KBN70M	CBN KBN510	CBN KBN525	CBN KBN475	CBN KBN570	Toolholder Page
Small Edge		DNGA 4302S00525SE		DNGA 150401S01225SE	0.004	0.087				△								
		4305S00525SE	S00525	150402S01225SE	0.008	0.098	1			△								
		432S00525SE		150408S01225SE	1/32	0.075				△								
Chip Control		DNGM 432S00325BB1	S00325	DNGM 150408S00825BB1	1/32	0.062	1			△								
		DNGM 433S00525BB2	S00525	DNGM 150412S01225BB2	3/64	0.083				△								
Small D.O.C. (55HRC~)		DNGM 431ME-HH		DNGM 150404ME-HH	1/64	0.102		●										D12 D13 F88 F94 F95
		432ME-HH	E	150408ME-HH	1/32	0.087	2	●										
		433ME-HH		150412ME-HH	3/64	0.075		●										
Small D.O.C. (~55HRC)		DNGM 431ME-HL		DNGM 150404ME-HL	1/64	0.102		●										
		432ME-HL	E	150408ME-HL	1/32	0.087	2	●										
		433ME-HL		150412ME-HL	3/64	0.075		●										
Large D.O.C.		DNGM 431ME-HD		DNGM 150404ME-HD	1/64	0.102		●										
		432ME-HD	S00535	150408ME-HD	1/32	0.087	2	●										
		433ME-HD		150412ME-HD	3/64	0.075		●										

● : Standard Item △ : Phaseout Item (will be removed from next catalog)

Contact your local Kyocera sales engineer to upgrade old products to new technology

CBN & PCD Inserts sold in 1 piece boxes.

How to read this page ➔ **B15**

90° Square

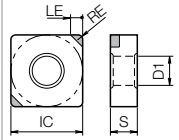
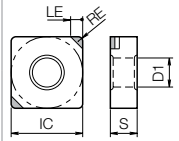
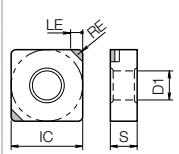
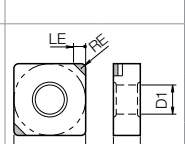
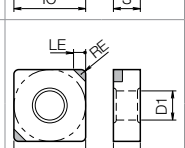
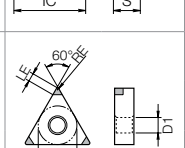
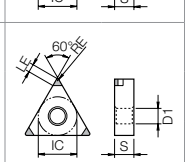
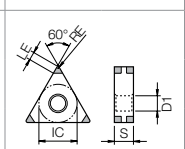
Negative Insert with Hole

(in)

Part Number	IC	S	D1
SNGA 43_	1/2	3/16	0.203
TNGA 33_	3/8	3/16	0.150

Edge Prep.			
Symbol	Cutting Edge Spec.	Example	
F	Sharp Edge		
E	Rounded Cutting Edge (Hone)	E003	R0.003" Honed
T	Chamfered Cutting Edge	T00515	0.005" X 15° Chamfered Cutting Edge
S	Chamfered and Honed Cutting Edge	S00525	0.005" X 25° Chamfered and Honed Cutting Edge

K	Gray Cast Iron (with Scale)	
	Nodular Cast Iron (without Scale)	●
	Nodular Cast Iron (with Scale)	
H	Hard Materials (Roughing)	✠
	Hard Materials (Finishing)	● ◔
	Hard Materials (Chip Control)	●
Powdered Steel		●

Insert		ANSI Part Number	Edge Prep (in)	ISO Part Number	Dimensions (in) RE	LE	No. of Edges	MEGACOAT CBN KBN05M	KBN10M	KBN25M	KBN35M	KBN60M	KBN70M	CBN KBN510	KBN525	KBN475	KBN570	Toolholder Page
Multi Edge Finishing		SNGA 432S00245MEP	S00245	SNGA 120408S00545MEP	1/32	0.071	2	●										D14 D15 F97
		433S00245MEP		120412S00545MEP	3/64	0.087		●										
Multi Edge Sharp Edge		SNGA 432MEF	F	SNGA 120408MEF	1/32	0.071	2									●		
		433MEF		120412MEF	3/64	0.087										●		
Multi Edge		SNGA 431S00525ME	S00525	SNGA 120404S01225ME	1/64	0.071	2	●		●								
		432S00525ME		120408S01225ME	1/32	0.071		●		●						●		
		433S00525ME		120412S01225ME	3/64	0.071										●		
		SNGA 432T00515ME	T00515	SNGA 120408T01215ME	1/32	0.071	2									●		
		433T00515ME		120412T01215ME	3/64	0.071										●		
Multi Edge Tough		SNGA 431S00730MET	S00730	SNGA 120404S01730MET	1/64	0.071	2	●		△								
		432S00730MET		120408S01730MET	1/32	0.071		●		●	●							
		433S00730MET		120412S01730MET	3/64	0.087		●		●	●							
Multi Edge Interruption		SNGA 432S01630MEH	S01630	SNGA 120408S04030MEH	1/32	0.071	2	●										
		433S01630MEH		120412S04030MEH	3/64	0.087		●										
Multi Edge Finishing		TNGA 331S00245MEP	S00245	TNGA 160404S00545MEP	1/64	0.106	3	●										D16 D17 D18 F88 F98 F99
		332S00245MEP		160408S00545MEP	1/32	0.094		●										
		333S00245MEP		160412S00545MEP	3/64	0.083		●										
Multi Edge Sharp Edge		TNGA 331MEF	F	TNGA 160404MEF	1/64	0.106	3									●	●	
		332MEF		160408MEF	1/32	0.094										●	●	
		333MEF		160412MEF	3/64	0.083										●		
Double-Sided Multi-Edge		TNGA 331ME6	S00525	TNGA 160404ME6	1/64	0.106	6	●										
		332ME6		160408ME6	1/32	0.094		●										
		333ME6		160412ME6	3/64	0.083		●										

CBN & PCD Inserts sold in 1 piece boxes.

● : Standard Item △ : Phaseout Item (will be removed from next catalog)

Contact your local Kyocera sales engineer to upgrade old products to new technology

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60° Triangle

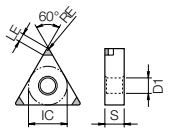
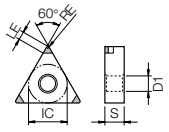
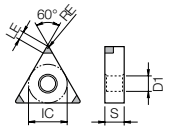
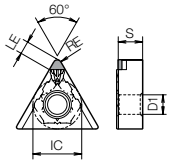
Negative Insert with Hole

(in)

Part Number	IC	S	D1
TNGA 33_	3/8	3/16	0.150
TNGM 33_	3/8	3/16	0.150

Edge Prep.			
Symbol	Cutting Edge Spec.	Example	
F	Sharp Edge		
E	Rounded Cutting Edge (Hone)	E003	R0.003" Honed
T	Chamfered Cutting Edge	T00515	0.005" X 15° Chamfered Cutting Edge
S	Chamfered and Honed Cutting Edge	S00525	0.005" X 25° Chamfered and Honed Cutting Edge

K	Gray Cast Iron (with Scale)	
	Nodular Cast Iron (without Scale)	●
	Nodular Cast Iron (with Scale)	●
H	Hard Materials (Roughing)	✠
	Hard Materials (Finishing)	● ○ ● ○ ◔
	Hard Materials (Chip Control)	● ●
	Powdered Steel	✠

Insert		ANSI Part Number	Edge Prep (in)	ISO Part Number	Dimensions (in) RE	Dimensions (in) LE	No. of Edges	MEGACOAT CBN KBN05M	KBN10M	KBN25M	KBN35M	KBN60M	KBN70M	CBN KBN510	KBN525	KBN475	KBN570	Toolholder Page
Multi Edge		TNGA 3302S00525ME	S00525	TNGA 160401S01225ME	0.004	0.114	3	●		●						●		D16 D17 D18 F88 F98 F99
		3305S00525ME		160402S01225ME	0.008	0.110		●	●	●	●	●				●		
		331S00525ME		160404S01225ME	1/64	0.106		●	●	●	●	●				●		
		332S00525ME		160408S01225ME	1/32	0.094		●	●	●	●	●				●		
		333S00525ME		160412S01225ME	3/64	0.083		●		●		△				●		
		TNGA 331T00515ME	T00515	TNGA 160404T01215ME	1/64	0.106	3						●			●		
		332T00515ME		160408T01215ME	1/32	0.094							●			●		
		333T00515ME		160412T01215ME	3/64	0.083							●			●		
Multi Edge Tough		TNGA 331S00730MET	S00730	TNGA 160404S01730MET	1/64	0.106	3	●		●	●							
		332S00730MET		160408S01730MET	1/32	0.094		●		●	●							
		333S00730MET		160412S01730MET	3/64	0.083		●		●	●							
Multi Edge Interruption		TNGA 331S01630MEH	S01630	TNGA 160404S04030MEH	1/64	0.106	3	●										
		332S01630MEH		160408S04030MEH	1/32	0.094		●										
		333S01630MEH		160412S04030MEH	3/64	0.083		●										
Chip Control		TNGM 332S00325BB1	S00325	TNGM 160408S00825BB1	1/32	0.067	1			△								
		TNGM 332S00525BB2	S00525	TNGM 160408S01225BB2	1/32	0.083				△								

● : Standard Item △ : Phaseout Item (will be removed from next catalog)

Contact your local Kyocera sales engineer to upgrade old products to new technology

CBN & PCD Inserts sold in 1 piece boxes.

How to read this page ➔ **B15**

35° Diamond

Negative Insert with Hole

(in)

Part Number	IC	S	D1
VNGA 33_	3/8	3/16	0.150

Edge Prep.			
Symbol	Cutting Edge Spec.	Example	
F	Sharp Edge		
E	Rounded Cutting Edge (Hone)	E003	R0.003" Honed
T	Chamfered Cutting Edge	T00515	0.005" X 15° Chamfered Cutting Edge
S	Chamfered and Honed Cutting Edge	S00525	0.005" X 25° Chamfered and Honed Cutting Edge

		KBN05M	KBN10M	KBN25M	KBN35M	KBN60M	KBN70M	KBN510	KBN525	KBN475	KBN570
K	Gray Cast Iron (with Scale)										
	Nodular Cast Iron (without Scale)					●				●	
	Nodular Cast Iron (with Scale)										
H	Hard Materials (Roughing)				✠						
	Hard Materials (Finishing)	●	○	●				○	◔		
	Hard Materials (Chip Control)										
	Powdered Steel						✠				●

Insert	ANSI Part Number	Edge Prep (in)	ISO Part Number	Dimensions (in) RE	LE	No. of Edges	KBN05M	KBN10M	KBN25M	KBN35M	KBN60M	KBN70M	KBN510	KBN525	KBN475	KBN570	Toolholder Page
Multi Edge Finishing	VNGA 331S00245MEP	S00245	VNGA 160404S00545MEP	1/64	0.079	2	●										D20 D21 D22 D24
	332S00245MEP		160408S00545MEP	1/32	0.071		●										
Multi Edge Sharp Edge	VNGA 331MEF	F	VNGA 160404MEF	1/64	0.079	2									●	●	
	332MEF		160408MEF	1/32	0.071										●		
Double-Sided Multi-Edge	VNGA 331ME4	S00525	VNGA 160404ME4	1/64	0.079	4	●										
	332ME4		160408ME4	1/32	0.071		●										
Multi Edge	VNGA 3302S00525ME	S00525	VNGA 160401S01225ME	0.004	0.102	2		●	●		△						
	3305S00525ME		160402S01225ME	0.008	0.091		●	●	●	●	△						
	331S00525ME		160404S01225ME	1/64	0.079		●	●	●	●	●				●		
	332S00525ME		160408S01225ME	1/32	0.071		●		●	●	●				●		
	333S00525ME		160412S01225ME	3/64	0.071		●										
	VNGA 331T00515ME	T00515	VNGA 160404T01215ME	1/64	0.079	2						●			●		
	332T00515ME		160408T01215ME	1/32	0.071							△			●		
Multi Edge Tough	VNGA 331S00730MET	S00730	VNGA 160404S01730MET	1/64	0.079	2	●		●	●							
	332S00730MET		160408S01730MET	1/32	0.071		●		●	●							
Multi Edge Interruption	VNGA 331S01630MEH	S01630	VNGA 160404S04030MEH	1/64	0.079	2	●										
	332S01630MEH		160408S04030MEH	1/32	0.071		●										
Small Edge	VNGA 332S00525SE	S00525	VNGA 160408S01225SE	1/32	0.106	1		△	△								

● : Standard Item △ : Phaseout Item (will be removed from next catalog)

Contact your local Kyocera sales engineer to upgrade old products to new technology

How to read this page ➔ **B15**

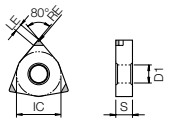
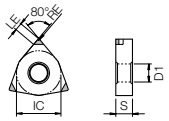
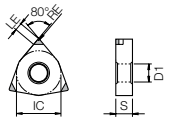
80° Trigon

Negative Insert with Hole

(in)

Part Number	IC	S	D1
WNGA 43_	1/2	3/16	0.203

Edge Prep.			
Symbol	Cutting Edge Spec.	Example	
F	Sharp Edge		
E	Rounded Cutting Edge (Hone)	E003	R0.003" Honed
T	Chamfered Cutting Edge	T00515	0.005" X 15° Chamfered Cutting Edge
S	Chamfered and Honed Cutting Edge	S00525	0.005" X 25° Chamfered and Honed Cutting Edge

		Insert		ANSI Part Number	Edge Prep (in)	ISO Part Number	Dimensions (in) RE	Dimensions (in) LE	No. of Edges	MEGACOAT CBN KBN05M	MEGACOAT CBN KBN10M	MEGACOAT CBN KBN25M	MEGACOAT CBN KBN35M	MEGACOAT CBN KBN60M	MEGACOAT CBN KBN70M	CBN KBN510	CBN KBN525	CBN KBN475	CBN KBN570	Toolholder Page
Multi Edge Sharp Edge			WNGA 431MEF	F	WNGA 080404MEF	1/64	0.079	3										●		D26 D27 F101 F102
			432MEF		080408MEF	1/32	0.102											●		
Multi Edge			WNGA 431S00525ME	S00525	WNGA 080404S01225ME	1/64	0.079	3	●		●	●	●				●		
			432S00525ME		080408S01225ME	1/32	0.102		●		●	△	●				●		
			433S00525ME		080412S01225ME	3/64	0.098		●		●								
			WNGA 431T00515ME	T00515	WNGA 080404T01215ME	1/64	0.079	3									●		
			432T00515ME		080408T01215ME	1/32	0.102							△			●		
Multi Edge Tough			WNGA 431S00730MET	S00730	WNGA 080404S01730MET	1/64	0.079	3				●	●							
			432S00730MET		080408S01730MET	1/32	0.102					●	●							
			433S00730MET		080412S01730MET	3/64	0.098						●							

	K	H	Powdered Steel
Gray Cast Iron (with Scale)			
Nodular Cast Iron (without Scale)	●		
Nodular Cast Iron (with Scale)	●		
Hard Materials (Roughing)	✠		
Hard Materials (Finishing)		●	
Hard Materials (Chip Control)		○	
Powdered Steel			✠

● : Standard Item △ : Phaseout Item (will be removed from next catalog)

Contact your local Kyocera sales engineer to upgrade old products to new technology

CBN & PCD Inserts sold in 1 piece boxes.

How to read this page ➔ **B15**

80° Diamond

Positive Insert with Hole

Part Number		IC (in)	S (in)	D1 (in)
CCMW	1109_	0.138	0.055	0.075
	1411_	0.169	0.071	0.091
	215_	1/4	3/32	0.110
	325_	3/8	5/32	0.173

Part Number		IC (in)	S (in)	D1 (in)
CPGB	2515_	5/16	3/32	0.138
	32_	3/8	1/8	0.177

Edge Prep.			
Symbol	Cutting Edge Spec.	Example	
F	Sharp Edge		
E	Rounded Cutting Edge (Hone)	E003	R0.003" Honed
T	Chamfered Cutting Edge	T00515	0.005" X 15° Chamfered Cutting Edge
S	Chamfered and Honed Cutting Edge	S00525	0.005" X 25° Chamfered and Honed Cutting Edge

		KBN05M	KBN10M	KBN25M	KBN35M	KBN60M	KBN70M	KBN510	KBN525	KBN475	KBN570
K	Gray Cast Iron (with Scale)										
	Nodular Cast Iron (without Scale)					●				●	
	Nodular Cast Iron (with Scale)										
H	Hard Materials (Roughing)				✠						
	Hard Materials (Finishing)	●	○	●				○	◔		
	Hard Materials (Chip Control)										
	Powdered Steel						✠				●

Insert	ANSI Part Number	Edge Prep (in)	ISO Part Number	Dimensions (in) RE	Dimensions (in) LE	No. of Edges	MEGACOAT CBN / CBN	Toolholder Page
Multi-Edge Sharp Edge	CCMW 3251MEF	F	CCMW 09T304MEF	1/64	0.075	2	KBN475 ●, KBN570 ●	C15 Reference Table Below
	3252MEF		09T308MEF	1/32	0.071		KBN475 ●	
Multi-Edge	CCMW 21505T00315ME	T00315	CCMW 060202T00815ME	0.008	0.079	2	KBN05M ●, KBN10M ●, KBN25M ●, KBN35M ●, KBN510 ●, KBN525 ●	
	2151T00315ME		060204T00815ME	1/64	0.075		KBN05M ●, KBN10M ●, KBN25M ●, KBN35M ●, KBN60M ●, KBN510 ●, KBN525 ●, KBN475 ●	
	2152T00315ME		060208T00815ME	1/32	0.071		KBN05M ●, KBN10M ●, KBN25M ●, KBN35M ●, KBN60M ●, KBN510 ●, KBN475 ●	
	CCMW 32505T00315ME	T00315	CCMW 09T302T00815ME	0.008	0.079	2	KBN05M ●, KBN25M ●, KBN35M ●, KBN60M △, KBN525 ●	
	3251T00315ME		09T304T00815ME	1/64	0.075		KBN05M ●, KBN10M ●, KBN25M ●, KBN35M ●, KBN60M ●, KBN70M ●, KBN510 ●, KBN525 ●, KBN475 ●	
	3252T00315ME		09T308T00815ME	1/32	0.071		KBN05M ●, KBN10M ●, KBN25M ●, KBN35M ●, KBN60M ●, KBN70M ●, KBN510 ●, KBN525 ●, KBN475 ●	
Multi-Edge General Purpose	CCMW 2151S00525MES	S00525	CCMW 060204S01225MES	1/64	0.075	2	KBN05M ●	
	2152S00525MES		060208S01225MES	1/32	0.071		KBN05M ●	
	CCMW 3251S00525MES	S00525	CCMW 09T304S01225MES	1/64	0.075	2	KBN05M ●, KBN475 ●	
	3252S00525MES		09T308S01225MES	1/32	0.071		KBN05M ●, KBN475 ●	
Multi-Edge / Tough	CCMW 3251S00435MET	S00435	CCMW 09T304S01035MET	1/64	0.075	2	KBN05M ●, KBN10M ●, KBN25M ●, KBN35M ●, KBN525 ●	
	3252S00435MET		09T308S01035MET	1/32	0.071		KBN05M ●, KBN10M ●, KBN25M ●, KBN35M ●	
Small Edge	CCMW 110905T00315SE	T00315	CCMW 030102T00815SE	0.008	0.055	1	KBN10M ●, KBN25M ●, KBN510 ●, KBN525 ●	F29 F47 F49
	11091T00315SE		030104T00815SE	1/64	0.055		KBN10M ●, KBN25M ●, KBN510 ●, KBN525 ●	
	CCMW 141105T00315SE	T00315	CCMW 040102T00815SE	0.008	0.055	1	KBN10M ●, KBN25M ●, KBN510 ●, KBN525 ●	
	14111T00315SE		040104T00815SE	1/64	0.055		KBN10M ●, KBN25M ●, KBN510 ●, KBN525 ●	
	CCMW 21505T00315SE	T00315	CCMW 060202T00815SE	0.008	0.079	1	KBN25M ●, KBN510 ●, KBN525 ●	C15 Reference Table Below
	2151T00315SE		060204T00815SE	1/64	0.075		KBN25M ●, KBN510 ●, KBN525 ●	
	CCMW 32505T00315SE	T00315	CCMW 09T302T00815SE	0.008	0.079	1	KBN510 ●, KBN525 ●	
	3251T00315SE		09T304T00815SE	1/64	0.075		KBN10M △, KBN510 ●, KBN525 ●	
Small Edge / Tough	CCMW 110905S00435SET	S00435	CCMW 030102S01035SET	0.008	0.055	1	KBN10M ●, KBN25M ●	F29 F47 F49
	11091S00435SET		030104S01035SET	1/64	0.055		KBN10M ●, KBN25M ●, KBN525 ●	
	CCMW 141105S00435SET	S00435	CCMW 040102S01035SET	0.008	0.055	1	KBN10M ●, KBN25M ●	
	14111S00435SET		040104S01035SET	1/64	0.055		KBN10M ●, KBN25M ●, KBN525 ●	
	CCMW 2151S00435SET	S00435	CCMW 060204S01035SET	1/64	0.075	1	KBN525 ●	C15 Ref. Table Below
	CCMW 3251S00435SET	S00435	CCMW 09T304S01035SET	1/64	0.075	1	KBN525 ●	
Multi-Edge	CPGB 25151T00315ME	T00315	CPGB 080204T00815ME	1/64	0.075	2	KBN05M ●, KBN25M ●, KBN510 △, KBN525 ●, KBN475 ●	
	CPGB 3205T00315ME	T00315	CPGB 090302T00815ME	0.008	0.075	2	KBN05M ●, KBN25M ●, KBN510 ●	
	321T00315ME		090304T00815ME	1/64	0.075		KBN05M ●, KBN25M ●, KBN35M △, KBN60M ●, KBN510 ●, KBN525 ●, KBN475 ●	
	322T00315ME		090308T00815ME	1/32	0.098		KBN475 ●	
Multi-Edge General Purpose	CPGB 321S00525MES	S00525	CPGB 090304S01225MES	1/64	0.075	2	KBN05M ●	
	322S00525MES		090308S01225MES	1/32	0.098		KBN05M ●	
Multi-Edge / Tough	CPGB 25151S00435MET	S00435	CPGB 080204S01035MET	1/64	0.075	2	KBN25M ●, KBN525 ●	F51 F53
	25152S00435MET		080208S01035MET	1/32	0.087		KBN25M ●	
	CPGB 321S00435MET	S00435	CPGB 090304S01035MET	1/64	0.075	2	KBN05M ●, KBN10M ●, KBN25M ●, KBN525 ●	
	322S00435MET		090308S01035MET	1/32	0.098		KBN05M ●, KBN25M ●, KBN35M ●	
Small Edge	CPGB 251505T00315SE	T00315	CPGB 080202T00815SE	0.008	0.075	1	KBN510 ●, KBN525 ●	
	25151T00315SE		080204T00815SE	1/64	0.075		KBN510 ●, KBN525 ●	
	CPGB 3205T00315SE	T00315	CPGB 090302T00815SE	0.008	0.075	1	KBN510 ●, KBN525 ●	
	321T00315SE		090304T00815SE	1/64	0.075		KBN510 ●, KBN525 ●	
Small Edge / Tough	CPGB 321S00435SET	S00435	CPGB 090304S01035SET	1/64	0.075	1	KBN525 △	

CBN & PCD Inserts sold in 1 piece boxes.

● : Standard Item △ : Phaseout Item (will be removed from next catalog)

Contact your local Kyocera sales engineer to upgrade old products to new technology

How to read this page ➔ B15

55° Diamond

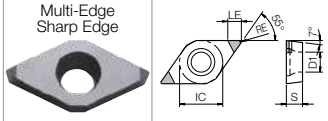
Positive Insert with Hole

(in)

Part Number		IC	S	D1
DCMW	215_	1/4	3/32	0.110
	325_	3/8	5/32	0.177

Edge Prep.			
Symbol	Cutting Edge Spec.	Example	
F	Sharp Edge		
E	Rounded Cutting Edge (Hone)	E003	R0.003" Honed
T	Chamfered Cutting Edge	T00515	0.005" X 15° Chamfered Cutting Edge
S	Chamfered and Honed Cutting Edge	S00525	0.005" X 25° Chamfered and Honed Cutting Edge

K	Gray Cast Iron (with Scale)												
	Nodular Cast Iron (without Scale)				●							●	
	Nodular Cast Iron (with Scale)												
H	Hard Materials (Roughing)				✠								
	Hard Materials (Finishing)	●	○	●				○	◔				
	Hard Materials (Chip Control)												
	Powdered Steel					✠						●	

Insert		ANSI Part Number	Edge Prep (in)	ISO Part Number	Dimensions (in) RE	Dimensions (in) LE	No. of Edges	MEGACOAT CBN KBN05M	KBN10M	KBN25M	KBN35M	KBN60M	KBN70M	CBN KBN510	KBN525	KBN475	KBN570	Toolholder Page
Multi-Edge Sharp Edge		DCMW 3251MEF	F	DCMW 11T304MEF	1/64	0.067	2									●	●	Reference Table Below
		3252MEF		11T308MEF	1/32	0.075										●	●	
Multi-Edge		DCMW 21505T00315ME	T00315	DCMW 070202T00815ME	0.008	0.075	2	●	●	●	●	●		●	●	●		
		2151T00315ME		070204T00815ME	1/64	0.067		●	△	●	●	●		●	●	●		
		2152T00315ME		070208T00815ME	1/32	0.075		●		●	●				●			
		DCMW 32505T00315ME	T00315	DCMW 11T302T00815ME	0.008	0.075	2	●	●	●	●	●		●	●			
		3251T00315ME		11T304T00815ME	1/64	0.067		●	●	●	●	●	●	●		●		
		3252T00315ME		11T308T00815ME	1/32	0.075		●	●	●	●	●	●	●	●	●		
		3253T00315ME		11T312T00815ME	3/64	0.075		●		△								
Multi-Edge General Purpose		DCMW 32505S00525MES	S00525	DCMW 11T302S01225MES	0.008	0.075	2	●										
		3251S00525MES		11T304S01225MES	1/64	0.067		●								●		
		3252S00525MES		11T308S01225MES	1/32	0.075		●								●		
Multi-Edge Tough		DCMW 21505S00435MET	S00435	DCMW 070202S01035MET	0.008	0.075	2			●	●							
		2151S00435MET		070204S01035MET	1/64	0.067				●	●							
		2152S00435MET		070208S01035MET	1/32	0.075				●								
		DCMW 32505S00435MET	S00435	DCMW 11T302S01035MET	0.008	0.075	2	●		●	●				●			
		3251S00435MET		11T304S01035MET	1/64	0.067		●	●	●	●				●			
		3252S00435MET		11T308S01035MET	1/32	0.075			●	●	●				●			
		3253S00435MET		11T312S01035MET	3/64	0.075			●		●							
Small Edge		DCMW 21505T00315SE	T00315	DCMW 070202T00815SE	0.008	0.075	1			●				△	●			
		2151T00315SE		070204T00815SE	1/64	0.067				●				●	●			
		DCMW 32505T00315SE	T00315	DCMW 11T302T00815SE	0.008	0.075	1							●	●			
		3251T00315SE		11T304T00815SE	1/64	0.067								●	●			
		3252T00315SE		11T308T00815SE	1/32	0.075				△					△			
Small Edge Tough		DCMW 2151S00435SET	S00435	DCMW 070204S01035SET	1/64	0.067	1								●			
		DCMW 32505S00435SET	S00435	DCMW 11T302S01035SET	0.008	0.075	1								●			
		3251S00435SET		11T304S01035SET	1/64	0.067									●			
		3252S00435SET		11T308S01035SET	1/32	0.075									△			

● CC

Part Number	Applicable Toolholder Page
CC..215_	E24~E26, E45, E52, F29, F47, F49
CC..325_	E24~E26, E45, E52, F47, F89

● DC

Part Number	Applicable Toolholder Page
DC..215_	E27~E33, E46, E52, F55~F59
DC..325_	E22, E27~E33, E46, E52, F55~F59, F89

● : Standard Item △ : Phaseout Item (will be removed from next catalog)

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CBN & PCD Inserts sold in 1 piece boxes.

How to read this page ➔ **B15**

60° Triangle

Positive Insert with Hole

Part Number	Applicable Toolholder Page
TP..1515_	E35, F59, F63, F65, F67
TP..1815_	E35, F28, F63, F65, F67
TP..22_	E35, F63, F65, F66
TP..32_	F63, F66

Part Number		IC	S	D1
		(in)		
TPGB	1515_	3/16	3/32	0.098
	1815_	7/32	3/32	0.118
	22_	1/4	1/8	0.138
	32_	3/8	1/8	0.177
TPGW	33_	3/8	3/16	0.173

Edge Prep.		
Symbol	Cutting Edge Spec.	Example
F	Sharp Edge	
E	Rounded Cutting Edge (Hone)	E003 R0.003" Honed
T	Chamfered Cutting Edge	T00315 0.003" X 15° Chamfered Cutting Edge
S	Chamfered and Honed Cutting Edge	S00525 0.005" X 25° Chamfered and Honed Cutting Edge

K	Gray Cast Iron (with Scale)	
	Nodular Cast Iron (without Scale)	●
	Nodular Cast Iron (with Scale)	●
H	Hard Materials (Roughing)	✖
	Hard Materials (Finishing)	● ○ ● ○ ◔
	Hard Materials (Chip Control)	
	Powdered Steel	◕

Insert	ANSI Part Number	Edge Prep (in)	ISO Part Number	Dimensions (in) RE	LE	No. of Edges	MEGACOAT CBN KBN05M	KBN10M	KBN25M	KBN35M	KBN60M	KBN70M	CBN KBN510	KBN525	KBN475	KBN570	Toolholder Page
Multi-Edge Sharp Edge	TPGB 221MEF	F	TPGB 110304MEF	1/64	0.083	3									●	●	Reference Table Above
	222MEF		110308MEF	1/32	0.071										●	●	
Multi-Edge	TPGB 2205T00315ME	T00315	TPGB 110302T00815ME	0.008	0.091	3	●		●		●		●	●	●		
	221T00315ME		110304T00815ME	1/64	0.083		●	●	●	●	●		●	●	●		
	222T00315ME		110308T00815ME	1/32	0.071		●		●	△	●			●	●		
	TPGB 321T00315ME	T00315	TPGB 160304T00815ME	1/64	0.071	3	●		●	△	●				●		
	322T00315ME		160308T00815ME	1/32	0.059		●		△		●				●		
Multi-Edge General Purpose	TPGB 221S00525MES	S00525	TPGB 110304S01225MES	1/64	0.083	3	●								●		
	222S00525MES		110308S01225MES	1/32	0.071		●								●		
Multi-Edge Tough	TPGB 2205S00435MET	S00435	TPGB 110302S01035MET	0.008	0.091	3		●	●	△							
	221S00435MET		110304S01035MET	1/64	0.083		●	●	●	●							
	222S00435MET		110308S01035MET	1/32	0.071		●	●	●	●							
	TPGB 321S00435MET	S00435	TPGB 160304S01035MET	1/64	0.071	3			●					●			
	322S00435MET		160308S01035MET	1/32	0.059				△					●			
Small Edge	TPGB 151505T00315SE	T00315	TPGB 080202T00815SE	0.008	0.071	1			●				●	●			
	15151T00315SE		080204T00815SE	1/64	0.062			●	●				●	●			
	TPGB 181505T00315SE	T00315	TPGB 090202T00815SE	0.008	0.071	1		●	●				●	●			
	18151T00315SE		090204T00815SE	1/64	0.062			●	●				●	●			
	TPGB 2205T00315SE	T00315	TPGB 110302T00815SE	0.008	0.075	1		●					●	●			
	221T00315SE		110304T00815SE	1/64	0.071			●					●	●			
	222T00315SE		110308T00815SE	1/32	0.059									●			
	TPGB 3205T00315SE	T00315	TPGB 160302T00815SE	0.008	0.075	1							●	●			
	321T00315SE		160304T00815SE	1/64	0.071								●	●			
Small Edge Tough	TPGB 151505S00435SET	S00435	TPGB 080202S01035SET	0.008	0.071	1			●								
	15151S00435SET		080204S01035SET	1/64	0.062				●					●			
	TPGB 181505S00435SET	S00435	TPGB 090202S01035SET	0.008	0.071	1			●								
	18151S00435SET		090204S01035SET	1/64	0.062				●					●			
	TPGB 221S00435SET	S00435	TPGB 110304S01035SET	1/64	0.071	1								●			
	222S00435SET		110308S01035SET	1/32	0.059									●			
	TPGB 321S00435SET	S00435	TPGB 160304S01035SET	1/64	0.071	1								●			
Multi-Edge	TPGW 331T00315ME	T00315	TPGW 160404T00815ME	1/64	0.071	3			●								-
	332T00315ME		160408T00815ME	1/32	0.059				△								
Multi-Edge Tough	TPGW 331S00435MET	S00435	TPGW 160404S01035MET	1/64	0.071	3			●					△			
	332S00435MET		160408S01035MET	1/32	0.059				●								
Small Edge	TPGW 331T00315SE	T00315	TPGW 160404T00815SE	1/64	0.071	1								●			

KYOCERA

CBN & PCD Inserts sold in 1 piece boxes.

● : Standard Item △ : Phaseout Item (will be removed from next catalog)

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35° Diamond

Positive Insert with Hole

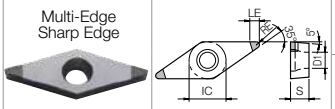
Part Number	Applicable Toolholder Page
VB..22_	E36~E39, E47, E52, F68~F75
VB..33_	E38~E39, F68~F75

(in)

Part Number		IC	S	D1
VBGW	22_	1/4	1/8	0.110
	33_	3/8	3/16	0.173
VCGW	1515_	3/16	3/32	0.091

Edge Prep.			
Symbol	Cutting Edge Spec.	Example	
F	Sharp Edge		
E	Rounded Cutting Edge (Hone)	E003	R0.003" Honed
T	Chamfered Cutting Edge	T00315	0.003" X 15° Chamfered Cutting Edge
S	Chamfered and Honed Cutting Edge	S00525	0.005" X 25° Chamfered and Honed Cutting Edge

K	Gray Cast Iron (with Scale)										
	Nodular Cast Iron (without Scale)				●				●		
	Nodular Cast Iron (with Scale)										
H	Hard Materials (Roughing)			✖							
	Hard Materials (Finishing)	●	○	●				○	◔		
	Hard Materials (Chip Control)										
	Powdered Steel						✖			●	

Insert		ANSI Part Number	Edge Prep (in)	ISO Part Number	Dimensions (in) RE	Dimensions (in) LE	No. of Edges	MEGACOAT CBN KBN05M	KBN10M	KBN25M	KBN35M	KBN60M	KBN70M	CBN KBN510	KBN525	KBN475	KBN570	Toolholder Page
Multi-Edge Sharp Edge		VBGW 221MEF	F	VBGW 110304MEF	1/64	0.079	2									●	●	Reference Table Above
		222MEF		110308MEF	1/32	0.067										●	●	
		VBGW 331MEF		VBGW 160404MEF	1/64	0.079	2							●	●	●	●	
		332MEF		160408MEF	1/32	0.067									●	●	△	
Multi-Edge		VBGW 2205T00315ME	T00315	VBGW 110302T00815ME	0.008	0.094		●	●	●	△	△		●		●		
		221T00315ME		110304T00815ME	1/64	0.079	2	●	●	●	△		●	●	●	●		
		222T00315ME		110308T00815ME	1/32	0.067		●		●					●	●		
		VBGW 3305T00315ME	T00315	VBGW 160402T00815ME	0.008	0.094		●	●	●	●			●	●			
		331T00315ME		160404T00815ME	1/64	0.079	2	●	●	●	●	●	●	●	●	●		
		332T00315ME		160408T00815ME	1/32	0.067		●	●	●	●	●	△		●	●		
Multi-Edge General Purpose		VBGW 221S00525MES	S00525	VBGW 110304S01225MES	1/64	0.079	2	●								●		
		222S00525MES		110308S01225MES	1/32	0.067										●		
		VBGW 331S00525MES	S00525	VBGW 160404S01225MES	1/64	0.079	2	●								●		
		332S00525MES		160408S01225MES	1/32	0.067										●		
Multi-Edge Tough		VBGW 2205S00435MET	S00435	VBGW 110302S01035MET	0.008	0.094				●	△							
		221S00435MET		110304S01035MET	1/64	0.079	2	●	●	●	●				●			
		222S00435MET		110308S01035MET	1/32	0.067				●	●							
		VBGW 3305S00435MET	S00435	VBGW 160402S01035MET	0.008	0.094			●	●	△							
		331S00435MET		160404S01035MET	1/64	0.079	2	●	●	●	●				●			
		332S00435MET		160408S01035MET	1/32	0.067			●	●	●							
Small Edge		VBGW 2205T00315SE	T00315	VBGW 110302T00815SE	0.008	0.110	1		●	●				●	●			
		221T00315SE		110304T00815SE	1/64	0.094			●	●				●	●			
		VBGW 3305T00315SE	T00315	VBGW 160402T00815SE	0.008	0.094	1							●	●			
		331T00315SE		160404T00815SE	1/64	0.079			●					●	●			
		332T00315SE		160408T00815SE	1/32	0.067								●	●			
Small Edge Tough		VBGW 221S00435SET	S00435	VBGW 110304S01035SET	1/64	0.079	1								●			
		222S00435SET		110308S01035SET	1/32	0.067				●								
		VBGW 331S00435SET	S00435	VBGW 160404S01035SET	1/64	0.079	1								●			
		332S00435SET		160408S01035SET	1/32	0.067									●			
Multi-Edge		VCGW 151505T00315ME	T00315	VCGW 080202T00815ME	0.008	0.079		●		●	△			●	●	●		
		15151T00315ME		080204T00815ME	1/64	0.079	2	●		●		●		●	●	●		
		15152T00315ME		080208T00815ME	1/32	0.067		●								●		
Multi-Edge Tough		VCGW 151505S00435MET	S00435	VCGW 080202S01035MET	0.008	0.079				●								
		15151S00435MET		080204S01035MET	1/64	0.079	2			●								
		15152S00435MET		080208S01035MET	1/32	0.067				●								E47 F68 F70~F75
Small Edge		VCGW 151505T00315SE	T00315	VCGW 080202T00815SE	0.008	0.094			●	△				●	●			
		15151T00315SE		080204T00815SE	1/64	0.079	1		●					●	●			
Small Edge Tough		VCGW 15151S00435SET	S00435	VCGW 080204S01035SET	1/64	0.079	1								●			
		15152S00435SET		080208S01035SET	1/32	0.071									●			

● : Standard Item △ : Phaseout Item (will be removed from next catalog)

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CBN & PCD Inserts sold in 1 piece boxes.

How to read this page ➔ **B15**

80° Trigon

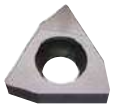
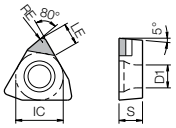
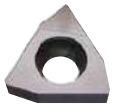
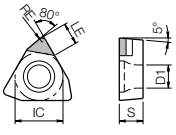
Positive Insert with Hole

(in)

Part Number	IC	S	D1
WBGW 121_	5/32	1/16	0.091
1515_	3/16	3/32	0.091

Edge Prep. Symbol	Cutting Edge Spec.	Example	
F	Sharp Edge		
E	Rounded Cutting Edge (Hone)	E003	R0.003" Honed
T	Chamfered Cutting Edge	T00315	0.003" X 15° Chamfered Cutting Edge
S	Chamfered and Honed Cutting Edge	S00525	0.005" X 25° Chamfered and Honed Cutting Edge

		MEGACOAT CBN						CBN				
		KBN05M	KBN10M	KBN25M	KBN35M	KBN60M	KBN70M	KBN510	KBN525	KBN475	KBN570	Toolholder Page
K	Gray Cast Iron (with Scale)											
	Nodular Cast Iron (without Scale)											
	Nodular Cast Iron (with Scale)											
H	Hard Materials (Roughing)											
	Hard Materials (Finishing)		●	●				○	◔			
	Hard Materials (Chip Control)											
	Powdered Steel											

Insert	ANSI Part Number	Edge Prep (in)	ISO Part Number	Dimensions (in) RE	LE	No. of Edges											
Small Edge  	WBGW 12105T00315L-SE	T00315	WBGW 060102T00815L-SE	0.008	0.075	1		●	●				●	●			F31 F77 F78 F79
	1211T00315L-SE		060104T00815L-SE	1/64	0.075			●	●				●	●			
	WBGW 151505T00315L-SE	T00315	WBGW 080202T00815L-SE	0.008	0.091	1		●	●				△	●			
	15151T00315L-SE		080204T00815L-SE	1/64	0.091			●	●				●	●			
Small Edge Tough  	WBGW 12105S00435L-SET	S00435	WBGW 060102S01035LSET	0.008	0.075	1			●								
	1211S00435L-SET		060104S01035LSET	1/64	0.075				●					●			
	WBGW 151505S00435L-SET	S00435	WBGW 080202S01035LSET	0.008	0.091	1			●								
	15151S00435L-SET		080204S01035LSET	1/64	0.091			●	●					●			

(in)

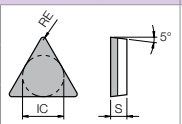
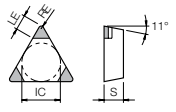
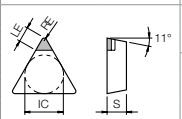
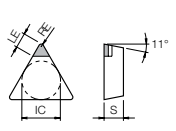
Part Number	IC	S	D1
TBG 121_	5/32	1/16	-
TPG 22_	1/4	1/8	-
TPG 32_	3/8	1/8	-

60° Triangle

Positive Insert without Hole

Edge Prep. Symbol	Cutting Edge Spec.	Example	
F	Sharp Edge		
E	Rounded Cutting Edge (Hone)	E003	R0.003" Honed
T	Chamfered Cutting Edge	T00315	0.003" X 15° Chamfered Cutting Edge
S	Chamfered and Honed Cutting Edge	S00525	0.005" X 25° Chamfered and Honed Cutting Edge

		MEGACOAT CBN						CBN				
		KBN05M	KBN10M	KBN25M	KBN35M	KBN60M	KBN70M	KBN510	KBN525	KBN475	KBN570	Toolholder Page
K	Gray Cast Iron (with Scale)											
	Nodular Cast Iron (without Scale)											
	Nodular Cast Iron (with Scale)											
H	Hard Materials (Roughing)											
	Hard Materials (Finishing)		●					○	◔			
	Hard Materials (Chip Control)											
	Powdered Steel										●	

Insert	ANSI Part Number	Edge Prep (in)	ISO Part Number	Dimensions (in) RE	LE	No. of Edges											
CBN Surface Type  	TBG 12105T00315	T00315	TBGN 060102T00815	0.008	-	3							●	●			-
	1211T00315		060104T00815	1/64	-								●	●			
	1212T00315		060108T00815	1/32	-			●					●				
Multi Edge  	TPG 2205T00315ME	T00315	TPGN 110302T00815ME	0.008	0.102	3								△			
	221T00315ME		110304T00815ME	1/64	0.098									●			
Small Edge  	TPG 221T00315SE	T00315	TPGN 110304T00815SE	1/64	0.098	1								●			F85
	222T00315SE		110308T00815SE	1/32	0.094									△			
	TPG 3205T00315SE	T00315	TPGN 160302T00815SE	0.008	0.102									●			
	321T00315SE		160304T00815SE	1/64	0.094	1							●	●			
	322T00315SE		160308T00815SE	1/32	0.083									●			
Small Edge Tough  	TPG 221S00435SET	S00435	TPGN 110304S01035SET	1/64	0.098	1								●			
	TPG 321S00435SET	S00435	TPGN 160304S01035SET	1/64	0.094	1								●			

CBN & PCD Inserts sold in 1 piece boxes.

● : Standard Item △ : Phaseout Item (will be removed from next catalog)
Contact your local Kyocera sales engineer to upgrade old products to new technology

Negative

Negative Insert without Hole

(in)

Part Number		IC	S
CNM	32_	3/8	1/8
	43_	1/2	3/16
RNM	22	1/4	1/8
	32	3/8	1/8
	42	1/2	1/8
	43	1/2	3/16

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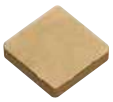
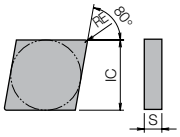
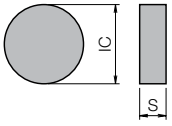
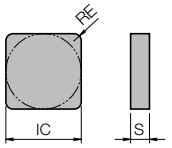
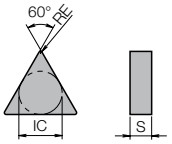
(in)

Part Number		IC	S
SNM	32_	3/8	1/8
	42_	1/2	1/8
	43_	1/2	3/16
TNM	22_	1/4	1/8
	33_	3/8	3/16

Edge Prep.			
Symbol	Cutting Edge Spec.	Example	
F	Sharp Edge		
E	Rounded Cutting Edge (Hone)	E003	R0.003" Honed
T	Chamfered Cutting Edge	T00315	0.003" X 15° Chamfered Cutting Edge
S	Chamfered and Honed Cutting Edge	S00525	0.005" X 25° Chamfered and Honed Cutting Edge

K	Gray Cast Iron (with Scale)	✖
	Nodular Cast Iron (without Scale)	✖
	Nodular Cast Iron (with Scale)	
H	Hard Materials (Roughing)	
	Hard Materials (Finishing)	●
	Hard Materials (Chip Control)	
	Powdered Steel	

Insert		ANSI Part Number	Edge Prep (in)	ISO Part Number	Dimensions (in) RE	No. of Edges	PVD Coated CBN KBN900	Toolholder Page
Solid 		CNM 322	S00820	CNMN 090308S02020	1/32	4	●	D38
		CNM 323		CNMN 090312S02020	3/64		●	
		CNM 433	S00820	CNMN 120412S02020	3/64	4	●	D32
		CNM 434		CNMN 120416S02020	1/16		●	
Solid 		RNM 22	S00820	RNMN 060300S02020	-	Depends on D.O.C.	●	-
		RNM 32	S00820	RNMN 090300S02020	-		●	D39
		RNM 42	S00820	RNMN 120300S02020	-		●	
		RNM 43	S00820	RNMN 120400S02020	-		●	D37 D39
Solid 		SNM 322	S00820	SNMN 090308S02020	1/32	8	●	D40 D41
		SNM 323		SNMN 090312S02020	3/64		●	
		SNM 423		SNMN 120312S02020	3/64	8	●	
		SNM 432	S00820	SNMN 120408S02020	1/32	8	△	D35 D40 D41
		SNM 433		SNMN 120412S02020	3/64		●	
		SNM 435		SNMN 120420S02020	5/64		●	
Solid 		TNM 222	S00820	TNMN 110308S02020	1/32	6	●	D42 F104
		TNM 332	S00820	TNMN 160408S02020	1/32	6	●	D36
		TNM 333		TNMN 160412S02020	3/64		●	

● : Standard Item △ : Phaseout Item (will be removed from next catalog)

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CBN & PCD Inserts sold in 1 piece boxes.

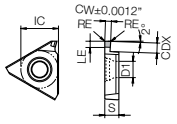
External Grooving Inserts

How to read this page ➔ B15

Grooving Inserts (1-edge)

Edge Prep.			
Symbol	Cutting Edge Spec.	Example	
E	Rounded Cutting Edge (Hone)	E003	R0.003" Honed
T	Chamfered Cutting Edge	T00315	0.003" X 15° Chamfered Cutting Edge
S	Chamfered and Honed Cutting Edge	S00525	0.005" X 25° Chamfered and Honed Cutting Edge

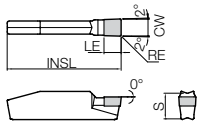
		CBN	
K	Gray Cast Iron (with Scale)		
	Nodular Cast Iron (without Scale)		
	Nodular Cast Iron (with Scale)		
H	Hard Materials (Roughing)		
	Hard Materials (Finishing)	○	●
	Hard Materials (Chip Control)		
	Powdered Steel		

Insert (Handed Insert shows Right-hand)		ANSI Part Number	ANSI Old Part Number	Edge Prep (in)	CW±0.0012 (in)	Dimensions (mm) CW±0.03	CDX	RE	IC	S	D1	LE	No. of Edges	CBN KBN510 R	KBN510 L	KBN525 R	KBN525 L	Toolholder Page
External Internal Grooving		GBA43R/L 125-020	GBA43R/L 125	E003	0.049	1.25	2.0	0.2	12.7	4.76	5.5	1.9	1	●		●	●	
		150-020	150		0.059	1.50	3.5	0.2	12.7	4.76	5.5	1.9		●	●	●	●	G12 G13
		200-020	200		0.079	2.00	3.5	0.2	12.7	4.76	5.5	1.9		●	●	●	●	G80
		300-020	300		0.118	3.00	4.0	0.2	12.7	4.76	5.5	1.9		●		●		

Deep Grooving Inserts (1-edge)

Edge Prep.			
Symbol	Cutting Edge Spec.	Example	
E	Rounded Cutting Edge (Hone)	E003	R0.003" Honed
T	Chamfered Cutting Edge	T00315	0.003" X 15° Chamfered Cutting Edge
S	Chamfered and Honed Cutting Edge	S00525	0.005" X 25° Chamfered and Honed Cutting Edge

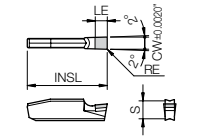
		MEGA CBN	
K	Gray Cast Iron (with Scale)		
	Nodular Cast Iron (without Scale)		
	Nodular Cast Iron (with Scale)		
H	Hard Materials (Roughing)		
	Hard Materials (Finishing)	○	
	Hard Materials (Chip Control)		
	Powdered Steel		●

Insert		ANSI Part Number	Edge Prep (in)	CW±0.0012 (in)	Dimensions (mm) CW±0.03	RE	INSL	S	LE	No. of Edges	MEGA CBN KBN05M	KBN570	Toolholder Page
External Grooving		GDGS 2020N-020NB	E003	0.079	2.0	0.2	20	4.3	2.9	1	●		G28 ~ G40
			E0008	0.079	2.0	0.2	20	4.3	2.9			●	
		3020N-040NB	E003	0.118	3.0	0.4	20	4.3	2.9	1	●		
			E0008	0.118	3.0	0.4	20	4.3	2.9			●	
		4020N-040NB	E003	0.157	4.0	0.4	20	4.3	2.9	1	●		
			E0008	0.157	4.0	0.4	20	4.3	2.9			●	
		5020N-040NB	E003	0.197	5.0	0.4	20	4.3	2.9	1	●		
			E0008	0.197	5.0	0.4	20	4.3	2.9			●	
		6020N-040NB	E003	0.236	6.0	0.4	20	4.3	2.9	1	●		

Deep Grooving Inserts (1-edge)

Edge Prep.			
Symbol	Cutting Edge Spec.	Example	
E	Rounded Cutting Edge (Hone)	E003	R0.003" Honed
T	Chamfered Cutting Edge	T00315	0.003" X 15° Chamfered Cutting Edge
S	Chamfered and Honed Cutting Edge	S00525	0.005" X 25° Chamfered and Honed Cutting Edge

		CBN	
K	Gray Cast Iron (with Scale)		
	Nodular Cast Iron (without Scale)		
	Nodular Cast Iron (with Scale)		
H	Hard Materials (Roughing)		
	Hard Materials (Finishing)	○	●
	Hard Materials (Chip Control)		
	Powdered Steel		

Insert		ANSI Part Number	Edge Prep (in)	CW±0.0020 (in)	Dimensions (mm) CW±0.05	RE	INSL	S	LE	No. of Edges	CBN KBN510	KBN525	Toolholder Page
External Grooving		GMN 2	E003	0.079	2	0.2	20	4.3	2.9	1	●	●	G52,G53
		3		0.118	3	0.4					●	●	G52
		4		0.157	4						●	●	G53
		5		0.197	5						△	△	G54
		6		0.236	6						△	△	G52,G53

● : Standard Item △ : Phaseout Item (will be removed from next catalog)
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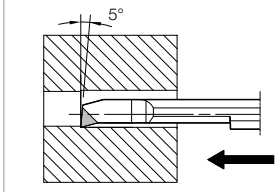
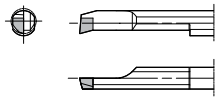
EZ Bars

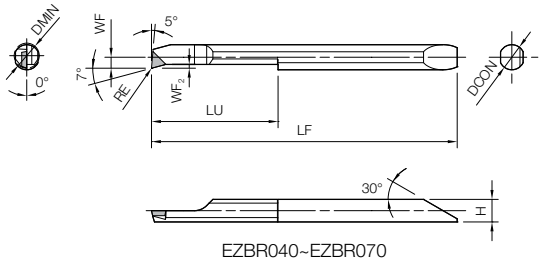
EZB-NB: CBN

How to read this page B15





EZBR030 Type



EZBR040~EZBR070

• Righ-Hand Insert Shown

EZ Bar Dimensions

Edge Prep.			
Symbol	Cutting Edge Spec.	Example	
E	Rounded Cutting Edge (Hone)	E003	R0.003" Honed
T	Chamfered Cutting Edge	T00315	0.003" X 15° Chamfered Cutting Edge
S	Chamfered and Honed Cutting Edge	S00525	0.005" X 25° Chamfered and Honed Cutting Edge

		MEGA CBN
		KBN05M
K	Gray Cast Iron (with Scale)	
	Nodular Cast Iron (without Scale)	
	Nodular Cast Iron (with Scale)	
H	Hard Materials (Roughing)	
	Hard Materials (Finishing)	●
	Hard Materials (Chip Control)	
	Powdered Steel	

ANSI Part Number		Edge Prep (in)	Min. Bore Dia. DMIN	DCON	H	LF	LU	WF	WF_2	RE	No. of Edges	MEGA CBN KBN05M	Applicable Sleeves Page
EZBR	030030-003NB	T00315	3	3	2.6	38.8	13	1.25	0.3	$0.035^{+0.015}$	1	●	F32 ~ F37
	040040-003NB	T00315	4	4	3.6	48.8	20	1.75	0.5			●	
	050050-003NB	T00315	5	5	4.6	58.1	25	2.25	0.5			●	
	060060-003NB	T00315	6	6	5.6	66.1	30	2.75	0.5			●	
	070070-003NB	T00315	7	7	6.6	74.1	35	3.25	0.5			●	

● : Standard Item △ : Phaseout Item (will be removed from next catalog)
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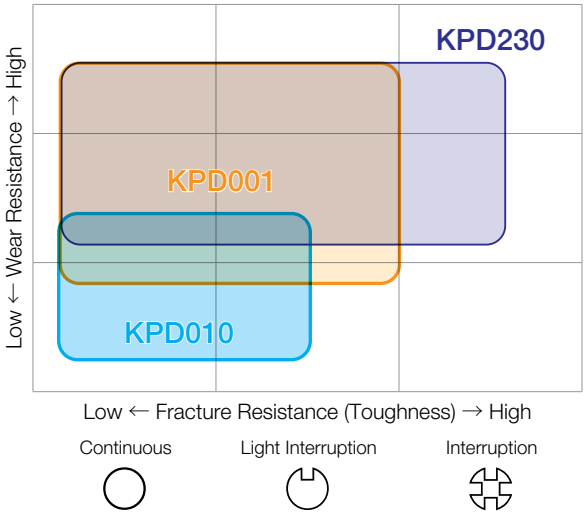
CBN & PCD Inserts sold in 1 piece boxes.

Application Map



About Insert Grades

Grades	Applications	Advantages
KPD001 (Average grain size under 1µm)	• High speed machining of non-ferrous metals and brass • High speed machining of glass fiber and plastics • Machining of carbide and ceramics	• Smallest micro-grain possible in PCD • High edge strength with superior wear resistance, fracture resistance, and edge sharpening performance
KPD010 (Average grain size 10µm)	• High speed machining of non-ferrous metals and brass • High speed machining of glass fiber and plastics • Machining of carbide and ceramics	• Well balanced wear resistance and flexural strength • General Purpose
KPD230 (Mixture of fine grain with average grain size 2-30µm and rough)	• High speed milling of aluminum alloy and non-ferrous metals such as brass • High speed milling of glass fiber and plastics	• High density PCD with mixture of both rough and fine grains with excellent abrasive wear and chipping resistance
KPD250 (Average grain size 25µm (Made to order))	• High speed machining of high silicon aluminium alloy • Machining of carbide	• Rough grain PCD (Average grain size 25µm) • Superior to wear resistance

Turning Insert Identification System

C	N	M	M	12	04	02	M	SE
C	C	G	W	04	01	01		SE

Refer to **B2** for "Turning Indexable Inserts Identification System"

Insert Type	Part Number	Manufacture's Option 1	Manufacture's Option 2	Series Name	Cutting Edge Length	No. of Edges	Regrinding
Negative	**CNMM120402M-SE**	M (Indicates the insert is for negative toolholders)	SE	Small Edge	Short (Small Edge)	1	Not Recommended
	CNMM120402M-NE		NE	New Value Edge	Long (85% length compared to no indication's cutting edge)	1	Possible
	CNMM120402M		No Indication	-	Long	1	
Positive	**CCGW040101SE**	-	SE	Small Edge	Short (Small Edge)	1	Not Recommended
	CCGW040101NE		NE	New Value Edge	Long (85% length compared to no indication's cutting edge)	1	Possible
	CCGW040101		No Indication	-	Long	1	

Note) 1. No edge preparation symbols for PCD inserts. Most of the PCD inserts' edge preparations are sharp edge.
2. "M" in manufacturer's option 1 indicates the inserts are applicable to negative toolholders.
3. Refer to **Page** **B3** for insert color.

• About Regrinding
1) Regrinding is possible with the inserts with "NE" and no symbol in manufacturer's option 2. Regrinding may not be possible depending on the condition of the used edge.
2) Regrinding is not recommended for inserts with "SE" in manufacturer's option 2.

Recommended Cutting Conditions (Turning)

Workpiece Material	Insert Grades		Cutting Conditions				Remarks
	KPD001	KPD010	Cutting Speed (sfm)	D.O.C. (in) Small Edge and Positive Inserts	D.O.C. (in) Negative Inserts	Feed Rate (ipr)	
Aluminum Alloys Zinc Alloys	★	☆	975 - 4925	~0.039	~0.079	0.001~0.020	Both Dry and Wet Cutting Available
Copper, Brass, Bronze	★	☆	975 - 3275	~0.039	~0.079	0.001~0.020	
Magnesium Alloys	★	☆	1300 - 3925	~0.039	~0.079	0.001~0.020	
Carbide	★	☆	25 - 100	~0.012	~0.012	0.001~0.004	
Titanium Alloys	★	☆	325 - 650	~0.039	~0.079	0.002~0.008	Wet
Glass Fiber Reinforced Plastics Carbon Fiber	★	☆	325 - 1975	~0.039	~0.079	0.002~0.020	Dry
Silica Filled Plastic Particle Board	★	☆	1300 - 2625	~0.039	~0.079	0.002~0.020	

★: 1st Recommendation ☆: 2nd Recommendation

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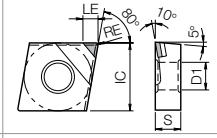
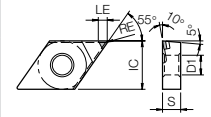
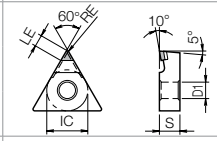
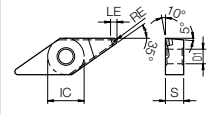
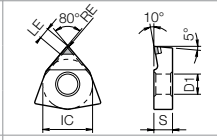
Negative

Negative Insert with Hole

How to read this page ➔ B15

Edge Prep.																		
All PCD Items		Sharp Edge																
Insert		ANSI Part Number	ISO Part Number	IC	S	D1	RE	LE	No. of Edges	KPD001	KPD010	Toolholder Page
Small Edge		CNMM 4305M-SE	CNMM 120402M-SE	1/2	3/16	0.203	0.008	0.110		●	●	D8-D9 F87 F91 F92
		431M-SE	120404M-SE	1/2	3/16	0.203	1/64	0.110	1	●	●	
		432M-SE	120408M-SE	1/2	3/16	0.203	1/32	0.106		●	●	
		CNMM 4305M-NE	CNMM 120402M-NE	1/2	3/16	0.203	0.008	0.201		●		
		431M-NE	120404M-NE	1/2	3/16	0.203	1/64	0.197	1	●		
		432M-NE	120408M-NE	1/2	3/16	0.203	1/32	0.193		●		
		CNMM 4305M	CNMM 120402M	1/2	3/16	0.203	0.008	0.228		●	●	
		431M	120404M	1/2	3/16	0.203	1/64	0.228	1	●	●	
		432M	120408M	1/2	3/16	0.203	1/32	0.224		●	●	
		433M	120412M	1/2	3/16	0.203	3/64	0.220		●	●	
Small Edge		DNMM 4305M-SE	DNMM 150402M-SE	1/2	3/16	0.203	0.008	0.110		●	●	D12 D13 F88 F94 F95
		431M-SE	150404M-SE	1/2	3/16	0.203	1/64	0.102	1	●	●	
		432M-SE	150408M-SE	1/2	3/16	0.203	1/32	0.087		●	●	
		DNMM 4305M-NE	DNMM 150402M-NE	1/2	3/16	0.203	0.008	0.205		●		
		431M-NE	150404M-NE	1/2	3/16	0.203	1/64	0.197	1	●		
		432M-NE	150408M-NE	1/2	3/16	0.203	1/32	0.181		●		
		DNMM 4305M	DNMM 150402M	1/2	3/16	0.203	0.008	0.232		●	●	
		431M	150404M	1/2	3/16	0.203	1/64	0.228	1	●	●	
		432M	150408M	1/2	3/16	0.203	1/32	0.213		●	●	
Small Edge		TNMM 3305M-SE	TNMM 160402M-SE	3/8	3/16	0.150	0.008	0.106		●	●	D16 D17 D18 F88 F98 F99
		331M-SE	160404M-SE	3/8	3/16	0.150	1/64	0.102	1	●	●	
		332M-SE	160408M-SE	3/8	3/16	0.150	1/32	0.091		●	●	
		TNMM 3305M-NE	TNMM 160402M-NE	3/8	3/16	0.150	0.008	0.126		●		
		331M-NE	160404M-NE	3/8	3/16	0.150	1/64	0.122	1	●		
		332M-NE	160408M-NE	3/8	3/16	0.150	1/32	0.110		●		
		TNMM 3305M	TNMM 160402M	3/8	3/16	0.150	0.008	0.150		●	●	
		331M	160404M	3/8	3/16	0.150	1/64	0.142	1	●	●	
		332M	160408M	3/8	3/16	0.150	1/32	0.130		●	●	
		333M	160412M	3/8	3/16	0.150	3/64	0.118			●	
Small Edge		VNMM 3305M-SE	VNMM 160402M-SE	3/8	3/16	0.150	0.008	0.114		●	●	D20 D21 D22 D24
		331M-SE	160404M-SE	3/8	3/16	0.150	1/64	0.098	1	●	●	
		332M-SE	160408M-SE	3/8	3/16	0.150	1/32	0.062		●	●	
		VNMM 3305M-NE	VNMM 160402M-NE	3/8	3/16	0.150	0.008	0.185		●		
		331M-NE	160404M-NE	3/8	3/16	0.150	1/64	0.165	1	●		
		332M-NE	160408M-NE	3/8	3/16	0.150	1/32	0.134		●		
		VNMM 3305M	VNMM 160402M	3/8	3/16	0.150	0.008	0.209		●	●	
		331M	160404M	3/8	3/16	0.150	1/64	0.189	1	●	●	
		332M	160408M	3/8	3/16	0.150	1/32	0.157		●	△	
Small Edge		WNMM 4305M-SE	WNMM 080402M-SE	1/2	3/16	0.203	0.008	0.110		●	△	D26 D27 F101 F102
		431M-SE	080404M-SE	1/2	3/16	0.203	1/64	0.110	1	●	●	
		432M-SE	080408M-SE	1/2	3/16	0.203	1/32	0.106			●	
		WNMM 4305M-NE	WNMM 080402M-NE	1/2	3/16	0.203	0.008	0.197		●		
		431M-NE	080404M-NE	1/2	3/16	0.203	1/64	0.197	1	●		
		WNMM 431M	WNMM 080404M	1/2	3/16	0.203	0.008	0.228	1		△	

● : Standard Item △ : Phaseout Item (will be removed from next catalog)
Contact your local Kyocera sales engineer to upgrade old products to new technology

CBN & PCD Inserts sold in 1 piece boxes.

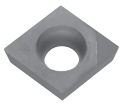
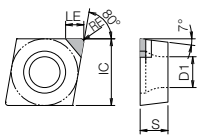
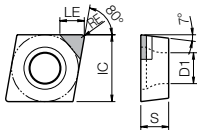
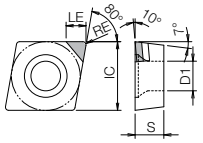
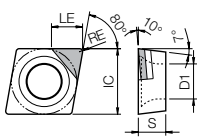
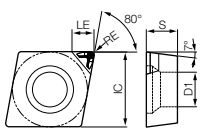
Positive

Positive Insert with Hole

How to read this page B15

Part Number	Applicable Toolholder Page
CC..215_	E24~E26, E45, E52, F29, F47, F49
CC..325_	E24~E26, E45, E52, F47, F89

Edge Prep.														
All PCD Items		Sharp Edge												
N	Non-Ferrous Metals (with Interruption)													
	Non-Ferrous Metals (without Interruption)													
S	Titanium Alloys (with Interruption)													
	Titanium Alloys (without Interruption)													

Insert		ANSI Part Number	ISO Part Number	Dimensions (in) IC	S	D1	RE	LE	No. of Edges	PCD KPD001	PCD KPD010	Toolholder Page
		CCGW 141102SE	CCGW 040101SE	0.169	0.071	0.091	0.004	0.051	1	●		F29 F47
		CCGW 141105SE	CCGW 040102SE				0.008	0.051		●		
		CCGW 14111SE	CCGW 040104SE				1/64	0.051		●		
		CCGW 21502SE	CCGW 060201SE	1/4	3/32	0.110	0.004	0.091	1	●		Reference Table Above
		CCGW 21505SE	CCGW 060202SE				0.008	0.091		●		
		CCGW 2151SE	CCGW 060204SE				1/64	0.091		●		
		CCGW 32505SE	CCGW 09T302SE	3/8	5/32	0.173	0.008	0.106	1	●		
		CCGW 3251SE	CCGW 09T304SE				1/64	0.106		●		
		CCGW 3252SE	CCGW 09T308SE				1/32	0.106		●		
		CCGW 141102NE	CCGW 040101NE	0.169	0.071	0.091	0.004	0.067	1	●		F29 F47
		CCGW 141105NE	CCGW 040102NE				0.008	0.062		●		
		CCGW 14111NE	CCGW 040104NE				1/64	0.062		△		
		CCGW 21502NE	CCGW 060201NE	1/4	3/32	0.110	0.004	0.122	1	●		Reference Table Above
		CCGW 21505NE	CCGW 060202NE				0.008	0.118		●		
		CCGW 2151NE	CCGW 060204NE				1/64	0.118		●		
		CCGW 32502NE	CCGW 09T301NE	3/8	5/32	0.173	0.004	0.134	1	●		
		CCGW 32505NE	CCGW 09T302NE				0.008	0.134		●		
		CCGW 3251NE	CCGW 09T304NE				1/64	0.134		●		
		CCGW 3252NE	CCGW 09T308NE				1/32	0.130		●		
		CCGW 141102	CCGW 040101	0.169	0.071	0.091	0.004	0.075	1	●	●	F29 F47
		CCGW 141105	CCGW 040102				0.008	0.075		●	●	
		CCGW 14111	CCGW 040104				1/64	0.075		●	●	
		CCGW 21502	CCGW 060201	1/4	3/32	0.110	0.004	0.138	1		●	Reference Table Above
		CCGW 21505	CCGW 060202				0.008	0.138			●	
		CCGW 2151	CCGW 060204				1/64	0.138			●	
		CCGW 32502	CCGW 09T301	3/8	5/32	0.173	0.004	0.150	1	●		
		CCGW 32505	CCGW 09T302				0.008	0.150		●	●	
		CCGW 3251	CCGW 09T304				1/64	0.146		●	●	
		CCGW 3252	CCGW 09T308				1/32	0.142			●	
		CCMT 21505SE	CCMT 060202SE	1/4	3/32	0.110	0.008	0.087	1	●		Reference Table Above
		CCMT 2151SE	CCMT 060204SE				1/64	0.087		●		
		CCMT 32502SE	CCMT 09T301SE	3/8	5/32	0.173	0.004	0.106	1	●		
		CCMT 32505SE	CCMT 09T302SE				0.008	0.106		●		
		CCMT 3251SE	CCMT 09T304SE				1/64	0.106		●		
		CCMT 3252SE	CCMT 09T308SE				1/32	0.106		●		
		CCMT 21502NE	CCMT 060201NE	1/4	3/32	0.110	0.004	0.110	1	●		
		CCMT 21505NE	CCMT 060202NE				0.008	0.110		●		
		CCMT 2151NE	CCMT 060204NE				1/64	0.110		●		
		CCMT 32502NE	CCMT 09T301NE	3/8	5/32	0.173	0.004	0.134	1	●		
		CCMT 32505NE	CCMT 09T302NE				0.008	0.134		●		
		CCMT 3251NE	CCMT 09T304NE				1/64	0.134		●		
		CCMT 21502	CCMT 060201	1/4	3/32	0.110	0.004	0.130	1	●	●	
		CCMT 21505	CCMT 060202				0.008	0.130		●	●	
		CCMT 2151	CCMT 060204				1/64	0.126		●	●	
		CCMT 32502	CCMT 09T301	3/8	5/32	0.173	0.004	0.154	1	●	●	
		CCMT 32505	CCMT 09T302				0.008	0.154		●	●	
		CCMT 3251	CCMT 09T304				1/64	0.154		●	●	
		CCMT 3252	CCMT 09T308				1/32	0.150			●	
NEW 		CCMT 32505APD	CCMT 09T302APD	3/8	5/32	0.173	0.008	0.106	1	●		
		3251APD	09T304APD				1/64	0.106		●		
		3252APD	09T308APD				1/32	0.106		●		

CBN & PCD Inserts sold in 1 piece boxes.

● : Standard Item □ : Made to Order △ : Phaseout Item (will be removed from next catalog)

Contact your local Kyocera sales engineer to upgrade old products to new technology

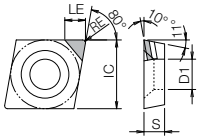
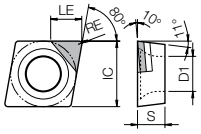
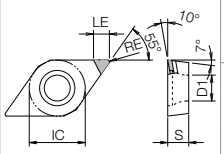
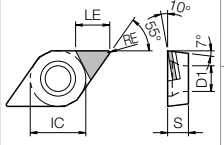
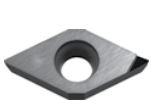
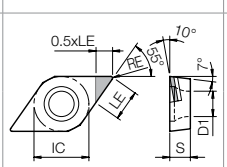
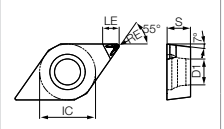
NEW ITEMS!

Positive

Positive Insert with Hole

How to read this page ➔ B15

Part Number	Applicable Toolholder Page
DC..215_	E27~E33, E46, E52, F55~F59
DC..325_	E22, E27~E33, E46, E52, F55~F59, F89

Edge Prep.														
All PCD Items	Sharp Edge								N	Non-Ferrous Metals (with Interruption)	●			
										Non-Ferrous Metals (without Interruption)	●			
									S	Titanium Alloys (with Interruption)	●			
										Titanium Alloys (without Interruption)	●			
Insert		ANSI Part Number	ISO Part Number	Dimensions (in)					No. of Edges	PCD		Toolholder Page
				IC	S	D1	RE	LE		KPD001	KPD010	
		CPMH 3205SE	CPMH 090302SE	3/8	1/8	0.177	0.008	0.106	1	●		F51 F53
		321SE	090304SE				1/64	0.106		●		
		CPMH 251505NE	CPMH 080202NE	5/16	3/32	0.138	0.008	0.126	1	●		
		25151NE	080204NE				1/64	0.126		●		
		CPMH 3202NE	CPMH 090301NE	3/8	1/8	0.177	0.004	0.134	1	●		
		3205NE	090302NE				0.008	0.134		●		
		321NE	090304NE				1/64	0.134		●		
		322NE	090308NE				1/32	0.130		●		
		CPMH 251502	CPMH 080201	5/16	3/32	0.138	0.004	0.146	1	●		
		251505	080202				0.008	0.146		●	●	
		25151	080204				1/64	0.146		●	●	
		CPMH 3202	CPMH 090301	3/8	1/8	0.177	0.004	0.157	1		●	
		3205	090302				0.008	0.154		●	●	
		321	090304				1/64	0.154		●	●	
		322	090308				1/32	0.150			●	
		DCMT 21502SE	DCMT 070201SE	1/4	3/32	0.110	0.004	0.106	1	●		Reference Table Above
		21505SE	070202SE				0.008	0.106		●		
		2151SE	070204SE				1/64	0.106		●		
		DCMT 32502SE	DCMT 11T301SE	3/8	5/32	0.173	0.004	0.106	1	●		
		32505SE	11T302SE				0.008	0.106		●		
		3251SE	11T304SE				1/64	0.106		●		
		3252SE	11T308SE				1/32	0.106		●		
		DCMT 21502NE	DCMT 070201NE	1/4	3/32	0.110	0.004	0.134	1	●		
		21505NE	070202NE				0.008	0.134		●		
		2151NE	070204NE				1/64	0.126		●		
		DCMT 32502NE	DCMT 11T301NE	3/8	5/32	0.173	0.004	0.134	1	●		
		32505NE	11T302NE				0.008	0.130		●		
		3251NE	11T304NE				1/64	0.126		●		
		3252NE	11T308NE				1/32	0.110		●		
		DCMT 21502	DCMT 070201	1/4	3/32	0.110	0.004	0.157	1	●	●	
		21505	070202				0.008	0.154		●	●	
		2151	070204				1/64	0.146		●	●	
		DCMT 32502	DCMT 11T301	3/8	5/32	0.173	0.004	0.157	1	●	●	
		32505	11T302				0.008	0.154		●	●	
		3251	11T304				1/64	0.146		●	●	
		3252	11T308				1/32	0.130		●	●	
		DCMT 32505R-NE	DCMT 11T302R-NE	3/8	5/32	0.173	0.008	0.130	1	●		
		3251L-NE	11T304L-NE				1/64	0.126		●		
NEW 		DCMT 32505APD	DCMT 09T302APD	3/8	5/32	0.173	0.008	0.106	1	●		
		3251APD	09T304APD				1/64	0.106		●		
		3252APD	09T308APD				1/32	0.106		●		

● : Standard Item △ : Phaseout Item (will be removed from next catalog)

Contact your local Kyocera sales engineer to upgrade old products to new technology

CBN & PCD Inserts sold in 1 piece boxes.

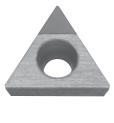
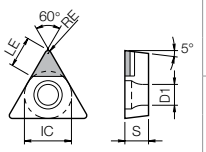
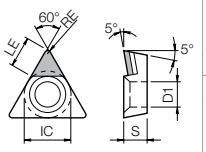
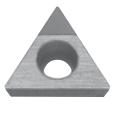
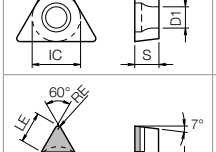
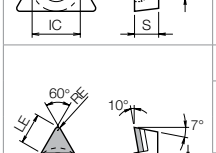
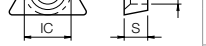
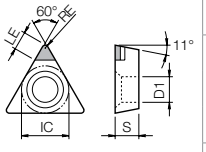
Positive

Positive Insert with Hole

How to read this page ➔ **B15**

Part Number	Applicable Toolholder Page
TP..1815_	E35, F28, F63, F65, F67

Part Number	Applicable Toolholder Page
TP..22_	E33, F61, F63, F64
TP..32_	F61, F64

Edge Prep.																
All PCD Items		Sharp Edge														
N	Non-Ferrous Metals (with Interruption)															
	Non-Ferrous Metals (without Interruption)															
S	Titanium Alloys (with Interruption)															
	Titanium Alloys (without Interruption)															
Insert		ANSI Part Number	ISO Part Number	Dimensions (in)					No. of Edges	PCD		Toolholder Page
				IC	S	D1	RE	LE		KPD001	KPD010	
		TBGW 12105NE	TBGW 060102NE	5/32	1/16	0.091	0.008	0.083	1	●		F30 F63 F65 F67
		1211NE	060104NE				1/64	0.075		●		
		TBGW 12105	TBGW 060102	5/32	1/16	0.091	0.008	0.094	1	●	△	
		1211	060104				1/64	0.087		●		
		TBMT 12102NE	TBMT 060101NE	5/32	1/16	0.091	0.004	0.087	1	●		
		1211NE	060104NE				1/64	0.079		●		
		1212NE	060108NE				1/32	0.067		●		
		TBMT 12105	TBMT 060102	5/32	1/16	0.091	0.008	0.098	1	●	●	
		1211	060104				1/64	0.091			●	
		1212	060108				1/32	0.079		●		
		TCGW 2205SE	TCGW 110302SE	1/4	1/8	0.110	0.008	0.098	1		●	
		221SE	110304SE				1/64	0.094			●	
		TCGW 2205NE	TCGW 110302NE	1/4	1/8	0.110	0.008	0.130	1	●		
		221NE	110304NE				1/64	0.126		●		
		TCGW 2205	TCGW 110302	1/4	1/8	0.110	0.008	0.154	1		△	
		TCMT 2202SE	TCMT 110301SE	1/4	1/8	0.110	0.004	0.102	1		●	E35
		2205SE	110302SE				0.008	0.098			●	
		221SE	110304SE				1/64	0.094			●	
		TCMT 151505NE	TCMT 080202NE	3/16	3/32	0.091	0.008	0.083	1	●		
		TCMT 2205NE	TCMT 110302NE	1/4	1/8	0.110	0.008	0.134	1	●		
		221NE	110304NE				1/64	0.130		△		
		TCMT 151505	TCMT 080202	3/16	3/32	0.091	0.008	0.094	1		●	
		15151	080204				1/64	0.087			●	
		TCMT 2205	TCMT 110302	1/4	1/8	0.110	0.008	0.154	1		△	
		TPGB 181505SE	TPGB 090202SE	7/32	3/32	0.118	0.008	0.083	1	●		Reference Table Above
		18151SE	090204SE				1/64	0.083		●		
		18152SE	090208SE				1/32	0.083		●		
		TPGB 2202SE	TPGB 110301SE	1/4	1/8	0.130	0.004	0.106	1	●	●	
		2205SE	110302SE				0.008	0.102		●	●	
		221SE	110304SE				1/64	0.098		●	●	
		TPGB 3205SE	TPGB 160302SE	3/8	1/8	0.177	0.008	0.102	1	●	●	
		321SE	160304SE				1/64	0.094		●	●	

CBN & PCD Inserts sold in 1 piece boxes.

● : Standard Item △ : Phaseout Item (will be removed from next catalog)
Contact your local Kyocera sales engineer to upgrade old products to new technology

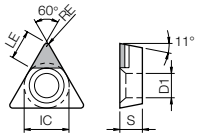
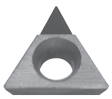
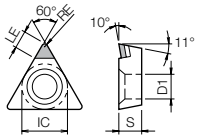
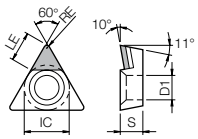
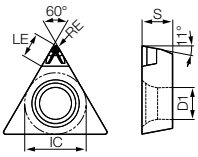
NEW ITEMS!

Positive

Positive Insert with Hole

How to read this page B15

Part Number	Applicable Toolholder Page	Part Number	Applicable Toolholder Page
TP..1515_	E35, F59, F63, F65, F67	TP..22_	E35, F63, F65, F66
TP..1815_	E35, F28, F63, F65, F67	TP..32_	F63, F66

Edge Prep.																
All PCD Items		Sharp Edge										N	Non-Ferrous Metals (with Interruption)	●		
													Non-Ferrous Metals (without Interruption)	●		
												S	Titanium Alloys (with Interruption)	●		
													Titanium Alloys (without Interruption)	●		
Insert		ANSI Part Number		ISO Part Number		Dimensions (in)					No. of Edges	PCD		Toolholder Page
						IC	S	D1	RE	LE		KPD001	KPD010	
		TPGB	151505NE	TPGB	080202NE	3/16	3/32	0.098	0.008	0.087	1	●		Reference Table Above
			15151NE		080204NE				1/64	0.083		●		
			15152NE		080208NE				1/32	0.071		●		
		TPGB	181505NE	TPGB	090202NE	7/32	3/32	0.118	0.008	0.106	1	●		
			18151NE		090204NE				1/64	0.102		●		
			18152NE		090208NE				1/32	0.091		△		
		TPGB	2205NE	TPGB	110302NE	1/4	1/8	0.130	0.008	0.134	1	●		
			221NE		110304NE				1/64	0.130		●		
			222NE		110308NE				1/32	0.118		●		
		TPGB	321NE	TPGB	160304NE	3/8	1/8	0.177	1/64	0.126	1	●		
			322NE		160308NE				1/32	0.114		●		
		TPGB	151505	TPGB	80202	3/16	3/32	0.098	0.008	0.102	1	●	●	
			15151		80204				1/64	0.094		●	●	
		TPGB	181505	TPGB	90202	7/32	3/32	0.118	0.008	0.126	1	●	△	
			18151		90204				1/64	0.118		●	●	
		TPGB	2205	TPGB	110302	1/4	1/8	0.130	0.008	0.154	1	●	●	
			221		110304				1/64	0.146		●	●	
			222		110308				1/32	0.134			●	
		TPMH	151505SE	TPMH	080202SE	3/16	3/32	0.098	0.008	0.079	1	●		
			15151SE		080204SE				1/64	0.071		●		
		TPMH	181505SE	TPMH	090202SE	7/32	3/32	0.118	0.008	0.094	1	●		
			18151SE		090204SE				1/64	0.087		●		
		TPMH	2202SE	TPMH	110301SE	1/4	1/8	0.130	0.004	0.106	1		●	
			2205SE		110302SE				0.008	0.102		●	●	
			221SE		110304SE				1/64	0.098		●	●	
		TPMH	3205SE	TPMH	160302SE	3/8	1/8	0.177	0.008	0.102	1	●		
			321SE		160304SE				1/64	0.094		●	●	
		TPMH	151502NE	TPMH	080201NE	3/16	3/32	0.098	0.004	0.091	1	●		
			151505NE		080202NE				0.008	0.087		●		
			15151NE		080204NE				1/64	0.083		●		
		TPMH	181502NE	TPMH	090201NE	7/32	3/32	0.118	0.004	0.106	1	●		
			181505NE		090202NE				0.008	0.102		●		
			18151NE		090204NE				1/64	0.098		●		
			18152NE		090208NE				1/32	0.087		●		
		TPMH	2202NE	TPMH	110301NE	1/4	1/8	0.130	0.004	0.134	1	●		
			2205NE		110302NE				0.008	0.130		●		
			221NE		110304NE				1/64	0.126		●		
			222NE		110308NE				1/32	0.114		●		
		TPMH	321NE	TPMH	160304NE	3/8	1/8	0.177	1/64	0.130	1	●		
			322NE		160308NE				1/32	0.118		●		
		TPMH	151505	TPMH	80202	3/16	3/32	0.098	0.008	0.098	1	●	●	
			15151		80204				1/64	0.091		●	●	
		TPMH	181502	TPMH	90201	7/32	3/32	0.118	0.004	0.118	1	●	△	
			181505		90202				0.008	0.114		●	●	
			18151		90204				1/64	0.110		●	●	
			18152		90208				1/32	0.098			△	
		TPMH	2202	TPMH	110301	1/4	1/8	0.130	0.004	0.154	1	●	●	
			2205		110302				0.008	0.154		●		
			221		110304				1/64	0.146		●	●	
			222		110308				1/32	0.134			●	
		TPMH	3205	TPMH	160302	3/8	1/8	0.177	0.008	0.157	1	●	●	
			321		160304				1/64	0.150		●	●	
			322		160308				1/32	0.142			●	
NEW 		TPMT	2205APD	TPMT	110302APD	1/4	1/8	0.130	0.008	0.102	1	●		
			221APD		110304APD				1/64	0.098		●		
			222APD		110308APD				1/32	0.098		●		

● : Standard Item △ : Phaseout Item (will be removed from next catalog)

Contact your local Kyocera sales engineer to upgrade old products to new technology

CBN & PCD Inserts sold in 1 piece boxes.

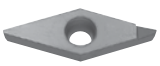
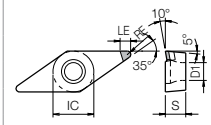
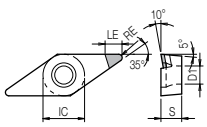
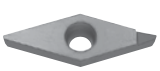
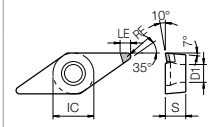
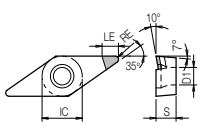
Positive

Positive Insert with Hole

How to read this page ➡ B15

Part Number	Applicable Toolholder Page
VB..22_	E36~E39, E47, E52, F68~F75
VB..33_	E38~E39, F68~F75

Edge Prep.			
All PCD Items	Sharp Edge	N	Non-Ferrous Metals (with Interruption) ●
			Non-Ferrous Metals (without Interruption) ●
		S	Titanium Alloys (with Interruption) ●
			Titanium Alloys (without Interruption) ●

Insert		ANSI Part Number	ISO Part Number	Dimensions (in) IC	S	D1	RE	LE	No. of Edges	PCD KPD001	PCD KPD010	Toolholder Page
		VBMT 2202SE	VBMT 110301SE	1/4	1/8	0.110	0.004	0.098	1	●		Reference Table Above
		2205SE	110302SE				0.008	0.091		●		
		221SE	110304SE				1/64	0.075		●		
		222SE	110308SE				1/32	0.075		●		
		VBMT 3302SE	VBMT 160401SE	3/8	3/16	0.173	0.004	0.106	1	●		
		3305SE	160402SE				0.008	0.098		●		
		331SE	160404SE				1/64	0.083		●		
		332SE	160408SE				1/32	0.079		●		
		VBMT 2202NE	VBMT 110301NE	1/4	1/8	0.110	0.004	0.102	1	●		
		2205NE	110302NE				0.008	0.094		●		
		221NE	110304NE				1/64	0.079		●		
		222NE	110308NE				1/32	0.122		●		
		VBMT 3302NE	VBMT 160401NE	3/8	3/16	0.173	0.004	0.110	1	●		
		3305NE	160402NE				0.008	0.102		●		
		331NE	160404NE				1/64	0.087		●		
		332NE	160408NE				1/32	0.118		●		
		VBMT 2202	VBMT 110301	1/4	1/8	0.110	0.004	0.118	1	●	●	
		2205	110302				0.008	0.110		●	●	
		221	110304				1/64	0.094		●	●	
		222	110308				1/32	0.138		●	●	
		VBMT 3302	VBMT 160401	3/8	3/16	0.173	0.004	0.126	1	●		
		3305	160402				0.008	0.118		●	●	
		331	160404				1/64	0.102		●	●	
		332	160408				1/32	0.138		●	●	
		VCMT 151505SE	VCMT 080202SE	3/16	3/32	0.091	0.008	0.055	1	●		E47 F68 F70~F75
		15151SE	080204SE				1/64	0.055		●		
		15152SE	080208SE				1/32	0.055		●		
		VCMT 151502NE	VCMT 080201NE	3/16	3/32	0.091	0.004	0.067	1	●		
		151505NE	080202NE				0.008	0.067		●		
		15151NE	080204NE				1/64	0.071		●		
		15152NE	080208NE				1/32	0.075		●		
		VCMT 151502	VCMT 080201	3/16	3/32	0.091	0.004	0.079	1		●	
		151505	080202				0.008	0.079		●	●	
		15151	080204				1/64	0.083		●	●	
		15152	080208				1/32	0.087		●	●	

KYOCERA
CBN & PCD Inserts sold in 1 piece boxes.

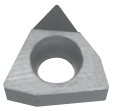
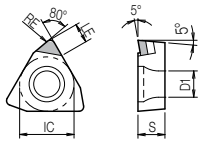
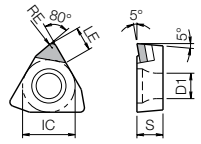
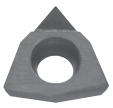
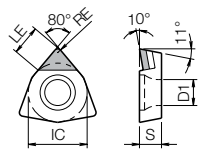
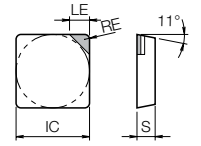
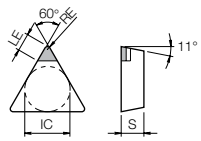
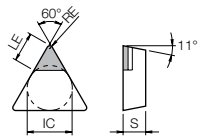
● : Standard Item △ : Phaseout Item (will be removed from next catalog)
Contact your local Kyocera sales engineer to upgrade old products to new technology

Positive

Positive Insert with & without Hole

How to read this page B15

Edge Prep.				N	Non-Ferrous Metals (with Interruption)	●		Toolholder Page
All PCD Items	Sharp Edge				Non-Ferrous Metals (without Interruption)	●		
				S	Titanium Alloys (with Interruption)	●		
					Titanium Alloys (without Interruption)	●		

Insert		ANSI Part Number	ISO Part Number	Dimensions (in) IC	S	D1	RE	LE	No. of Edges	PCD KPD001	PCD KPD010	Toolholder Page
		WBMT 12105L-SE	WBMT 060102L-SE	5/32	1/16	0.091	0.008	0.051	1	●		
		WBMT 151505L-SE	WBMT 080202L-SE	3/16	3/32	0.091	0.008	0.062	1	●		
		WBMT 12102L	WBMT 060101L	5/32	1/16	0.091	0.004	0.075	1	●		F31 F77 F78 F79
		12105L	060102L				0.008	0.075		●	●	
		1211L	060104L				1/64	0.075		●	●	
		WBMT 151505L	WBMT 080202L	3/16	3/32	0.091	0.008	0.094	1	●	●	
		15151L	080204L				1/64	0.091		●	●	
		WPMT 21505SE	WPMT 110202SE	1/4	3/32	0.110	0.008	0.083	1	●		
		WPMT 21505NE	WPMT 110202NE	1/4	3/32	0.110	0.008	0.106	1	●		F77
		WPMT 21505	WPMT 110202	1/4	3/32	0.110	0.008	0.122	1		●	
		SPG 421NE	SPGN 120304NE	1/2	1/8	-	1/64	0.142	1	●		
		SPG 421	SPGN 120304	1/2	1/8	-	1/64	0.165	1		●	F84
		TPG 2202SE	TPGN 110301SE	1/4	1/8	-	0.004	0.102	1	●		
		2205SE	110302SE				0.008	0.098		●	●	
		221SE	110304SE				1/64	0.094		●	●	
		TPG 3202SE	TPGN 160301SE	3/8	1/8	-	0.004	0.102	1		●	
		3205SE	160302SE				0.008	0.102		●	●	
		321SE	160304SE				1/64	0.094		●	●	
		TPG 321NE	TPGN 160304NE	3/8	1/8	-	1/64	0.126	1	●		F85
		322NE	160308NE				1/32	0.114		●		
		TPG 2205	TPGN 110302	1/4	1/8	-	0.008	0.154	1	●	●	
		221	110304				1/64	0.146		●	●	
		222	110308				1/32	0.134			△	
		TPG 321	TPGN 160304	3/8	1/8	-	1/64	0.146		●	●	
		322	160308				1/32	0.134			●	

● : Standard Item △ : Phaseout Item (will be removed from next catalog)
Contact your local Kyocera sales engineer to upgrade old products to new technology

CBN & PCD Inserts sold in 1 piece boxes.

Grooving Inserts

How to read this page ➔ B15

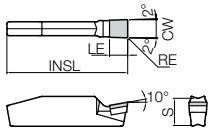
Grooving Inserts (1-edge)

| Edge Prep. | | |

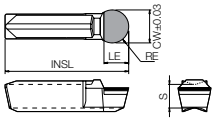
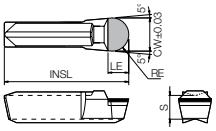
Grooving Inserts

How to read this page ➔ B15

Deep Grooving Inserts (1-edge)

Edge Prep.			N	Non-Ferrous Metals (with Interruption)								
				Non-Ferrous Metals (without Interruption)								
All PCD Items	Sharp Edge		S	Titanium Alloys (with Interruption)								
				Titanium Alloys (without Interruption)								
Insert		ANSI Part Number	$CW^{\pm 0.0012}$ (in)	Dimensions (mm)					No. of Edges	PCD	Toolholder Page
				$CW^{\pm 0.03}$	RE	INSL	S	LE		KPD001	
External Deep Grooving 		GDGS 2020N-020NB	0.079	2.0	0.2	20	4.3	2.9	1	●	G28 ~ G40
		3020N-020NB	0.118	3.0						●	
		4020N-020NB	0.157	4.0						●	
		5020N-020NB	0.197	5.0						●	
		6020N-020NB	0.236	6.0						●	

For Aluminum Wheel (1-edge)

Edge Prep.			N	Non-Ferrous Metals (with Interruption)								
				Non-Ferrous Metals (without Interruption)								
GMGW	Honed Cutting Edge		S	Titanium Alloys (with Interruption)								
				Titanium Alloys (without Interruption)								
Insert		ANSI Part Number	$CW^{\pm 0.0012}$ (in)	Dimensions (mm)					No. of Edges	PCD	Toolholder Page
				$CW^{\pm 0.03}$	RE	INSL	S	LE		KPD001	
		GMGW 6030-30R	0.236	6	3	30	5.5	4.5	1	●	G60
		8030-40R	0.315	8	4	30	5.5	6.0		●	
		GMGW 8030-40R-HR	0.315	8	4	30	5.5	5.0	1	●	

● : Standard Item △ : Phaseout Item (will be removed from next catalog)
Contact your local Kyocera sales engineer to upgrade old products to new technology

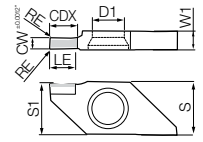
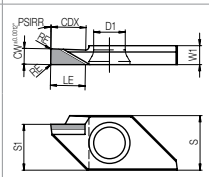
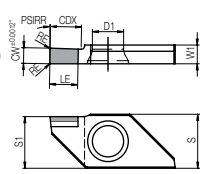
CBN & PCD Inserts sold in 1 piece boxes.

Grooving / Traversing

1 - Edge

How to read this page ➡ B15

Edge Prep.		N	Non-Ferrous Metals (with Interruption)	●
			Non-Ferrous Metals (without Interruption)	●
All PCD Items	Sharp Edge	S	Titanium Alloys (with Interruption)	●
			Titanium Alloys (without Interruption)	●

Insert		ANSI Part Number		CW±0.0012 (in)	Dimensions (mm) CW±0.03	CDX	RE	W1	S	S1	D1	LE	Angle (°) PSIR R/L	No. of Edges	PCD KPD001 R	PCD KPD001 L	Toolholder Page
Traversing / Grooving NEW 		TKF12R	200-AGT	0.079	2.0	4.8	+0.00 -0.05 0.1	3	8.7	8.3	5	4.2	0°	1	●		E12 E14
			250-AGT	0.098	2.5										●		
Traversing / Grooving 		TKF12R/L	200-AS	0.079	2.0	5.0	+0.00 -0.05 0.1	3	8.7	7.3	5	5.3	0°	1	●		
		TKF16R/L	250-AS	0.098	2.5	8		4	9.5	8.0		6.3			●		
External Grooving (Traversing is Possible) 		TKF12R/L	150-NB	0.059	1.5	3.5	+0.00 -0.05 0.1	3	8.7	8.3	5	2.0	0°	1	●		
			200-NB	0.079	2.0	4.0						3.0			●		
			250-NB	0.098	2.5	4.0						3.0			●		
			250-NB4.5	0.098	2.5	5.0						4.5			△		

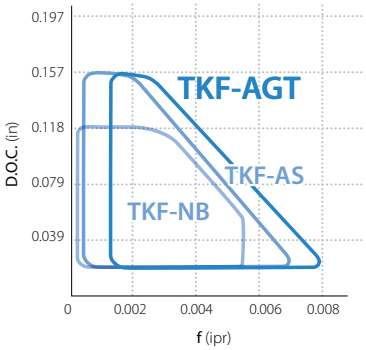
- Lead angle (front cutting edge angle: **PSIR R/L**) shows the angle when installed into toolholder
- TKF PCD inserts are only for turning and grooving
- Cut-off is not recommended.
- Dimension **CDX** shows available grooving depth

◆ Insert Identification System

TKF	12	R	200	-	AS
TKF	12	L	200	-	AS

- Insert Type
- Insert Size
- Insert Hand
  - **R** : Right-hand
  - **L** : Left-hand
- Width (Edge Width)
- Name of Chipbreaker
  - **AS** : AS Chipbreaker
  - **NB** : Without Chipbreaker

● Applicable Range



- TKF PCD inserts are only for turning and grooving
- Cut-off is not recommended

Note) 1. The cutting edge of the TKF-AS will be 0.04" lower than the center line when attached to the KTKF toolholder (Ref. **Fig.1**). Adjust the height by making NC lathe parameter settings or inserting a plate.

2. If the 0.04" adjustment is not possible on your automatic lathe, use the TKF-NB (Ref. **Fig.2**).

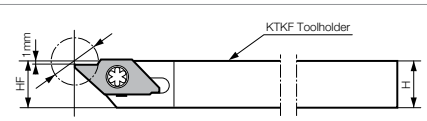


Fig.1 When a TKF-AS/-ASR insert is attached
(The cutting edge is 0.04" lower than the center line.)

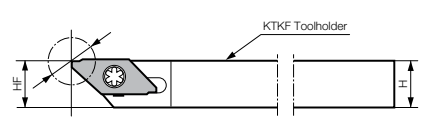


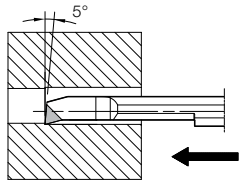
Fig.2 When a TKF-NB insert is attached

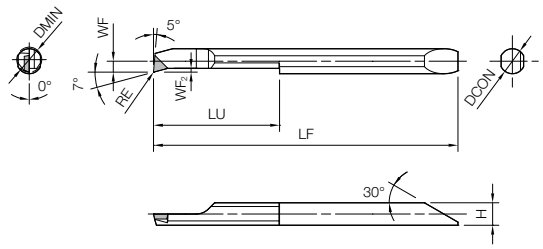
● : Standard Item △ : Phaseout Item (will be removed from next catalog)
Contact your local Kyocera sales engineer to upgrade old products to new technology

EZ Bar

EZB-NB : PCD

How to read this page B15





• Righ-Hand Insert Shown

EZ Bar Dimensions

Edge Prep.														
All PCD Items	Sharp Edge		N	Non-Ferrous Metals (with Interruption)									●	Applicable Sleeves Page
				Non-Ferrous Metals (without Interruption)									●	
			S	Titanium Alloys (with Interruption)									●	
				Titanium Alloys (without Interruption)									●	
		Min. Bore Dia.	Dimensions (mm)									PCD		
ANSI Part Number		DMIN	DCON	H	LF	LU	WF	WF_2	RE	No. of Edges	KPD001			
EZBR	040040-003NB	4	4	3.6	48.8	20	1.75	0.5	$0.035^{+0.015}$	1	●	F32 ~ F37		
	050050-003NB	5	5	4.6	58.1	25	2.25	0.5			●			
	060060-003NB	6	6	5.6	66.1	30	2.75	0.5			●			
	070070-003NB	7	7	6.6	74.1	35	3.25	0.5			●			

● : Standard Item △ : Phaseout Item (will be removed from next catalog)
Contact your local Kyocera sales engineer to upgrade old products to new technology

CBN & PCD Inserts sold in 1 piece boxes.

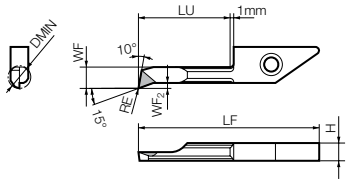
System Tip-Bars

Micro Boring / Micro Grooving

How to read this page B15

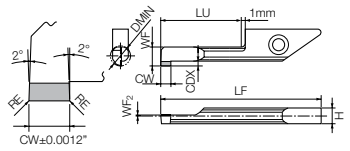
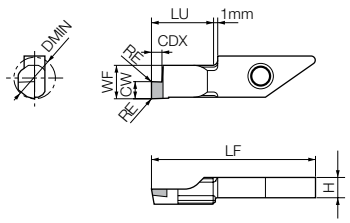
System Tip-Bars

Edge Prep.			N	Non-Ferrous Metals (with Interruption)	●	
				Non-Ferrous Metals (without Interruption)	●	
All PCD Items	Sharp Edge		S	Titanium Alloys (with Interruption)	●	
				Titanium Alloys (without Interruption)	●	

Insert	ANSI Part Number		Min. Bore Dia.	Dimensions (mm)							No. of Edges	PCD		Toolholder Page
			DMIN	H	LF	LU	WF	WF_2	RE		KPD001	KPD010	
Micro Boring 	VNBR	0411-02NB	4	3.9	30.8	11	3.5	0.5	0.2	1	●	△	F40 F41
		0420-02NB			39.8	20					●	△	
	VNBR	0511-02NB	5	3.9	30.8	11	4.5	0.7	0.2	1	●	△	
		0520-02NB			39.8	20					●	△	
	VNBR	0620-02NB	6	3.9	39.8	20	5.3	1.0	0.2	1	●	△	
		0630-02NB			49.8	30					●	△	
	VNBR	0720-02NB	7	3.9	39.8	20	6.2	1.0	0.2	1	●	△	
		0730-02NB			49.8	30					●		

System Tip-Bars

Edge Prep.			N	Non-Ferrous Metals (with Interruption)	●	
				Non-Ferrous Metals (without Interruption)	●	
All PCD Items	Sharp Edge		S	Titanium Alloys (with Interruption)	●	
				Titanium Alloys (without Interruption)	●	

Insert	ANSI Part Number		Min. Bore Dia.	Dimensions (mm)									No. of Edges	PCD		Toolholder Page
			DMIN DAXN	CW (in)	CW (mm)	RE	H	LF	LU	WF	WF_2	CDX		KPD001	KPD010	
Micro Grooving 	VNGR	0410-11NB	4	0.039	1.0	0.05	3.9	30.8	11	3.5	0.1	0.8	1	□		F40 F41
		0420-11NB		0.079	2.0	0.10								□		
	VNGR	0510-11NB	5	0.039	1.0	0.05	3.9	30.8	11	4.4	0.1	1.0	1	□		
		0520-11NB		0.079	2.0	0.10								□		
	VNGR	0610-20NB	6	0.039	1.0	0.05	3.9	39.8	20	5.2	0.3	1.8	1	□	□	
		0620-20NB		0.079	2.0	0.10								□	□	
	VNGR	0710-20NB	7	0.039	1.0	0.05	3.9	39.8	20	6.2	0.3	2.0	1	□	□	
		0720-20NB		0.079	2.0	0.10								□		
Micro Face Grooving 	VNFGR	0820-10NB	8	0.079	2.0	0.05	3.9	39.8	10	7.3	-	2.0	1	□	□	
		0830-10NB		0.118	3.0							3.0		□		

CBN & PCD Inserts sold in 1 piece boxes.

● : Standard Item □ : Made to Order △ : Phaseout Item (will be removed from next catalog)
Contact your local Kyocera sales engineer to upgrade old products to new technology

EXTERNAL TURNING TOOLHOLDERS

D

D1 - D46

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TN□□ INSERT	CTJN / CTUN	D36
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RCMT INSERT	PRGC-BE	D43
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RECOMMENDED CUTTING CONDITIONS		D45 - D46

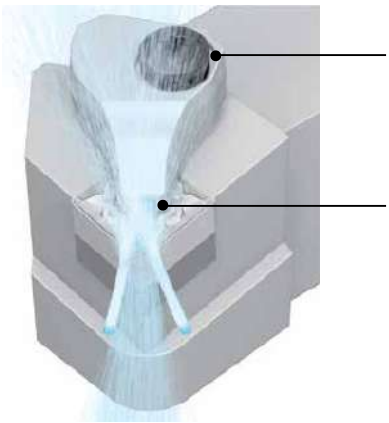
Double-Clamp-JCT

Coolant-Through Turning Holders

Discharges coolant in three directions to improve chip control and lengthen tool life for a wide variety of workpieces including steel, hardened material and difficult-to-cut material

1 Superior Chip Control Performance

Special coolant-through structure designed by careful simulation and analysis technology



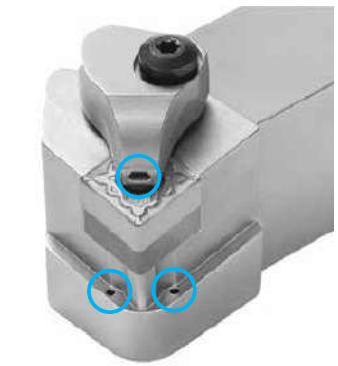
Double-Clamp

Firm insert clamp and easy to use in single operations
High-density coolant supply close to the cutting edge

Unique Nozzle Shape

Provides coolant to a wide area of the insert surface

○ : Coolant Hole



Discharges coolant in three directions and the cutting edge stays cool

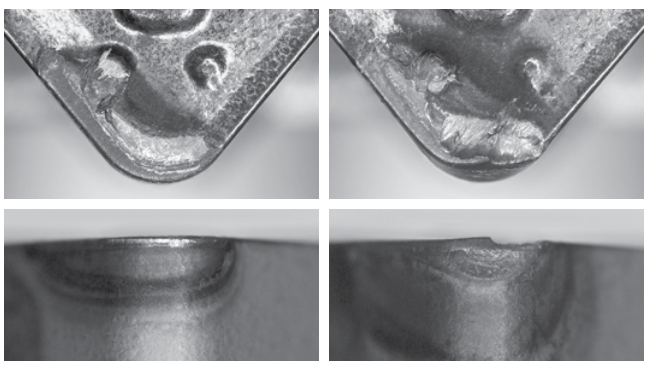
2 Advantages of Internal Coolant

Discharges Coolant towards the Cutting Edge
Internal Coolant Provides Longer Tool Life and Excellent Chip Control

Extended Tool Life

Wear Resistance Comparison (Internal Evaluation)

Internal Coolant (1,015 psi) External Coolant (58 psi)

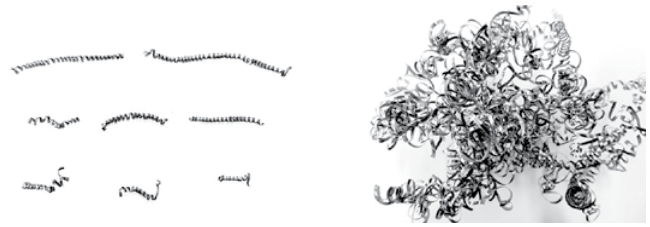


Cutting Conditions: Vc = 820 sfm, f = 0.079 ipr, D.O.C. = 0.079", Wet
CNMG432 Insert Workpiece: 4137
External Turning After Machining 42.2 min

Improved Chip Control

Chip Control Comparison (Internal Evaluation)

Internal Coolant (1,015 psi) External Coolant (58 psi)



Cutting Conditions: Vc = 660 sfm, f = 0.002 ipr, D.O.C. = 0.020", Wet
DNMG432 Insert Workpiece: 4131 External Turning

EXTERNAL TOOLHOLDER IDENTIFICATION SYSTEM

LENGTH AND WIDTH	LENGTH AND SIDE
A - 4.000 Back and End	M - 4.000 Front and End
B - 4.500 Back and End	N - 4.500 Front and End
C - 5.000 Back and End	P - 5.000 Front and End
D - 6.000 Back and End	R - 6.000 Front and End
E - 7.000 Back and End	S - 7.000 Front and End
F - 8.000 Back and End	T - 8.000 Front and End
G - 5.500 Back and End	U - 5.500 Front and End

* NOTE: All qualified dimensions are given to a tolerance of 0.003" over a master gauge insert radius based on the standard shown.

Insert I.C.	Radius
1/4" - 5/16"	0.015"
3/8" - 1/2"	0.031"
5/8" - 3/4"	0.047"
1"	0.062"

⑧ Qualified Control

Number of 1/8ths on 1/4" I.C. and over.

⑦ Insert Size I.C.

This position shall be a significant number which indicates the holder cross section. For square shanks this number will represent the number of sixteenths of width and height. For rectangular holders the first digit represents the number of eighths of width and the second digit the number of quarters of height, except the following toolholder: 1-1/4 x 1-1/2 which is given the number 91.

⑥ Toolholder Shank Size

- R : Round
- S : Square
- T : Triangle
- C : 80° Diamond
- D : 55° Diamond
- V : 35° Diamond
- W : 80° Trigon
- R : Round

② Insert Shape

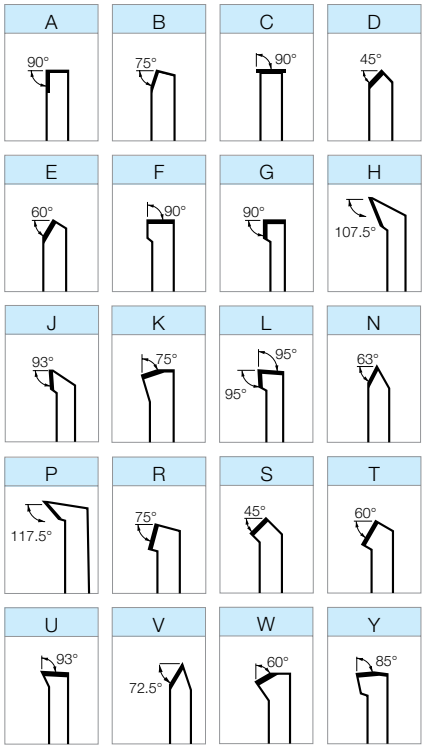
- A : Anchor Pin Style
- C : Clamp Only
- D : Double Clamp
- M : Clamp and Lock Pin
- P : Lock Pin Only (or Lever Lock)
- S : Screw Only
- W : Wedge Only

① Clamping System

	①	②	③	④	⑤	⑥	⑦	⑧
ANSI (inch)	D	C	L	N	R	16	4	D
ISO (metric)	D	C	L	N	R	20	20	K

	⑨	⑩
ANSI (inch)	12	
ISO (metric)		

③ Cutting Edge Angle



④ Insert Relief Angle



- B : 5° Positive
- C : 7° Positive
- D : 15° Positive
- E : 20° Positive
- N : 0° Negative
- P : 11° Positive

⑤ Hand of Tool

- R : Right-hand
- L : Left-hand
- N : Neutral

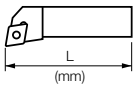
⑥ Shank Height

Shank Height (mm)

⑦ Shank Width

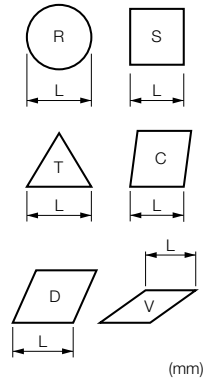
Shank Width (mm)

⑧ Toolholder Length (mm)



A : 32	J : 110	R : 200
B : 40	JX : 120	S : 250
C : 50	K : 125	T : 300
D : 60	L : 140	U : 350
E : 70	M : 150	V : 400
F : 80	N : 160	W : 450
G : 90	P : 170	Y : 500
H : 100	Q : 180	X : Special

⑨ Insert Size



⑩ Others

- Optional Code
- Optional Mark or Number

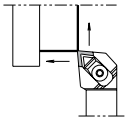
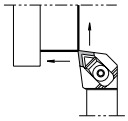
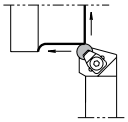
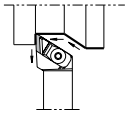
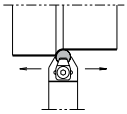
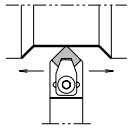
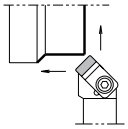
- Specifications may change without prior notice.
- Due to the installation size constraints on the machine, the toolholder length of some products may not match with the symbol.

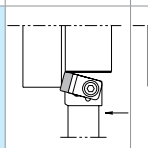
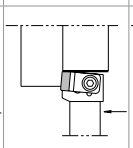
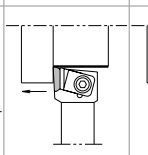
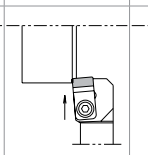
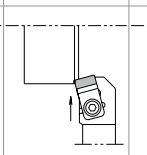
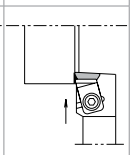
General Purpose Turning Holders

Applicable Insert Shape	CN..	WN..	TN..	DN..	RC..		RN..	VN..
Application	External / Facing		External / Facing / Copying					External / Facing / Copying / Undercutting
Cutting Edge Angle	95°		105°	107.5°	Special			117.5°
Lever Lock (Pin Lock)	PCLN	PWLN		PDHN	PRGC	PRXC	PRGN	PVPN (Pin Lock)
Ref. Page	D9	D27		D13	D25	D25	D25	D24
Wedge Lock		WWLN	WTKN					
Ref. Page		D27	D18					
Double Clamp	DCLN (-JCT)	DWLN (-JCT)		DDHN				DVPN (-JCT)
Ref. Page	D8	D26		D12				D20, D21
Multi-Lock	MCLN	MWLN						
Ref. Page	D8	D26						

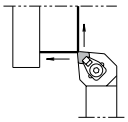
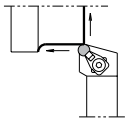
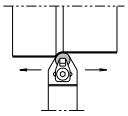
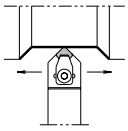
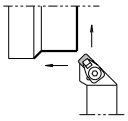
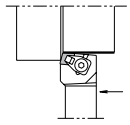
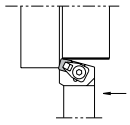
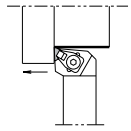
Applicable Insert Shape	VN..	DN.. / TN..	SN..	TN..	SN..	SN..	TN..	SN..	TN..
Application	External / Copying		External / Chamfering		External / Facing / Chamfering	External		Facing	
Cutting Edge Angle	72.5°	95°	93°	45°	60°	45°	75°	91°	15°	-1°
Lever Lock (Pin Lock)	PVVN (Pin Lock)	PVLN (Pin Lock)	PDJN	PSDN		PSSN	PSBN	PTGN	PSKN	PTFN
Ref. Page	D24	D24	D13	D15		D15	D15	D17	D15	D17
Wedge Lock			WTJN		WTEN					
Ref. Page			D18		D18					
Double Clamp	DVVN (-JCT)	DVJN (-JCT) / DVLN	DDJN (-JCT)				DSBN	DTGN (-JCT)		
Ref. Page	D20, D21	D20, D21	D12				D14	D16		
Multi-Lock	MVVN	MVJN / MVLN	MDJN			MSSN		MTGN		
Ref. Page	D22	D22	D13			D14		D16		

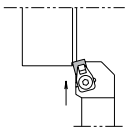
Toolholders for Ceramic Tools

Application	External / Facing			External / Copying		External / Chamfering	External / Facing / Chamfering
Cutting Edge Angle	95°	97.5°	Special	93°	Special	45°	45°
Top Clamp							
	CCLN / HCLN	CELN	CRSN / HRSN	CDJN	CRDN / CRDC	CSDN / HSDN	CSSN
Ref. Page	D32	D33	D37	D33	D37	D35	D35

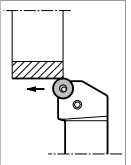
Application	External			Facing		
Cutting Edge Angle	75°	85°	93°	5°	15°	-3°
Top Clamp						
	CSRN / HSRN	CS-N	CTJN	CSYN	CSKN	CTUN
Ref. Page	D35	D35	D36	D35	D35	D36

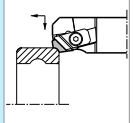
Toolholders for Solid CBN Tools

Application	External / Facing		External / Copying	External / Chamfering	External / Facing / Chamfering	External		
Cutting Edge Angle	95°	Special	Special	45°	45°	75°		93°
Top Clamp								
	CCLN-A	CRSN-A	CRDN-A	CSDN-A	CSSN-A	CCRN-A	CSRN-A	CTJN-A
Ref. Page	D38	D39	D39	D41	D41	D38	D40	D42

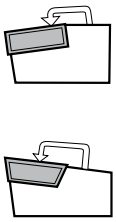
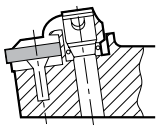
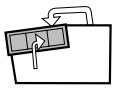
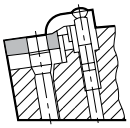
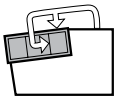
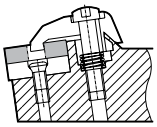
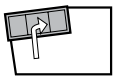
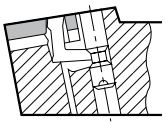
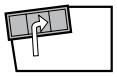
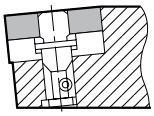
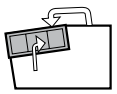
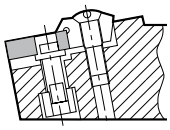
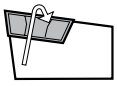
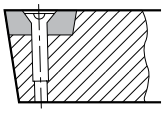
Application	Facing
Cutting Edge Angle	15°
Top Clamp	
	CSKN-A
Ref. Page	D40

Toolholders for Bearing Machining

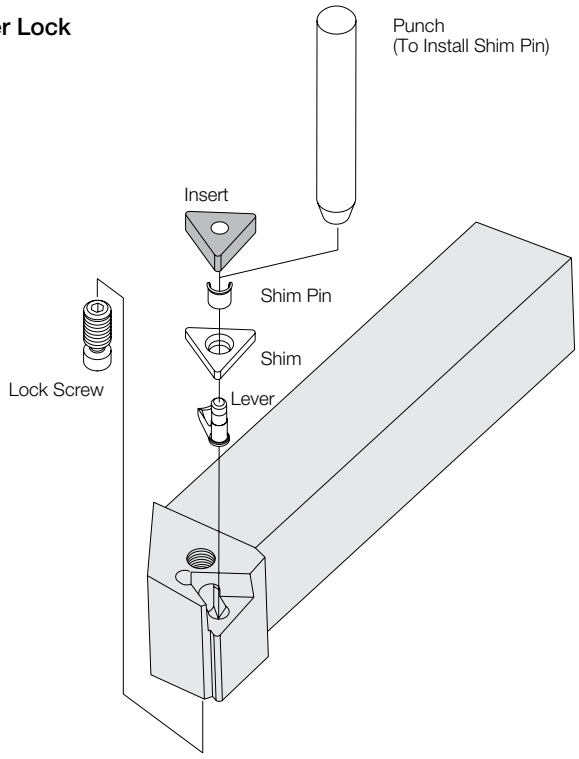
Application	External
Cutting Edge Angle	Special
Lever Lock	
	PRGC-BE
Ref. Page	D43

Application	Round Chamfering
Cutting Edge Angle	Special
Top Clamp	
	CBSN
Ref. Page	D44

Clamping System

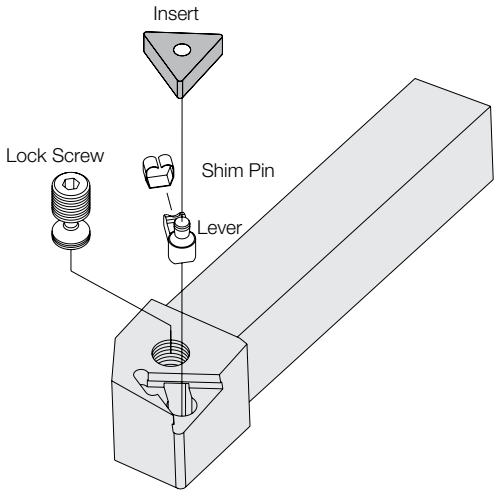
Series	Design		Features	Series	Design		Features
Top Clamp (C)			• Rigid Clamping • Negative Insert : Medium to Heavy Machining (Mainly for Ceramic Insert) • Positive Insert : Low Cutting Force	**Multi-Lock (M)**			• Combination of Top Clamp and Pin Lock • Rigid Clamping • Heavy Machining
Double Clamp (D)			• Firmly clamp the insert in two directions with one action.	**Lever Lock (P)**			• Easy Insert Replacement • General Use
Pin Lock (P)			• Easy Insert Replacement	**Wedge Lock (W)**			• Rigid Clamping • Heavy Machining
Screw Clamp (S)			• Simple Mechanism • Fewer Parts • Finishing to Medium Machining				

Lever Lock



With Shim

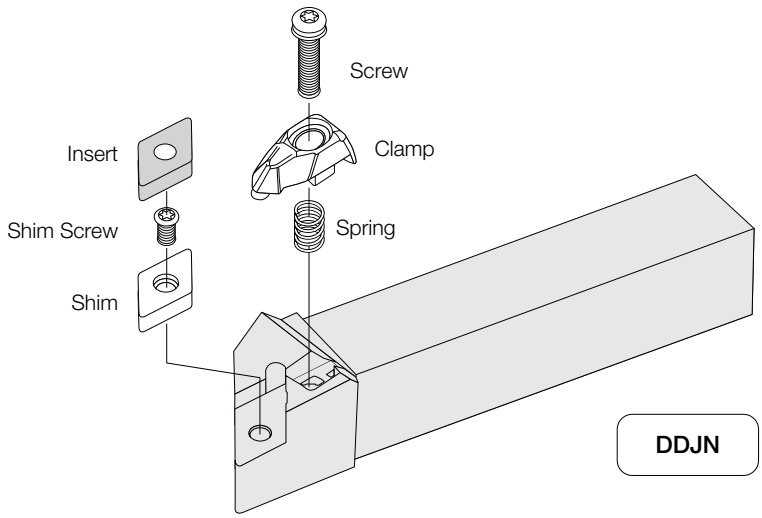
PCLN
PWLN
PTGN / PTFN / PTLN
PDJN / PDHN
PSBN / PSKN / PSSN / PSDN
PRGN
PRGC / PRXC



Without Shim

PTGN-11 / PTFN-11

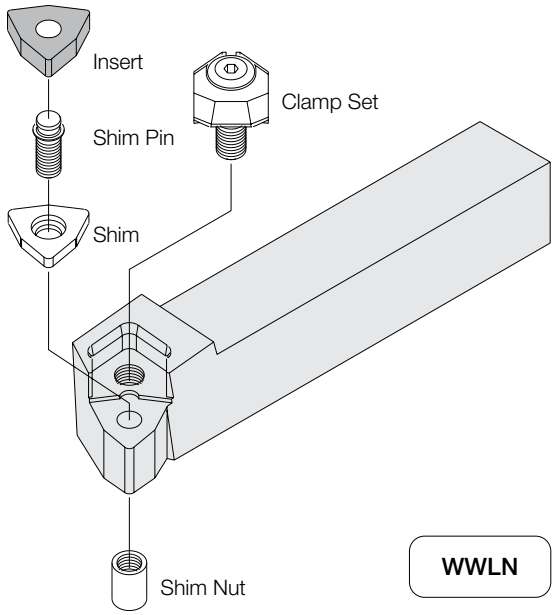
Double Clamp



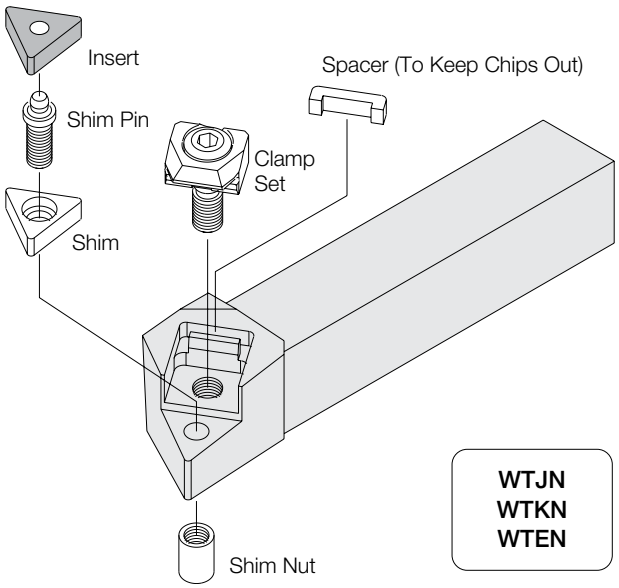
DDJN

DCLN
DDJN / DDHN
DSBN
DTGN
DVLN / DVJN / DVPN / DVVN
DWLN

Wedge Lock

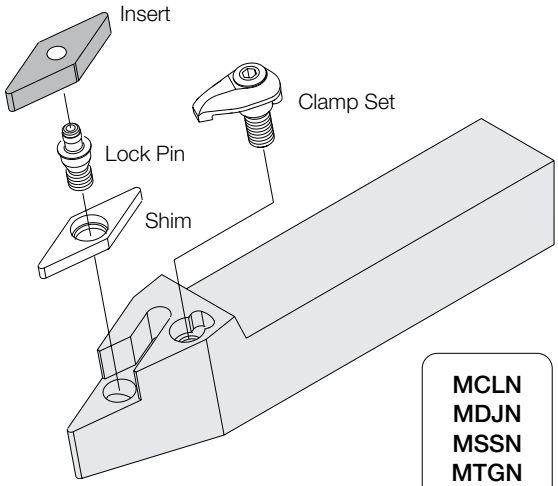


WWLN



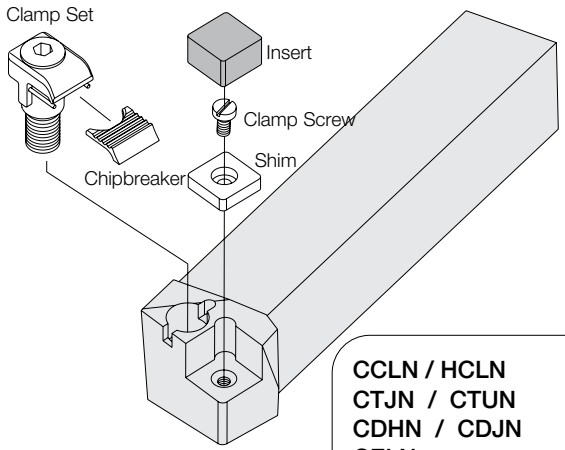
WTJN
WTKN
WTEN

Multi Lock



MCLN
MDJN
MSSN
MTGN
MVJN
MVVN
MWLN

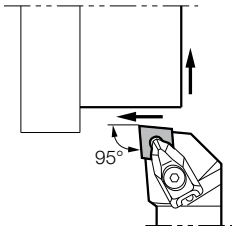
Top Clamp

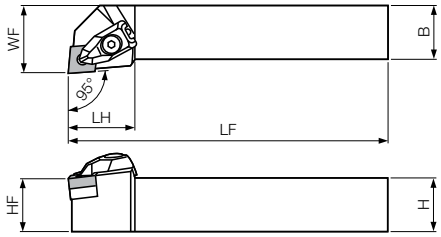


CCLN / HCLN
CTJN / CTUN
CDHN / CDJN
CELN
CSRN / HSRN / CS-N / CSKN
CSYN / CSSN / CSDN / HSDN
***CRSN / HRSN / *CRDN / CRDC**

* Chipbreaker is not included with CRSN / CRDN.

DCLN (External / Facing)





• Right-hand shown

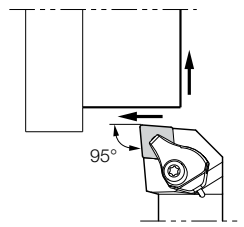
Side Rake Angle: -6°
Angle of Inclination: -6°

Applicable Inserts

Toolholder	Insert	
DCLN[R/L]...12-4B	CN□A CN□G CN□M	43..
DCLN[R/L]...16-4D		
DCLN[R/L]...-12		

DCLN-JCT (External / Facing, Jet Coolant-Through)

Pressure Resistance: up to 4,350 psi



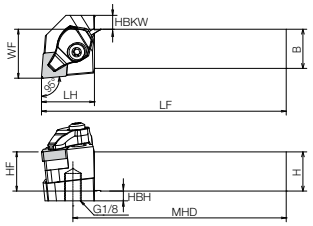


Fig.1

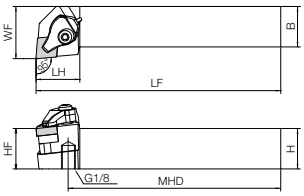


Fig.2

• Right-hand shown

Side Rake Angle: -6°
Angle of Inclination: -6°

Applicable Inserts

Toolholder	Insert	
DCLN[R/L]...-12JCT	CN□A CN□G CN□M	43..

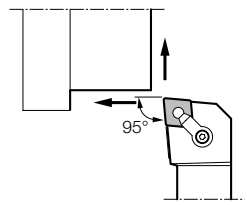
Toolholder Dimensions

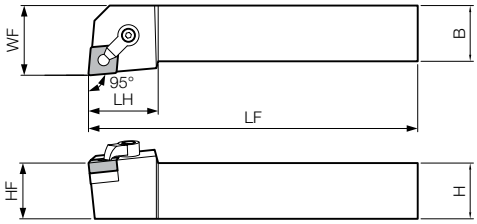
JCT Coolant Connections and Pipe Parts ➡ **D10~D11**

Part Number	Stock		Unit	Dimensions									Standard Corner-R (RE)	Drawing	Spare Parts						
															Clamp	Pipe Connection (*1 with O-Ring)	Screw	Spring	Shim	Shim Screw	Wrench	Wrench (Sold Separately)
	R	L		H	HF	HBH	B	HBKW	LF	LH	WF	MHD			...JCT						For Clamp	For Shim
DCLN[R/L] 12-4B	●	●	inch	0.75	0.75	-	0.75	-	4.50	1.30	1.00	-	1/32	-	CP-3D	-	CS-3D	SP-3D	*2 DC-44 *3 DC-44-C	SB-4085TR	LW-3	FT-15
16-4D	●	●		1.00	1.00		1.00		6.00	1.26	1.25											
DCLN[R/L] 2020K-12	●	●	mm	20	20	-	20	-	125	33	25	-	0.8	-	CP-3D	-	CS-3D	SP-3D	*2 DC-44 *3 DC-44-C	SB-4085TR	LW-3	FT-15
2525M-12	●	●		25	25		25		150	32	32											
DCLN[R/L] 12-4BJCT	●	●	inch	0.75	0.75	0.23	0.75	0.26	4.50	1.06	1.00	3.87	1/32	Fig.1	CP-3D-[R/L]-JCT	FP-12	CS-3D-TR	SP-3D	*2 DC-44 *3 DC-44-C	SB-4085TR	-	FT-15
16-4DJCT	●	●		1.00	1.00	-	1.00	-	6.00	1.06	1.25	5.37		Fig.2								
DCLN[R/L] 2020K-12JCT	●	●	mm	25	25	5	20	7	125	27	25	109	0.8	Fig.1	CP-3D-[R/L]-JCT	FP-12	CS-3D-TR	SP-3D	*2 DC-44 *3 DC-44-C	SB-4085TR	-	FT-15
2525M-12JCT	●	●		25	25	-	25	-	150	27	32	134		Fig.2								

*1 O-ring (**SS-035**) is available to order separately
*2 When using inserts with a corner-R (RE) greater than 1/16", additional modifications of the shim are necessary in order to prevent workpiece and shim from interfering with each other
*3 This shim is required for SX chipbreaker inserts (sold separately)

MCLN (External / Facing)





• Right-hand shown

Side Rake Angle: -6°
Angle of Inclination: -6°

Applicable Inserts

Toolholder	Insert	
MCLN[R/L]...-12-4B	CN□A CN□G CN□M	43..
MCLN[R/L]...-16-4D		
MCLN[R/L]...-16-5D		54..
MCLN[R/L]...-20-5D		
MCLN[R/L]...-20-6D		64..

Toolholder Dimensions

Part Number	Stock		Unit	Dimensions						Standard Corner-R (RE)	Spare Parts						
											Clamp	Clamp Screw	Wrench	Shim	Shim Screw	Lock Pin	Wrench
	R	L		H	HF	B	LF	LH	WF								
MCLN[R/L] 12-4B	●	●	inch	0.75	0.75	0.75	4.00	1.190	1.00	1/32	CL-20	XNS-48	LW-125	ICSN433	S-46	NL46	LW-094
16-4D	●	●		1.00	1.00	1.00	6.00	1.260	1.25								
16-5D	●	●		1.00	1.00	1.00	6.00	1.375	1.25	1/32	CL-12	XNS-510	LW-156	ICSN533	S-58	NL58	LW-125
20-5D	●	●		1.25	1.25	1.25	6.00	1.375	1.50								
20-6D	●	●		1.25	1.25	1.25	6.00	1.500	1.50	1/32	CL-12	XNS-510	LW-156	ICSN633	S-68	NL68	LW-140

Applicable Inserts ➡ **D9**

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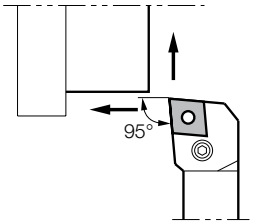
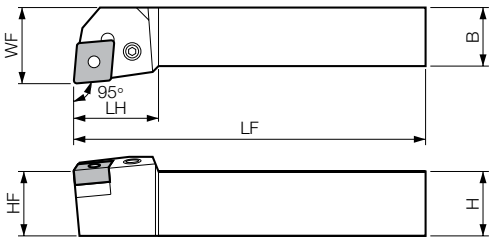
PCLN (External / Facing)





• Right-hand shown

Side Rake Angle: -6°
Angle of Inclination: -6°

Applicable Inserts

Toolholder	Insert	
PCLNR/L...12-4B	CN□A CN□G CN□M	43..
PCLNR/L...16-4D		
PCLNR/L...-09	CN□G	33..
PCLNR/L...-12	CN□A CN□G CN□M	43..
PCLNR/L...-16		54..

Toolholder Dimensions

Part Number		Stock R	Stock L	Unit	H	HF	B	LF	LH	WF	Standard Corner-R(RE)	Lever	Lock Screw	Shim	Shim Pin	Punch	Wrench
					Dimensions							Spare Parts					
PCLNR/L	12-4B	●		inch	0.75	0.75	0.75	4.50	1.06	1.00	1/32	LL-2N	LS-2N	LC-42N *2 LC-42N-20 *3 LC-42N-C	LSP-2	PC-2	LW-3
	16-4D	●			1.00	1.00	1.00	6.00	1.06	1.25							
PCLNR/L	1616H-09	●	●	mm	16	16	16	100	22	20	0.8	LL-1N	LS-1N	LC-32N	LSP-1	PC-1	FH-2.5
	2020K-09	●	●		20	20	20	125	22	25							
	2525M-09	●	●		25	25	25	150	22	32							
PCLNR/L	1616H-12	●			16	16	16	100	27	20	0.8	LL-2N	LS-2N	LC-42N *2 LC-42N-20 *3 LC-42N-C	LSP-2	PC-2	LW-3
	2020H-12*1	●			20	20	20	100	27	25							
	2020K-12	●	●		20	20	20	125	27	25							
	2525M-12	●	●		25	25	25	150	27	32							
	3225P-12	●	●		32	32	25	170	27	32							
PCLNR/L	2525M-16	●	●		25	25	25	150	32	32	0.8	LL-5N	LS-4N	LC-53N *3 LC-53N-C	LSP-3	-	LW-3
	3232P-16	●	●		32	32	32	170	32	40							

*1 Short shank type.
*2 When using inserts whose corner-R(RE) is greater than 1/16", purchase this shim (sold separately) to prevent workpiece and shim from interfering with each other.
*3 This shim is required for SX chipbreaker inserts.

Applicable Inserts

Application	Finishing	Finishing-Medium	Finishing	Finishing-Medium	Finishing-Medium	Finishing-Medium	Medium-Roughing	Medium-Roughing	Medium-Roughing	Medium-Roughing / High Feed Rate
Insert	WF (Wiper)	WE (Wiper)	PP	PQ	CQ	CJ	GS	PG	PS	PT
Size	43..	43..	43..	43..	43.., 54..	43.., 54..	33.., 43..	43..	43.., 54..	43.., 54..
Ref. Page	B16	B16	B16	B16	B17	B17	B17	B17	B17	B18
Application	Roughing	Roughing	Single Sided / Roughing / High Feed Rate	Finishing	Medium	Soft Steel / Small D.O.C.	Soft Steel / Finishing	Soft Steel / Medium	Soft Steel / Roughing	Stainless Steel / Finishing
Insert	Standard	PH	PX	R/L-S	R/L	XF	XP	XQ	XS	MQ
Size	43.., 54.., 64..	43.., 54.., 64..	43.., 54.., 64..	33..	33.., 43..	43..	43..	43..	43..	43..
Ref. Page	B18	B18	B19	B22	B22	B19	B19	B19	B19	B20
Application	Stainless Steel / Medium-Roughing	Stainless Steel / Medium-Roughing	Cast Iron	Cast Iron	Cast Iron	Cast Iron	Cast Iron	Cast Iron	Cast Iron	Cast Iron
Insert	MS	MU	KQ	KG	KH	C	ZS	GC	Without Chipbreaker	Ceramic
Size	43..	43.., 54.., 64..	43..	43..	43..	43..	43..	43..	43..	43..
Ref. Page	B20	B20	B21	B21	B21	B21	B21	B21	B21	B108
Application	Non-ferrous Metals	Non-ferrous Metals	Non-ferrous Metals	Heat-Resistant Alloys	Heat-Resistant Alloy Roughing	Heat-Resistant Alloy Roughing	Hard Materials			
Insert	A3	AH	PCD	SQ	SG	R/L-SX	CBN			
Size	43..	43..	43..	43.., 54.., 64..	43.., 54.., 64..	43.., 54.., 64..	43..			
Ref. Page	B22	B22	C23	B20	B20	B21	C6, C7			

Recommended Cutting Conditions → D45-D46

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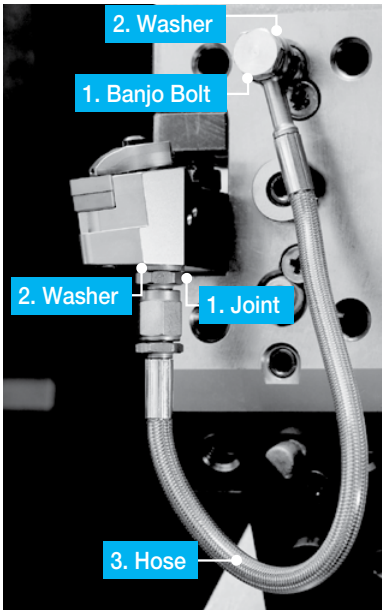
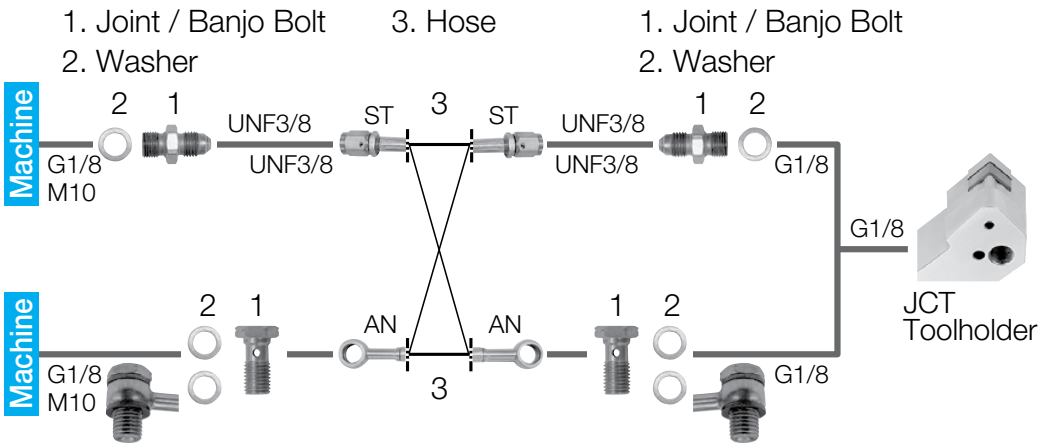
Easy Coolant Connections

Easy Connection with High Pressure Hose and Joint



- Even without a high pressure pump, internal coolant can be used at a normal pressure
- Banjo bolt available for angled hose connection and can be used in a variety of machines

Piping Installation Guide



● **Improved performance and stable machining with internal coolant even with low pressure**

Pressure Range	Tool Life	Chip Control	Notes
~ 290 psi (Low Pressure)	**Good**	Poor	Tool life is improved even when machining with low pressure coolant systems
290 psi ~ 1,015 psi (Medium Pressure)	**Excellent**	**Good**	Improved tool life and chip control performance
1,015 psi ~ 2,175 psi (High Pressure)	**Excellent**	**Excellent**	Chips become smaller and are easily evacuated
2,175 psi ~ 4,350 psi (Extra High Pressure)	**Excellent**	**Excellent**	Chips are smaller and high-speed machining of heat-resistant alloys is possible

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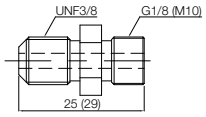
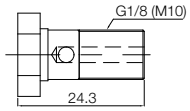
Piping Parts

Optional Piping Parts Available
Choose from parts below to match your machine specifications

1. Joint / Banjo bolt × 2
2. Washer × 2-4
3. Hose × 1

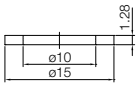
1. Joint / Banjo Bolt

Pressure Resistance: up to 4,350 psi

Shape		Part Number	Stock	Thread Standard Holder / Machine Connection
		**J-G1/8-UNF3/8**	●	G1/8
		J-M10X1.5-UNF3/8	●	M10X1.5
Banjo Bolt (for Angle Hose) 		**BB-G1/8**	●	G1/8
		BB-M10X1.5	●	M10X1.5

2. Washer

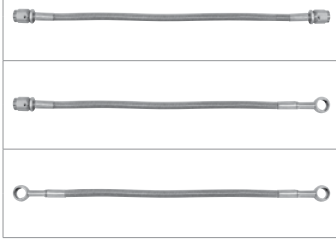
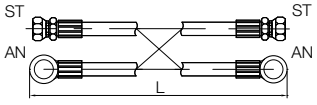
Pressure Resistance: up to 4,350 psi

Shape		Part Number	Stock
		**WS-10**	●

* Use 2 washers for a banjo bolt

3. Hose

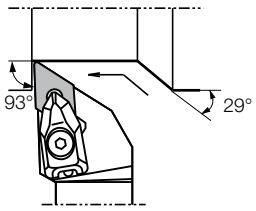
Pressure Resistance: up to 4,350 psi

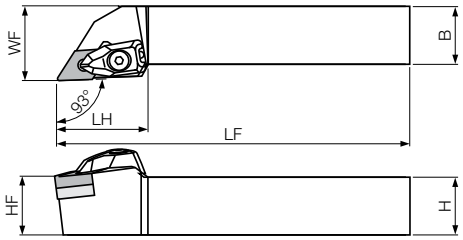
Shape		Part Number	Stock	Thread Standard		Dimensions (mm) L
		**HS-ST-ST-200**	●	UNF3/8	UNF3/8	200
		HS-ST-ST-250	●			250
		HS-ST-AN-200	●	UNF3/8	- (Banjo Bolt)	200
		HS-ST-AN-250	●			250
		HS-AN-AN-200	●	- (Banjo Bolt)	- (Banjo Bolt)	200
		HS-AN-AN-250	●			250

Precautions

1. Make sure machine door is completely closed before use of these parts.
2. Use appropriate seal for the male thread of the piping parts and make sure the connection is secure. Use plugs to seal off unused coolant holes.
3. Connect and fasten the coolant hose firmly.
4. The use of copper washers may cause leakage but will have no effect on the performance.
5. Commercial piping parts can be used if the thread standards are the same. Check the pressure resistance before use.
6. Regularly changing the coolant filter is recommended.

DDJN (External / Copying)





• Right-hand shown

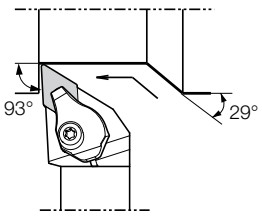
Side Rake Angle: -6°
Angle of Inclination: -7°

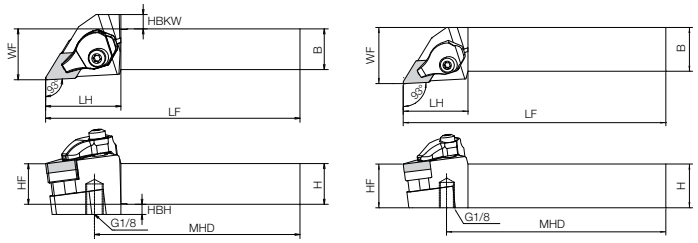
Applicable Inserts

Toolholder	Insert	
DDJNR/L**... 12-4B**	DN□A DN□G DN□M DN□X	43.. (44..)
DDJNR/L**...16-4D**		43.. (44..)
DDJNR/L**...-1504**	DN□A DN□G DN□M DN□X	43.. (44..)
DDJNR/L**...-1506**		44.. (43..)

DDJN-JCT (External / Copying, Jet Coolant-Through)

JCT Coolant Connections and Pipe Parts **D10~D11**
Pressure Resistance: up to 4,350 psi





• Right-hand shown

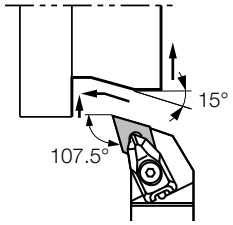
Fig.1 Fig.2

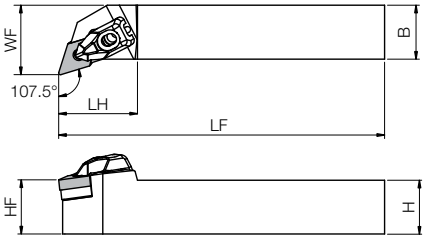
Side Rake Angle: -6°
Angle of Inclination: -7°

Applicable Inserts

Toolholder	Insert	
DDJNR/L**...-15JCT**	DN□A DN□G DN□M DN□X	44.. (43..)

DDHN (External / Face Grooving / Copying)





• Right-hand shown

Side Rake Angle: -6°
Angle of Inclination: -6°

Applicable Inserts

Toolholder	Insert	
DDHNR/L**...-1504**	DN□A DN□G DN□M DN□X	43.. (44..)
DDHNR/L**...-1506**		44.. (43..)

Toolholder Dimensions

Part Number	Stock R	Stock L	Unit	Dimensions H	HF	HBH	B	HBKW	LF	LH	WF	MHD	Standard Corner-R(RE)	Drawing	Spare Parts: Clamp	Pipe Connection (*1 with O-Ring)	Screw	Spring	Shim	Shim Screw	Wrench: For Clamp	Wrench: For Shim
DDJNR/L **12-4B**	●	●	inch	0.75	0.75		0.75	-	4.50	1.54	1.00	-	1/32	-	CP-3D	-	CS-3D	SP-3D	*DD-44 (DD-43)	SB-4085TR	LW-3	FT-15 Sold Separately
16-4D	●	●		1.00	1.00		1.00		6.00	1.54	1.25											
DDJNR/L **2020K-1504**	●	●	mm	20	20		20	-	125	39	25	-	0.8	-	CP-3D	-	CS-3D	SP-3D	*DD-44 (DD-43)	SB-4085TR	LW-3	
2525M-1504	●	●		25	25		25		150	39	32											
DDJNR/L **2020K-1506**	●	●		20	20		20	-	125	39	25	-	0.8	-	CP-3D	-	CS-3D	SP-3D	DD-43 (*DD-44)	SB-4085TR	LW-3	
2525M-1506	●	●		25	25		25		150	39	32											
DDJNR/L **12-4BJCT**	●	●	inch	0.75	0.75	0.23	0.75	0.26	4.50	1.46	1.00	3.56	1/32	Fig.1	CP-4D-R/L-JCT	FP-12	CS-3D-TR	SP-3D	*DD-44 (DD-43)	SB-4085TR	-	FT-15
16-4DJCT	●	●		1.00	1.00	-	1.00	-	6.00	1.46	1.25	5.06		Fig.2								
DDJNR/L **2020K-15JCT**	●	●	mm	20	20	5	20	7	125	37	25	101	0.8	Fig.1	CP-4D-R/L-JCT	FP-12	CS-3D-TR	SP-3D	*DD-44 (DD-43)	SB-4085TR	-	FT-15
2525M-15JCT	●	●		25	25	-	25	-	150	37	32	126		Fig.2								
DDHNR/L **2020K-1504**	●	●	mm	20	20		20	-	125	37	25	-	0.8	-	CP-3D	-	CS-3D	SP-3D	*2DD-44 (DD-43)	SB-4085TR	LW-3	FT-15 Sold Separately
2525M-1504	●	●		25	25		25		150	37	32											
DDHNR/L **2020K-1506**	●	●		20	20		20	-	125	37	25	-	0.8	-	CP-3D	-	CS-3D	SP-3D	DD-43 (*2DD-44)	SB-4085TR	LW-3	
2525M-1506	●	●		25	25		25		150	37	32											

Shims indicated within ( ) are not included with the toolholder. To change insert thickness, please purchase it separately.

Applicable Inserts **D13**

*1 O-ring (**SS-035**) is available to order separately

*2 When using inserts with a corner-R (RE) greater than 1/16", additional modifications of the shim are necessary in order to prevent workpiece and shim from interfering with each other

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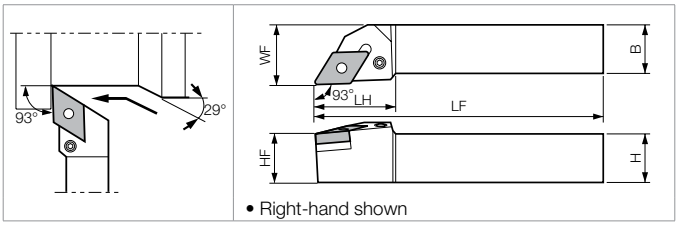
PDJN (External / Copying)

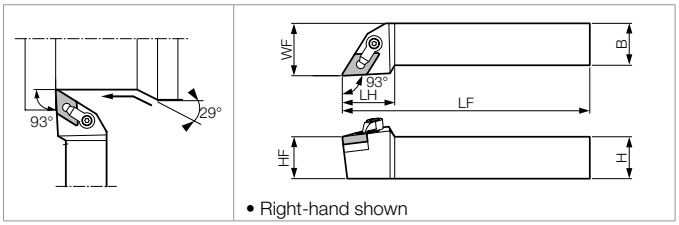
Side Rake Angle: -6°
Angle of Inclination: -7°



• Right-hand shown

MDJN (External / Copying)

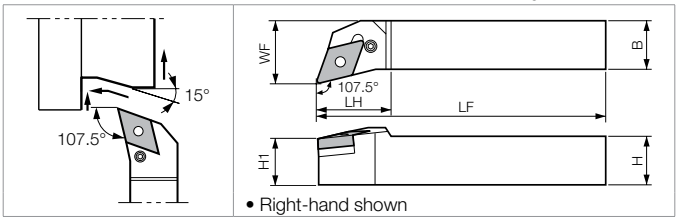
Side Rake Angle: -6°
Angle of Inclination: -6°



• Right-hand shown

PDHN (External / Face Grooving / Copying)

Side Rake Angle: -6°
Angle of Inclination: -6°



• Right-hand shown

PDHN Applicable Inserts

Toolholder	Insert	
PDHN□...-15	DN□A DN□G DN□M DN□X	43.. (44..)

PDJN / MDJN Applicable Inserts

Toolholder	Insert	
PDJN□...-3□ PDJN□...-11	DN□A DN□G	33..
PDJN□...-4□ PDJN□...-15	DN□A DN□G DN□M DN□X	43..
PDJN□...-15U		44.. (43..)
MDJN□...-4□		43..

Toolholder Dimensions

Part Number		Stock R	Stock L	Unit	Dimensions H	HF	B	LF	LH	WF	Standard Corner-R (RE)	Spare Parts: Lever	Lock Screw	Shim	Shim Pin	Punch	Wrench	Clamp	Clamp Screw	Shim Screw	Lock Pin
PDJN□	12-3B	●		inch	0.75	0.75	0.75	4.50	0.87	1.00	1/64	LL-1N	LS-1N	LD-32N	LSP-1	PC-1	FH-2.5	-	-	-	-
	16-3D	●	●		1.00	1.00	1.00	6.00	0.87	1.25											
PDJN□	16-4D	●	●		1.00	1.00	0.75	4.50	1.06	1.00	1/32	LL-3N	LS-2N	LD-42 *2 LD-42-20	LSP-2	PC-2	LW-3	-	-	-	-
PDJN□	1616H-11	●	●	mm	16	16	16	100	28	20	0.4	LL-1DN	LS-1N	LD-32N	LSP-1	PC-1	FH-2.5	-	-	-	-
	2020K-11	●	●		20	20	20	125	28	25											
	2525M-11	●	●		25	25	25	150	28	32											
PDJN□	2020H-15*1	●			20	20	20	100	36	25	0.8	LL-3N	LS-2N	LD-42 *2 LD-42-20	LSP-2	PC-2	LW-3	-	-	-	-
	2020K-15	●	●		20	20	20	125	36	25											
	2525M-15	●	●		25	25	25	150	36	32											
	3225P-15	●	●		32	32	25	170	36	32											
PDJN□	2525M-15U	●	●		25	25	25	150	34	32	0.8	LL-4	LS-3	LD-42 *2 LD-42-20 (LD-43) (*2 LD-43-20)	LSP-2	PC-2	LW-3	-	-	-	-
	3232P-15U	●	●		32	32	32	170	36	40											
PDHN□	2020K-15	●	●		20	20	20	125	35	25	0.8	LL-4	LS-3	LD-43 *2 LD-43-20 (LD-42) (*2 LD-42-20)	LSP-2	PC-2	LW-3	-	-	-	-
	2525M-15	●	●		25	25	25	150	34	32											
MDJN□	12-4B	●	●	inch	0.75	0.75	0.75	4.50	1.25	1.00	1/32	-	-	IDSN443	-	-	LW-125, LW-094	CL-20	XNS-48	S-46	NL46
	16-4D	●	●		1.00	1.00	1.00	6.00	1.25	1.25											

*1 Short shank type.

• Shim: PDJN□-15U...LD-42 is attached to PDJN□-15U. When using DN□□43 type insert, please purchase LD-43 separately.
PDHN ...LD-43 is attached to PDHN. When using DN□□44 type Insert, please purchase LD-42 separately.

*2 When using inserts whose corner-R(RE) is greater than 1/16", please purchase this shim in order to prevent workpiece and shim from interfering each other.

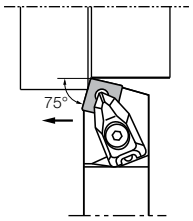
Applicable Inserts

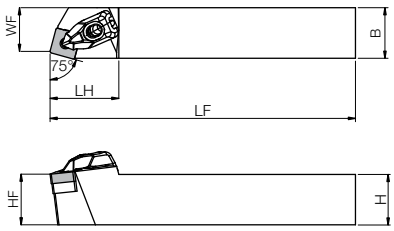
Application	Finishing	Finishing	Finishing-Medium	Finishing-Medium	Finishing-Medium	Medium-Roughing	Medium-Roughing	Medium-Roughing	Medium-Roughing / High Feed Rate	Roughing
Insert	WF (Wiper)	PP	PQ	CQ	CJ	GS	PG	PS	PT	Standard
Size	43.., 44..	43.., 44..	43.., 44..	43.., 44..	43.., 44..	33.., 43.., 44..	43.., 44..	43.., 44..	43.., 44..	43.., 44..
Ref. Page	B23	B23	B23	B24	B24	B24	B25	B25	B25	B26
Application	Roughing	Single Sided Roughing High Feed Rate	Finishing	Medium	Soft Steel / Finishing	Soft Steel / Medium	Soft Steel / Roughing	Stainless Steel / Finishing	Stainless Steel / Medium-Roughing	Stainless Steel / Medium-Roughing
Insert	PH	PX	□-S	□	XP	XQ	XS	MQ	MS	MU
Size	43.., 44..	43.., 44..	33..	33.., 43..	43.., 44..	43.., 44..	43..	43.., 44..	43.., 44..	43.., 44..
Ref. Page	B26	B26	B30	B30	B26	B26	B26	B27	B28	B28
Application	Heat-Resistant Alloy Roughing	Stainless Steel / Medium-Roughing	Cast Iron	Cast Iron	Cast Iron	Cast Iron	Cast Iron	Cast Iron	Cast Iron	Non-ferrous Metals
Insert	SG	TK	C	KQ	KG	KH	ZS	GC	Ceramic	□-A3
Size	43..	43.., 44..	43.., 44..	43.., 44..	43.., 44..	43.., 44..	43.., 44..	43.., 44..	43.., 44..	43..
Ref. Page	B28	B27	B29	B29	B29	B29	B29	B29	B109	B30
Application	Non-ferrous Metals	Non-ferrous Metals	Heat-Resistant Alloys	Hard Materials						
Insert	AH	PCD	SQ	CBN						
Size	43.., 44..	43..	43.., 44..	43.., 44..						
Ref. Page	B30	C23	B28	C8, C9						

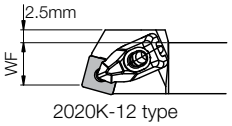
Recommended Cutting Conditions ➔ **D45-D46**

● : Standard Item △ : Phaseout Item (will be removed from next catalog)
Contact your local Kyocera sales engineer to upgrade old products to new technology

DSBN (External)







2020K-12 type

Side Rake Angle: -6°
Angle of Inclination: -6°

• Right-hand shown

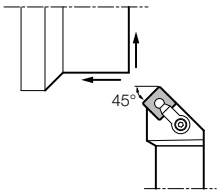
Applicable Inserts

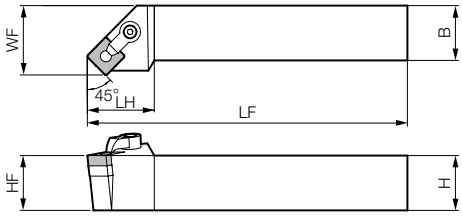
Toolholder	Insert	
DSBNR/L**...-12**	SN□A SN□G SN□M	43..

Toolholder Dimensions

Part Number	Stock R	Stock L	Unit	H	HF	B	LF	LH	WF	Standard Corner-R (RE)	Spare Parts: Clamp	Screw	Spring	Shim	Shim Screw	Wrench	Wrench (Sold Separately)
																	
DSBNR/L **2020K-12**	●	●	mm	20	20	20	125	34	17	0.8	CP-3D	CS-3D	SP-3D	DS-44	SB-4085TR	LW-3	FT-15
2525M-12	●	●		25	25	25	150	34	22								

MSSN (External / Facing / Chamfering)





• Right-hand shown

Applicable Inserts

Toolholder	Insert	
MSSNR/L**...-12-4B** **MSSN**R/L**...-16-4D**	SN□A SN□G SN□M	43..

Toolholder Dimensions

Part Number	Stock R	Stock L	Unit	H	HF	B	LF	LH	WF	Standard Corner-R (RE)	Spare Parts: Clamp	Clamp Screw	Wrench	Shim	Shim Screw	Lock Pin	Wrench
																	
MSSNR/L **16-4D**	●	□	inch	1.00	1.00	1.00	6.00	1.23	0.925	1/32	CL-9	XNS59	LW-156	ISSN433	S-46	NL46	LW-094

Applicable Inserts ➔ **D15**

(Customer Service) **800.823.7284 - Option 1**
(Technical Support) **800.823.7284 - Option 2**
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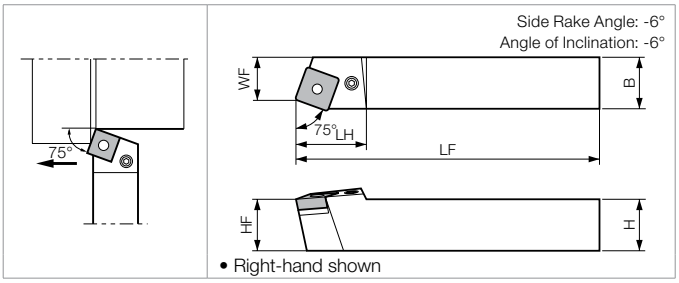
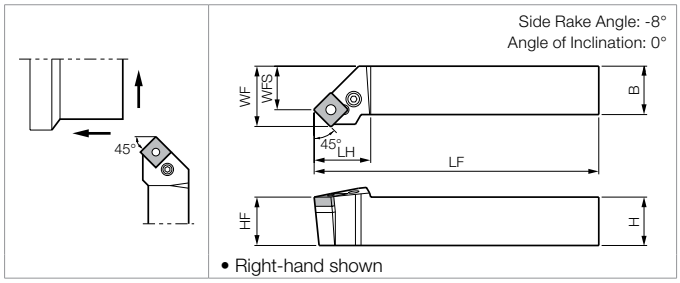
● : Standard Item □ : Made to Order △ : Phaseout Item (will be removed from next catalog)
Contact your local Kyocera sales engineer to upgrade old products to new technology

PSBN (External)



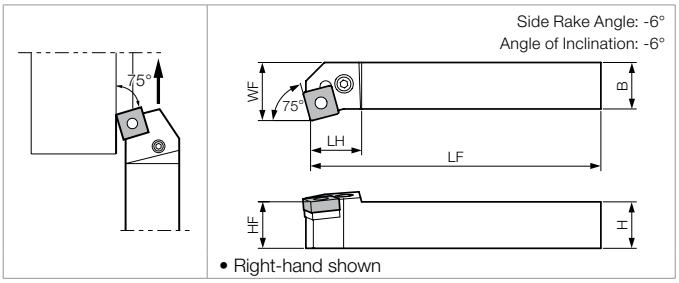
• Right-hand shown

PSSN (External / Facing / Chamfering)



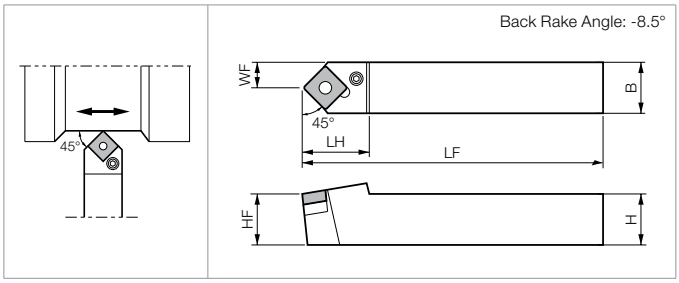
• Right-hand shown

PSKN (Facing)



• Right-hand shown

PSDN (External / Chamfering)



Toolholder Dimensions

Part Number		Stock R	Stock N	Stock L	Unit	Dimensions H	HF	B	LF	LH	WF	WFS	Standard Corner-R (RE)	Spare Parts: Lever	Lock Screw	Shim	Shim Pin	Punch	Wrench
PSBN[R/L]	1616H-09	△		△	mm	16	16	16	100	21.0	13	-	0.8	LL-1N	LS-1N	LS-32	LSP-1	PC-1	FH-2.5
	2020K-12	●		●		20	20	20	125	27.0	17	-	0.8	LL-2N	LS-2N	LS-42	LSP-2	PC-2	LW-3
	2525M-12	●		●		25	25	25	150	24.0	22	-							
PSKN[R/L]	1616H-09	△		△		16	16	16	100	19.0	20	-	0.8	LL-1N	LS-1N	LS-32	LSP-1	PC-1	FH-2.5
	2020K-12	●		●		20	20	20	125	22.5	25	-	0.8	LL-2N	LS-2N	LS-42	LSP-2	PC-2	LW-3
	2525M-12	●		●		25	25	25	150	22.5	32	-							
PSSN[R/L]	1616H-09	●		●		16	16	16	100	22	20	13.6	0.8	LL-1N	LS-1N	LS-32	LSP-1	PC-1	FH-2.5
	2020K-12	●		●		20	20	20	125	29	25	16.4	0.8	LL-2N	LS-2N	LS-42	LSP-2	PC-2	LW-3
	2525M-12	●		●		25	25	25	150	29	32	23.4							
PSDNN	1616H-09		●			16	16	16	100	21	8	-	0.8	LL-1N	LS-1N	LS-32	LSP-1	PC-1	FH-2.5
	2020K-12		●			20	20	20	125	30	10	-	0.8	LL-2N	LS-2N	LS-42	LSP-2	PC-2	LW-3
	2525M-12		●			25	25	25	150	30	12.5	-							

Applicable Inserts

Toolholder	Insert	
PSBN[R/L]...-09	SN□G	32..
PSKN[R/L]...-09		
PSSN[R/L]...-09		
PSDNN...-09		
PSBN[R/L]...-12	SN□A SN□G SN□M	43..
PSKN[R/L]...-12		
PSSN[R/L]...-12		
PSDNN...-12		

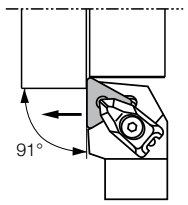
Application	Finishing-Medium	Medium-Roughing	Medium-Roughing	Medium-Roughing	Medium-Roughing / High Feed Rate	Roughing	Roughing	Single Sided Roughing High Feed
Insert	PQ	PG	PS	HS	PT	Standard	PH	PX
Size	43..	43..	43..	43..	43..	32.., 43..	43..	43..
Ref. Page	B32	B32	B32	B32	B32	B32	B33	B33
Application	Finishing-Roughing	Medium-Roughing / Low Cutting Force	Soft Steel / Finishing	Soft Steel / Medium	Soft Steel / Roughing	Stainless Steel / Finishing	Stainless Steel / Medium-Roughing	Heat-Resistant Alloy Roughing
Insert	[R/L]-□	[R/L]-25R	XP	XQ	XS	MQ	MS	SG
Size	32.., 43..	43..	43..	43..	43..	43..	43..	43..
Ref. Page	B35	B35	B33	B33	B33	B34	B34	B34
Application	Cast Iron	Cast Iron / Roughing	Cast Iron / Roughing	Cast Iron	Cast Iron	Cast Iron	Cast Iron	Hard Materials
Insert	C	KG	KH	ZS	GC	Without Chipbreaker	Ceramic	CBN
Size	43..	43..	43..	43..	43..	43..	43..	43..
Ref. Page	B34	B34	B34	B34	B34	B35	B111	C10

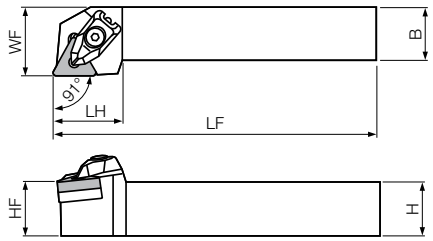
• PSKN[R/L]: Left-hand Insert for Right-hand Toolholder, Right-hand Insert for Left-hand Toolholder.
• PSSN[R/L]: For External Turning, Right-hand Insert for Right-hand Toolholder, Left-hand Insert for Left-hand Toolholder
For Facing, Left-hand Insert for Right-hand Toolholder, Right-hand Insert for Left-hand Toolholder

Recommended Cutting Conditions ➔ **D45-D46**

● : Standard Item △ : Phaseout Item (will be removed from next catalog)
Contact your local Kyocera sales engineer to upgrade old products to new technology

DTGN (External)





• Right-hand shown

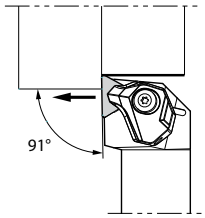
Side Rake Angle: -6°
Angle of Inclination: -6°

Applicable Inserts D19

Toolholder	Insert	
DTGN□...-16	TN□A TN□G TN□M TN□X	33..

DTGN-JCT (External, Jet Coolant-Through) NEW

JCT Coolant Connections and Pipe Parts **D10~D11**
Pressure Resistance: up to 4,350 psi



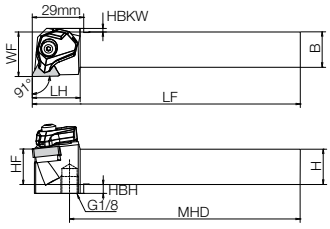


Fig.1

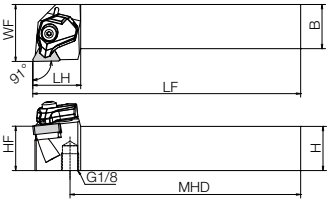


Fig.2

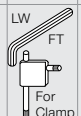
• Right-hand shown

Side Rake Angle: -6°
Angle of Inclination: -6°

Applicable Inserts D19

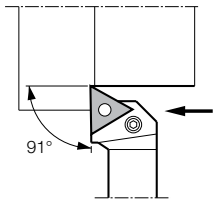
Toolholder	Insert	
DTGN□...-16JCT	TN□A TN□G TN□M TN□X	33..

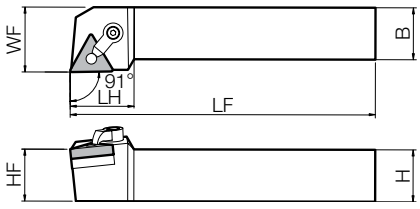
Toolholder Dimensions

Part Number	Stock R	Stock L	Unit	H	HF	HBH	B	HBWK	LF	LH	WF	MHD	Standard Corner-R (RE)	Drawing	Spare Parts: Clamp	Pipe Connection (*1 with O-Ring)	Screw	Spring	Shim	Shim Screw	Wrench	Wrench (Sold Separately)
															 ...JCT							
DTGN□ 2020K-16	●	●	mm	20	20	-	20	-	125	25	25	-	0.8	-	CP-2D	-	CS-2D	SP-2D	*2 DT-32	SB-3080TR	LW-2.5	FT-10
2525M-16	●	●		25	25		25		150		32											
DTGN□ 2020K-16JCT	●	●	mm	20	20	5	20	2	125	27	25	104	0.8	Fig.1	CP-2D-□-JCT	FP-12	CS-3D-TR	SP-3D	*2 DT-32	SB-3080TR	FT-15	FT-10
NEW **2525M-16JCT**	●	●		25	25	-	25	-	150		32	129		Fig.2								

• When using WF chipbreaker (wiper insert), tool edge offset or program corrections are required. See **R50**
*1 O-ring (**SS-035**) is available to order separately
*2 When using inserts with a corner-R (RE) greater than 1/16", additional modifications of the shim are necessary in order to prevent workpiece and shim from interfering with each other

MTGN (External)





• Right-hand shown

Side Rake Angle: -5°
Angle of Inclination: -5°

Applicable Inserts D19

Toolholder	Insert	
MTGN□...-12-3B	TN□A TN□G TN□M TN□X	32..
MTGN□...-16-4D		43..

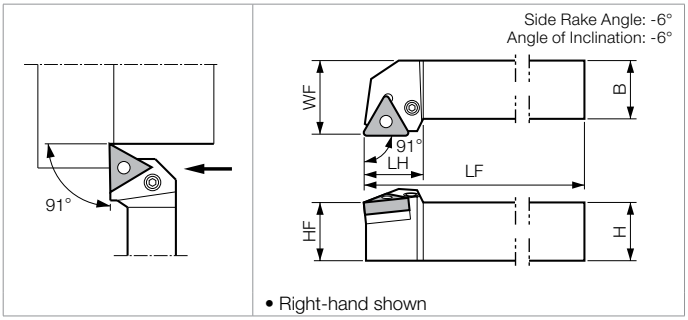
Toolholder Dimensions

Part Number	Stock R	Stock L	Unit	H	HF	B	LF	LH	WF	Standard Corner-R (RE)	Spare Parts: Clamp	Clamp Screw	Wrench	Shim	Shim Screw	Lock Pin	Wrench
																	
MTGN□ 12-3B	●	●	inch	0.75	0.75	0.75	4.50	0.94	1.00	1/64	CL-6	XNS36	LW-094	ITSN333 (ITSN323)	S-34	NL34L	(5/64 Hex)
16-4D	●			1.00	1.00	1.00	6.00	1.19	1.25	1/32	CL-9	XNS48	LW-156	ITSN433	S-46	NL46	LW0

• Shim: ITSN333 is included with MTGN□12-3B. When using TN__33_ insert, please purchase ITSN323 separately.

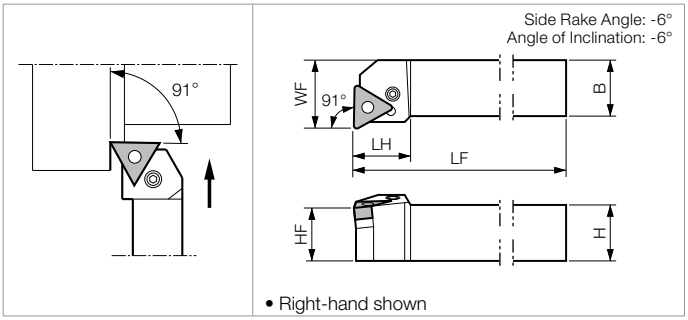
(Customer Service) **800.823.7284 - Option 1**
(Technical Support) **800.823.7284 - Option 2**
Visit us online at **KyoceraPrecisionTools.com**
● : Standard Item △ : Phaseout Item (will be removed from next catalog)
Contact your local Kyocera sales engineer to upgrade old products to new technology

PTGN (External)



• Right-hand shown

PTFN (Facing)



• Right-hand shown

Toolholder Dimensions

Part Number	Stock R	Stock L	Unit	H	HF	B	LF	LH	WF	Standard Corner-R (RE)	Lever	Lock Screw	Shim	Shim Pin	Punch	Wrench
				Dimensions							Spare Parts					
PTGN□ 12-3B	●		inch	0.75	0.75	0.75	4.50	0.96	1.00	1/32	LL-1N	LS-1N	LT-32N *LT-32N-20	LSP-1	PC-1	LW-2.5
PTGN□ 1212F-11	●	●	mm	12	12	12	80	18.0	16	0.8	LL-03N	LS-03N	-	P-03	-	FH-2
1616H-11	●			16	16	16	100	22.0	20	0.8	LL-03TN	LS-03SN	-	P-03S	-	FH-2.5
2020K-11	●	●		20	20	20	125	22.0	25							
2525M-11	●	●		25	25	25	150	22.0	32							
PTGN□ 1616H-16	●	●		16	16	16	100	24.0	20	0.8	LL-1N	LS-1N	LT-32N *2 LT-32N-20	LSP-1	PC-1	FH-2.5
2020H-16*	●			20	20	20	100	24.0	25							
2020K-16	●	●		20	20	20	125	24.0	25							
2525M-16	●	●		25	25	25	150	24.0	32							
PTGN□ 2525M-22	●	●		25	25	25	150	29.0	32	0.8	LL-2N	LS-2N	LT-42N *2 LT-42N-20	LSP-2	PC-2	LW-3
PTFN□ 12-3C		●	inch	0.75	0.75	0.75	5.00	0.88	1.00	1/32	LL-1N	LS-1N	LT-32N *2 LT-32N-20	LSP-1	PC-1	FH-2.5
PTFN□ 1212F-11	●	●	mm	12	12	12	80	15.0	16	0.8	LL-03N	LS-03N	-	P-03	-	FH-2
PTFN□ 1616H-11	●	●		16	16	16	100	22.5	20	0.8	LL-03TN	LS-03SN	-	P-03S	-	FH-2.5
2020K-11	●			20	20	20	125	22.5	25							
2525M-11	●	●		25	25	25	150	22.5	32							
PTFN□ 2020K-16	●	●		20	20	20	125	22.0	25	0.8	LL-1N	LS-1N	LT-32N *2 LT-32N-20	LSP-1	PC-1	FH-2.5
2525M-16	●	●		25	25	25	150	23.0	32							
PTFN□ 2525M-22	●	●		25	25	25	150	28.0	32	0.8	LL-2N	LS-2N	LT-42N *2 LT-42N-20	LSP-2	PC-2	LW-3

*1 Short shank type.
*2 When using inserts whose corner-R(RE) is greater than 1/16", please purchase this shim in order to prevent workpiece and shim from interfering each other.
• When using WF chipbreaker (wiper insert), tool edge offset or program corrections are required. See R50

Applicable Inserts D19

Toolholder	Insert	
PTGN□...12-3B	TN□A TN□G TN□M TNMX	33..
PTFN□...12-3C	TN□A TN□G TNMX	33..
PT□N□12...-11	TN□□	22..
PT□N□...-11		23..
PT□N□...-16	TN□A TN□G	33..
PT□N□...-22	TN□M TNMX*3	43..

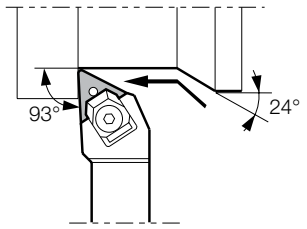
PTGN□1212F-11
PTFN□1212F-11
} Insert applicable for above

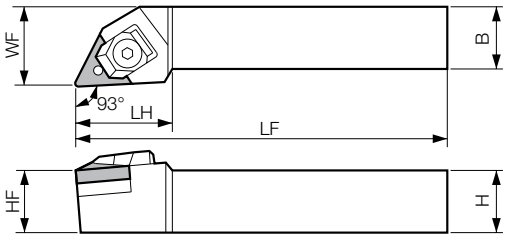
TN□□1103-type Insert is applicable.

• PTFN□: Left-hand Insert for Right-hand Toolholder, Right-hand Insert for Left-hand Toolholder

*3 TNMX insert is **NOT** applicable for PT□N□...-22 type toolholders.

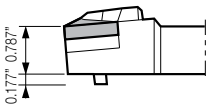
WTJN (External / Copying)





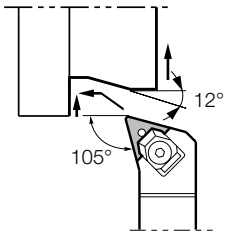
Side Rake Angle: -6°
Angle of Inclination: -6°

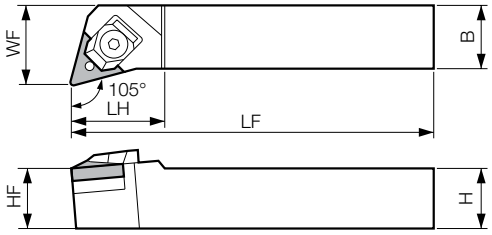
WTJN□2020K type:
Shim Nut sticks out as shown below.



• Right-hand shown

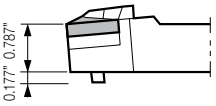
WTKN (External / Facing / Copying)





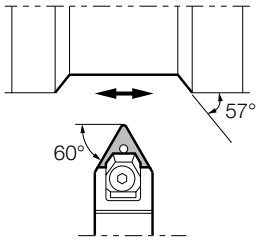
Side Rake Angle: -6°
Angle of Inclination: -6°

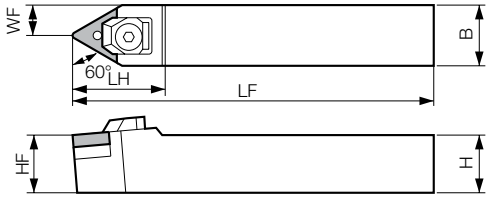
WTKN□2020K type:
Shim Nut sticks out as shown below.



• Right-hand shown

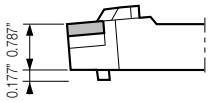
WTEN (External / Chamfering)





Back Rake Angle: -8.5°

WTENN2020K type:
Shim Nut sticks out as shown below.



• Right-hand shown

Toolholder Dimensions

Part Number	Stock			Unit	Dimensions						Standard Corner-R (RE)	Spare Parts					
												Clamp Set	Shim	Shim Pin	Shim Nut	Wrench	Spacer
	R	N	L		H	HF	B	LF	LH	WF							
WTJN□ 12-3C	●			inch	0.75	0.75	0.75	5.00	1.26	1.00	1/32	WCS-1N	WTN-33 *WTN-33-20	WP-1S	WN-1	LW-3	WSP-1
16-3D	●		●		1.00	1.00	1.00	6.00	1.26	1.25							
WTJN□ 2020K-16N	●		●	mm	20	20	20	125	32	25.0	0.8	WCS-1N	WTN-33 *WTN-33-20	WP-1S	WN-1	LW-3	WSP-1
2525M-16N	●		●		25	25	25	150	32	32.0							
WTKN□ 12-3C			●	inch	0.75	0.75	0.75	5.00	1.26	1.00	1/32	WCS-1N	WTN-33 *WTN-33-20	WP-1S	WN-1	LW-3	WSP-1
WTKN□ 2020K-16N	●		●	mm	20	20	20	125	32	25.0	0.8	WCS-1N	WTN-33 *WTN-33-20	WP-1S	WN-1	LW-3	WSP-1
2525M-16N	●		●		25	25	25	150	32	32.0							
WTENN 2020K-16N		●		mm	20	20	20	125	32	10.0	0.8	WCS-1N	WTN-33 *WTN-33-20	WP-1S	WN-1	LW-3	WSP-1
2525M-16N		●			25	25	25	150	32	12.5							

* When using inserts whose corner-R (RE) is greater than 1/16", please purchase a shim (WTN-33-20) with * mark and use it in order to prevent workpiece and shim from interfering with each other.

Applicable Inserts D19

Toolholder	Insert	
WTJN□...12-3C	TN□A TN□G TN□M	33..
WTJN□...16-3D		
WTJN□...-16N		
WTKN□...12-3C		
WTKN□...16-3D		
WTKN□...-16N		

Toolholder	Insert	
WTENN...-16N	TN□A TN□G TN□M	33..

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Contact your local Kyocera sales engineer to upgrade old products to new technology

Applicable Inserts























Application	Finishing	Finishing-Medium	Finishing-Medium	Medium-Roughing	Medium-Roughing	Medium-Roughing	Medium-Roughing / High Feed Rate	Medium-Roughing / High Feed Rate	Medium-Roughing	Single Sided / Roughing / High Feed	Roughing
Insert	PP	PQ	CQ	GS	PG	PS	PT	GT	PH	PX	Standard
Size	33..	33..	33.., 43..	23.., 33..	33..	33.., 43..	33..	33..	33.., 43..	33.., 43..	23.., 33..
Ref. Page	B36	B36	B36	B36	B36	B37	B37	B37	B37	B38	B37
Application	Finishing	Finishing-Roughing	Medium-Roughing Low Cutting Force	Soft Steel / Small D.O.C.	Soft Steel / Finishing	Soft Steel / Medium	Soft Steel / Roughing	Stainless Steel / Finishing	Stainless Steel / Medium-Roughing	Stainless Steel / Medium-Roughing	Heat-Resistant Alloy Roughing
Insert	R/L-S	R/L-□	R/L-25R	XF	XP	XQ	XS	MQ	MS	MU	SG
Size	23.., 33..	22.., 23.., 33.., 43..	33..	33..	33..	33..	33..	33..	33..	33..	33.., 43..
Ref. Page	B42	B42, B43	B43	B38	B38	B38	B38	B39	B39	B39	B39
Application	Cast Iron	Cast Iron	Cast Iron	Cast Iron	Cast Iron	Non-ferrous Metals	Non-ferrous Metals	Non-ferrous Metals	Hard Materials		
Insert	KQ	KG	KH	ZS	Ceramic	R/L-A3	AH	PCD	CBN		
Size	33..	33..	33..	33..	33..	33..	33..	33..	33..		
Ref. Page	B40	B40	B40	B40	B113	B41	B41	C23	C10, C11		





































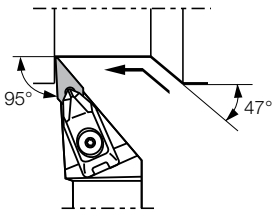


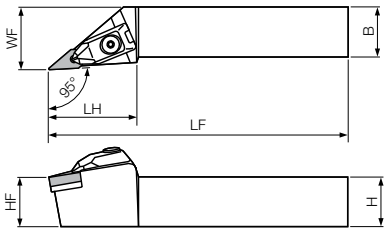


• In wedge lock, use of ceramic insert other than silicon nitride insert is not recommended due to strong restrain force.

Recommended Cutting Conditions D45-D46

DVJN / DVLN (External / Copying)



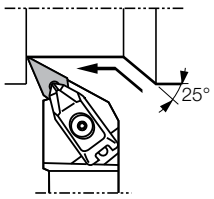


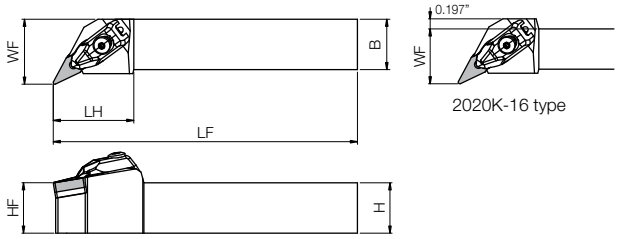
• Right-hand shown

Side Rake Angle: -6°
Angle of Inclination: -9°

Toolholder	Insert	
DVJN□12-3B	VN□A VN□G VN□M	33..
DVJN□16-3D		
DVLN□...-16		

DVPN (External / Facing / Copying / Undercutting)



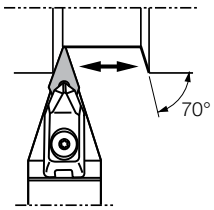


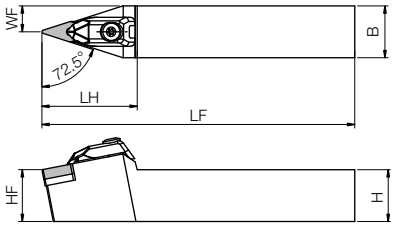
• Right-hand shown

Side Rake Angle: -13°
Angle of Inclination: -10°

Toolholder	Insert	
DVPN□12-3B	VN□A VN□G VN□M	33..
DVPN□16-3D		
DVPN□...-16		

DVVN (External / Copying)





• Right-hand shown

Back Rake Angle: -11°

Toolholder	Insert	
DVVNN12-3B	VN□A VN□G VN□M	33..
DVVNN16-3D		
DVVNN...-16		

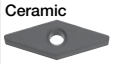
Toolholder Dimensions

Part Number		Stock R	Stock N	Stock L	Unit	H	HF	B	LF	LH	WF	Standard Corner-R (RE)	Spare Parts: Clamp	Screw	Spring	Shim	Shim Screw	Wrench	Wrench (sold separately)
																			
DVJN□	12-3B	●		●	inch	0.75	0.75	0.75	4.50	1.77	1.00	1/32	CP-5D	CS-5D	SP-5D	DV-33	SB-4085TR	LW-3	FT-15
	16-3D	●		●		1.00	1.00	1.00	6.00	1.77	1.25								
DVLN□	2020K-16	●		●	mm	20	20	20	125	45	25.0	0.8	CP-5D	CS-5D	SP-5D	DV-33	SB-4085TR	LW-3	FT-15
	2525M-16	●		●		25	25	25	150	45	32.0								
DVPN□	12-3B	●		●	inch	0.75	0.75	0.75	4.50	1.58	1.00	1/32	CP-5D	CS-5D	SP-5D	DV-33	SB-4085TR	LW-3	FT-15
	16-3D	●		●		1.00	1.00	1.00	6.00	1.58	1.25								
DVPN□	2020K-16	●		●	mm	20	20	20	125	40	27.0	0.8	CP-5D	CS-5D	SP-5D	DV-33	SB-4085TR	LW-3	FT-15
	2525M-16	●		●		25	25	25	150	40	32.0								
DVVNN	12-3B		●		inch	0.75	0.75	0.75	4.50	1.81	0.40	1/32	CP-5D	CS-5D	SP-5D	DV-33	SB-4085TR	LW-3	FT-15
	16-3D		●			1.00	1.00	1.00	6.00	1.81	0.52								
DVVNN	2020K-16		●		mm	20	20	20	125	46	10.0	0.8	CP-5D	CS-5D	SP-5D	DV-33	SB-4085TR	LW-3	FT-15
	2525M-16		●			25	25	25	150	46	12.5								

Applicable Inserts

Toolholder	Insert	
DVJN□...-3□(JCT)	VN□A VN□G VN□M	33..
DVLN□...-3□(JCT)		
DVLN□...-16(JCT)		
DVPN□...-3□(JCT)		
DVPN□...-16(JCT)		
DVVNN□...-3□(JCT)		
DVVNN□...-16(JCT)		

Application	Finishing	Finishing-Medium	Finishing-Medium	Finishing-Medium	Medium	Roughing	Finishing-Medium	Stainless Steel / Finishing	Stainless Steel / Medium-Roughing
Insert	PP 	□ -VC 	VF 	PQ 	TN-V 	Standard 	□ 	MQ 	MS 
Size	33..	33..	33..	33..	33..	33..	33..	33..	33..
Ref. Page	B44	B44	B44	B44	B44	B44	B45	B45	B45

Application	Stainless Steel / Medium-Roughing	Heat-Resistant Alloy Roughing	Cast Iron	Cast Iron	Cast Iron	Cast Iron	Non-ferrous Metals	Hard Materials
Insert	MU 	SG 	KG 	KH 	Without Chipbreaker 	Ceramic 	PCD 	CBN 
Size	33..	33..	33..	33..	33..	33..	33..	33..
Ref. Page	B45	B45	B45	B45	B45	B114	C23	C12

Recommended Cutting Conditions ➡ D45-D46

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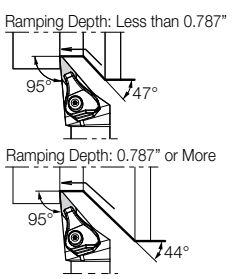
DVLN-JCT (External / Copying, Jet Coolant-Through) NEW

Pressure Resistance: up to 4,350 psi



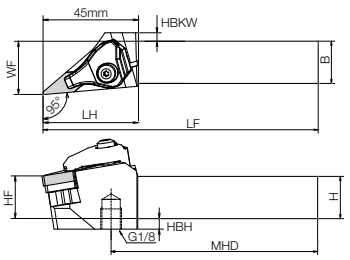


Fig.1

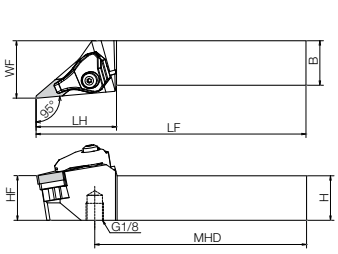


Fig.2

• Right-hand shown

Side Rake Angle: -6°
Angle of Inclination: -9°

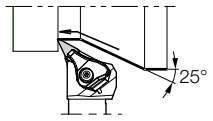
Applicable Inserts D20

Toolholder	Insert	
DVLN□12-3BJCT	VN□A VN□G VN□M	33..
DVLN□16-3DJCT		
DVLN□...-16JCT		

JCT Coolant Connections and Pipe Parts D10~D11

DVPN-JCT (External / Facing / Copying / Undercutting, Jet Coolant-Through) NEW

Pressure Resistance: up to 4,350 psi



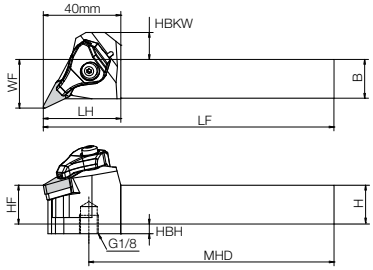


Fig.3

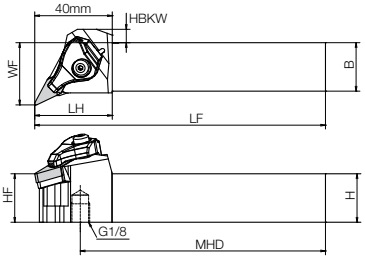


Fig.4

• Right-hand shown

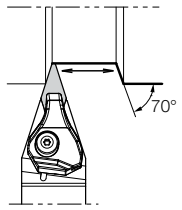
Side Rake Angle: -13°
Angle of Inclination: -10°

Applicable Inserts D20

Toolholder	Insert	
DVPN□...-16JCT	VN□A VN□G VN□M	33..

DVVN-JCT (External / Copying, Jet Coolant-Through) NEW

Pressure Resistance: up to 4,350 psi



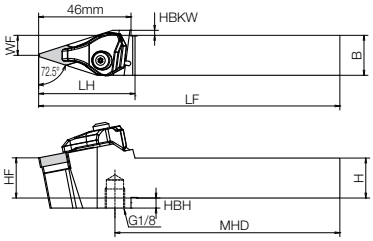


Fig.5

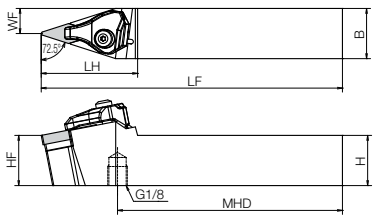


Fig.6

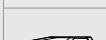
• Right-hand shown

Back Rake Angle: -11°

Applicable Inserts D20

Toolholder	Insert	
DVVNN...-16JCT	VN□A VN□G VN□M	33..

Toolholder Dimensions

Part Number	Stock R	Stock N	Stock L	Unit	Dimensions H	HF	HBH	B	HBKW	LF	LH	WF	MHD	Standard Corner-R (RE)	Drawing	Spare Parts: Clamp	Pipe Connection (*1 with O-Ring)	Screw	Spring	Shim	Shim Screw	Wrench
																						
DVLNR 12-3BJCT	●			inch	0.750	0.750	0.234	0.750	0.142	4.500	1.771	1.000	3.220	1/32	Fig. 1	CP-5D-JCT	FP-12	CS-3D-TR	SP-3D	DV-33	SB-408STR	FT-15
16-3DJCT	●				1.000	1.000	-	1.000	-	6.000	1.771	1.250	4.720		Fig. 2							
DVLNL 12-3BJCT			●		0.750	0.750	0.234	0.750	0.142	4.500	1.771	1.000	3.060		Fig. 1							
16-3DJCT			●		1.000	1.000	-	1.000	-	6.000	1.771	1.250	4.560		Fig. 2							
DVLNR 2020K-16JCT	●			mm	20	20	5	20	4	125	45	25	92.5	0.8	Fig.1	CP-5D-JCT	FP-12	CS-3D-TR	SP-3D	*2 DV-33	SB-4085TR	FT-15
2525M-16JCT	●				25	25	-	25	-	150		32	117.5		Fig.2							
DVLNL 2020K-16JCT			●		20	20	5	20	4	125		25	88.5		Fig.1							
2525M-16JCT			●		25	25	-	25	-	150		32	113.5		Fig.2							
DVPNR 2020K-16JCT	●				20	20	5	20	14	125	40	25	101.5	0.8	Fig.3	CP-5D-JCT	FP-12	CS-3D-TR	SP-3D	*2 DV-33	SB-4085TR	FT-15
2525M-16JCT	●				25	25	-	25	7	150		32	126.5		Fig.4							
DVPNL 2020K-16JCT			●		20	20	5	20	14	125		25	93.5		Fig.3							
2525M-16JCT			●		25	25	-	25	7	150		32	118.5		Fig.4							
DVVNN 2020K-16JCT		●			20	20	5	20	2.5	125	48	10	87.0	0.8	Fig.5	CP-5D-JCT	FP-12	CS-3D-TR	SP-3D	*2 DV-33	SB-4085TR	FT-15
2525M-16JCT		●			25	25	-	25	-	150		12.5	112.0		Fig.6							

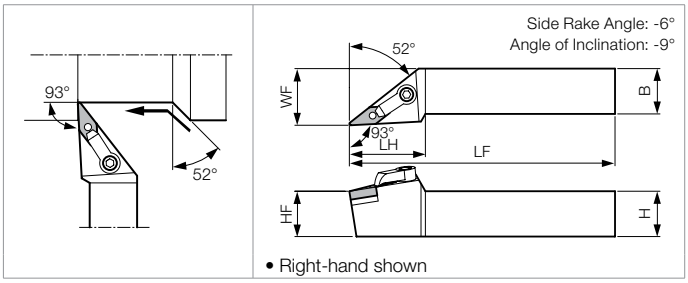
*1 O-ring (**SS-035**) is available to order separately

*2 When using inserts with a corner-R (RE) greater than 1/16", additional modifications of the shim are necessary in order to prevent workpiece and shim from interfering with each other

● : Standard Item △ : Phaseout Item (will be removed from next catalog)

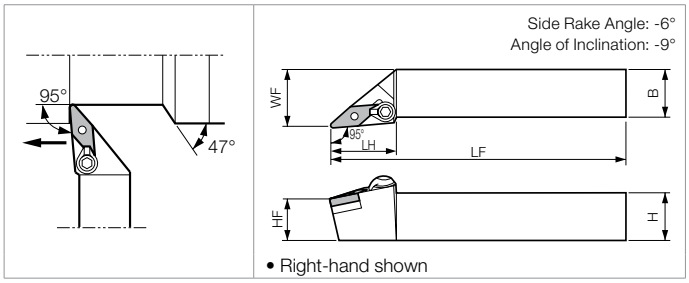
Contact your local Kyocera sales engineer to upgrade old products to new technology

MVJN (External / Copying)



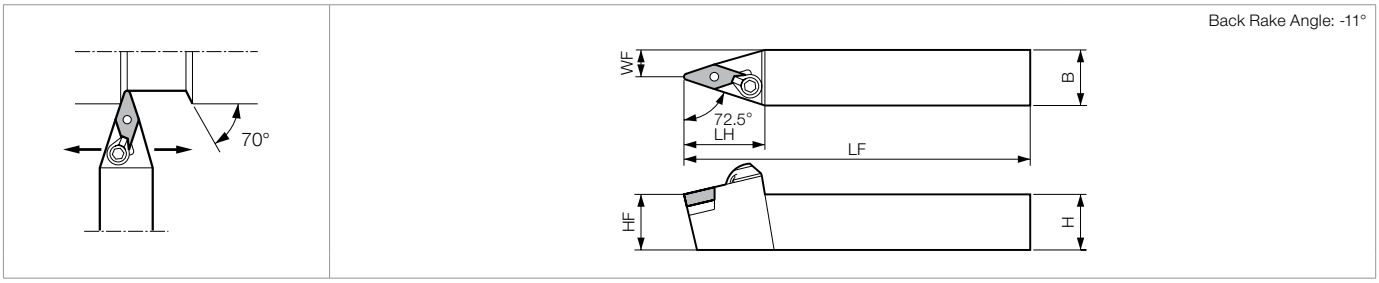
• Right-hand shown

MVLN (External / Copying)



• Right-hand shown

MVVN (External / Copying)



Toolholder Dimensions

Part Number		Stock R	Stock N	Stock L	Unit	Dimensions H	HF	B	LF	LH	WF	Standard Corner-R (RE)	Spare Parts: Clamp Set	Wrench	Shim	Shim Screw	Lock Pin	Wrench	Clamp	Clamp Screw
																				
MVJN[R/L]	12-3B	●		●	inch	0.75	0.75	0.75	4.5	1.69	1.00	1/32	-	(5/64 hex)	IVSN322	S-34	NL34L	LX-156	CL-30	XNS48
	16-3C	●		●		1.00	1.00	1.00	5.0	1.69	1.25									
MVLN[R/L]	2020K-16	●		●	mm	20	20	20	125	38	25.0	0.8	CPS-5[R/L]	FH-2.5	MVN-32	-	TS-3S	FH-2	-	-
	2525M-16	●		●		25	25	25	150	38	32.0									
MVVNN	12-3B		●		inch	0.75	0.75	0.75	4.50	1.67	0.375	1/32	-	(5/64 Hex)	IVSN322	-	NL34L	LW-156	CL-12	XNS510
	16-3D		●			1.00	1.00	1.00	6.00	1.67	0.500									
MVVNN	2020K-16		●		mm	20	20	20	125	39	10.0	0.8	CPS-5R	FH-2.5	MVN-32	-	TS-3S	FH-2	-	-
	2525M-16		●			25	25	25	150	39	12.5									

• Clamp Set: CPS-5R for Right-hand Toolholder, CPS-5L for Left-hand Toolholder.

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● : Standard Item △ : Phaseout Item (will be removed from next catalog)
Contact your local Kyocera sales engineer to upgrade old products to new technology

Applicable Inserts

Toolholder	Insert	
MVJNR/L...12-3B	VN□A VN□G VN□M	33..
MVJNR/L...16-3C		
MVLNR/L...-16		
MVVNN...12-3B		
MVVNN...16-3D		
MVVNN...-16		

Application	Finishing	Finishing-Medium	Finishing-Medium	Finishing-Medium	Medium	Roughing	Finishing-Medium	Stainless Steel / Finishing	Stainless Steel / Medium-Roughing
Insert	PP	R/L -VC	VF	PQ	TN-V	Standard	R/L	MQ	MS
Size	33..	33..	33..	33..	33..	33..	33..	33..	33..
Ref. Page	B44	B44	B44	B44	B44	B44	B45	B45	B45
Application	Stainless Steel / Medium-Roughing	Heat-Resistant Alloy Roughing	Cast Iron	Cast Iron	Cast Iron	Cast Iron	Non-ferrous Metals	Hard Materials	
Insert	MU	SG	KG	KH	Without Chipbreaker	Ceramic	PCD	CBN	
Size	33..	33..	33..	33..	33..	33..	33..	33..	
Ref. Page	B45	B45	B45	B45	B45	B114	C23	C12	

Recommended Cutting Conditions ➡ **D45-D46**

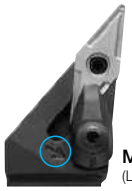
Rotation Directions of the Clamp Set



MVVNN type
(Neutral)



MVLNR type
(Right-hand Toolholder)

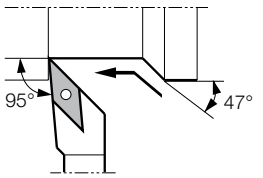


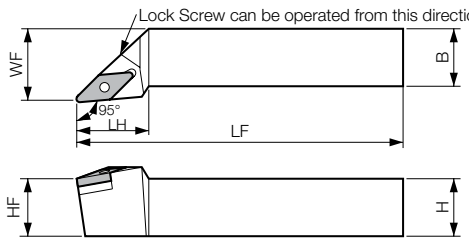
MVLNL type
(Left-hand Toolholder)

Clamp set: (CPS-5R) has Right-hand thread.
When clamping the insert, turn the screw in the arrow direction (clockwise).
When removing the insert, turn the screw away from the arrow (counterclockwise).

Clamp set: (CPS-5L) has Left-hand thread.
When clamping the insert, turn the screw in the arrow direction (counterclockwise).
When removing the insert, turn the screw away from the arrow (clockwise).

PVLN (External / Copying)

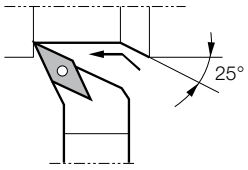


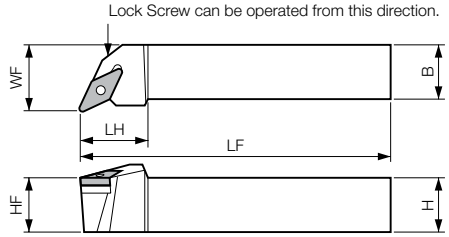


Side Rake Angle: -6°
Angle of Inclination: -9°

• Right-hand shown

PVPN (External / Facing / Copying / Undercutting)

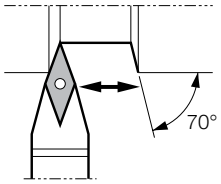


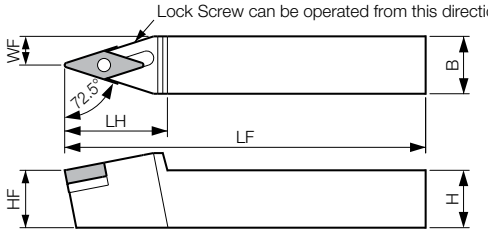


Side Rake Angle: -13°
Angle of Inclination: -10°

• Right-hand shown

PVVN (External / Copying)





Back Rake Angle: -11°

Toolholder Dimensions

Part Number		Stock R	Stock N	Stock L	Unit	Dimensions H	HF	B	LF	LH	WF	Standard Corner-R (RE)	Spare Parts: Lock Pin	Lock Screw	Shim	Wrench
PVLN[R/L]	2525M-16Q	●		●	mm	25	25	25	150	37	32.0	0.8	LP-6S	LS-15	KVN-32	LW-3
PVPN[R/L]	2020K-16Q	●		●		20	20	20	125	30	25.0	0.8	LP-2S	LS-11	KVN-32	LW-3
	2525M-16Q	●		●		25	25	25	150	30	32.0		LP-6S			
PVVNN	2020K-16Q		●			20	20	20	125	35	10.0	0.8	LP-2S	LS-15	KVN-32	LW-3
	2525M-16Q		●			25	25	25	150	40	12.5		LP-6S			

Applicable Inserts

Toolholder	Insert	
PVLN[R/L]...-16Q	VN□A VN□G VN□M	33..
PVPN[R/L]...-16Q		
PVVNN...-16Q		

Application	Finishing	Finishing-Medium	Finishing-Medium	Finishing-Medium	Medium	Roughing	Finishing-Medium	Stainless Steel / Finishing	Stainless Steel / Medium-Roughing
Insert	**PP**	**[R/L]-VC**	**VF**	**PQ**	**TN-V**	**Standard**	**[R/L]**	**MQ**	**MS**
Size	33..	33..	33..	33..	33..	33..	33..	33..	33..
Ref. Page	B44	B44	B44	B44	B44	B44	B45	B45	B45

Application	Stainless Steel / Medium-Roughing	Heat-Resistant Alloy Roughing	Cast Iron	Cast Iron	Cast Iron	Cast Iron	Non-ferrous Metals	Hard Materials
Insert	**MU**	**SG**	**KG**	**KH**	Without Chipbreaker	**Ceramic**	**PCD**	**CBN**
Size	33..	33..	33..	33..	33..	33..	33..	33..
Ref. Page	B45	B45	B45	B45	B45	B114	C23	C12

Recommended Cutting Conditions ➡ **D45-D46**

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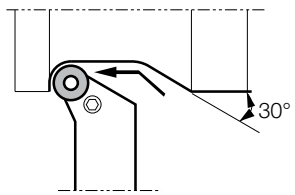
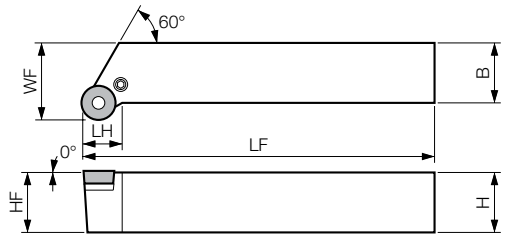
● : Standard Item △ : Phaseout Item (will be removed from next catalog)
Contact your local Kyocera sales engineer to upgrade old products to new technology

PRGC (External / Facing / Undercutting)

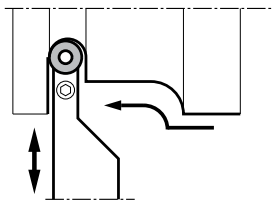


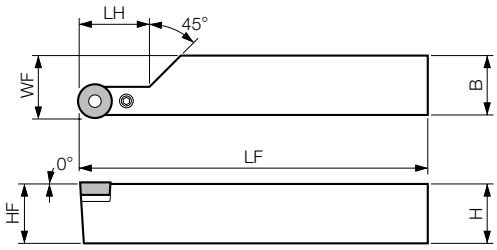


Side Rake Angle: 0°
Angle of Inclination: 0°

• Right-hand shown

PRXC (External / Facing / Undercutting)

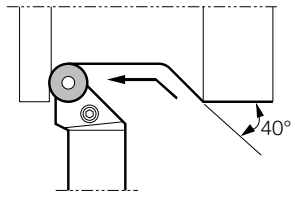


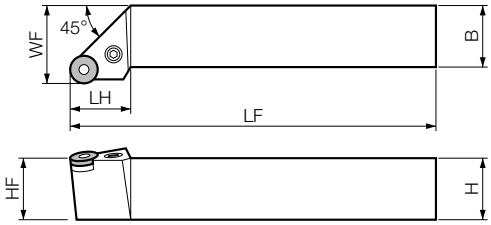


Side Rake Angle: 0°
Angle of Inclination: 0°

• Right-hand shown

PRGN (External / Facing / Undercutting)





Side Rake Angle: -6°
Angle of Inclination: -6°

• Right-hand shown

Toolholder Dimensions

Part Number	Stock R	Stock L	Unit	H	HF	B	LF	LH	WF	Standard Corner-R (RE)	Spare Parts: Lever	Lock Screw	Shim	Shim Pin	Punch	Wrench
PRGC□ 12-10MC	●	●	inch	0.75	0.75	0.75	5.00	0.60	1.00	-	LL-05C	LS-05	LR-10C	LSP-1	PC-1	FH-2
16-10MD	●	●		1.00	1.00	1.00	6.00	0.60	1.25							
PRGC□ 12-12MC		●		0.75	0.75	0.75	5.00	0.60	1.00	-	LL-1CN	LS-1N	LR-12C	LSP-1	PC-1	FH-2.5
16-12MD	●	●		1.00	1.00	1.00	6.00	0.60	1.25							
PRGC□ 2020K-10	●	●	mm	20	20	20	125	15	25.0	-	LL-05C	LS-05	LR-10C	LSP-1	PC-1	FH-2
2525M-10	●	●		25	25	25	150	15	32.0							
PRGC□ 2020K-12	●	●		20	20	20	125	14	25.0	-	LL-1CN	LS-1N	LR-12C	LSP-1	PC-1	FH-2.5
2525M-12	●	●		25	25	25	150	17	32.0							
PRXC□ 12-10MC	●	●	inch	0.75	0.75	0.75	5.00	1.00	0.77	-	LL-05C	LS-05	LR-10C	LSP-1	PC-1	FH-2
16-10MD	●	●		1.00	1.00	1.00	6.00	1.00	1.02							
PRXC□ 12-12MC		●		0.75	0.75	0.75	5.00	1.00	0.77	-	LL-1CN	LS-1N	LR-12C	LSP-1	PC-1	FH-2.5
16-12MD	●	●		1.00	1.00	1.00	6.00	1.00	1.02							
PRXC□ 2020K-10	●	●	mm	20	20	20	125	25	20.5	-	LL-05C	LS-05	LR-10C	LSP-1	PC-1	FH-2
2525M-10	●	●		25	25	25	150	30	25.5							
2525Q-10	●	●		25	25	25	180	30	25.5							
PRXC□ 2525M-12	●	●		25	25	25	150	30	25.7	-	LL-1CN	LS-1N	LR-12C	LSP-1	PC-1	FH-2.5
PRGN□ 2020K-09	●	●		20	20	20	125	19	25.0	-	LL-1N	LS-1N	LR-80	LSP-1	PC-1	FH-2.5
2525M-12	●	●		25	25	25	150	26	32.0		LL-2N	LS-2N	LR-81	LSP-2	PC-2	LW-3

Applicable Inserts

Toolholder	Insert	
PR□C□...12-10..	RCGX RCMX	1003M0
PR□C□...16-10..		
PR□C□...12-12..	RCGX RCMX	1204M0
PR□C□...16-12..		

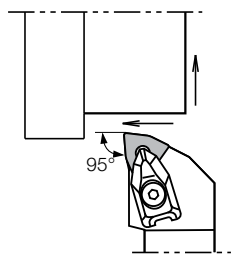
Toolholder	Insert	
PRGC□...-10	RCGX RCMX	1003M0
PRGC□...-12		1204M0
PRXC□...-10		1003M0
PRXC□...-12		1204M0
PRGN□...-09	RNMG	32
PRGN□...-12		43

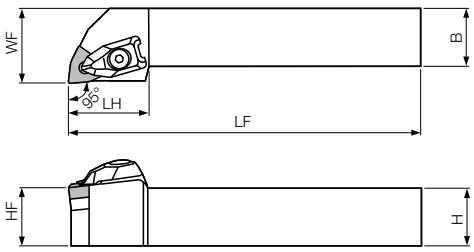
Application	Medium	Non-ferrous Metals	Medium-Roughing
Insert	Standard	AQ	Standard
Size	RC□X10.., RC□X12..	RC□X10..	RNMG32, RNMG43..
Ref. Page	B74	B74	B31

Recommended Cutting Conditions D45-D46

● : Standard Item △ : Phaseout Item (will be removed from next catalog)
Contact your local Kyocera sales engineer to upgrade old products to new technology

DWLN (External / Facing)





• Right-hand shown

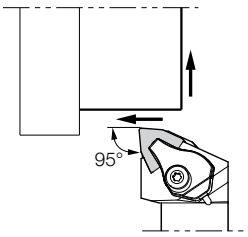
Side Rake Angle: -6°
Angle of Inclination: -6°

Applicable Inserts D27

Toolholder	Insert	
DWLNR/L 12-3B	WN□G WN□M	33..
DWLNR/L 16-3D		
DWLNR/L 12-4B	WN□A WN□G WN□M	43..
DWLNR/L 16-4D		
DWLNR/L ...-08		

DWLN-JCT (External / Facing, Jet Coolant-Through) NEW

Pressure Resistance: up to 4,350 psi



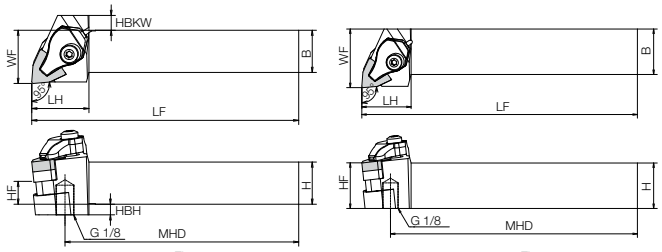


Fig.1 Fig.2

• Right-hand shown

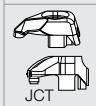
Side Rake Angle: -6°
Angle of Inclination: -6°

Applicable Inserts D27

Toolholder	Insert	
DWLNR/L 12-4BJCT	WN□A WN□G WN□M	43..
DWLNR/L 16-4DJCT		
DWLNR/L ...-08JCT		

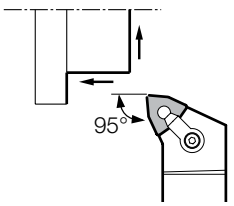
Toolholder Dimensions

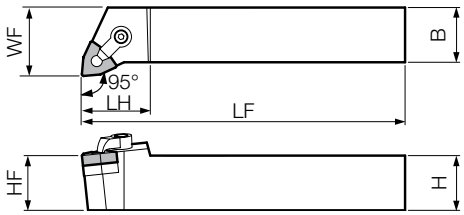
JCT Coolant Connections and Pipe Parts D10~D11

Part Number	Stock R	Stock L	Unit	H	HF	HBH	B	HBKW	LF	LH	WF	MHD	Standard Corner-R (RE)	Drawing	Spare Parts: Clamp	Pipe Connection (*1 with O-Ring)	Screw	Spring	Shim	Shim Screw	Wrench	Wrench
															 JCT						 For Clamp	 For Shim
DWLNR/L 12-3B	●	●	inch	0.75	0.75	-	0.75	-	4.50	1.06	1.00	-	1/32	-	CP-2D	-	CS-2D	SP-2D	DW-32	SB-3080TR	LW-2.5	FT-10 Sold Separately
16-3D	●	●		1.00	1.00		1.00		6.00	1.06	1.25											
DWLNR/L 12-4B	●	●		0.75	0.75	-	0.75	-	4.50	1.34	1.25	-	1/32	-	CP-3D	-	CS-3D	SP-3D	DW-44	SB-4085TR	LW-3	FT-15 Sold Separately
16-4D	●	●		1.00	1.00		1.00		6.00	1.34	1.25											
DWLNR/L 2020K-08	●	●	mm	20	20	-	20	-	125	34	25	-	0.8	-	CP-3D	-	CS-3D	SP-3D	DW-44	SB-4085TR	LW-3	
2525M-08	●	●		25	25		25		150	34	32											
DWLNR/L 12-4BJCT	●	●	inch	0.75	0.75	0.23	0.75	0.26	4.50	1.06	1.00	3.88	1/32	Fig.1	CP-3D-R/L-JCT	FP-12	CS-3D-TR	SP-3D	DW-44	SB-4085TR	-	FT-15
NEW 16-4DJCT	●	●		1.00	1.00	-	1.00	-	6.00	1.06	1.25	5.38		Fig.2								
DWLNR/L 2020K-08JCT	●	●	mm	20	20	5	20	7	125	27	25	109	0.8	Fig.1	CP-3D-R/L-JCT	FP-12	CS-3D-TR	SP-3D	DW-44	SB-4085TR		
NEW 2525M-08JCT	●	●		25	25	-	25	-	150	27	32	134		Fig.2								

*1 O-ring (**SS-035**) is available to order separately

MWLN (External / Facing)





• Right-hand shown

Side Rake Angle:-5°
Angle of Inclination:-5°

Applicable Inserts D27

Toolholder	Insert	
MWLNR/L ...-16-4D	WN□A WN□G WN□M	43..

Toolholder Dimensions

Part Number	Stock R	Stock L	Unit	H	HF	B	LF	LH	WF	Standard Corner-R (RE)	Spare Parts: Clamp	Clamp Screw	Wrench	Shim	Shim Screw	Lock Pin	Wrench
																	
MWLNR/L 16-4D	●	●	inch	1.00	1.00	1.00	6.00	1.19	1.25	1/32	CL-9	XNS-510	LW-156	IWSN432	S-46	NL46	LW-094

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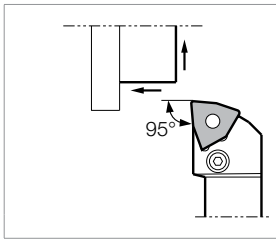
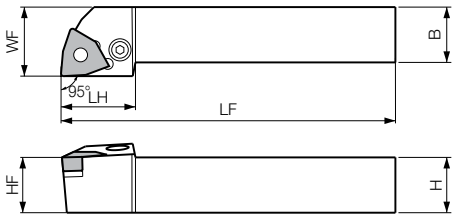
PWLN (External / Facing)





• Right-hand shown

Side Rake Angle: -6°
Angle of Inclination: -6°

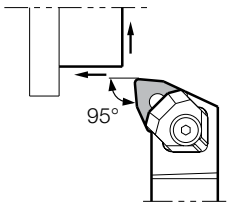
Applicable Inserts

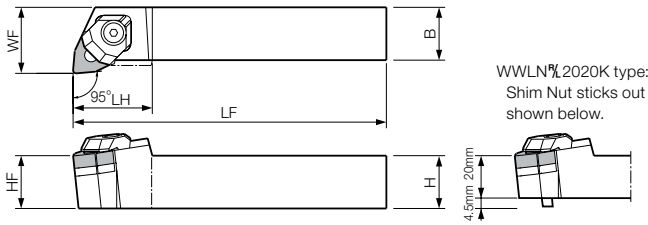
Toolholder	Insert	
PWLN□...12-3B	WN□G	33..
PWLN□...16-3D		
PWLN□...-06	WN□A WN□G WN□M	33..
PWLN□...-08		43..

Toolholder Dimensions

Part Number		Stock R	Stock L	Unit	Dimensions H	HF	B	LF	LH	WF	Standard Corner-R (RE)	Spare Parts: Lever	Lock Screw	Shim	Shim Pin	Punch	Wrench
PWLN□	12-3B	●		inch	0.75	0.75	0.75	4.50	0.87	1.00	1/32	LL-1N	LS-1N	LW-32N	LSP-1	PC-1	FH-2.5
	16-3D	●			1.00	1.00	1.00	6.00	0.87	1.25							
PWLN□	1616H-06	●	●	mm	16	16	16	100	22	20	0.8	LL-1N	LS-1N	LW-32N	LSP-1	PC-1	FH-2.5
	2020K-06	●	●		20	20	20	125	22	25							
	2525M-06	●	●		25	25	25	150	22	32							
	2020K-08	●	●		20	20	20	125	26	25	0.8	LL-2N	LS-2N	LW-42N	LSP-2	PC-2	LW-3
	2525M-08	●	●		25	25	25	150	26	32							

WWLN (External / Facing)





WWLN□2020K type:
Shim Nut sticks out as shown below.

• Right-hand shown

Side Rake Angle: -6°
Angle of Inclination: -6°

Applicable Inserts

Toolholder	Insert	
WWLN□...-08	WN□A WN□G WN□M	43..

Toolholder Dimensions

Part Number		Stock R	Stock L	Unit	Dimensions H	HF	B	LF	LH	WF	Standard Corner-R (RE)	Spare Parts: Clamp Set	Shim	Shim Pin	Shim Nut	Wrench
WWLN□	2020K-08	●	●	mm	20	20	20	125	30	25	1.2	WCS-8	WWN-42	WP5X15	WN-1	LW-3
	2525M-08	●	●		25	25	25	150	30	32						

Applicable Inserts

Application	Finishing	Finishing-Medium	Finishing	Finishing-Medium	Finishing-Medium	Finishing-Medium	Medium-Roughing	Medium-Roughing	Medium-Roughing	Medium-Roughing / High Feed Rate
Insert	WF (Wiper)	WE (Wiper)	PP	PQ	CQ	CJ	GS	PG	PS	PT
Size	43..	43..	43..	43..	43..	43..	33.., 43..	43..	43..	43..
Ref. Page	B46	B46	B46	B46	B47	B47	B47	B47	B47	B47
Application	Roughing	Finishing	Medium	Soft Steel / Finishing	Soft Steel / Medium	Soft Steel / Roughing	Stainless Steel / Finishing	Stainless Steel Medium-Roughing	Stainless Steel Medium-Roughing	Heat-Resistant Alloy Roughing
Insert	Standard	□-S	□	XP	XQ	XS	MQ	MS	MU	SG
Size	43..	33..	33..	43..	43..	43..	43..	43..	43..	43..
Ref. Page	B47	B49	B49	B48	B48	B48	B48	B48	B48	B48
Application	Cast Iron	Cast Iron	Cast Iron	Cast Iron	Cast Iron	Non-ferrous Metals	Non-ferrous Metals	Hard Materials		
Insert	KQ	KG	KH	ZS	GC	AH	PCD	CBN		
Size	43..	43..	43..	43..	43..	43..	43..	43..		
Ref. Page	B49	B49	B49	B49	B49	B49	C23	C13		

• In wedge lock, use of ceramic insert other than silicon nitride insert is not recommended due to strong restrain force.

Recommended Cutting Conditions D45-D46

● : Standard Item △ : Phaseout Item (will be removed from next catalog)
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ZBMT Series NEW

25° Insert Profiling Tools

Unique clamping structure and a wide lineup of external toolholders and boring bars.

High precision and stable machining in a wide range of applications including copying, undercutting, tapering, V-slotting, spherical machining, and more.

1 Newly Developed Self-Clamping Mechanism Achieves a Higher Rigidity

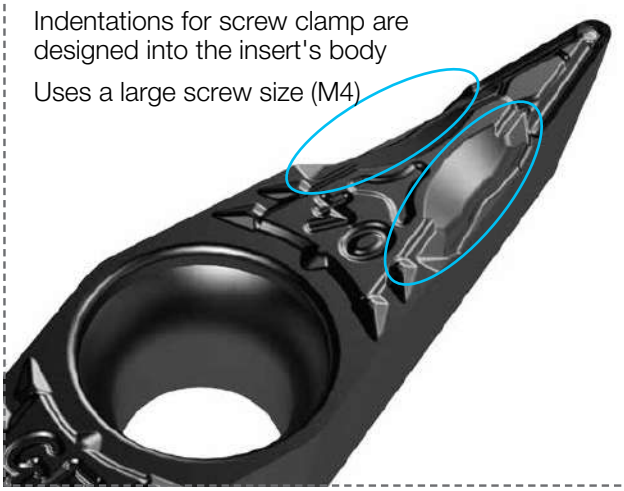
Side Lock Mechanism

Unique design holds insert at 2 points
Safe even for insert with small tip angle that is difficult to mount

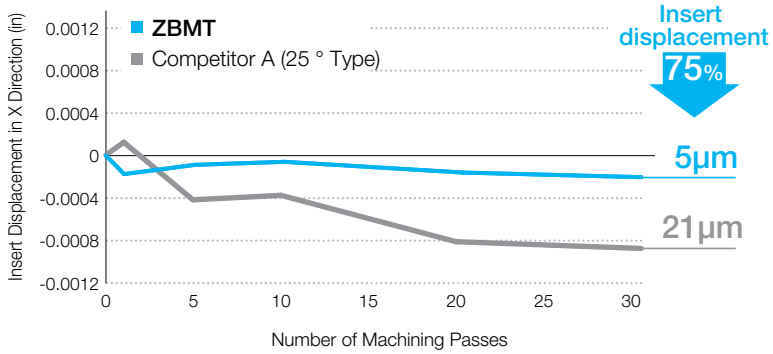


Indentations for screw clamp are designed into the insert's body

Uses a large screw size (M4)



Insert Displacement During Facing Comparison (Internal Evaluation)



Cutting Conditions : Vc = 750 sfm, D.O.C. = 0.012", f = 0.006 ipr, Wet Workpiece 4137

*The above figures are not guaranteed and depends on cutting conditions.

Stable Insert Design

By controlling insert displacement,

– Machining precision is stabilized and prolongs tool life

– Reduces defect rate due to sudden dimensional deviation

*Please check P5 for how to attach and detach insert using the new insert clamp

2 Unique Holder Design to Meet Customers' Needs

Both boring bars and external toolholders are compatible with internal coolant.

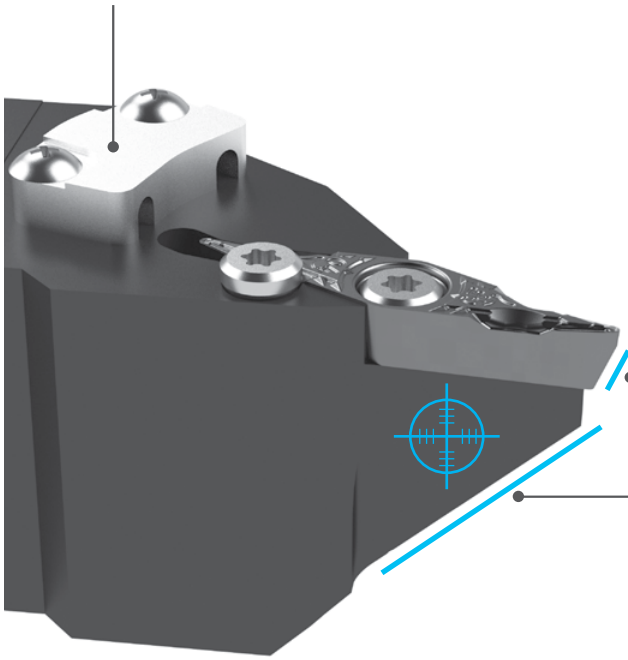
Unique Double Coolant Hole Design

Supplies coolant directly to the cutting edge and provides improved chip evacuation and long tool life (Coolant discharge direction: Fine adjustment possible)

*Though coolant stream hits side clamp screw, machining performance is not affected

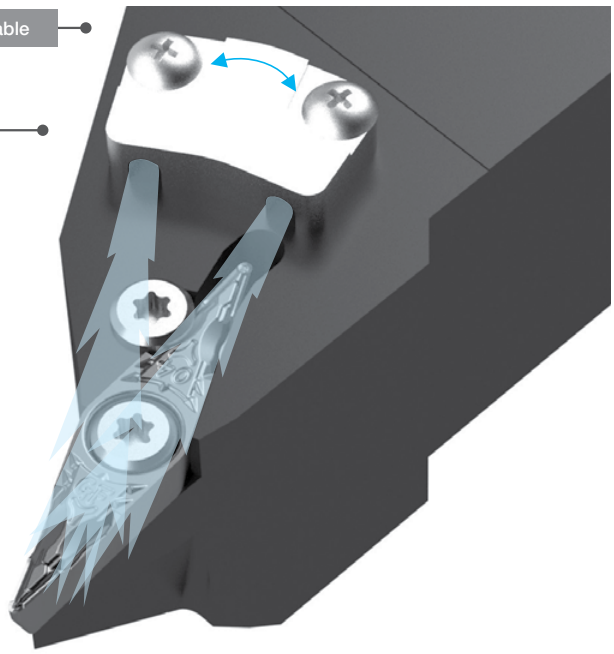
*Pressure resistance: ~ 435 psi

Uses a clamp with a small thickness that does not interfere with chip flow



Fine Tuned and Adjustable

± 4 ° Adjustable Oscillation



Easy to use for Facing

Insert corner : 2-Step Positive Type (20°)

Holder: Tapered shape

Inserts and toolholders have a unique end shape
No additional machining is required when trying to avoid interference with workpiece.

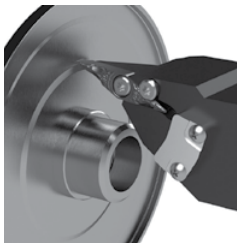
Effective for facing applications



Case Study

Significant reduction in quality defect costs (User Evaluation)

Suppresses dimensional fluctuations due to insert displacement.
Reduces defect rates.



Dimensional defect rate

GF Chipbreaker

Competitor B — 100 +/month

Defect rate Reduction

Cutting Conditions : Vc = 750 sfm, D.O.C. = 0.012", f = 0.006 ipr, Wet
Workpiece 4137

GF Chipbreaker chip condition

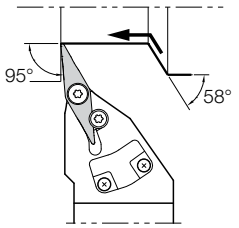


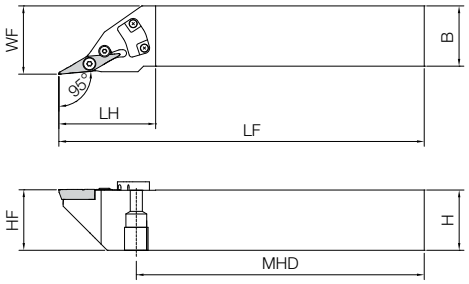
Customer Feedback

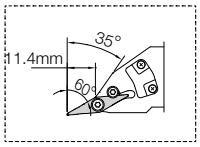
– Some parts require an insert with a tip angle of 25° to allow machining.
– The dimensional error of the GC chipbreaker was drastically improved in comparison with the competitors.
– Greatly reduced the cost of quality defects

SZLB (External / Copying) NEW

Pressure resistance : ~ 435 psi







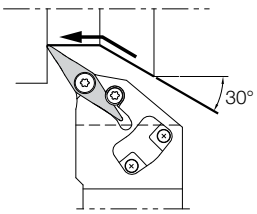
Side Rake Angle : 0°
Angle of Inclination : 0°

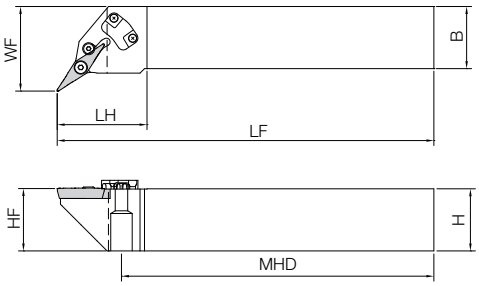
• Right-hand Shown

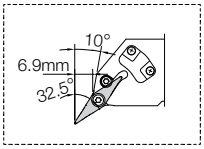
• When using ZBMT13T304R-GF-15D inserts, use a Right-hand holder only

SZPB (External / Facing / Copying / Undercutting) NEW

Pressure resistance : ~ 435 psi





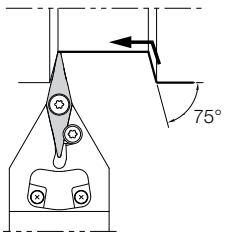


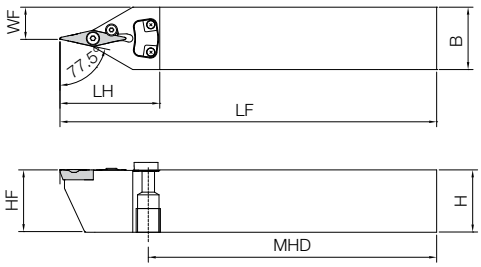
Side Rake Angle : 0°
Angle of Inclination : 0°

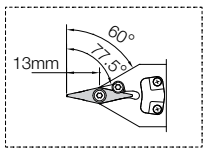
• Right-hand Shown

SZVB (External / Copying) NEW

Pressure resistance : ~ 435 psi







Side Rake Angle : 0°
Angle of Inclination : 0°

Toolholder Dimensions

Part Number		Stock			Dimensions (mm)							Standard Corner-R(RE)	Coolant Hole	Spare Parts			
														Clamp	Clamp Screw	Insert Screw	Wrench
		R	N	L	H	HF	B	LF	LH	WF	MHD						
SZLB□	2020K-13C	●		●	20	20	20	125	40	23	92.6	0.4	Yes	ZCP-13	BH2X6	SB-3079TR	FT-8
	2525M-13C	●		●	25	25	25	150	40	28.2	118						
SZPB□	2020K-13C	●		●	20	20	20	125	37	27.2	95	0.4	Yes			Recommended tightening torque 1.2 Nm	
	2525M-13C	●		●	25	25	25	150	36	33.9	124.2						
SZVBN	2020K-13C		●		20	20	20	125	40	10	89.6	0.4	Yes				
	2525M-13C		●		25	25	25	150	40	12.5	114.6						

Applicable Inserts

Application	25° Tip Angle	15° Tip Angle
Ref. Page	B101	B101
Insert / Toolholder	GF 	GF-15D 
SZLB...-13C SZPB...-13C SZVB...-13C	ZBMT13T3	ZBMT13T3

Recommended Cutting Conditions B101

When mounting the insert (Tightening torque: 1.2 Nm)

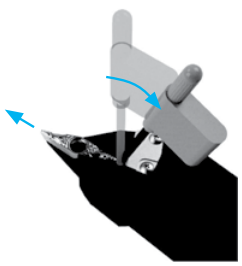


1. Tighten the main screw with the insert pressed against the contact surface with fingertips.



2. Tighten the side screw to complete the installation.

When removing the insert



Remove the two screws and put the wrench into the gap at the back end of the insert. It can be easily removed by pushing out the insert as shown above.

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NEW ITEMS!

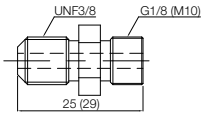
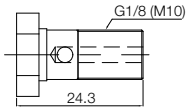
Piping Parts

Optional Piping Parts Available
Choose from parts below to match your machine specifications

1. Joint / Banjo bolt × 2
2. Washer × 2-4
3. Hose × 1

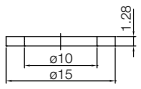
1.Joint / Banjo Bolt

Pressure Resistance: up to 4,350 psi

Shape		Part Number	Stock	Thread Standard Holder / Machine Connection
		J-G1/8-UNF3/8	●	G1/8
		J-M10X1.5-UNF3/8	●	M10X1.5
Banjo Bolt (for Angle Hose) 		BB-G1/8	●	G1/8
		BB-M10X1.5	●	M10X1.5

2.Washer

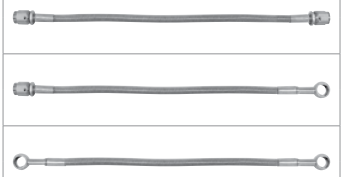
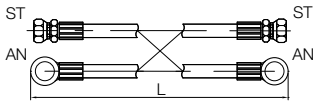
Pressure Resistance: up to 4,350 psi

Shape		Part Number	Stock
		WS-10	●

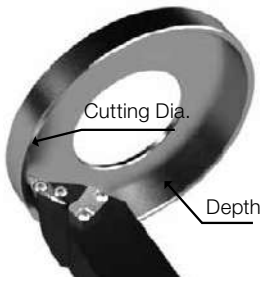
* Use 2 washers for a banjo bolt

3.Hose

Pressure Resistance: up to 4,350 psi

Shape		Part Number	Stock	Thread Standard		Dimensions (mm) L
		HS-ST-ST-200	●	UNF3/8	UNF3/8	200
		HS-ST-ST-250	●			250
		HS-ST-AN-200	●	UNF3/8	- (Banjo Bolt)	200
		HS-ST-AN-250	●			250
		HS-AN-AN-200	●	- (Banjo Bolt)	- (Banjo Bolt)	200
		HS-AN-AN-250	●			250

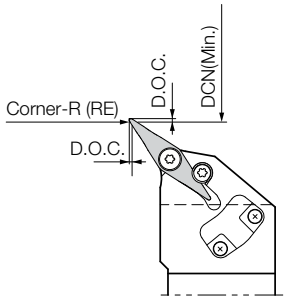
● Boring/Facing Available Cutting Dia. and Max. D.O.C.



Standard Corner-R 0.4mm (RE)

Cutting Dia. (mm)	Depth (mm)
Ø30	0.5
Ø50	1.5
Ø65	3.0
Ø80	6.0
Ø100	10.0
Ø150	14.0

● Undercutting Diameter of SZPB



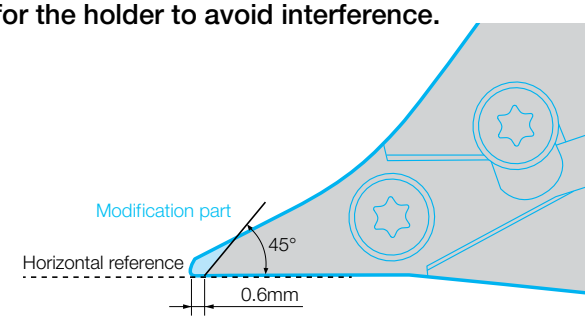
Corner-R (RE)	D.O.C. (mm)	DCN (Min.)
0.2	0.5	Ø30
	1	Ø35
0.4	0.5	Ø30
	1	Ø35
0.8	0.5	Ø110
	1	Ø150

How to Modify Toolholder when Using 15° Insert

When using 15° insert, additional modification is required for the holder to avoid interference.

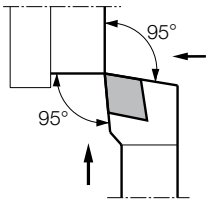
Recommended Additional Modification

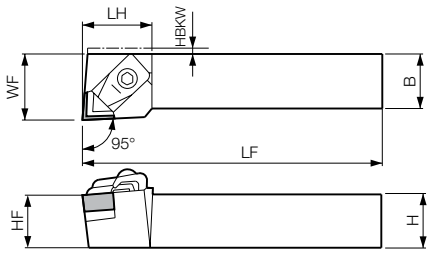
- Set the edge of insert bearing surface at the end of the holder at horizontal reference shown below.
- Modify the holder to 0.6 mm from the tip at an angle of not less than 45 degrees from the horizontal.



● : Standard Item △ : Phaseout Item (will be removed from next catalog)
Contact your local Kyocera sales engineer to upgrade old products to new technology

CCLN / HCLN (External / Facing)





Side Rake Angle: -6°
Angle of Inclination: -6°

• Right-hand shown

Toolholder Dimensions

Part Number	Stock R	Stock L	Unit	H	HF	B	LF	LH	WF	HBKW	Standard Corner-R (RE)	Spare Parts: Chipbreaker	Clamp Set (CE / HCL)	Wrench	Shim	Shim Screw (M / S)	Lock Pin	Wrench
CCLN□ 2020K-12	●	●	mm	20	20	20	125	32	27	5	0.8	CB-16	CE-010	LW-4	SP-441 (SP-443)	M3X8 (M3X12)	-	-
CCLN□ 2525M-12	●	●	mm	25	25	25	150	32	32	-	0.8	CB-16	CE-010	LW-4	SP-441 (SP-443)	M3X8 (M3X12)	-	-
CCLN□ 3225P-16	●	●		32	32	25	170	35	32	-	0.8	CB-17	CE-220	LW-4	SP-454	M4X10	-	-
HCLN□ 16-4D	●	□	inch	1.00	1.00	1.00	6.00	1.26	1.25	-	1/32	HCB318	HCL008	LW-4	ICSN433 (ICSN453)	S-46	NL46L	LW-094

• Shim & Shim Screw: When using CN□□43 Insert, purchase spare parts in ( ) separately.

Applicable Inserts

Application	Cast Iron / Hard Materials	Hard Materials / Cast Iron
Ref. Page	B108	C19
Shape / Toolholder	Ceramic	CBN (KBN900)
CCLN□...-12	CNG45.., (CNG43..) CNM45	(CNM43..)
CCLN□...-16	CNG55..	-

Application	Cast Iron / Hard Materials	Cast Iron / Hard Materials
Ref. Page	B108	B108
Shape / Toolholder	Ceramic	Ceramic
HCLN□...16-4D	CNG 45.. (43..)	CN□A 45.. (43..)

Recommended Cutting Conditions **D45-D46**

Ceramic Insert Selection Guide

Select the suitable ceramic specifications (Corner-R(RE), Feed Rate, Chamfer, etc.) from the table below. (No.45, Cutting Edge Angle: 0°~15)

Insert Shape	Corner-R (RE)	f (ipr) 0.004	0.006	0.008	0.010	0.012	0.014	0.016	0.018	0.020	0.024	D.O.C.
RN	–	→	→	→	→	→	→	→	→	→	→	0.012~0.157
SN / EN / CN	2.0	→	→	→	→	→	→	→	→	→	→	0.012~0.157
	1.6	→	→	→	→	→	→	→	→			
	1.2	→	→	→	→	→	→					
	0.8	→	→	→	→							
	0.4	→	→									
TN / DN	1.6	→	→	→	→	→	For Finishing					0.012~0.079
	1.2	→	→	→	→							
	0.8	→	→	→								
Chamfer		0.002"×20°		(0.004"~0.008")×(20°~25°)				0.012"×30°				–
Insert Thickness		5/16"										

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(Technical Support) **800.823.7284 - Option 2**
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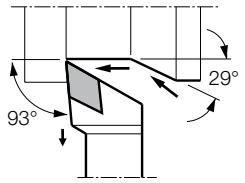
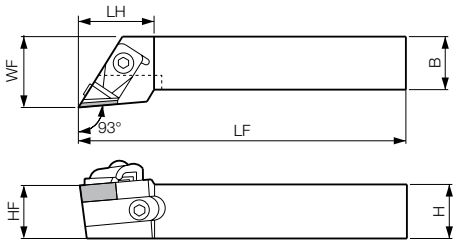
● : Standard Item □ : Made to Order △ : Phaseout Item (will be removed from next catalog)
Contact your local Kyocera sales engineer to upgrade old products to new technology

CDJN (External / Copying / Back Turning)





Side Rake Angle: -5°
Angle of Inclination: -8°

• Right-hand shown

Toolholder Dimensions

Part Number	Stock R	Stock L	Unit	Dimensions H	HF	B	LF	LH	WF	Standard Corner-R (RE)	Spare Parts: Chipbreaker	Clamp Set	Wrench	Shim	Shim Screw
CDJN□ 2525M-15	●	●	mm	25	25	25	150	32	32	0.8	CB-14/15	CE-010	LW-4	556C□	HH5X16
3225P-15	●	●		32	32	25	170	32	32						

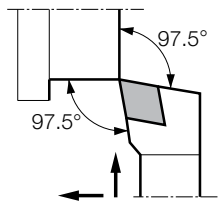
• Chipbreaker: CB-14 for Right-hand Toolholder, and CB-15 for Left-hand Toolholder.
• Shim: 556CR for Right-hand Toolholder, and 556CL for Left-hand Toolholder.

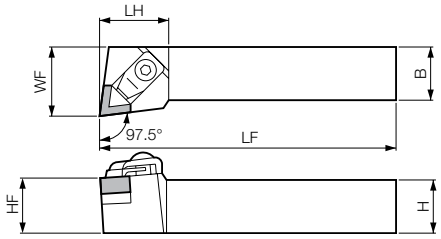
Applicable Inserts

Application	Cast Iron / Hard Materials
Ref. Page	B109
Shape / Toolholder	Ceramic
CDJN□...-15	DNG45..

Recommended Cutting Conditions **D39-D40**

CELN (External / Facing)





Side Rake Angle: -6°
Angle of Inclination: -6°

• Right-hand shown

Toolholder Dimensions

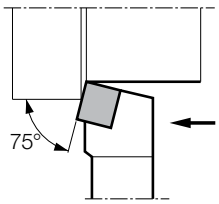
Part Number	Stock R	Stock L	Unit	Dimensions H	HF	B	LF	LH	WF	Standard Corner-R (RE)	Spare Parts: Chipbreaker	Clamp Set	Wrench	Shim	Shim Screw
CELN□ 2525M-13	●	●	mm	25	25	25	150	32	32	0.8	CB-16	CE-010	LW-4	SP-342	M3X8

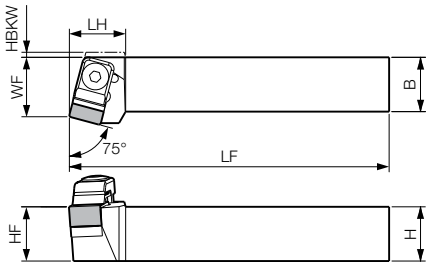
Applicable Inserts

Application	Cast Iron / Hard Materials
Ref. Page	B109
Shape / Toolholder	Ceramic
CELN□...-13	ENG45..

Recommended Cutting Conditions **D45-D46**

CSRN / HSRN (External)

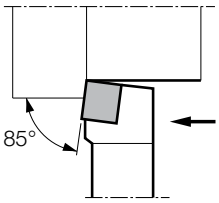


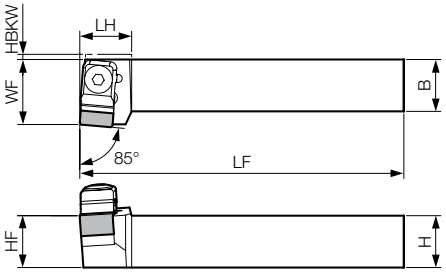


Side Rake Angle: -6°
Angle of Inclination: -4°

• Right-hand shown

CS-N (External)

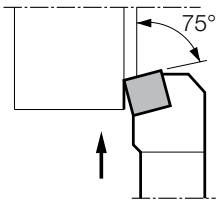


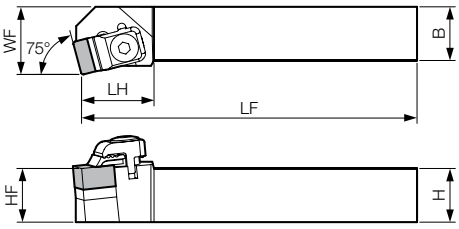


Side Rake Angle: -6°
Angle of Inclination: -4°

• Right-hand shown

CSKN (Facing)

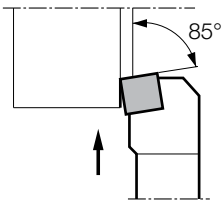


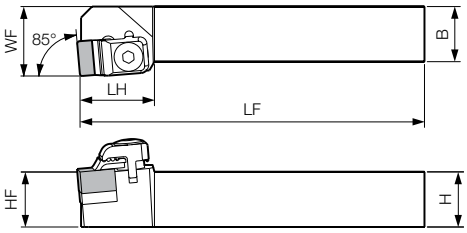


Side Rake Angle: -6°
Angle of Inclination: -4°

• Right-hand shown

CSYN (Facing)

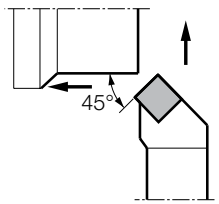


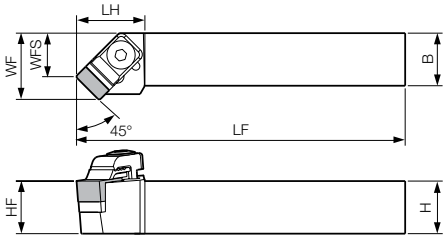


Side Rake Angle: -6°
Angle of Inclination: -4°

• Right-hand shown

CSSN (External / Facing / Chamfering)

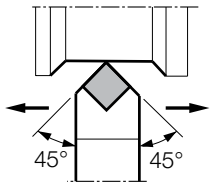


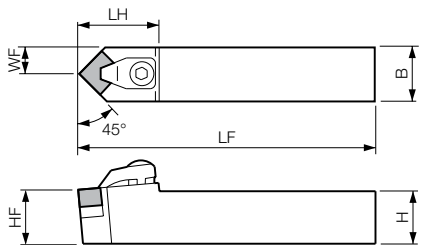


Side Rake Angle: -6°
Angle of Inclination: 0°

• Right-hand shown

CSDN / HSDN (External / Chamfering)





Back Rake Angle: -8.5°

Toolholder Dimensions

Part Number	Stock R	Stock N	Stock L	Unit	Dimensions H	HF	B	LF	LH	WF	HBKW	WFS	Standard Corner-R (RE)	Spare Parts: Chipbreaker	Clamp Set	Wrench	Shim	Shim Screw	Lock Pin	Wrench
															 020 220 040 HCL			 M3 S		
CSRN□□ 20-4E	●		●	inch	1.25	1.25	1.25	7.00	0.88	1.50	-	-	1/32	CB-11	CE-020	LW-4	SP-141	M3X8	-	-
CSRN□□ 2020K-12	●		●	mm	20	20	20	125	22	22.0	2	-	0.8	CB-11	CE-020	LW-4	SP-141 (SP-143)	M3X8 (M3X12)	-	-
2525M-12	●		●		25	25	25	150	22	27.0	-	-								
3225P-12	●		●		32	32	25	170	22	27.0	-	-								
3225P-15	●				32	32	25	170	30	32.4	-	-	0.8	CB-51	CE-220	LW-4	SP-162	M4X10	-	-
4040R-15	●		●		40	40	40	200	30	43.0	-	-								
CS-N□□ 2525M-12	●		●		25	25	25	150	20	32.0	-	-	0.8	CB-11	CE-020	LW-4	SP-141 (SP-143)	M3X8 (M3X12)	-	-
CSKN□□ 2020K-12	●				20	20	20	125	27	25.0	-	-	0.8	CB-11	CE-020	LW-4	SP-141 (SP-143)	M3X8 (M3X12)	-	-
2525M-12	●		●		25	25	25	150	27	32.0	-	-								
3225P-15	●				32	32	25	170	37	32.0	-	-	0.8	CB-51	CE-220	LW-4	SP-162	M4X10	-	-
CSYN□□ 2525M-12	●		●		25	25	25	150	27	32.0	-	-	0.8	CB-11	CE-020	LW-4	SP-141 (SP-143)	M3X8 (M3X12)	-	-
CSSN□□ 16-4D	●		●	inch	1.00	1.00	1.00	6.00	1.00	1.25	-	-	1/32	CB-11	CE-020	LW-4	SP-141 (SP-143)	M3X8 (M3X12)	-	-
CSSN□□ 2020K-12	●			mm	20	20	20	125	26	25.0	-	16	0.8	CB-11	CE-020	LW-4	SP-141 (SP-143)	M3X8 (M3X12)	-	-
2525M-12	●		●		25	25	25	150	26	32.0	-	23								
CSDNN 2020K-12		●			20	20	20	125	32	10.0	-	-	0.8	-	CE-040	LW-4	SP-141 (SP-143)	M3X8 (M3X12)	-	-
2525M-12		●			25	25	25	150	32	12.5	-	-								
3225P-12		●			32	32	25	170	32	12.5	-	-								
HSRN□□ 16-4D	●			inch	1.00	1.00	1.00	6.00	0.87	1.13	-	-	1/32	HCB300	HCL-000 (HCL-001)	LW-4	ISSN433 (ISSN453)	S-46	NL46L	LW-094
HSDNN 20-4D		●			1.25	1.25	1.25	6.00	1.30	0.625	-	-	1/32	-	HCL-002	LW-4	ISSN433 (ISSN453)	S-46	NL46L	LW-094

• Shim & Shim Screw : When using SN□□43 Insert, purchase spare parts in ( ) separately.

Applicable Inserts

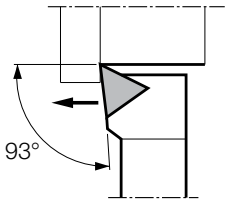
Application	Cast Iron / Hard Materials	Cast Iron / Hard Materials	Cast Iron	Hard Materials / Cast Iron	When using as toolholder for CBN tools (KBN900), prepare spare parts below separately.		
Ref. Page	B111, B112	B111	B35	C19			
Shape / Toolholder	Ceramic 	Ceramic 	Coated Carbide 	CBN (KBN900) 	Clamp Set 	Shim 	Shim Screw  M3 S
CSRN□□...-4E CSRN□□...-12	SNG45.. (SNG43..) SNM45..	-	(SNM43..)	(SNM43..)	CE-030A	SP-143	M3X12
CSRN□□...-15	SNG55..	-	-	-	-	-	-
CS-N□□...-12	SNG45.. (SNG43..) SNM45..	-	(SNM43..)	(SNM43..)	CE-030A	SP-143	M3X12
CSKN□□...-12	SNG45.. (SNG43..) SNM45..	-	(SNM43..)	(SNM43..)	CE-030A	SP-143	M3X12
CSKN□□...-15	SNG55..	-	-	-	-	-	-
CSYN□□...-12	SNG45.. (SNG43..) SNM45..	-	(SNM43..)	(SNM43..)	CE-030A	SP-143	M3X12
CSSN□□...-4D CSSN□□...-12	SNG45.. (SNG43..) SNM45..	-	(SNM43..)	(SNM43..)	CE-030A	SP-143	M3X12
CSDNN...-12	SNG45.. (SNG43..) SNM45..	-	(SNM43..)	(SNM43..)	*-	SP-143	M3X12
HSRN□□...-4D	SNG45.. (SNG43..) SNM45..	(SNGA43..) (SNMA43..)	(SNM43..)	(SNM43..)	HCL-001	ISSN453	S-46
HSDNN...-4D	SNG45.. (SNG43..) SNM45..	(SNGA43..) (SNMA43..)	(SNM43..)	(SNM43..)	*-	ISSN453	S-46

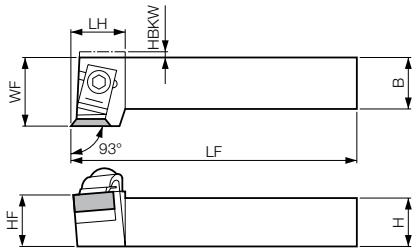
• Shim & Shim Screw : When using SN□□43 Insert, purchase spare parts in ( ) separately.
*CSDNN...-12: Clamp Set CE-040 is used continuously.

Recommended Cutting Conditions D45-D46

● : Standard Item △ : Phaseout Item (will be removed from next catalog)
Contact your local Kyocera sales engineer to upgrade old products to new technology

CTJN (External)

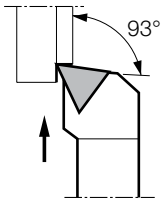


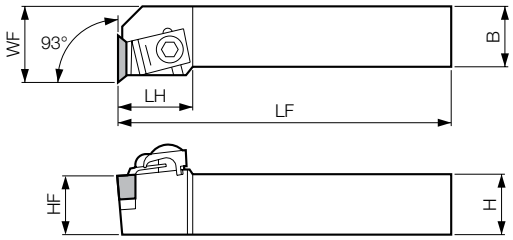


Side Rake Angle: -6°
Angle of Inclination: -4°

• Right-hand shown

CTUN (Facing)





Side Rake Angle: -6°
Angle of Inclination: -4°

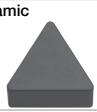
• Right-hand shown

Toolholder Dimensions

Part Number	Stock R	Stock L	Unit	Dimensions H	HF	B	LF	LH	WF	HBKW	Standard Corner-R (RE)	Spare Parts: Chipbreaker	Clamp Set	Wrench	Shim	Shim Screw
CTJN□□ 16-3D	●	●	inch	1.00	1.00	1.00	6.00	0.88	1.25	-	1/32	CB-12/13	CE-020	LW-4	SP-221 (SP-223)	M3X8 (M3X12)
16-4D	●	●		1.00	1.00	1.00	6.00	0.88	1.25	-						
CTJN□□ 2020K-16	●	●	mm	20	20	20	125	21	25	2	0.8	CB-12/13	CE-020	LW-4	SP-221 (SP-223)	M3X8 (M3X12)
2525M-16	●	●		25	25	25	150	21	32	-						
CTUN□□ 2020K-16	●	●		20	20	20	125	27	25	-	0.8	CB-13/12	CE-020	LW-4	SP-221 (SP-223)	M3X8 (M3X12)
2525M-16	●	●		25	25	25	150	27	32	-						

• CTJN (Chipbreaker): CB-12 for Right-hand Toolholder, CB-13 for Left-hand Toolholder.
CTUN (Chipbreaker): CB-13 for Right-hand Toolholder, CB-12 for Left-hand Toolholder.
• Shim & Shim Screw: When using TN□□33 Insert, purchase spare parts in ( ) separately.

Applicable Inserts

Application	Cast Iron / Hard Materials	Hard Materials / Cast Iron
Ref. Page	B113	C19
Shape / Toolholder	Ceramic 	CBN (KBN900) 
CTJN□□...-3D	TNG35.. (TNG33..) (TNM33..)	(TNM33..)
CTJN□□...-4D	TNG45.. (TNG43..) (TNM43..)	(TNM43..)
CTJN□□...-16	TNG35.. (TNG33..) (TNM33..)	(TNM33..)
CTUN□□...-16		

Recommended Cutting Conditions **D45-D46**

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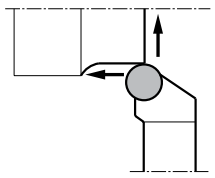
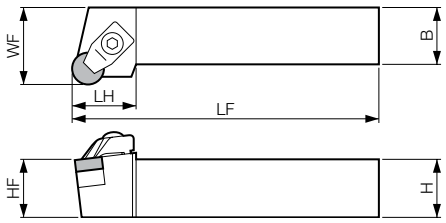
(Technical Support) **800.823.7284 - Option 2**
Visit us online at **KyoceraPrecisionTools.com**
● : Standard Item △ : Phaseout Item (will be removed from next catalog)
Contact your local Kyocera sales engineer to upgrade old products to new technology

CRSN / HRSN (External / Facing)

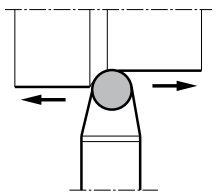


Side Rake Angle: -6°
Angle of Inclination: -6°

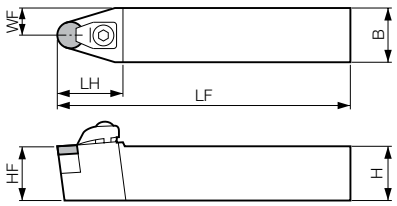


• Right-hand shown

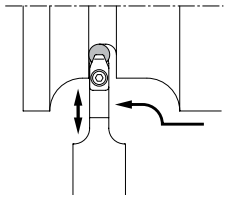
CRDN (External / Copying)

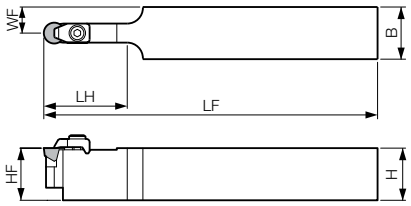


Back Rake Angle: -8.5°



CRDC (External / Copying)





Toolholder Dimensions

Part Number		Stock R	Stock N	Stock L	Unit	Dimensions H	HF	B	LF	LH	WF	Standard Corner-R (RE)	Spare Parts: Clamp Set CE / HCL	Wrench	Shim SP / HSH	Shim Screw M / S	Lock Pin	Wrench
CRSN□	2020K-12	●		●	mm	20	20	20	125	26	25.0	-	CE-030	LW-4	SP-841 (SP-843)	M3X8 (M3X12)	-	-
	2525M-12	●		●		25	25	25	150	26	32.0	-						
	3225P-12	●		●		32	32	25	170	26	32.0	-						
CRDNN	16-4D		●		inch	1.00	1.00	1.00	6.00	1.13	0.500	-	CE-030	LW-4	SP-841 (SP-843)	M3X8	-	-
	20-4E		●			1.25	1.25	1.25	7.00	1.13	0.625	-						
CRDNN	2020K-12		●		mm	20	20	20	125	28	10.0	-	CE-030	LW-4	SP-841 (SP-843)	M3X8 (M3X12)	-	-
	2525M-12		●			25	25	25	150	28	12.5	-						
	3225P-12		●			32	32	25	170	28	12.5	-						
	3232P-15		●			32	32	32	170	35	16.0	-	CE-040	LW-4	SP-861	M4X10	-	-
	4040R-15		●			40	40	40	200	35	20.0	-						
HRSN□	16-4D	●		□	inch	1.00	1.00	1.00	6.00	1.03	1.250	-	HCL-001	LW-4	IRSN43 (IRSN45)	S-46	NL46L	LW-094
	20-4D	●		□		1.25	1.25	1.25	6.00	1.03	1.500	-						
CRDCN	16-2		●		inch	1.00	1.00	1.00	8.00	1.00	0.500	-	HCL-017C	LW-2	HSH665A	-	-	-
	16-3		●			1.00	1.00	1.00	8.00	1.50	0.500	-	HCL-016	LW-25IP	HSH655			
	20-3		●			1.25	1.25	1.25	8.00	1.50	0.625	-						
	20-4		●			1.25	1.25	1.25	8.00	2.00	0.625	-	HCL-007	LW-4	HSH657			
	20-6		●			1.25	1.25	1.25	8.00	2.00	0.625	-	HCL-013	LW-4	HSH661			

• Shim & Shim Screw : When using RN□43 Insert, purchase spare parts in ( ) separately.

Applicable Inserts

Application	Cast Iron / Hard Materials
Ref. Page	B110
Shape	Ceramic 
Toolholder	
CRSN□...-12	RNG45.. (RNG43..)
CRDNN...-4D/4E CRDNN...-12	RNG45.. (RNG43..)
CRDNN...-15	RNG55..
HRSN□...-4D	RNG45.. (RNG43..)

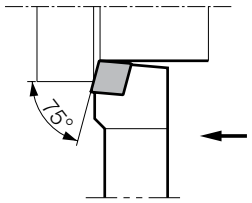
Hard Materials / Cast Iron	When using as toolholder for CBN tools (KBN900), prepare spare parts below separately.		
C19			
CBN (KBN900) 	Clamp Set 	Shim 	Shim Screw M S 
(RNM43..)	CE-030A	SP-843	M3X12
(RNM43..)	CE-030A	SP-843	M3X12
-	-	-	-
(RNM43..)	HCL-001	IRSN45	S-46

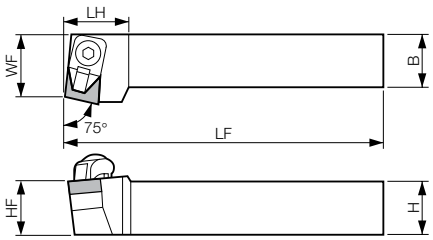
Application	Cast Iron / Hard Materials
Ref. Page	B116
Shape	Ceramic 
Toolholder	
CRDCN...-2	RCGX 102T04015
CRDCN...-3	RCGX 35.., 103..
CRDCN...-4	RCGX 45.., 104..
CRDCN...-6	RCGX 106..

Recommended Cutting Conditions D45-D46

● : Standard Item □ : Made to Order △ : Phaseout Item (will be removed from next catalog)
Contact your local Kyocera sales engineer to upgrade old products to new technology

CCRN-A (External)

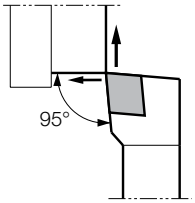


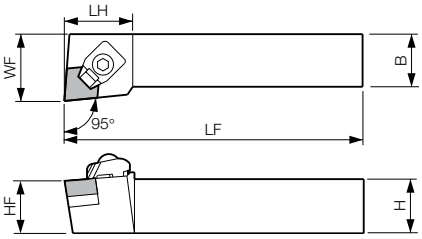


Side Rake Angle: -6°
Angle of Inclination: -6°

• Right-hand shown

CCLN-A (External / Facing)





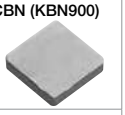
Side Rake Angle: -5°
Angle of Inclination: -5°

• Right-hand shown

Toolholder Dimensions

Part Number	Stock		Unit	Dimensions						Standard Corner-R (RE)	Spare Parts			
	R	L		H	HF	B	LF	LH	WF		Clamp Set	Wrench	Shim	Shim Screw
CCRN□ 2525M-09A	●	●	mm	25	25	25	150	27	27	0.8	CE-030A	LW-4	SP-429	HH3X12
CCLN□ 2525M-09A	●	●		25	25	25	150	28	32	0.8	CE-030A	LW-4	SP-429	HH3X12

Applicable Inserts

Application	Hard Materials / Cast Iron
Ref. Page	C19
Shape / Toolholder	CBN (KBN900) 
CCRN□...-09A	CNM32..
CCLN□...-09A	

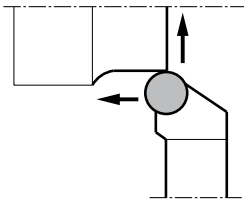
* For Ceramic CNM43 Insert toolholder D32

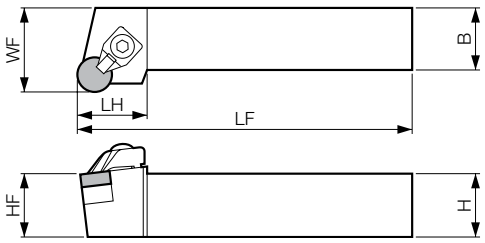
Recommended Cutting Conditions **D45-D46**

(Customer Service) **800.823.7284 - Option 1**
(Technical Support) **800.823.7284 - Option 2**
Visit us online at **KyoceraPrecisionTools.com**

● : Standard Item △ : Phaseout Item (will be removed from next catalog)
Contact your local Kyocera sales engineer to upgrade old products to new technology

CRSN-A (External / Facing)

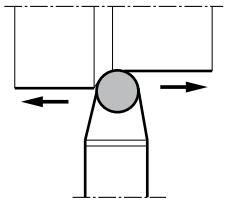


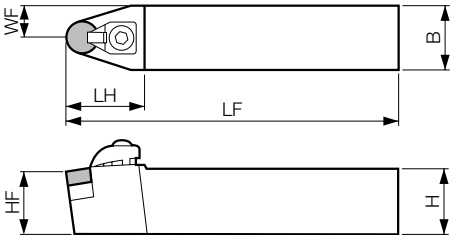


Side Rake Angle: -6°
Angle of Inclination: -6°

• Right-hand shown

CRDN-A (External / Copying))





Back Rake Angle: -8.5°

Toolholder Dimensions

Part Number		Stock R	Stock N	Stock L	Unit	Dimensions H	HF	B	LF	LH	WF	Standard Corner-R (RE)	Spare Parts: Clamp Set	Wrench	Shim	Shim	Shim Screw
CRSN□□	2525M-09A	●		●	mm	25	25	25	150	26	32.0	-	CE-030A	LW-4	SP-829	-	HH3X12
	3225P-09A	●		●		32	32	25	170	26	32.0						
	2525M-12A	●		●		25	25	25	150	26	32.0	-	CE-030A	LW-4	-	SP-849 (SP-843)	BH3X12
	3225P-12A	●		●		32	32	25	170	26	32.0						
CRDNN	2525M-09A		●			25	25	25	150	29	12.5	-	CE-030A	LW-4	SP-829	-	HH3X12
	3225P-09A		●			32	32	25	170	29	12.5						
	2525M-12A		●			25	25	25	150	28	12.5	-	CE-030A	LW-4	-	SP-849 (SP-843)	BH3X12
	3225P-12A		●			32	32	25	170	28	12.5						

Shim Screw: HH, BH

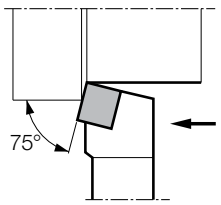
• -12A toolholder Shim: When using RN□□43 Insert, purchase spare parts: SP-843 in ( ) separately.

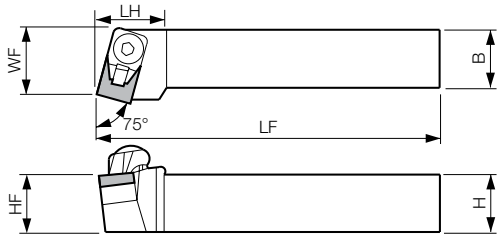
Applicable Inserts

Application	Hard Materials / Cast Iron	Cast Iron / Hard Materials	When using as toolholder for ceramic tools, prepare spare parts below separately.	
Ref. Page	C19	B112		
Shape / Toolholder	CBN (KBN900)	Ceramic	Shim	Shim Screw
CRSN□□...-09A	RNM32	(RNG33)	SP-826	-
CRSN□□...-12A	RNM42 (RNM43)	(RNG43)	SP-843	M3X12
		(RNG45)	SP-841	M3X8
CRDNN...-09A	RNM32	(RNG33)	SP-826	-
CRDNN...-12A	RNM42 (RNM43)	(RNG43)	SP-843	M3X12
		(RNG45)	SP-841	M3X8

Recommended Cutting Conditions **D45-D46**

CSRN-A (External)

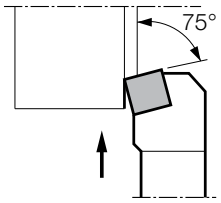


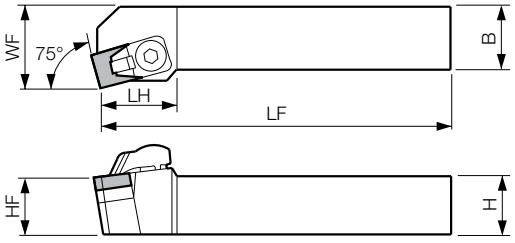


Side Rake Angle: -6°
Angle of Inclination: -4°

• Right-hand shown

CSKN-A (Facing)





Side Rake Angle: -6°
Angle of Inclination: -4°

• Right-hand shown

Toolholder Dimensions

Part Number	Stock R	Stock L	Unit	Dimensions H	HF	B	LF	LH	WF	Standard Corner-R (RE)	Spare Parts: Clamp Set	Wrench	Shim	Shim	Shim Screw
CSRN□ 2525M-12A	●	●	mm	25	25	25	150	22	27	0.8	CE-030A	LW-4	-	SP-148 (SP-143)	BH3X12
CSKNR 2525M-09A	●		mm	25	25	25	150	27	32	0.8	CE-030A	LW-4	SP-129	-	HH3X12

• -12A toolholder Shim: When using SN□□43 Insert, purchase spare parts: SP-143 in ( ) separately.

Applicable Inserts

Application	Hard Materials / Cast Iron	Cast Iron
Ref. Page	C19	B35
Shape / Toolholder	**CBN (KBN900)**	**Coated Carbide**
CSRN□...-12A	SNM42.. (SNM43..)	(SNM43..)
CSKNR...-09A	SNM32..	-

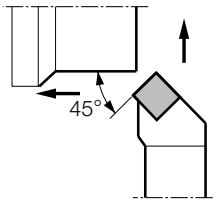
Cast Iron / Hard Materials	When using as toolholder for ceramic tools, prepare spare parts below separately. Chipbreaker	Clamp Set	Shim	Shim Screw
B111, B112				
Ceramic				
(SNG43..) (SNM43..)	CB-11	CE-020	SP-143	M3X12
(SNG45..) (SNM45..)			SP-141	M3X8
-	-	-	-	-

Recommended Cutting Conditions D39-D40

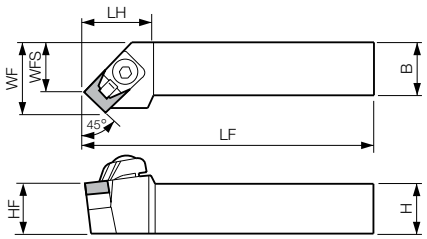
● : Standard Item △ : Phaseout Item (will be removed from next catalog)
Contact your local Kyocera sales engineer to upgrade old products to new technology

(Customer Service) 800.823.7284 - Option 1
(Technical Support) 800.823.7284 - Option 2
Visit us online at KyoceraPrecisionTools.com

CSSN-A (External / Facing / Chamfering)

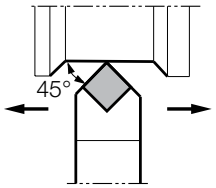


Side Rake Angle: -6°
Angle of Inclination: 0°

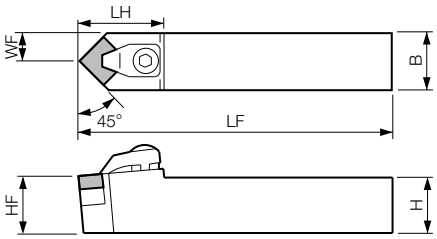


• Right-hand shown

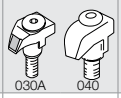
CSDN-A (External / Chamfering)



Back Rake Angle: -8.5°



Toolholder Dimensions

Part Number		Stock R	Stock N	Stock L	Unit	H	HF	B	LF	LH	WF	WFS	Standard Corner-R (RE)	Spare Parts: Clamp Set	Spare Parts: Wrench	Spare Parts: Shim	Spare Parts: Shim	Spare Parts: Shim Screw
														 030A 040				 HH BH
CSSN□	2525M-09A	●		●	mm	25	25	25	150	26	32.0	25	0.8	CE-030A	LW-4	SP-129	-	HH3X12
	2525M-12A	●		●		25	25	25	150	26	32.0	23				-	SP-148 (SP-143)	BH3X12
CSDNN	2525M-09A		●			25	25	25	150	32	12.5	-	0.8	CE-040	LW-4	SP-129	-	HH3X12
	2525M-12A		●			25	25	25	150	32	12.5	-				-	SP-148 (SP-143)	BH3X12

• -12A toolholder Shim: When using SN□□43 Insert, purchase spare parts: SP-143 in ( ) separately.

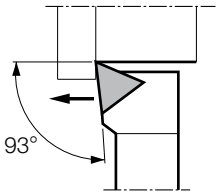
Applicable Inserts

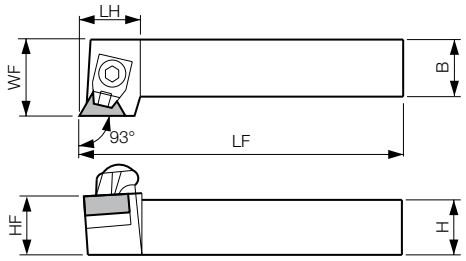
Application	Hard Materials / Cast Iron	Cast Iron
Ref. Page	C19	B35
Shape / Toolholder	CBN (KBN900) 	Coated Carbide 
CSSN□...-09A	SNM32..	-
CSSN□...-12A	SNM42.. (SNM43..)	(SNM43..)
CSDNN...-09A	SNM32..	-
CSDNN...-12A	SNM42.. (SNM43..)	(SNM43..)

Cast Iron / Hard Materials	When using as toolholder for ceramic tools, prepare spare parts below separately. Chipbreaker	Clamp Set	Shim	Shim Screw
B111, B112				
Ceramic 				
-	-	-	-	-
(SNG43..) (SNM43..)	CB-11	CE-020	SP-143	M3X12
(SNG45..) (SNM45..)			SP-141	M3X8
-	-	-	-	-
(SNG43..) (SNM43..)	-	-	SP-143	M3X12
(SNG45..) (SNM45..)			SP-141	M3X8

Recommended Cutting Conditions D45-D46

CTJN-A (External)

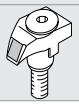




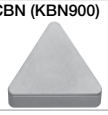
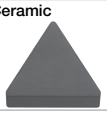
Side Rake Angle: -6°
Angle of Inclination: -4°

• Right-hand shown

Toolholder Dimensions

Part Number	Stock		Unit	Dimensions						Standard Corner-R(RE)	Spare Parts			
											Clamp Set	Wrench	Shim	Shim Screw
	R	L		H	HF	B	LF	LH	WF					
CTJNR/L **2525M-11A**	●	●	mm	25	25	25	150	22	32	0.8	CE-030A	LW-4	SP-219	HH3X12

Applicable Inserts

Application	Hard Materials / Cast Iron	Cast Iron / Hard Materials
Ref. Page	C19	B111
Shape / Toolholder	**CBN (KBN900)** 	**Ceramic** 
CTJNR/L**...-11A**	TNM22..	TNG22..

* TNM33 Insert toolholder is described in **D36**

Recommended Cutting Conditions **D45-D46**

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● : Standard Item △ : Phaseout Item (will be removed from next catalog)
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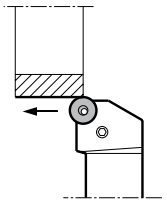
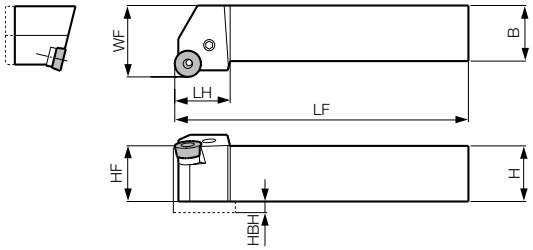
PRGC-BE (External)





• Right-hand shown

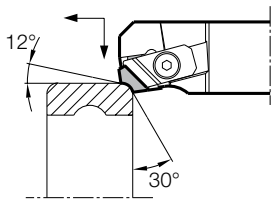
Toolholder Dimensions

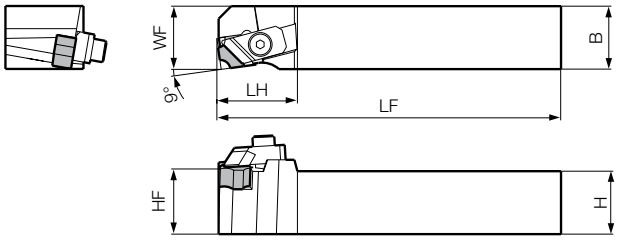
Part Number	Stock	Unit	Dimensions							Spare Parts						Applicable Inserts
			H	HF	HBH	B	LF	LH	WF	Lever	Lock Screw	Shim	Shim Pin	Punch	Wrench	
PRGCR 2525M-12BE	●	mm	25	25	-	25	150	25	32	LL-1CN	LS-1N	LR-12C	LSP-1	PC-1	FH-2.5	RCMT 1204M0-BB
2525M-16BE	△		25	25	-	25	150	27	32	LL-2C	LS-1T	LR-16C	LSP-2	PC-2	FH-2.5	RCMT 1606M0-BB

Applicable Inserts B105

Recommended Cutting Conditions **D45-D46**

CBSN (External Corner Filleting)





• Right-hand shown

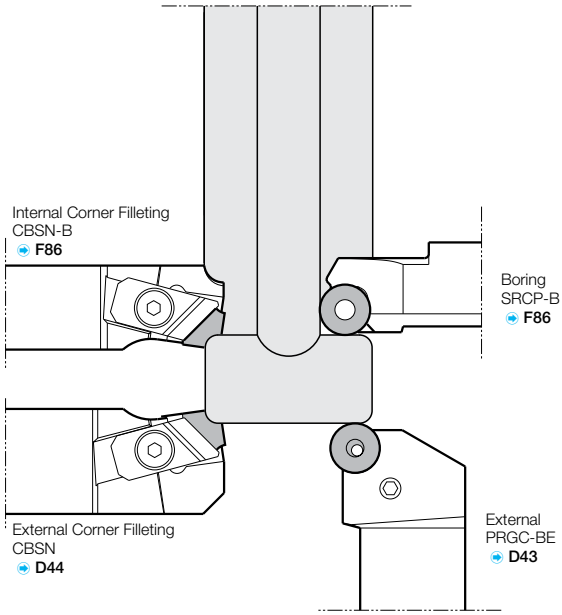
Toolholder Dimensions

Part Number		Stock R	Stock L	Unit	Dimensions H	HF	B	LF	LH	WF	Spare Parts: Clamp Set	Wrench	Shim	Shim Screw	Applicable Inserts
CBSN℀	2020K-12	●	●	mm	20	20	20	125	32	20	CP-RC℀	LW-5	SP-RC	SP3X8	SNMF1204○○-21
	2525M-12	●	●		25	25	25	150	32	25					

• Clamp Set: CP-RCR for Right-hand Toolholder, and CP-RCL for Left-hand Toolholder.

Recommended Cutting Conditions **D45-D46**

Tooling for Bearing Machining



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● : Standard Item △ : Phaseout Item (will be removed from next catalog)
Contact your local Kyocera sales engineer to upgrade old products to new technology

Recommended Cutting Conditions - External Turning (Negative Insert) [D.O.C. Indicates Radius]

ISO Classification	Workpiece Material	Hardness	Cutting Range	Applications	Recommended Chipbreaker	Recommended Insert Grade	Corner-R (RE)	Lower Limit - **Recommendation** - Upper Limit		
								Vc (sfm)	D.O.C. (in)	Feed Rate (ipr)
P	Low Carbon Steel Low Carbon Alloy	HB ≦ 300	Finishing (High Speed)	Continuous	XP	CCX	1/32	980 - **1970** - 2620	0.008 - **0.020** - 0.028	0.003 - **0.005** - 0.008
			Finishing (Small D.O.C.)	Continuous	XF	PV710	1/64	820 - **1150** - 1710	0.002 - **0.005** - 0.024	0.001 - **0.004** - 0.009
				Interruption		PV720	1/32	790 - **1050** - 1570	0.002 - **0.006** - 0.024	0.002 - **0.005** - 0.010
			Finishing (Gloss Oriented)	Continuous	XP	TN610	1/64	820 - **1050** - 1310	0.008 - **0.020** - 0.028	0.003 - **0.005** - 0.008
				Interruption		TN620	1/32	790 - **1020** - 1210	0.008 - **0.020** - 0.028	0.003 - **0.005** - 0.008
			Finishing (Tool Life Oriented)	Continuous	XP	PV710	1/64	820 - **980** - 1210	0.008 - **0.020** - 0.028	0.003 - **0.005** - 0.008
				Interruption		PV720	1/32	790 - **950** - 1120	0.008 - **0.020** - 0.028	0.003 - **0.005** - 0.008
			Finishing-Medium (Gloss Oriented)	Continuous	XQ	TN610	1/64	820 - **1050** - 1310	0.020 - **0.039** - 0.059	0.007 - **0.010** - 0.012
				Interruption		TN620	1/32	790 - **920** - 1120	0.020 - **0.039** - 0.059	0.007 - **0.010** - 0.012
			Finishing-Medium (Tool Life Oriented)	Continuous	XQ	PV710	1/32	820 - **980** - 1210	0.020 - **0.039** - 0.059	0.007 - **0.010** - 0.012
				Interruption		PV720	1/32	790 - **920** - 1120	0.020 - **0.039** - 0.059	0.007 - **0.010** - 0.012
			Medium-Roughing	Continuous	XS	PV720	1/32	720 - **850** - 1050	0.031 - **0.059** - 0.079	0.010 - **0.012** - 0.016
				Interruption		CA515	1/32	520 - **690** - 850	0.031 - **0.059** - 0.079	0.010 - **0.012** - 0.016
			Roughing	Continuous	PG	CA515	1/32	590 - **720** - 850	0.039 - **0.098** - 0.138	0.008 - **0.012** - 0.016
				Interruption		CA025P	3/64	490 - **660** - 790	0.039 - **0.098** - 0.138	0.008 - **0.012** - 0.016
			Medium-Roughing High Feed Rate	Continuous	PT	CA515	1/32	490 - **660** - 790	0.059 - **0.118** - 0.177	0.010 - **0.014** - 0.018
				Interruption		CA025P	3/64	390 - **590** - 720	0.059 - **0.118** - 0.177	0.010 - **0.014** - 0.018
			Roughing High Feed Rate	Continuous	PH	CA515	3/64	490 - **660** - 790	0.079 - **0.197** - 0.315	0.016 - **0.024** - 0.031
				Interruption		CA025P	1/16	390 - **590** - 720	0.079 - **0.197** - 0.315	0.012 - **0.020** - 0.028
			Roughing (Low Cutting Force)	Continuous	PX (Single Side)	CA515	3/64	490 - **660** - 790	0.079 - **0.197** - 0.315	0.016 - **0.024** - 0.031
				Interruption		CA025P	1/16	390 - **590** - 720	0.079 - **0.197** - 0.315	0.012 - **0.020** - 0.028
	Medium Carbon Steel Medium Carbon Alloy	HB ≦ 300	Finishing (Time Oriented)	Continuous	WF (Wiper)	PV710	1/32	660 - **820** - 1050	0.012 - **0.020** - 0.039	0.008 - **0.012** - 0.016
				Interruption		CA515	1/32	520 - **720** - 920	0.012 - **0.020** - 0.039	0.008 - **0.012** - 0.016
			Finishing-Medium (Time Oriented)	Continuous	WE (Wiper)	PV710	1/32	590 - **720** - 920	0.039 - **0.079** - 0.118	0.008 - **0.012** - 0.016
				Interruption		CA025P	1/32	430 - **590** - 790	0.039 - **0.079** - 0.118	0.008 - **0.012** - 0.016
			Finishing (High Speed)	Continuous	PP	CCX	1/32	660 - **980** - 1480	0.008 - **0.020** - 0.059	0.002 - **0.006** - 0.011
			Finishing (Gloss Oriented)	Continuous	PP	TN610	1/64	660 - **820** - 1050	0.008 - **0.020** - 0.059	0.002 - **0.006** - 0.011
				Interruption			1/32	590 - **750** - 980	0.008 - **0.020** - 0.059	0.002 - **0.008** - 0.014
			Finishing (Tool Life Oriented)	Continuous	PP	PV710	1/64	660 - **820** - 1050	0.008 - **0.020** - 0.059	0.002 - **0.006** - 0.011
				Interruption		PV720	1/32	660 - **790** - 950	0.008 - **0.020** - 0.059	0.002 - **0.008** - 0.014
			Finishing-Medium (Gloss Oriented)	Continuous	PQ	TN610	1/32	590 - **750** - 980	0.020 - **0.059** - 0.098	0.004 - **0.008** - 0.012
				Interruption		TN620	3/64	520 - **720** - 850	0.020 - **0.059** - 0.098	0.004 - **0.007** - 0.010
			Finishing-Medium (Tool Life Oriented)	Continuous	PQ	PV710	1/32	520 - **690** - 920	0.020 - **0.059** - 0.098	0.004 - **0.008** - 0.012
				Interruption		CA025P	1/32	460 - **660** - 790	0.020 - **0.059** - 0.098	0.004 - **0.007** - 0.010
			Medium-Roughing	Continuous	PG	CA515	1/32	490 - **660** - 790	0.039 - **0.098** - 0.138	0.008 - **0.012** - 0.016
				Interruption		CA025P	3/64	390 - **530** - 660	0.039 - **0.098** - 0.138	0.008 - **0.012** - 0.016
			Medium-Roughing High Feed Rate	Continuous	PT	CA515	1/32	390 - **590** - 750	0.059 - **0.118** - 0.177	0.010 - **0.014** - 0.018
				Interruption		CA025P	3/64	330 - **490** - 660	0.059 - **0.118** - 0.177	0.010 - **0.014** - 0.018
			Roughing High Feed Rate	Continuous	PH	CA515	3/64	390 - **590** - 750	0.079 - **0.197** - 0.315	0.016 - **0.024** - 0.031
				Interruption		CA025P	1/16	330 - **490** - 660	0.079 - **0.197** - 0.315	0.012 - **0.020** - 0.028
			Roughing (Low Cutting Force)	Continuous	PX (Single Side)	CA515	3/64	390 - **590** - 750	0.079 - **0.197** - 0.315	0.016 - **0.024** - 0.031
				Interruption		CA025P	1/16	330 - **490** - 660	0.079 - **0.197** - 0.315	0.012 - **0.020** - 0.028
	High Carbon Alloy	HB ≦ 280	Finishing (High Speed)	Continuous	PP	CCX	1/32	660 - **980** - 1310	0.008 - **0.020** - 0.059	0.002 - **0.006** - 0.011
			Finishing (Gloss Oriented)	Continuous	PP	TN610	1/64	490 - **660** - 920	0.008 - **0.020** - 0.059	0.002 - **0.006** - 0.011
				Interruption		TN620	1/32	460 - **590** - 790	0.008 - **0.020** - 0.059	0.002 - **0.008** - 0.014
			Finishing (Tool Life Oriented)	Continuous	PP	PV710	1/64	390 - **590** - 850	0.008 - **0.020** - 0.059	0.002 - **0.006** - 0.011
				Interruption		CA515	1/32	330 - **490** - 660	0.008 - **0.020** - 0.059	0.002 - **0.008** - 0.014
			Finishing-Medium	Continuous	PQ	CA515	1/32	390 - **520** - 720	0.020 - **0.059** - 0.098	0.006 - **0.010** - 0.012
				Interruption		CA025P	1/32	330 - **460** - 590	0.020 - **0.059** - 0.098	0.006 - **0.008** - 0.010
			Medium-Roughing	Continuous	PG	CA515	1/32	390 - **490** - 660	0.039 - **0.079** - 0.118	0.008 - **0.012** - 0.020
				Interruption		CA025P	1/32	330 - **430** - 590	0.039 - **0.079** - 0.118	0.006 - **0.008** - 0.012
			Medium-Roughing High Feed Rate	Continuous	PT	CA515	1/32	330 - **460** - 590	0.059 - **0.118** - 0.177	0.010 - **0.014** - 0.018
				Interruption		CA025P	3/64	260 - **390** - 520	0.059 - **0.118** - 0.177	0.010 - **0.014** - 0.018
			Roughing High Feed Rate	Continuous	PH	CA515	3/64	330 - **460** - 590	0.079 - **0.197** - 0.315	0.016 - **0.024** - 0.031
				Interruption		CA025P	1/16	260 - **390** - 520	0.079 - **0.197** - 0.315	0.012 - **0.020** - 0.028
			Roughing (Low Cutting Force)	Continuous	PX (Single Side)	CA515	3/64	330 - **460** - 590	0.079 - **0.197** - 0.315	0.016 - **0.024** - 0.031
				Interruption		CA025P	1/16	260 - **390** - 520	0.079 - **0.197** - 0.315	0.012 - **0.020** - 0.028

Recommended Cutting Conditions - External Turning (Negative Insert) [D.O.C. Indicates Radius]

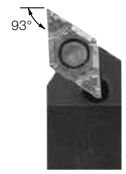
ISO Classification	Workpiece Material	Hardness	Cutting Range	Applications	Recommended Chipbreaker	Recommended Insert Grade	Corner-R (RE)	Lower Limit - **Recommendation** - Upper Limit		
								Vc (sfm)	D.O.C. (in)	Feed Rate (ipr)
M	Stainless Steel (Austenitic)	HB ≦ 220	Finishing (Gloss Oriented)	Continuous	PQ	TN620	1/32	390 - **520** - 660	0.020 - **0.039** - 0.059	0.003 - **0.006** - 0.008
				Interruption			1/32	330 - **390** - 490	0.020 - **0.039** - 0.059	0.002 - **0.004** - 0.006
			Finishing	Continuous	MQ	CA6515	1/64	390 - **590** - 790	0.020 - **0.039** - 0.059	0.003 - **0.006** - 0.008
				Interruption		CA6525	1/32	330 - **520** - 720	0.020 - **0.039** - 0.059	0.002 - **0.004** - 0.006
			Medium-Roughing (Chip Control Oriented)	Continuous	MS	CA6515	1/64	390 - **520** - 660	0.039 - **0.079** - 0.118	0.004 - **0.008** - 0.012
				Interruption		CA6525	1/32	260 - **460** - 590	0.039 - **0.079** - 0.118	0.008 - **0.012** - 0.016
			Medium-Roughing (Sharpness Oriented)	Continuous	MU	CA6515	1/64	390 - **520** - 660	0.039 - **0.079** - 0.118	0.006 - **0.010** - 0.014
				Interruption		CA6525	1/32	260 - **460** - 590	0.039 - **0.079** - 0.118	0.006 - **0.010** - 0.012
			Roughing	Continuous	Standard	CA6515	1/32	330 - **460** - 590	0.039 - **0.079** - 0.157	0.008 - **0.012** - 0.016
				Interruption		CA6525	3/64	260 - **390** - 490	0.039 - **0.079** - 0.157	0.008 - **0.012** - 0.016
	Stainless Steel (Precipitation Hardened)	HB ≦ 300	Finishing (Gloss Oriented)	Continuous	PQ	TN620	1/32	330 - **390** - 490	0.020 - **0.039** - 0.059	0.002 - **0.004** - 0.006
				Interruption			1/32	260 - **330** - 390	0.020 - **0.039** - 0.059	0.002 - **0.003** - 0.004
			Finishing	Continuous	MQ	CA6515	1/64	330 - **390** - 490	0.020 - **0.039** - 0.059	0.003 - **0.006** - 0.008
				Interruption		CA6525	1/32	260 - **330** - 390	0.020 - **0.039** - 0.059	0.002 - **0.004** - 0.006
			Medium-Roughing (Chip Control Oriented)	Continuous	MS	CA6515	1/64	330 - **390** - 490	0.039 - **0.059** - 0.079	0.004 - **0.006** - 0.010
				Interruption		CA6525	1/32	260 - **330** - 390	0.039 - **0.079** - 0.118	0.004 - **0.006** - 0.008
			Medium-Roughing (Sharpness Oriented)	Continuous	MU	CA6515	1/64	330 - **390** - 490	0.039 - **0.059** - 0.079	0.004 - **0.006** - 0.010
				Interruption		CA6525	1/32	260 - **330** - 390	0.039 - **0.079** - 0.118	0.004 - **0.006** - 0.008
			Roughing	Continuous	Standard	CA6515	1/32	260 - **330** - 390	0.039 - **0.079** - 0.118	0.008 - **0.012** - 0.016
				Interruption		CA6525	3/64	200 - **260** - 330	0.039 - **0.079** - 0.157	0.008 - **0.012** - 0.016
K	Gray Cast Iron	HB ≦ 250	High Speed Machining	Continuous	Without Chipbreaker	KBN475	1/32	1310 - **2620** - 3940	0.002 - **0.008** - 0.020	0.004 - **0.008** - 0.012
				Continuous		KBN900	3/64	1640 - **2950** - 3940	0.004 - **0.020** - 0.039	0.002 - **0.004** - 0.008
				Interruption		KBN900	3/64	1640 - **2300** - 2950	0.020 - **0.039** - 0.059	0.002 - **0.004** - 0.008
			Finishing (Gloss Oriented)	Continuous	Standard	PV7005	1/32	980 - **1150** - 1310	0.020 - **0.039** - 0.059	0.004 - **0.008** - 0.012
				Interruption		PV720	1/32	490 - **660** - 980	0.020 - **0.039** - 0.059	0.003 - **0.006** - 0.008
			Finishing (Ceramic)	Continuous	Without Chipbreaker	KA30	3/64	980 - **1640** - 2300	0.012 - **0.020** - 0.039	0.004 - **0.008** - 0.012
				Continuous		PT600M	1/32	980 - **1480** - 1970	0.012 - **0.020** - 0.039	0.004 - **0.008** - 0.012
			Medium (Ceramic)	Continuous		CS7050	3/64	980 - **1480** - 1800	0.039 - **0.079** - 0.118	0.006 - **0.010** - 0.014
				Interruption		KS6050	3/64	820 - **1310** - 1640	0.039 - **0.079** - 0.118	0.006 - **0.008** - 0.012
			Medium	Continuous	KH	CA310	1/32	660 - **820** - 980	0.020 - **0.079** - 0.098	0.004 - **0.008** - 0.012
				Interruption		CA315	3/64	490 - **660** - 820	0.020 - **0.079** - 0.098	0.003 - **0.006** - 0.008
			Roughing	Continuous	KH	CA310	1/32	660 - **820** - 980	0.039 - **0.079** - 0.157	0.008 - **0.012** - 0.016
				Interruption		CA315	3/64	490 - **660** - 820	0.039 - **0.079** - 0.157	0.008 - **0.012** - 0.016
	Nodular Cast Iron	HB ≦ 270	High Speed Machining	Continuous	Without Chipbreaker	KBN60M	1/64	660 - **980** - 1310	0.004 - **0.012** - 0.020	0.004 - **0.006** - 0.008
				Continuous		PT600M	1/32	660 - **820** - 1150	0.004 - **0.020** - 0.039	0.004 - **0.008** - 0.016
			Finishing (Gloss Oriented)	Continuous	Standard	PV7005	1/32	490 - **820** - 980	0.020 - **0.039** - 0.059	0.004 - **0.008** - 0.012
				Interruption		PV720	1/32	390 - **660** - 820	0.020 - **0.039** - 0.059	0.003 - **0.006** - 0.008
			Medium	Continuous	KG	CA310	1/32	490 - **660** - 820	0.020 - **0.079** - 0.098	0.004 - **0.008** - 0.012
				Interruption		CA315	3/64	390 - **590** - 720	0.020 - **0.079** - 0.098	0.003 - **0.006** - 0.008
			Roughing	Continuous	KG	CA315	1/32	490 - **660** - 820	0.039 - **0.079** - 0.157	0.008 - **0.012** - 0.016
				Interruption	KH	CA320	3/64	390 - **590** - 720	0.039 - **0.079** - 0.157	0.008 - **0.012** - 0.016
N	Non-ferrous Metals Copper Alloy Aluminum Aluminum Alloys	HB ≦ 100	High Speed Machining (Glossy Surface)	Continuous	Without Chipbreaker	KPD001	1/64	980 - **2620** - 6560	0.002 - **0.020** - 0.039	0.002 - **0.004** - 0.006
			Finishing (Long Tool Life)	Continuous	A3	PDL025	1/64	1310 - **1640** - 2300	0.020 - **0.039** - 0.079	0.004 - **0.008** - 0.010
				Interruption			1/32	1310 - **1640** - 2300	0.020 - **0.039** - 0.079	0.004 - **0.008** - 0.010
			Finishing	Continuous	A3	KW10	1/32	1310 - **1640** - 2300	0.020 - **0.039** - 0.079	0.004 - **0.008** - 0.010
				Interruption			1/32	1310 - **1640** - 2300	0.020 - **0.039** - 0.079	0.004 - **0.008** - 0.010
			Medium	Continuous	AH	KW10	1/32	660 - **980** - 1640	0.039 - **0.079** - 0.138	0.004 - **0.012** - 0.016
				Interruption			1/32	660 - **980** - 1640	0.039 - **0.079** - 0.138	0.004 - **0.012** - 0.016
S	Titanium Alloys	HB ≦ 400	Precision Finishing (Glossy Surface)	Continuous	Without Chipbreaker	KPD001	1/64	330 - **490** - 590	0.002 - **0.012** - 0.020	0.001 - **0.004** - 0.006
				Interruption			1/64	230 - **390** - 490	0.002 - **0.012** - 0.020	0.001 - **0.003** - 0.004
			Finishing	Continuous	MQ	SW05	1/64	130 - **230** - 330	0.008 - **0.020** - 0.039	0.002 - **0.008** - 0.012
				Interruption			1/64	130 - **230** - 330	0.008 - **0.020** - 0.039	0.002 - **0.006** - 0.008
			Medium	Continuous	MU	SW05	1/32	130 - **200** - 260	0.020 - **0.039** - 0.118	0.004 - **0.010** - 0.014
				Interruption			1/32	130 - **200** - 260	0.020 - **0.039** - 0.118	0.004 - **0.008** - 0.012
	Heat-resistant Alloys	HB ≦ 350	Finishing	Continuous	MQ	PR005S	1/64	100 - **180** - 300	0.008 - **0.012** - 0.039	0.002 - **0.003** - 0.006
				Interruption		PR015S	1/32	80 - **150** - 230	0.008 - **0.020** - 0.039	0.002 - **0.004** - 0.008
			Medium	Continuous	SQ	PR005S	1/32	100 - **180** - 300	0.012 - **0.020** - 0.059	0.004 - **0.007** - 0.014
				Interruption		PR015S	1/32	80 - **150** - 230	0.012 - **0.020** - 0.059	0.004 - **0.007** - 0.014
			Roughing	Continuous	SG	PR005S	1/32	100 - **180** - 300	0.020 - **0.079** - 0.157	0.004 - **0.012** - 0.016
				Interruption		PR015S	1/32	80 - **150** - 230	0.020 - **0.079** - 0.157	0.004 - **0.012** - 0.016
				Continuous	SX	PR005S	-	100 - **180** - 300	0.020 - **0.079** - 0.157	0.006 - **0.012** - 0.018
				Interruption		PR015S	-	80 - **150** - 230	0.020 - **0.079** - 0.157	0.006 - **0.012** - 0.018
H	Hardened Steel Hard Materials	40~50 HRC	Finishing	Continuous	PQ Standard	CA515	1/32	200 - **330** - 390	0.004 - **0.012** - 0.020	0.002 - **0.003** - 0.004
				Interruption			1/32	100 - **160** - 230	0.004 - **0.012** - 0.020	0.002 - **0.003** - 0.004
		40~50 HRC	Finishing	Continuous	Without Chipbreaker	PT600M	1/32	200 - **250** - 325	0.008 - **0.020** - 0.028	0.002 - **0.004** - 0.006
		50~65 HRC		Continuous			3/64	100 - **125** - 200	0.008 - **0.020** - 0.028	0.002 - **0.004** - 0.006
		50~68 HRC	Finishing	Continuous	ME MET	KBN05M	1/32	325 - **500** - 650	0.002 - **0.012** - 0.020	0.002 - **0.003** - 0.004
				Interruption			3/64	300 - **450** - 600	0.002 - **0.012** - 0.020	0.002 - **0.003** - 0.004
			Medium	Continuous	Without Chipbreaker	KBN900	3/64	250 - **325** - 400	0.020 - **0.039** - 0.079	0.002 - **0.004** - 0.008
				Interruption			Radius	225 - **300** - 350	0.012 - **0.028** - 0.039	0.002 - **0.004** - 0.006

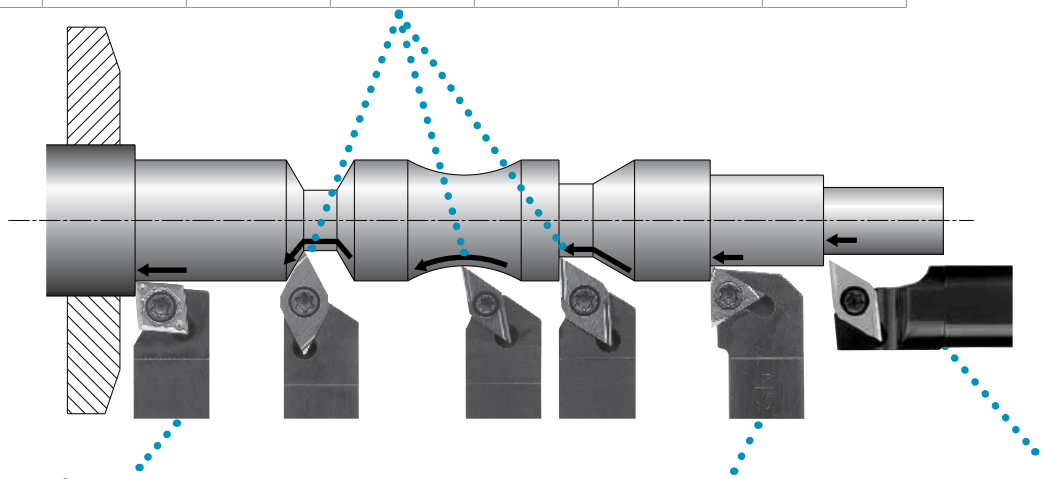
SMALL TOOLS

E1 - E60

TURNING SUMMARY		E2 - E10
IDENTIFICATION SYSTEM		E11
TOOLHOLDERS FOR BACK TURNING		E12 - E21
TKFB INSERT	(Back Turning / Goose-neck / Y-axis)	E12, E14
TKFB-GTP	(Back Turning)	E13
TKF-AGT / TKF-AS INSERT	(Back Turning)	E18
ABS INSERT	(Back Turning)	E19
ABW INSERT	(Back Turning)	E20
GOOSE-NECK HOLDER		E22 - E23
DC INSERT	(Goose-neck Holder)	E22
VP INSERT	(Goose-neck Holder)	E23
EXTERNAL TURNING (BACK CLAMP / SCREW CLAMP)		E24 - E44
CC INSERT	(Without Offset / With Offset)	E24
DC INSERT	(Without Offset / With Offset)	E27
DP INSERT	(Without Offset)	E34
TC / TP INSERT		E35
VB / VC INSERT	(Without Offset / With Offset)	E36
VP INSERT	(Without Offset / With Offset)	E42
EXTERNAL SLEEVE HOLDER TOOLS		E45 - E47
CC INSERT		E45
DC INSERT		E46
VB / VC INSERT		E47
SMALL DOUBLE-SIDED TOOLING (SCREW CLAMP)		E48 - E49
CN / DN INSERT	(Without Offset)	E48
TN INSERT	(Without Offset)	E49
SMALL DOUBLE-SIDED TOOLING (LEVER LOCK)		E50 - E51
CN INSERT	(Without Offset)	E50
TN INSERT	(Without Offset)	E51
SUB-SPINDLE TOOLS (FOR STAR™ MACHINES)		E52 - E54
RECOMMENDED CUTTING CONDITIONS		E55 - E56
NEW PART DESCRIPTION REFERENCE TABLE		E57 - E60

External / Copying

						
ADJC-FF	SDJC-FF(JCTM) SDJC-FF-Y	SDJC	SDLC-FF SDLP-FF	SDLN	SDNC-F	SDNC
Back Clamp Without Offset	Screw Clamp Without Offset	Screw Clamp	Screw Clamp Without Offset	Screw Clamp Without Offset	Screw Clamp	Screw Clamp
E27	E27~E30	E29	E32, E34	E48	E33	E32



External / Facing

			
ACLC-FF	SCLC-FF(JCTM)	SCLC	SCLN-FF
Back Clamp Without Offset	Screw Clamp Without Offset	Screw Clamp	Screw Clamp Without Offset
E24	E24, E25	E26	E48

External

	
STGC(P)	STLN-FF
Screw Clamp	Screw Clamp Without Offset
E35	E49

External Sleeve Holder

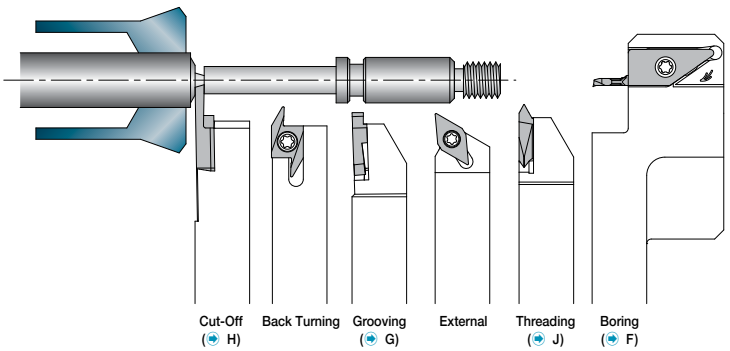


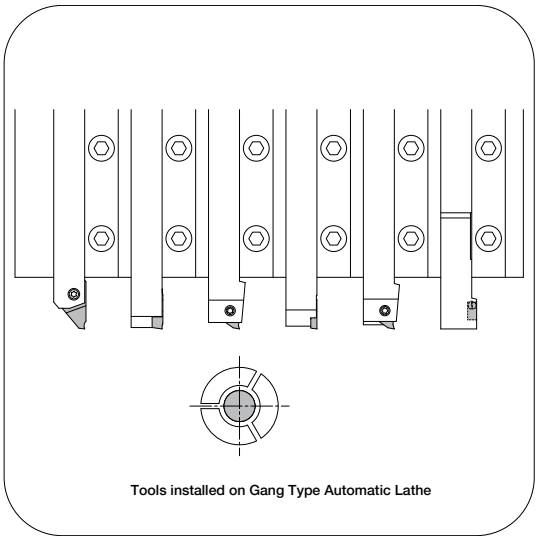
S...SDLC

Screw Clamp Shank Dia.
Ø0.625"~Ø1.000"
Ø12.0mm~Ø25.4mm

E46

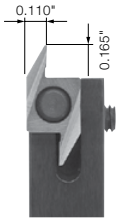
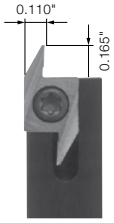
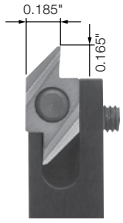
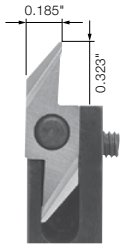
Tooling Example ① - CNC Automatic Lathe (Gang Type)

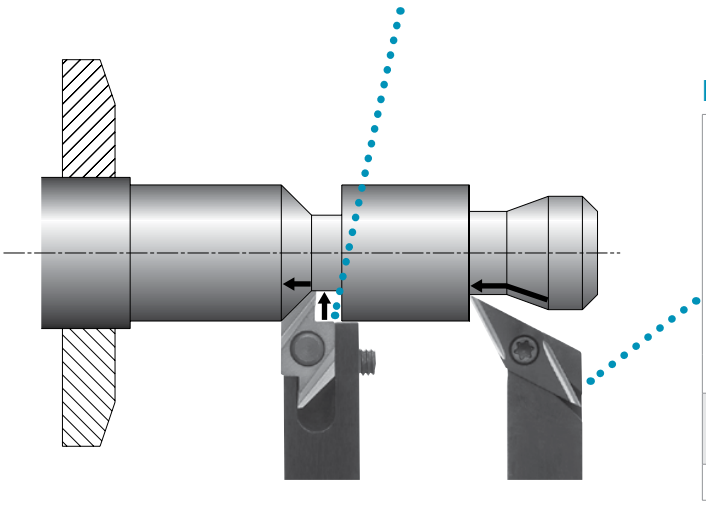




Tools installed on Gang Type Automatic Lathe

Back Turning

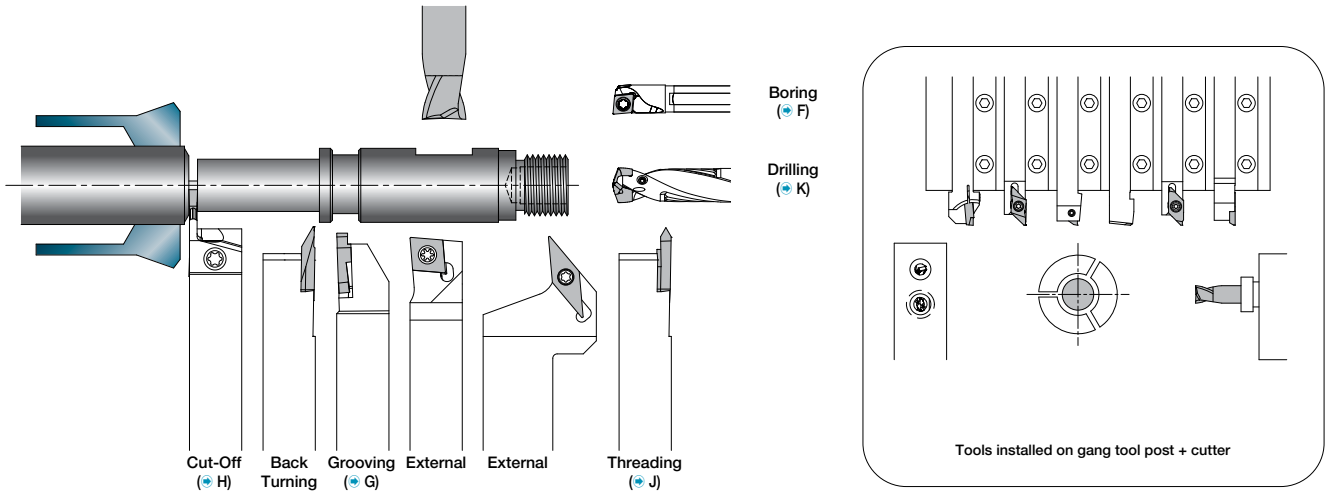
						
AABS-40F	**SABS-40F**	**AABW-40F**	**SABW-40F**	**AABW-50F**	**SABW-50F**	**KTKF**
Back Clamp Edge Width: 0.110" / 2.8mm D.O.C. ~0.158" / ~4.0mm	Screw Clamp Edge Width: 0.110" / 2.8mm D.O.C. ~0.158" / ~4.0mm	Back Clamp Edge Width: 0.185" / 4.7mm D.O.C. ~0.158" / ~4.0mm	Screw Clamp Edge Width: 0.185" / 4.7mm D.O.C. ~0.158" / ~4.0mm	Back Clamp Edge Width: 0.185" / 4.7mm D.O.C. ~0.197" / ~5.0mm	Screw Clamp Edge Width: 0.185" / 4.7mm D.O.C. ~0.197" / ~5.0mm	Screw Clamp Edge Width: 0.059"~0.150" / 1.5mm~3.8mm D.O.C. 0.071"~0.217" / 1.8mm~5.5mm
E19	E19	E20	E20	E21	E21	E12



External / Facing / Copying / Undercutting

	
SVPB	**SVPP-FF**
Screw Clamp	Screw Clamp (Without Offset)
E38	E44

Tooling Example ② - CNC Automatic Lathe (Gang Type)



Goose-Neck Toolholder

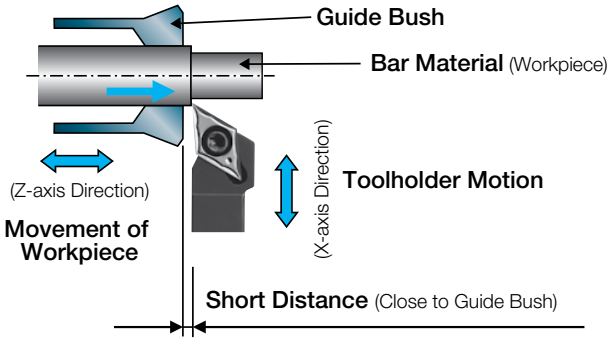
for Swiss Tool Automatic Lathe (Gang Edge Tool Post)



Swiss Tool Automatic Lathe (Guide Bush System)

The Goose-neck Holder works with automatic lathes that do not move toolholders in longitudinal direction (Z-axis)

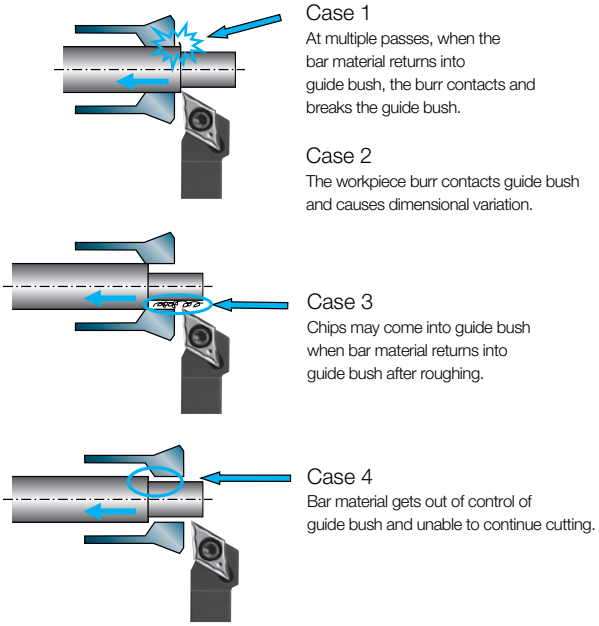
When Using a Conventional Toolholder



Tool position is fixed and workpiece moves longitudinally

Problems When Using a Conventional Toolholder

Problems When Machining with a Conventional Toolholder



Case 1
At multiple passes, when the bar material returns into guide bush, the burr contacts and breaks the guide bush.

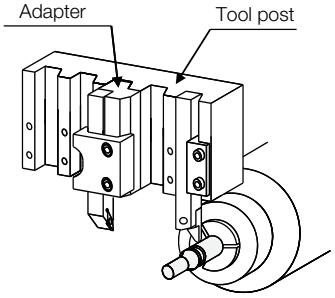
Case 2
The workpiece burr contacts guide bush and causes dimensional variation.

Case 3
Chips may come into guide bush when bar material returns into guide bush after roughing.

Case 4
Bar material gets out of control of guide bush and unable to continue cutting.

Toolholder Installation Problems When Using a Conventional Toolholder

1) Additional space is required for an adapter.
2) Toolholder's handling is difficult due to limited space.
3) It is necessary to buy an adapter.
4) An adapter may interfere with the next toolpost



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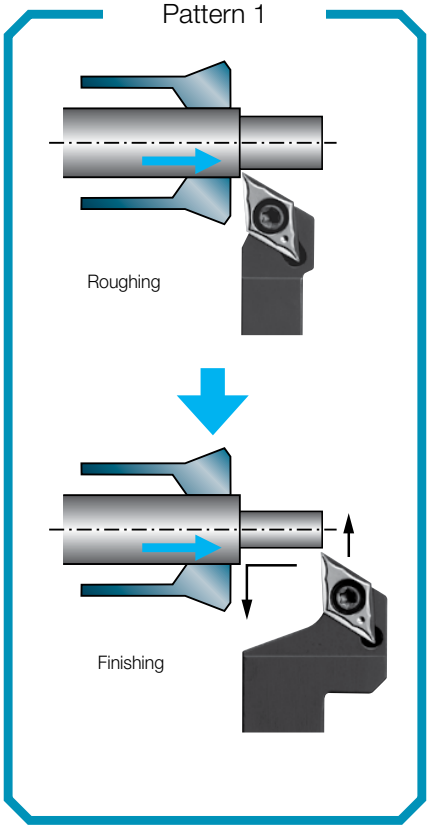
ADVANTAGES

of the Goose-Neck Holder

1) Additional finishing process improves machining precision
2) Chips do not enter guide bushing
3) Large chip evacuation space produces better chip control

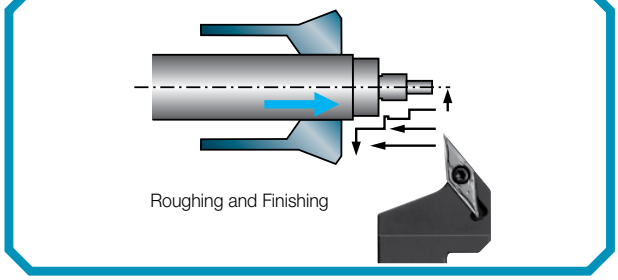
Available for machining after roughing without returning bar material into guide bushing, prevents damages and improves precision.

Pattern 1

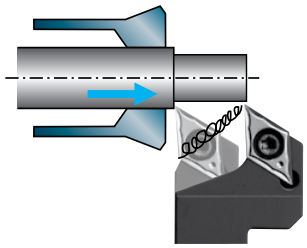


Available for machining from roughing to finishing with a single Goose-neck Holder.

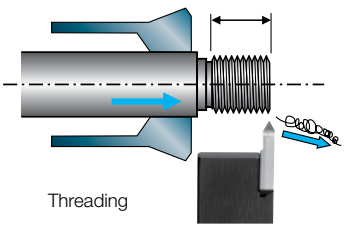
Pattern 2



For smooth chip control



Optimized location of the cutting edge makes enough space for smooth chip evacuation of long chipping materials

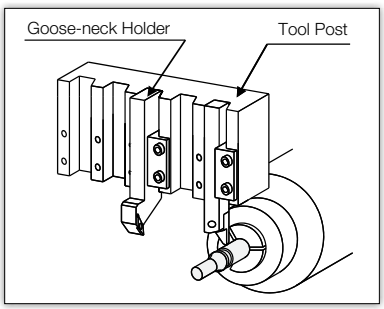


With conventional toolholders, chips can be entangled in guide bushing and damage workpiece

Advantages of Toolholder Installation

Using Goose-neck Holder

1) Maximum number of toolholders can be attached
2) No interference with next tool post

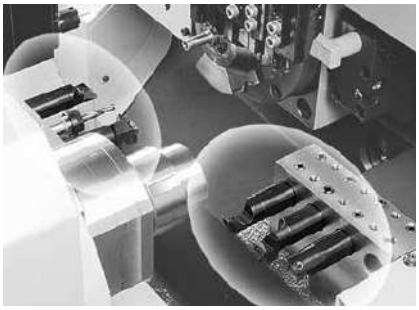


External Sleeve Holder

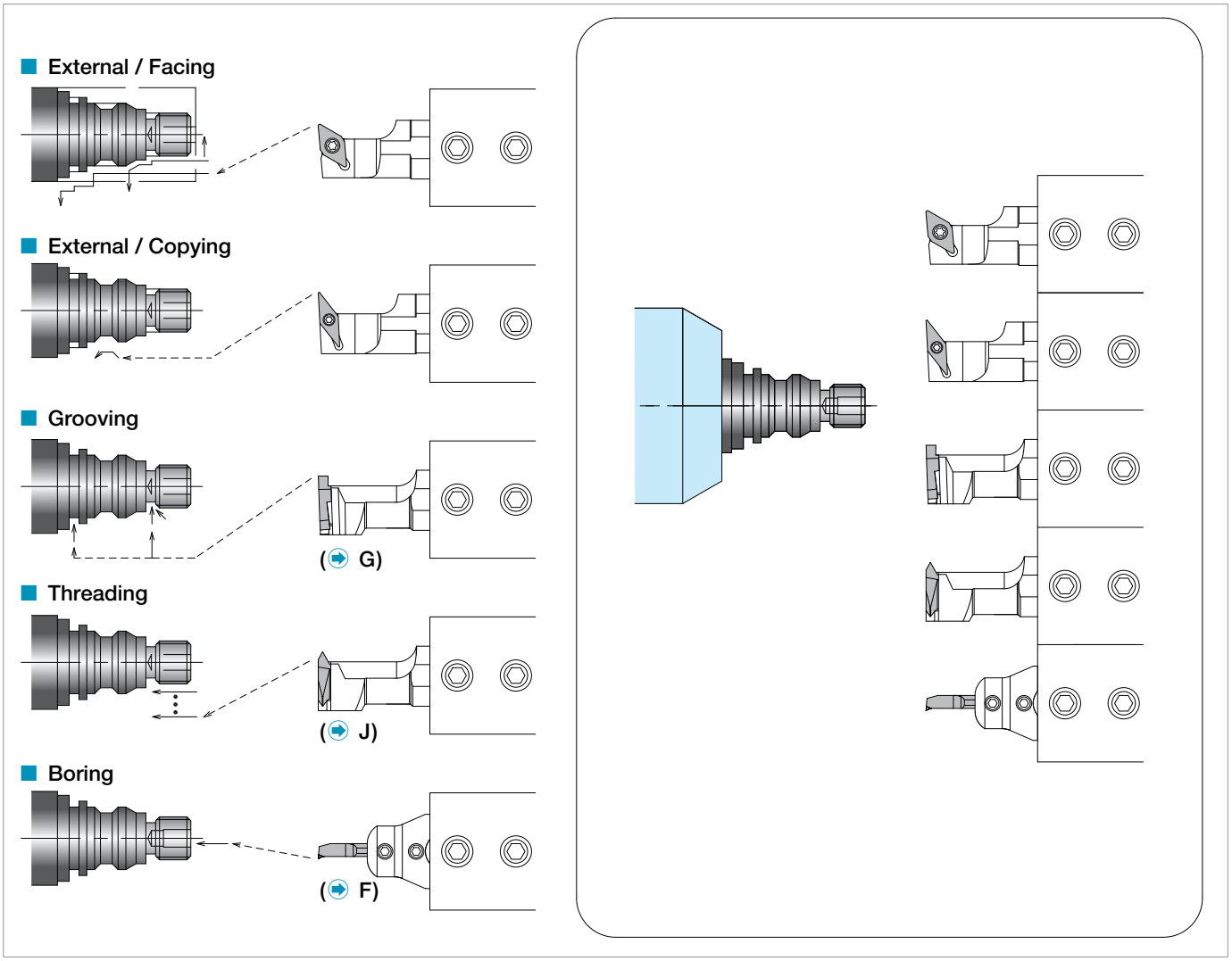
More Tools for CNC Automatic Lathe

Use External Sleeve Holders ➡➡➡ With Attachable Tools During Intricate Part Machining

			
S...SCLC	**S...SDUC**	**S...SDLC**	**S...SVUB(C)**
Screw Clamp Shank Dia. Ø0.625"~Ø1.000" Ø12.0mm~Ø25.4mm	Screw Clamp Shank Dia. Ø0.625"~Ø1.000" Ø14.0mm~Ø25.4mm	Screw Clamp Shank Dia. Ø0.625"~Ø1.000" Ø12.0mm~Ø25.4mm	Screw Clamp Shank Dia. Ø0.625"~Ø1.000" Ø12.0mm~Ø25.4mm
E45	E46	E46	E47



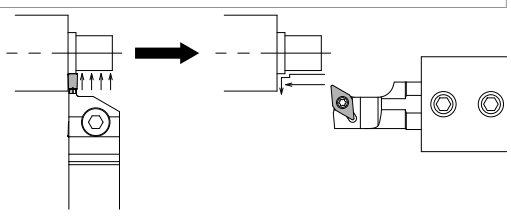
Tooling Example ③ - CNC Automatic Lathe (Opposed Gang Type)



See **Page** R66~R71 for Automatic Lathe List of Machine Manufacturer and Tooling Examples

Examples of Finishing with Sleeve Holder

1) Roughing by Grooving Toolholder
2) Finishing by Sleeve Holder Improves Chip Control and Reduces Cutting Time



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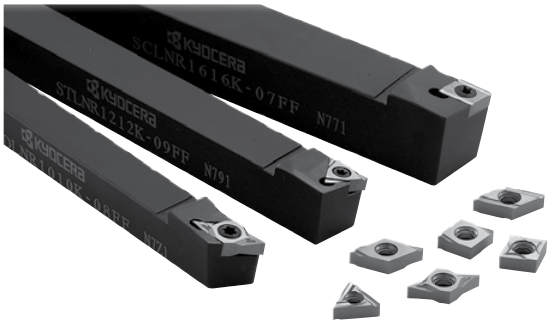
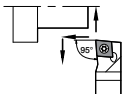
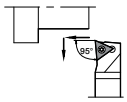
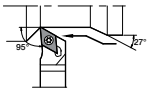
Double-Sided Swiss Tools (Screw Clamp)

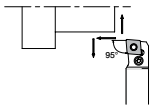
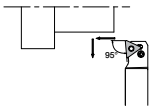


Application	External / Facing	External / Up Facing	External / Copying
Cutting Edge Angle	95°	95°	95°
Screw Clamp (Without Offset)	 SCLN	 STLN	 SDLN
Ref. Page	E48	E49	E48

The double-sided design offers less cost per insert and more stability.
Sharp cutting performance equivalent to conventional positive inserts.

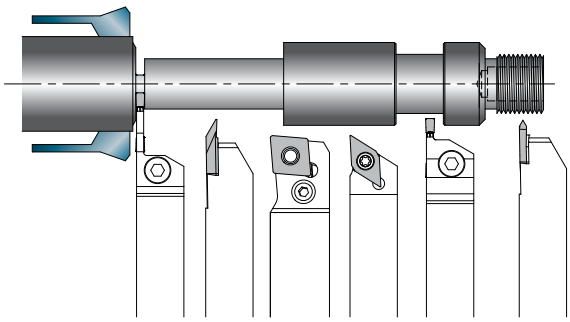
Double-Sided Toolholder for Automatic Lathe (Without Offset / Lever Lock)

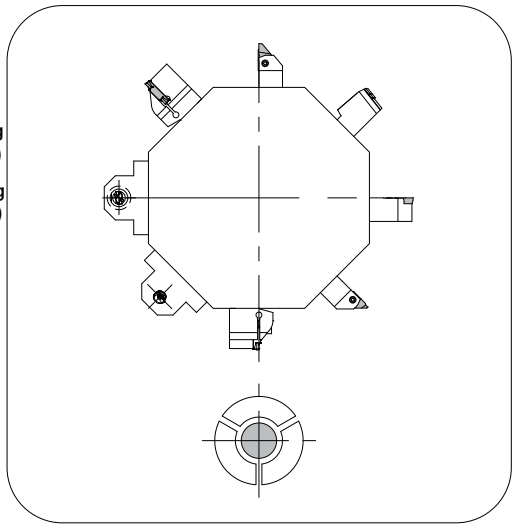


Application	External / Facing	External / Up Facing
Cutting Edge Angle	95°	95°
Lever Lock (Without Offset)	 PCLN-FF	 PTLN-FF
Ref. Page	E50	E51

The Lever Lock type is available for small tools with external turning.

Double-Sided Toolholder for Automatic Lathe (Without Offset / Lever Lock)





See Page R66~R71 for Automatic Lathe List of Machine Manufacturer and Tooling Examples

JCTM-Series NEW

Direct from Turret High-Pressure Coolant-Through Cut-Off Holders

Supports Internal Coolant with or without Piping Systems

Internal Coolant without Piping *When the tool turret supports direct coolant

Coolant is supplied directly from the tool turret into the holder without the need to install piping

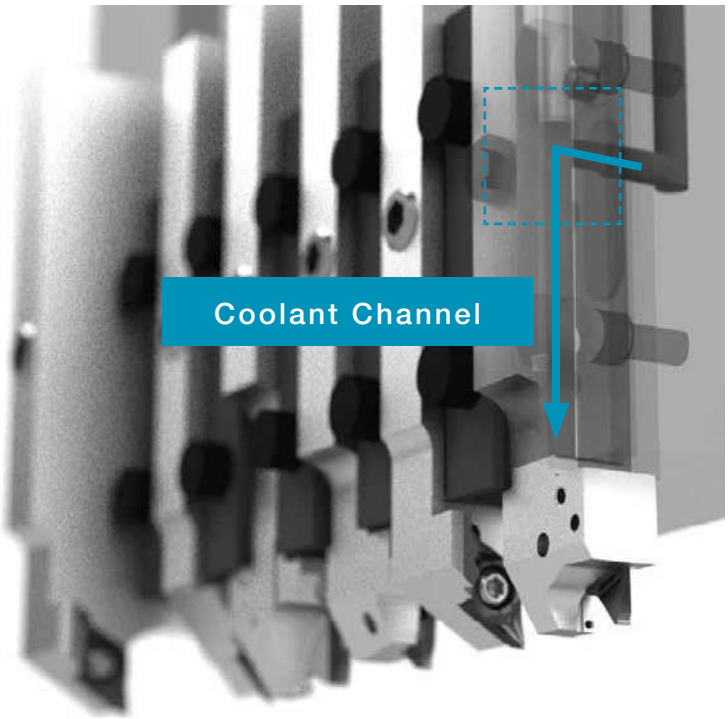
Applicable to Wide Range of Machines

The tool turret is optional. Please contact our company sales representative for details.

(Random order)
Based on Kyocera Survey in January 2021

CITIZEN MACHINERY CO., LTD. (L20, D25, M32)
STAR MICRONICS CO., LTD. (SB-R series, SR series, SV series)
TSUGAMI CORPORATION (S205/206-Ⅱ □16 type, S205A/206A-Ⅱ □16 type)

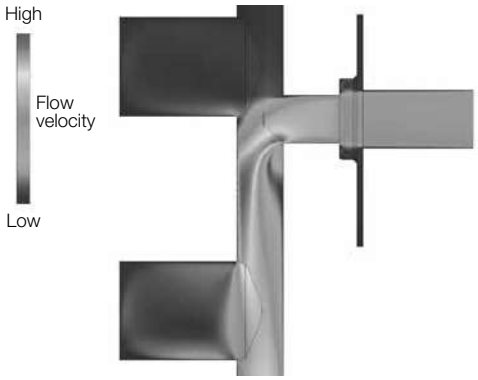
Compatible with various machine including the above.Toolholders can be customized as well.



Optimized Coolant Supply

Supply hole designed to reduce energy loss based on extensive flow analysis

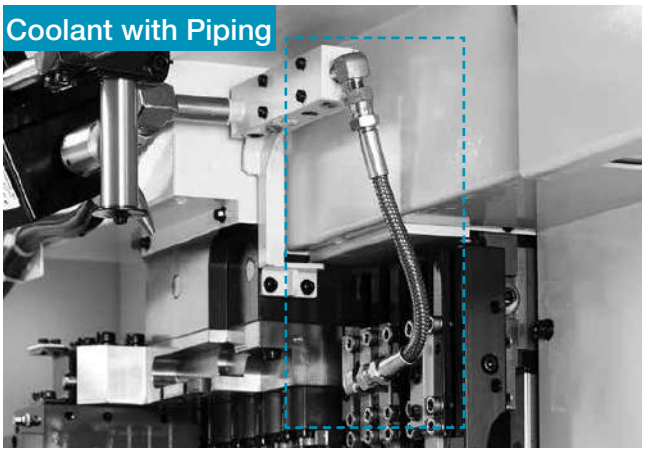
Analysis Image (Internal Evaluation)



Internal Coolant with Piping *Piping parts: See pages H18 and H19

Compatible with internal coolant on any machine with standard piping parts

Commercial piping parts are available when using at normal pressure



NEW ITEMS!

Screw-Clamp-JCTM NEW

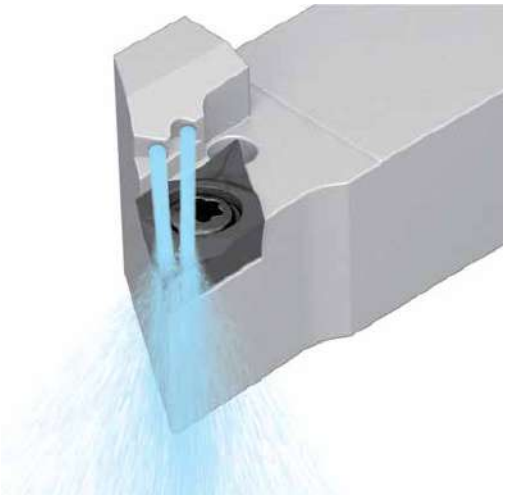
Coolant-Through Turning Holders for Small Parts Machining

Double Coolant Hole Design Delivers an Ample Supply of Coolant to the Cutting Edge Excellent Chip Control and Longer Tool Life

1 Superior Chip Control Performance

2 Sufficient Cooling of the Cutting Edge Leads to Longer Tool Life

Double coolant hole design provides coolant to the insert cutting edge surface



Double Coolant Holes

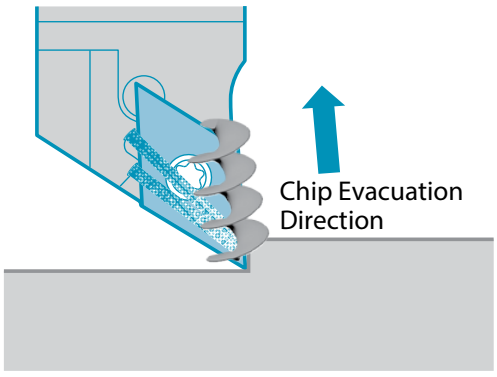
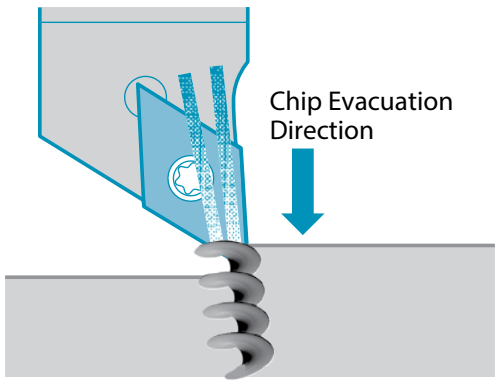
Provides stable chip curls for superior chip control

The cutting edge stays cool increasing tool life



Insert cross-section

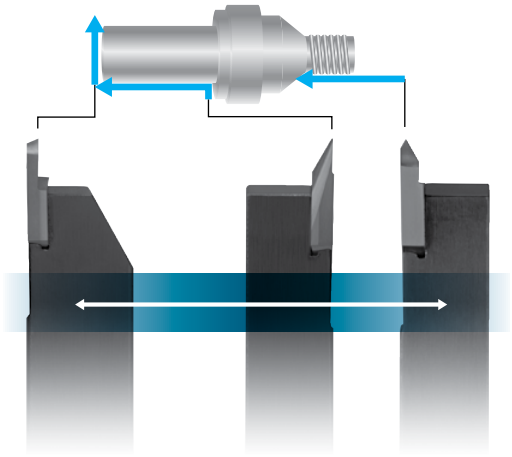
Coolant System Comparison (Internal Evaluation)

	Screw-Clamp-JCTM Holder	Competitor A Holder
Coolant System	Discharges coolant towards the rake surface of insert 	Discharges coolant down onto the chip forcing the chip into the part 
Superior Chip Control	Excellent : Provides stable chip curls	Poor : Chip becomes unstable
Coolant Effects	Excellent : Ensures proper cooling of the cutting edge	Poor : Chip can cause interference with the workpiece

Small Parts Machining

KTKF

E12



Back Turning

TKFB

E12

GQ Chipbreaker

Double function chipbreaker
for improved chip control

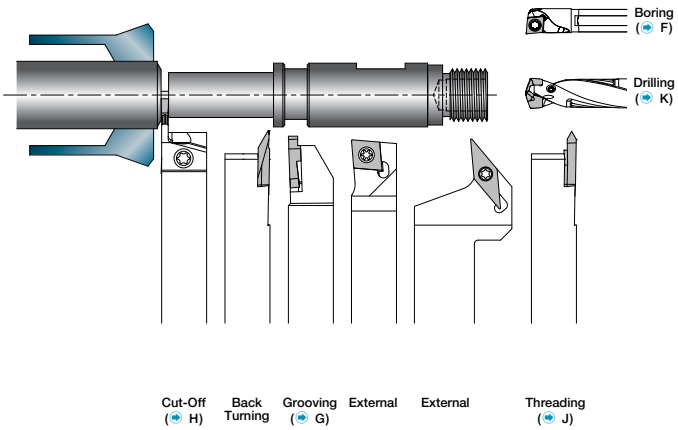


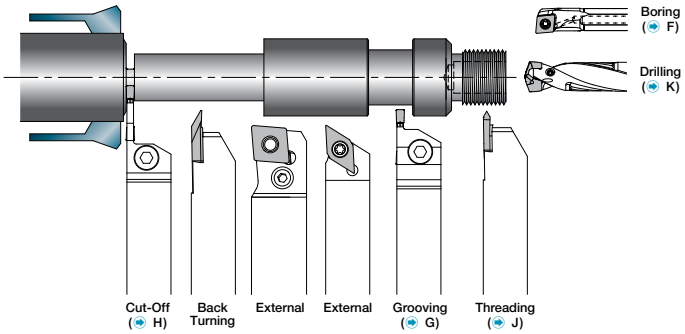
TKFB-GQ

NEW **PR1725**
Insert grade for Steel and Stainless

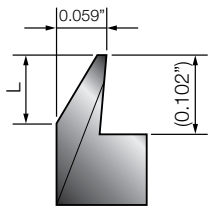
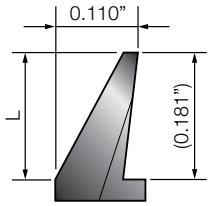
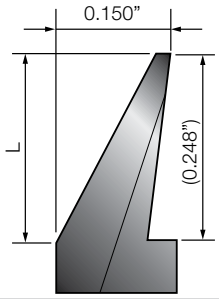
PR1535
Insert grade for Stainless and HRSA

Tooling Examples of KTKF Toolholders





Cutting Edge Shape

For Small D.O.C.		For General Purpose		For Large D.O.C.	
					
Part Number	Cutting Edge Length **L**	Part Number	Cutting Edge Length **L**	Part Number	Cutting Edge Length **L**
TKFB12R15..	0.083"	**TKFB12R28..**	0.165"	**TKFB16R38..**	0.228"
-	-	**TKFB12L28..**	0.173"	**TKFB16L38..**	0.244"
For small diameter workpieces or shorter lengths Minimum overhang length of toolholder, stable machining		For General Purpose Good Chip Control		Large D.O.C. Per Pass	

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Square / Rectangle Shank Identification System

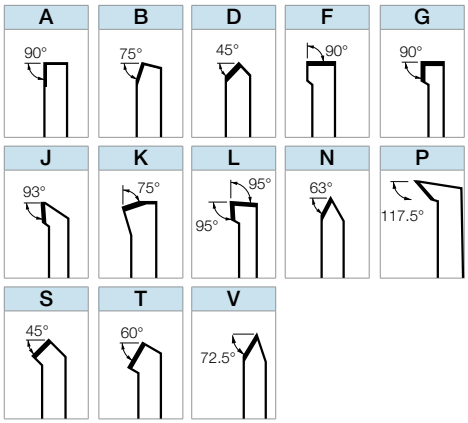
Note: JCT-Series holders for small parts machining have rectangle shanks
See below for part number identification examples

Square Shank:
This number will represent the number of sixteenths of width and height.
Ex. 6/16 = 3/8" Square
Rectangle Shank:
the first digit represents the number of eighths of width and the second digit the number of quarters of height.
Ex. **Width** = 6/8 = 3/4"
Height = 2/4 = 1/2"

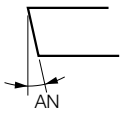
Clamping System	Insert Shape	Hand of Tool	Shank Size	Insert Size I.C.	Others
A : Back Clamp **C** : Top Clamp **P** : Level Lock **S** : Screw Clamp	**C** : 80° Rhombic **D** : 55° Rhombic **S** : 90° Square **T** : 60° Triangle **V** : 35° Rhombic	**R** : Right-Hand **L** : Left-Hand **N** : Neutral		Number of 1/8ths on 1/4" I.C. and over.	Optional Code Manufacturer Options (**FF** : Without Offset) (**JCT** : Jet Coolant-Through Series)

ANSI (inch)	S	C	L	C	R	6	–	2	JX	FF	(JCT)
ISO (metric)	S	C	L	C	R	12	12	JX	– 09	FF	(JCT)

Cutting Edge Angle



Insert Relief Angle



B : 5° Positive
C : 7° Positive
N : 0° Negative
P : 11° Positive

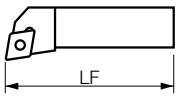
Shank Height

Shank Height (mm)

Shank Width

Shank Width (mm)

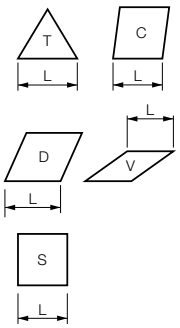
Toolholder Length



F : 80 (85)
H : 100

JX : 4.750" 120mm
K : 125mm
M : 150

Insert Size



• Some back turning toolholders have Kyocera's unique descriptions

External Sleeve Holder Identification System

	ANSI (in)	ISO (mm)		ANSI (in)	ISO (mm)
F:	3.00	80	**Q:**	7.00	180
G:	3.50	90	**R:**	8.00	200
H:	4.00	100	**S:**	10.00	250
J:	4.50	110	**T:**	12.00	300
K:	5.00	125	**U:**	14.00	350
L:	5.50	140	**V:**	16.00	400
M:	6.00	150	**W:**	18.00	450
N:	6.50	160	**Y:**	20.00	500
P:	6.75	170	**X:**	Special	

Shank	Toolholder Length	Clamping System	Insert Shape	Hand of Tool
S Steel		**S** : Screw Clamp	**C** : 80° Rhombic **D** : 55° Rhombic **V** : 35° Rhombic	**L** : Left-Hand

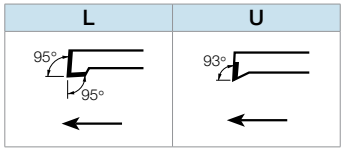
ANSI (inch)	S	19	K	–	S	C	L	C	L	09	
ISO (metric)	S	20	K	–	S	C	L	C	L	09	

Shank Diameter

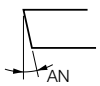
ANSI
A two-digit number that indicates the shank diameter in 1/16" increments.

ISO
Shank diameter in mm

Cutting Edge Angle

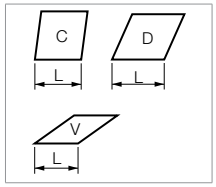


Insert Relief Angle



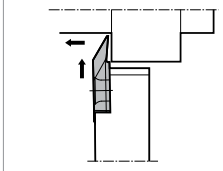
B : 5° Positive
C : 7° Positive

Insert Size (mm)



• The dimensions and specifications are subject to change for improvement without notice.
• Depending on the machine specifications such as attachment Dimensions, the symbol may not match the actual toolholder length.

KTKF / KTKF Goose-neck Holder



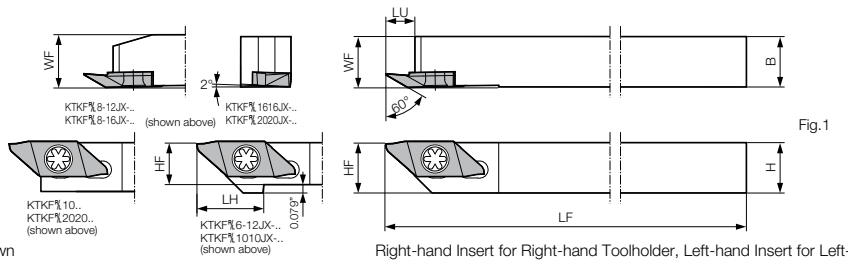
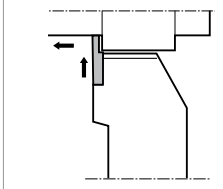


Fig.1

• Right-hand shown

Right-hand Insert for Right-hand Toolholder, Left-hand Insert for Left-hand Toolholder



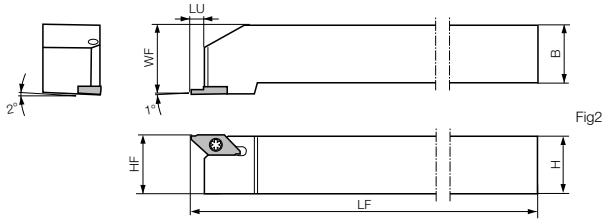
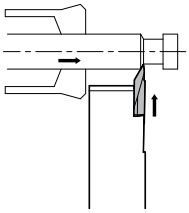


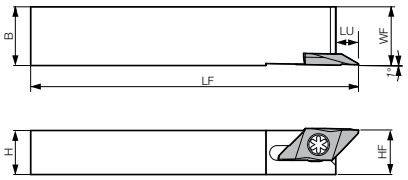
Fig2

• Right-hand shown

Right-hand Insert for Right-hand Toolholder



(Goose-neck Holder)



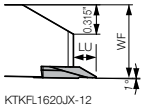


Fig.3

• Left-hand Shown

Left-hand Insert for Left-hand Toolholder

Toolholder Dimensions

Part Number		Stock R	Stock L	Unit	Dimensions H	HF	B	LF	LH	WF	LU	Drawing	Spare Parts: Clamp Screw	Spare Parts: Wrench	Applicable Inserts
KTKF□	6-12JX	●	●	inch	0.375	0.375	0.375	4.750	0.590	0.375	0.236	Fig.1	SB-4590TRWN	LTW-10S	TKFB12□… TKF12□…
	8-12JX	●	●		0.500	0.500	0.500	4.750	-	0.500	0.236				
	10-12JX	●	●		0.625	0.625	0.625	4.750	-	0.625	0.236				
KTKF□	6-16JX	●	●		0.375	0.375	0.375	4.750	0.787	0.375	0.315	Fig.1	SB-4590TRWN	LTW-10S	TKFB16□… TKF16□…
	8-16JX	●	●		0.500	0.500	0.500	4.750	-	0.500	0.315				
	10-16JX	●	●		0.625	0.625	0.625	4.750	-	0.625	0.315				
KTKF□	1010JX-12	●	●	mm	10	10	10	120	15	10	6	Fig.1	SB-4590TRWN	LTW-10S	TKFB12□… TKF12□…
	1212JX-12	●	●		12	12	12	120	-	12	6				
	1616JX-12	●	●		16	16	16	120	-	16	6				
	2020JX-12	●	●		20	20	20	120	-	20	6				
KTKF□	1010JX-16	●	●		10	10	10	120	20	10	8	Fig.1	SB-4590TRWN	LTW-10S	TKFB16□… TKF16□…
	1212JX-16	●	●		12	12	12	120	-	12	8				
	1616JX-16	●	●		16	16	16	120	-	16	8				
	2020JX-16	●	●		20	20	20	120	-	20	8				
KTKF□	1212F-12	●	●		12	12	12	85	-	12	6	Fig.1	SB-4590TRWN	LTW-10S	TKFB12R… TKF12R…
	1212F-16	●	●		12	12	12	85	-	12	8				TKFB16R… TKF16R…
KTKFR	2525M-12	●			25	25	25	150	-	30	6	Fig.2	SB-4590TRWN	LTW-10S	TKFB12R… TKF12R…
	2525M-16	●			25	25	25	150	-	30	8				TKFB16R… TKF16R…
KTKFL	52-12JX		●	inch	0.500	0.500	0.625	4.750	-	0.625	0.236	Fig.3	SB-4590TRWN	LTW-10S	TKFB12L… TKF12L…
	62.5-12JX		●		0.625	0.625	0.750	4.750	-	0.750	0.236				
KTKFL	1216JX-12		●	mm	12	12	16	120	-	16	6	Fig.3	SB-4590TRWN	LTW-10S	
	1620JX-12		●		16	16	20	120	-	20	6				

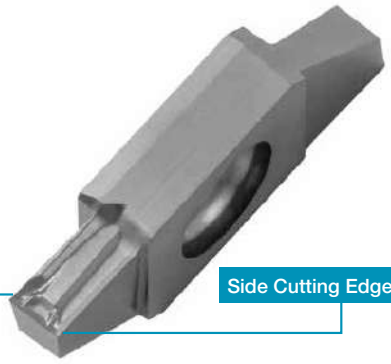
• Dimensions LU shows the distance from the toolholder to the cutting edge

Recommended Cutting Conditions ➡ **E56**

GTP Chipbreaker NEW

KTKF Insert for Small Parts Machining

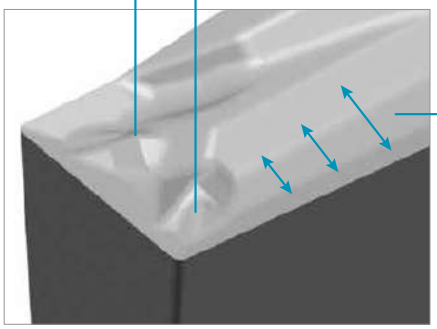
Reduce Cycle Time with Grooving and Traversing Capabilities



Dots for Grooving

Dots for Traversing

Dots utilized for each machining application
Maintains good chip control in small D.O.C.

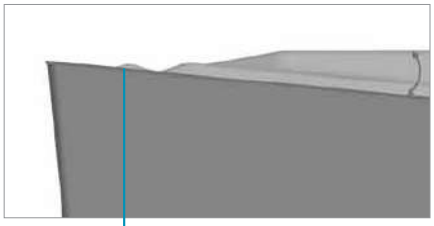


Side Cutting Edge (Back)

Side Cutting Edge (Front)

Chipbreaker Width

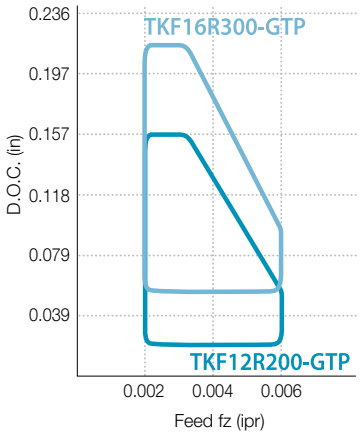
Width is optimized for depth of cut
Maintains good chip control for a wide range of machining applications



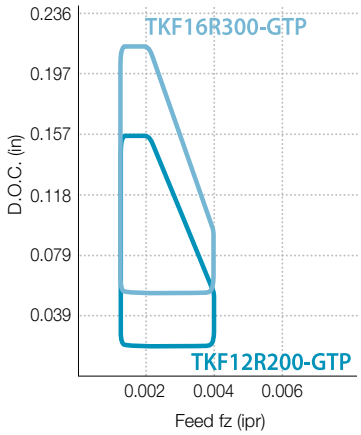
Sloped Cutting Edge

Sloped cutting edge reduces radial force
Great chattering resistance

Chipbreaker Range
(Steel)

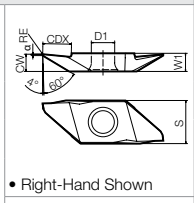
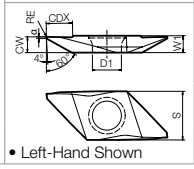


Chipbreaker Range
(Stainless Steel)



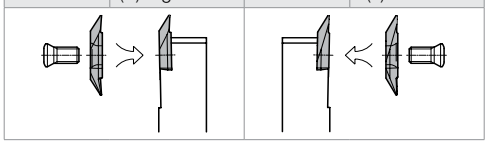
KTKF Applicable Back Turning Inserts B102-B103

TKFB

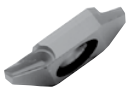
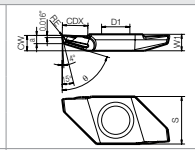
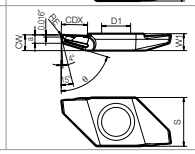
Insert (Photo Shows Right-Hand)	Part Number	Corner-R (RE) : mm (inch)
  • Right-Hand Shown  • Left-Hand Shown	TKFB 12R15005M	<0.05 (<0.002)
	12R28005M	<0.05 (<0.002)
	12R28010M	<0.10 (<0.004)
	TKFB 16R38005M	<0.05 (<0.002)
	16R38010M	<0.10 (<0.004)
	TKFB 12L28005MR	<0.05 (<0.002)
	12L28010MR	<0.10 (<0.004)
	TKFB 16L38005MR	<0.05 (<0.002)
	16L38010MR	<0.10 (<0.004)

Combination of Toolholders & Inserts (See Fig Below)

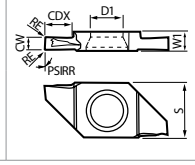
Toolholders	(R) Right-hand	Toolholders	(L) Left-hand
Inserts	(R) Right-hand	Inserts	(L) Left-hand



TKFB-GQ

Insert (Photo Shows Right-Hand)	Part Number	Corner-R (RE) : mm (inch)
 Polished 	TKFB 12R28005P-GQ	0.05 (<0.002)
	12R28015P-GQ	0.15 (<0.006)
	TKFB 16R38005P-GQ	0.05 (<0.002)
	16R38015P-GQ	0.15 (<0.006)
 	TKFB 12R28005-GQ	0.05 (<0.002)
	12R28015-GQ	0.15 (<0.006)
	TKFB 16R38005-GQ	0.05 (<0.002)
	16R38015-GQ	0.15 (<0.006)

TKF-GTP

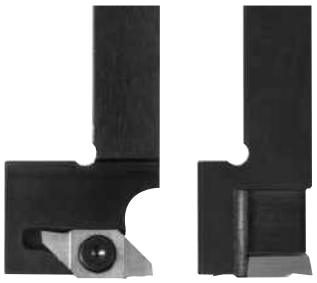
Insert (Photo Shows Right-Hand)	Part Number	Corner-R (RE) : mm (inch)
 	TKF 12R200-GTP	0.08 (0.003)
	TKF 16R300-GTP	0.08 (0.003)

Recommended Cutting Conditions E56

Y-axis Toolholders

Improved Chip Control

New Toolholder Designs for Better Chip Evacuation in Small Parts Machining

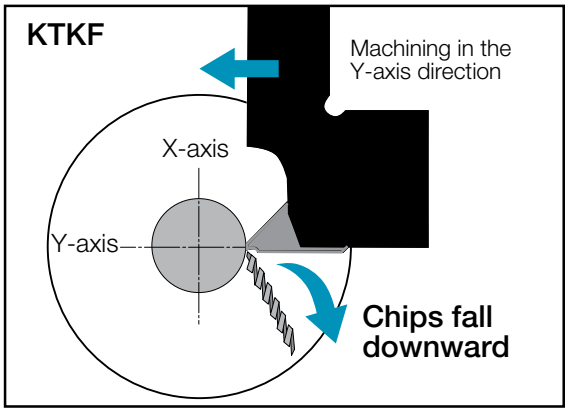


KTKFR-Y

SDJCR-Y
E28

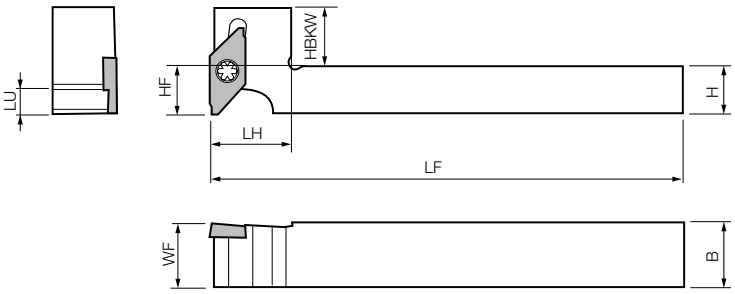
1 Controlled Chip Evacuation for Stable Machining





The Y-axis machining direction allows the chips to fall down and away from the workpiece, improving chip evacuation.

KTKF-Y (Y-axis Holder)



• Right-hand shown

Right-hand Insert for Right-hand Toolholder, Left-hand Insert for Left-hand Toolholder

Toolholder Dimensions

Part Number		Stock		Dimensions (mm)								Spare Parts		Applicable Inserts
												Clamp Screw	Wrench	
		R	L	H	HF	B	LF	LH	WF	LU	HBKW			
KTKFR	1216JX-12-Y	●		12	12	16	120	20	16	6	15	SB-4590TRWN	FT-10	TKFB12R...
	1616JX-12-Y	●		16	16	16		25	16		11			

• Dimensions LU shows the distance from the toolholder to the cutting edge

Recommended Cutting Conditions E56

(Customer Service) **800.823.7284 - Option 1**
(Technical Support) **800.823.7284 - Option 2**
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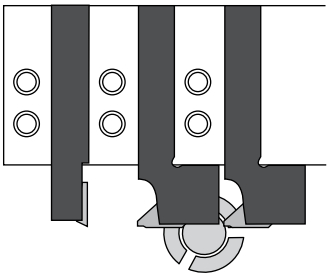
● : Standard Item △ : Phaseout Item (will be removed from next catalog)
Contact your local Kyocera sales engineer to upgrade old products to new technology

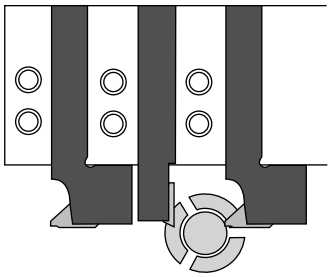
Precautions

Do not use Y-axis toolholders side-by-side to prevent interference (Only two Y-axis holders can be used at the same time)

Interference

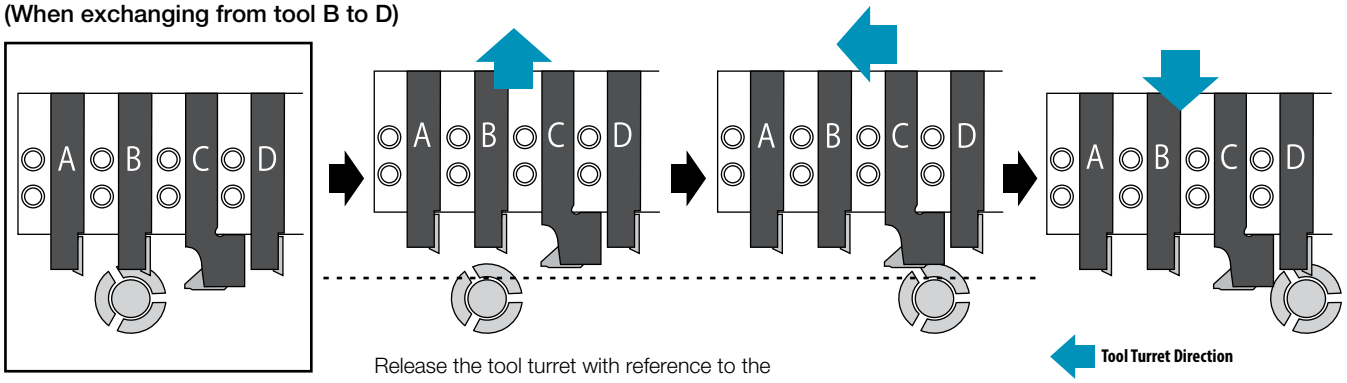


Without Interference



Standard toolholders may be mounted between two Y-axis toolholders

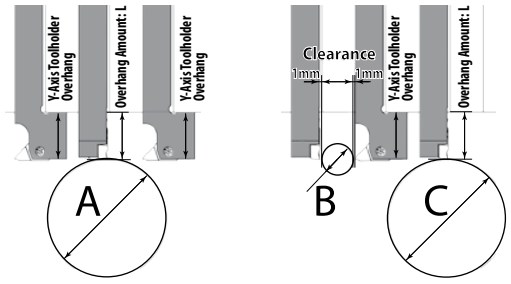
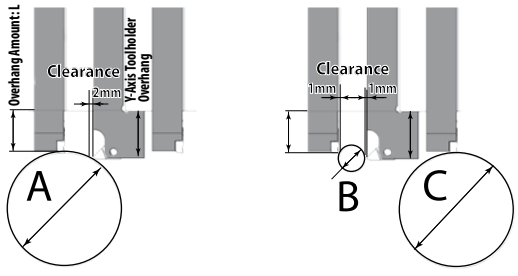
When changing the tool, set the retracted position with reference to the cutting edge of the Y-axis holder (When exchanging from tool B to D)



Release the tool turret with reference to the overhang amount of the Y-axis toolholder

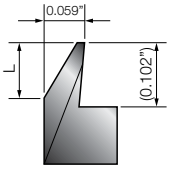
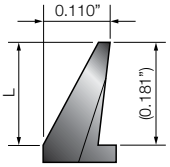
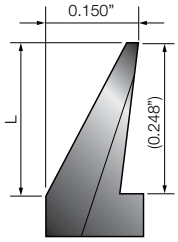
Note that using other toolholder styles together will result in different outside diameters

(Unit: mm)

Y-axis Toolholder Overhang	Examples	Overhang Amount : L / Available Outside Cutting Dia. (Ø)	20	22	25
20		A	Without Restriction	Without Restriction	Without Restriction
		B	13.0	13.0	13.0
		C	Without Restriction	Without Restriction	Without Restriction
25		A	38.0	58.0	Without Restriction
		B	14.9	13.6	13.0
		C	45.0	60.0	Without Restriction

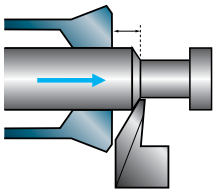
Edge Tips Details and Selection Guide

Cutting Edge Shape

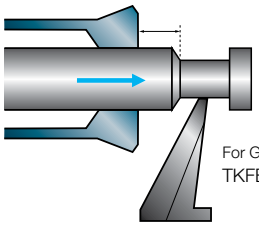
For Small D.O.C.	For General Purpose	For Large D.O.C.
		

Part Number	Cutting Edge Length L	Part Number	Cutting Edge Length L	Part Number	Cutting Edge Length L
TKFB12R15..	0.083"	**TKFB12R28..**	0.165"	**TKFB16R38..**	0.228"
-	-	**TKFB12L28..**	0.173"	**TKFB16L38..**	0.244"
For small diameter workpieces or short length Minimum overhang length of toolholder, stable machining		For general purpose Good chip control		D.O.C. per pass is large.	

How to Select



For Small D.O.C.
TKFB12R15..

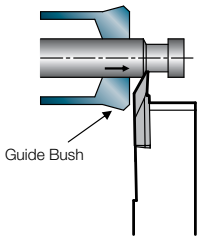
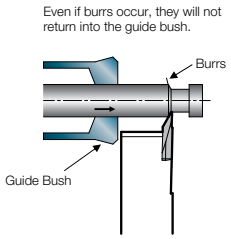


For General Purpose
TKFB12R28..

In case D.O.C. is same, if insert with narrower edge width is used, overhang length from guide bushing is shorter, which enables better stability due to less workpiece vibration.

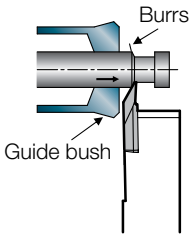
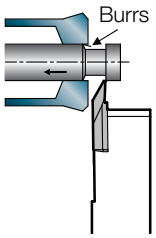
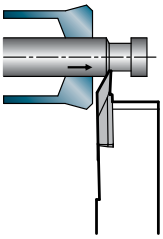
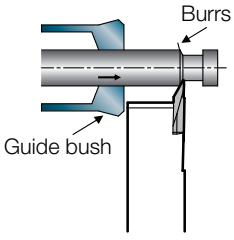
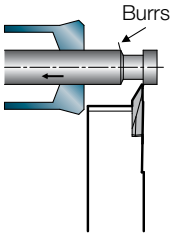
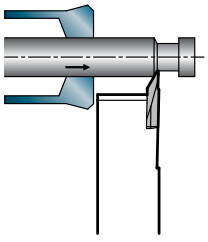
➡High Precision Cutting

Choosing Hand of Back Turning Toolholder

(R) Right-hand		Cutting close to guide bushing is possible Since TKFB12R15005M has a narrow cutting edge (width=0.059"), cutting close to guide bushing is possible ➡Good for small parts and high precision cutting
(L) Left-hand		Cutting with distance from guide bushing Good chip control due to large space between the guide bushing and the tool. ➡How to improve chip control for roughing to finishing In case of using a left-hand toolholder in finishing, the burred portions of workpiece do not return into the guide bushing, which enables stability of external diameter. Also, a Left-hand toolholder prevents wear of guide bushing due to chip biting.

Workpiece Material Motion & How to Select Hand of Tool

When Roughing, Medium, & Finishing

	Roughing	Workpiece position after roughing	Finishing
(R) Right-hand			
(L) Left-hand			

※Good dimensional accuracy: If a Left-hand toolholder is used, burrs on workpiece generated during roughing do not damage the guide bushing during finishing.

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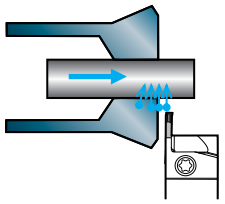
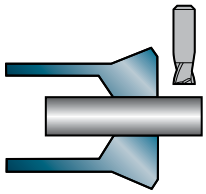
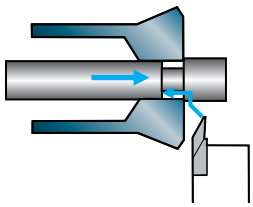
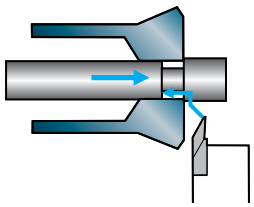
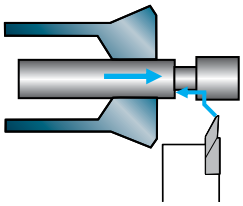
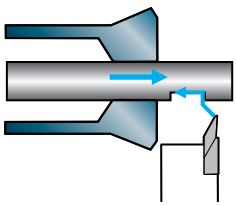
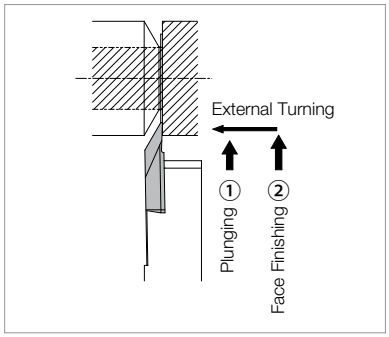
Chip Control Improvement During Back Turning

	① Chip control improvement by tool pass changes	② Chip control improvement by tool pass changes
Roughing / Pre-Stage Machining	● Roughing (1) GMM2420-020MW (Grooving) 	● Pre-stage Machining is Processed with Solid End Mill (1) 2FESW040-040-04 (Solid End Mill) 
Finishing (Countermeasure 1) Use Right-Hand Toolholder	(1) When Using TKFB12R28010M (Back Turning / Righ-hand)  **Advantages :** Smooth Surface Finish **Disadvantages :** If machining pass is long, the guide bushing can not support the workiece	(1) When Using TKFB12R28010M (Back Turning / Righ-hand)  **Advantages :** 1. Minimal deflection during long machining passes 2. Chips are broken into small pieces, though the workpiece material is elastic. **Disadvantages :** The pre-stage machining may cause fractures, because of interruption
Finishing (Countermeasure 2) Use Left-Hand Toolholder	(2) When Using TKFB12L28010M (Back Turning / Left-hand)  **Advantages :** 1. Smooth Surface Finish 2. High precision cutting if the machined portion does not contact the guide bushing **Disadvantages :** If machining pass is long, the guide bushing can not support the workiece	(2) When Using TKFB12L28010M (Back Turning / Left-hand)  **Advantages :** 1. Minimal deflection during long machining passes 2. Chips are broken into small pieces, though the workpiece material is elastic 3. High precision cutting if the machined portion does not contact the guide bushing **Disadvantages :** The pre-stage machining may cause fractures, because of interruption

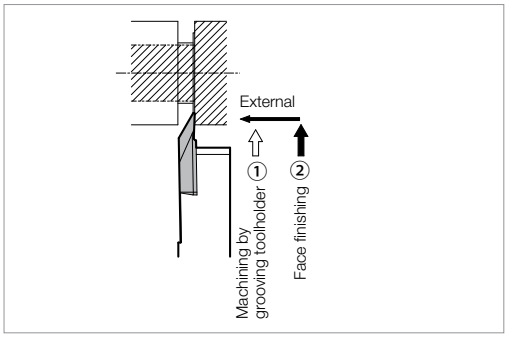
Peeled Surface Countermeasures During Face Back Turning

When peeled surface occurs on the workpiece face, please apply the countermeasures below.

● **Countermeasure 1** (Face Finishing)

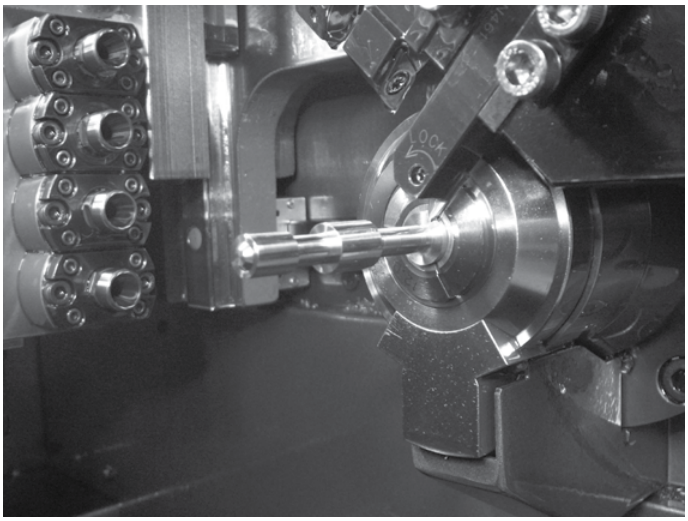


● **Countermeasure 2** (Face Finishing After Grooving)



TKF PCD Inserts for Non-Ferrous

The KTKF toolholder can be used as multi-functional tooling for non-ferrous and non-metal when combined with a TKF-AGT and TKF-AS insert. (See Fig. 1)



Example of Spool Cutting

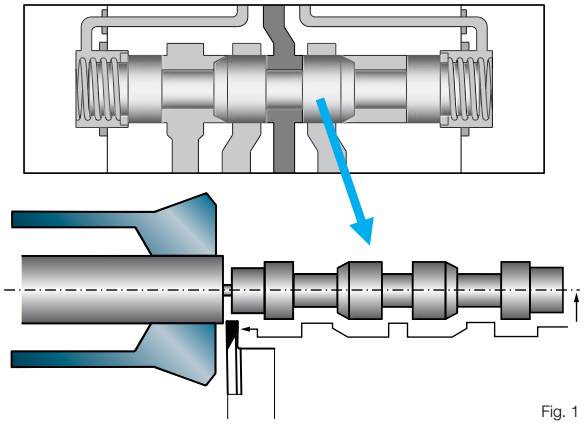
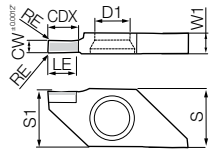
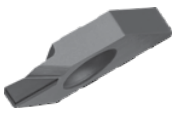
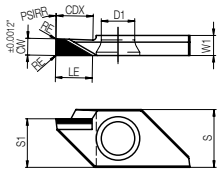
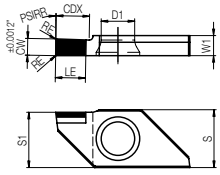


Fig. 1

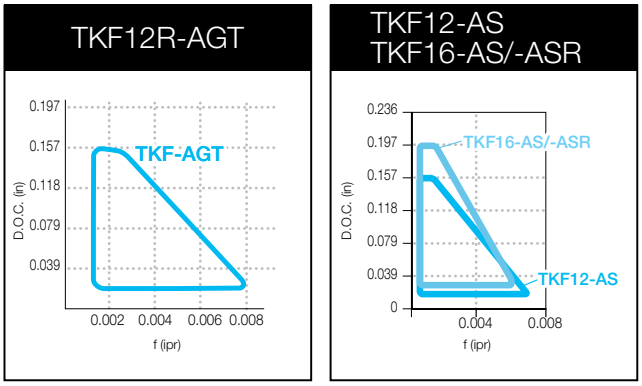
Example of the pass of KTKF toolholder + TKF-AS insert

Applicable Inserts C32

Inserts (Photo Shows Right-hand)		Part Number	
NEW  Traversing / Grooving	 • Right-hand Shown	TKF12R	200-AGT
			250-AGT
 Traversing / Grooving	 • Right-hand Shown	TKF12R/L	200-AS
		TKF16R/L	250-AS
 Grooving Inserts (Traversing possible)	 • Right-hand Shown	TKF12R/L	150-NB
			200-NB
			250-NB
			250-NB4.5

Applicable Toolholder E12, E14
Recommended Cutting Conditions E56

Applicable Range



- TKF PCD inserts are only for turning and grooving
- Cut-off is not recommended

Insert Identification System

TKF	12	R	200	-	AS
TKF	12	L	200	-	AS

Insert Type | Insert Size | Width (Edge Width)

Insert Hand	Name of Chipbreaker
R : Right-hand	AS : AS Chipbreaker
L : Left-hand	NB : Without Chipbreaker

Note 1) When using TKF-AS insert with KTKF toolholder, the edge position is 1.0mm below the center. (See **Fig.2**) Please adjust the edge height at the parameter of the NC lathe or using soleplates.

2) When the edge height can not be adjusted, please use TKF-AGT or TKF-NB insert. (**Fig.3**)

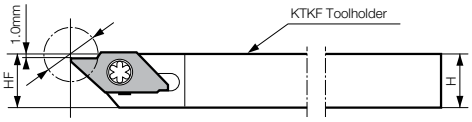


Fig.2 When TKF-AS/-ASR installed (the edge position: 1.0mm below the center)

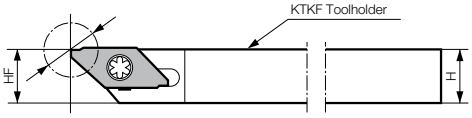
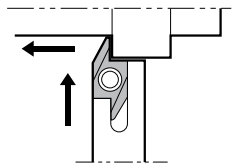
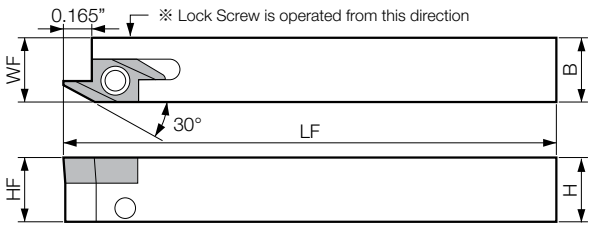


Fig.3 When TKF-NB / TKF-AGT installed

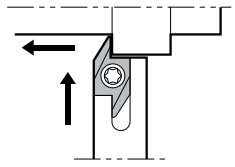
AABS Back Clamp (Edge Width: 0.110" • Depth 0.158" MAX)

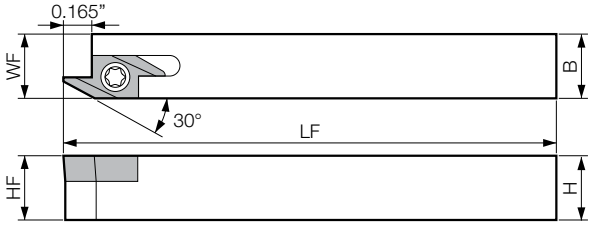




• Right-hand Shown

SABS Screw Clamp (Edge Width: 0.110" • Depth 0.158" MAX)



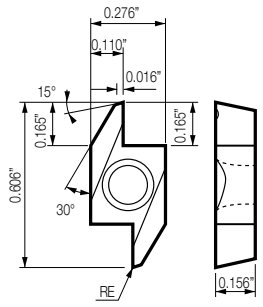


• Right-hand Shown

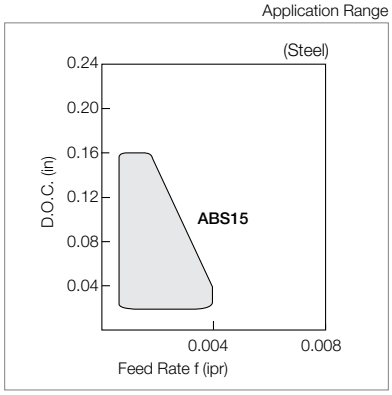
Toolholder Dimensions

Part Number		Stock	Unit	Dimensions H	HF	B	LF	WF	Standard Corner-R (RE)	Spare Parts: Anchor Pin	Lock Screw	Clamp Screw	Wrench
AABSR	6-15JXF	●	inch	0.375	0.375	0.375	4.750	0.383	0.006	LPA-11	HSB4X8R	-	FH-2
	8-15JXF	●		0.500	0.500	0.500	4.750	0.508	0.006	LPA-13			
	10-15JXF	●		0.625	0.625	0.625	4.750	0.633	0.006	LPA-17			
AABSR	1010JX-40F	●	mm	10	10	10	120	10.2	0.15	LPA-11	HSB4X8R	-	FH-2
	1212JX-40F	●		12	12	12	120	12.2	0.15	LPA-13			
	1616JX-40F	●		16	16	16	120	16.2	0.15	LPA-17			
SABSR	6-15JXF	●	inch	0.375	0.375	0.375	4.750	0.383	0.006	-	-	SB-3080TR	FT-10
	8-15JXF	●		0.500	0.500	0.500	4.750	0.508					
	10-15JXF	●		0.625	0.625	0.625	4.750	0.633					
SABSR	1010JX-40F	●	mm	10	10	10	120	10.2	0.15	-	-	SB-3080TR	FT-10
	1212JX-40F	●		12	12	12	120	12.2					
	1616JX-40F	●		16	16	16	120	16.2					
SABSR	1212F-40F	●		12	12	12	85	12.2	0.15	-	-	SB-3080TR	FT-10
	2020K-40F	●		20	20	20	125	20.2					

Applicable Inserts

Insert		Part Number	Corner-R (RE) : mm (inch)	Reference Page
		ABS 15R4005	0.05 (0.002)	B104
		15R4015	0.15 (0.006)	
		ABS 15R4005M	<0.05 (<0.002)	
		15R4015M	<0.15 (<0.006)	

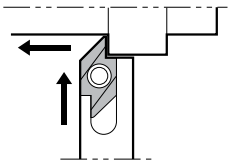
Application Range

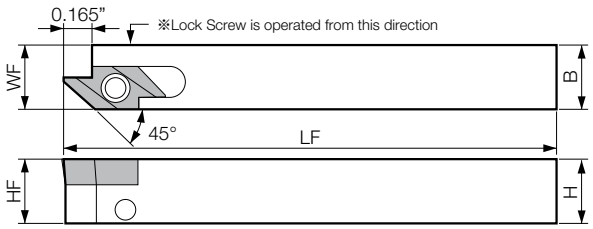


Recommended Cutting Conditions → **E56**

● : Standard Item △ : Phaseout Item (will be removed from next catalog)
Contact your local Kyocera sales engineer to upgrade old products to new technology

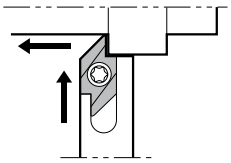
AABW Back Clamp (Edge Width: 0.185" • Depth 0.158" MAX)

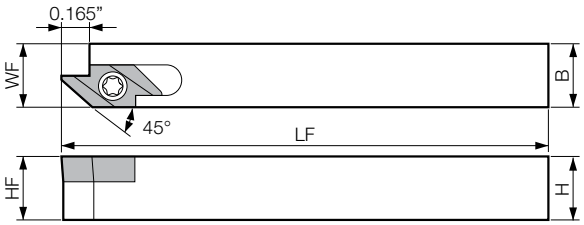




• Right-hand Shown

SABW Screw Clamp (Edge Width: 0.185" • Depth 0.158" MAX)



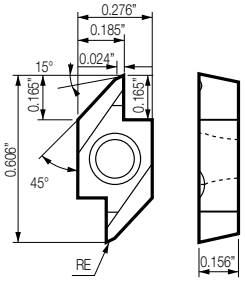


• Right-hand Shown

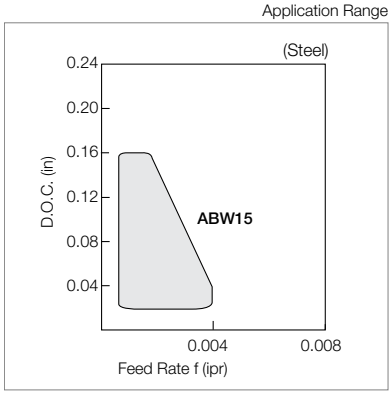
Toolholder Dimensions

Part Number	Stock	Unit	Dimensions H	HF	B	LF	WF	Standard Corner-R (RE)	Spare Parts: Anchor Pin	Lock Screw	Clamp Screw	Wrench
AABWR 6-15JXF	●	inch	0.375	0.375	0.375	4.750	0.383	0.006	LPA-11	HSB4X8R	-	FH-2
8-15JXF	●		0.500	0.500	0.500	4.750	0.508	0.006	LPA-13			
10-15JXF	●		0.625	0.625	0.625	4.750	0.633	0.006	LPA-17			
AABWR 1010JX-40F	●	mm	10	10	10	120	10.2	0.15	LPA-11	HSB4X8R	-	FH-2
1212JX-40F	●		12	12	12	120	12.2	0.15	LPA-13			
1616JX-40F	●		16	16	16	120	16.2	0.15	LPA-17			
SABWR 8-15JXF	●	inch	0.500	0.500	0.500	4.750	0.508	0.006	-	-	SB-3080TR	FT-10
10-15JXF	●		0.625	0.625	0.625	4.750	0.633					
SABWR 1010JX-40F	●	mm	10	10	10	120	10.2	0.15	-	-	SB-3080TR	FT-10
1212JX-40F	●		12	12	12	120	12.2					
1616JX-40F	●		16	16	16	120	16.2					
SABWR 2020K-40F	●		20	20	20	125	20.2	0.15	-	-	SB-3080TR	FT-10

Applicable Inserts

Insert		Part Number	Corner-R (RE) : mm (inch)	Reference Page
		**ABW 15R4005**	0.05 (0.002)	**B104**
		15R4015	0.15 (0.006)	
		ABW 15R4005M	<0.05 (<0.002)	
		15R4015M	<0.15 (<0.006)	

Application Range

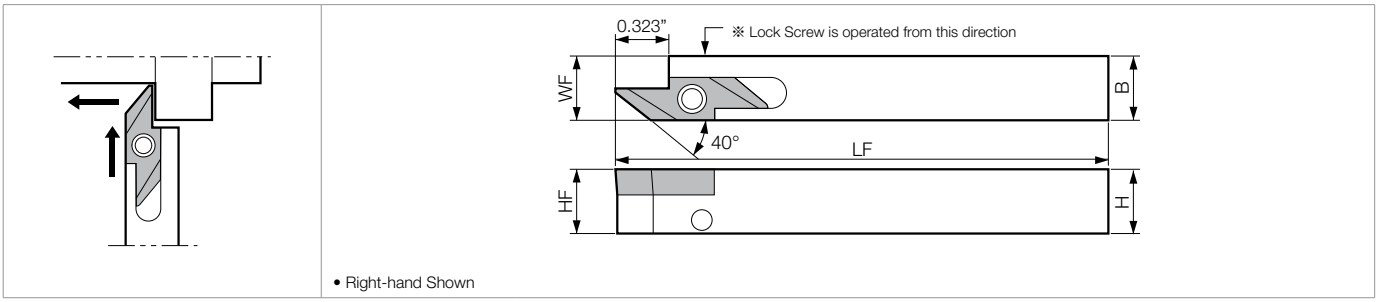


Recommended Cutting Conditions **E56**

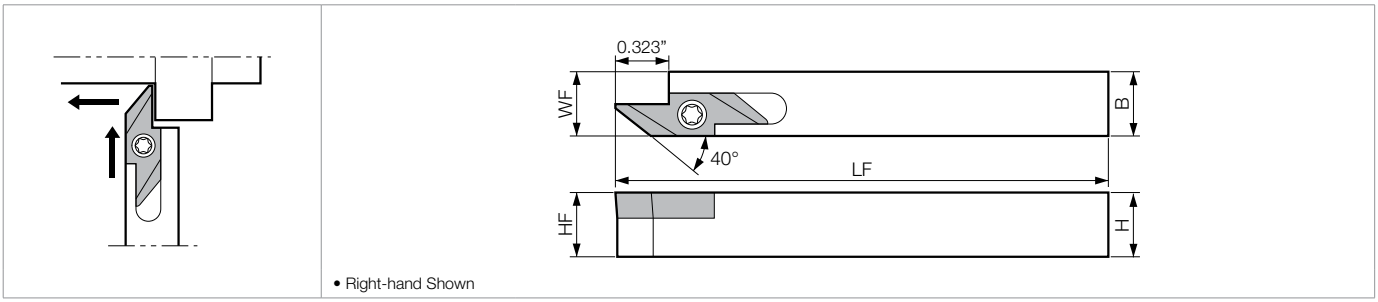
(Customer Service) **800.823.7284 - Option 1**
(Technical Support) **800.823.7284 - Option 2**
Visit us online at **KyoceraPrecisionTools.com**

● : Standard Item △ : Phaseout Item (will be removed from next catalog)
Contact your local Kyocera sales engineer to upgrade old products to new technology

AABW Back Clamp (Edge Width: 0.185" • Depth 0.197" MAX)



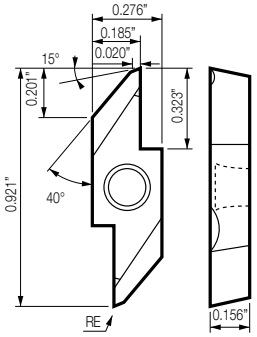
SABW Screw Clamp (Edge Width: 0.185" • Depth 0.197" MAX)



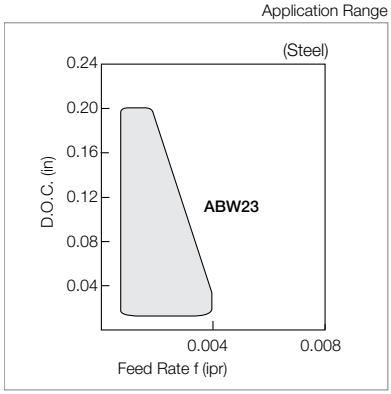
Toolholder Dimensions

Part Number	Stock	Unit	Dimensions H	HF	B	LF	WF	Standard Corner-R (RE)	Spare Parts: Anchor Pin	Lock Screw	Clamp Screw	Wrench
AABWR 6-23JXF	●	inch	0.375	0.375	0.375	4.750	0.383	0.006	LPA-11	HSB4X8R	-	FH-2
8-23JXF	●		0.500	0.500	0.500	4.750	0.508	0.006	LPA-13			
10-23JXF	●		0.625	0.625	0.625	4.750	0.633	0.006	LPA-17			
AABWR 1010JX-50F	●	mm	10	10	10	120	10.2	0.15	LPA-11	HSB4X8R	-	FH-2
1212JX-50F	●		12	12	12	120	12.2	0.15	LPA-13			
1616JX-50F	●		16	16	16	120	16.2	0.15	LPA-17			
SABWR 8-23JXF	●	inch	0.500	0.500	0.500	4.750	0.508	0.006	-	-	SB-3080TR	FT-10
10-23JXF	●		0.625	0.625	0.625	4.750	0.633					
SABWR 1010JX-50F	●	mm	10	10	10	120	10.2	0.15	-	-	SB-3080TR	FT-10
1212JX-50F	●		12	12	12	120	12.2					
1616JX-50F	●		16	16	16	120	16.2					
SABWR 2020K-50F	●		20	20	20	125	20.2	0.15	-	-	SB-3080TR	FT-10

Applicable Inserts

Insert	Part Number	Corner-R (RE) : mm (inch)	Reference Page
 	**ABW 23R5005**	0.05 (0.002)	B104
	23R5015	0.15 (0.006)	
	ABW 23R5005M	<0.05 (<0.002)	
	23R5015M	<0.15 (<0.006)	

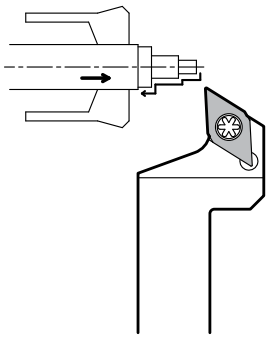
Application Range

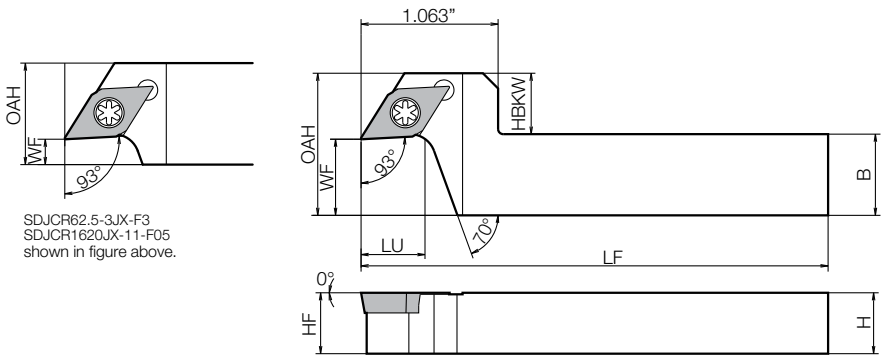


Recommended Cutting Conditions → **E56**

● : Standard Item △ : Phaseout Item (will be removed from next catalog)
Contact your local Kyocera sales engineer to upgrade old products to new technology

SDJC (External / Copying)





SDJCR62.5-3JX-F3
SDJCR1620JX-11-F05
shown in figure above.

• Right-hand Shown

Toolholder Dimensions

Part Number		Stock	Unit	Dimensions								Standard Corner-R (RE)	Spare Parts	
				H	HF	B	LF	LU	OAH	HBKW	WF		Clamp Screw	Wrench
SDJCR	52-3JX-F3	●	inch	0.500	0.500	0.625	4.750	0.488	0.687	0.062	0.187	0.008	SB-4085TR	FT-15
	52-3JX-F9	●		0.500	0.500	0.625	4.750	0.488	1.125	0.500	0.562			
	62.5-3JX-F9	●		0.625	0.625	0.750	4.750	0.488	1.125	0.375	0.562			
SDJCR	1216JX-11-F05	●	mm	12	12	16	120	12.6	18	2	5	0.2	SB-4085TR	FT-15
	1216JX-11-F15	●		12	12	16	120	12.6	28	12	15			
	1620JX-11-F05	●		16	16	20	120	12.6	20	-	5			
	1620JX-11-F15	●		16	16	20	120	12.6	28	8	15			

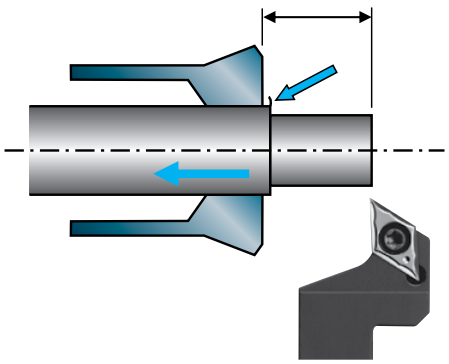
Applicable Inserts

Application	Minute D.O.C.	Finishing	Finishing	Finishing	Finishing	Finishing	Finishing-Medium	Finishing-Medium	Finishing	Finishing / Precision	Low Feed	Low Feed / Precision
Ref. Page	B62	B62	B62	B62	B63	B63	B64	B63	B67	B66	B68, B69	B68
Insert / Toolholder	**CF**	**GF**	**SKS**	**SK**	**WP** (Wiper)	**PP**	**GK**	**GQ**	**R-F**	**R-FSF**	**(E/F) R-U**	**FR-USF**
SDJCR..-3JX-F.. SDJCR..-11-F..	DCGT325..	DCGT325..	DCGT325..	DCGT325..	DCMX325..	DCMT325..	DCMT325..	DCGT325..	DCGT325..	DCET325..	DCGT325..	DCET325..
Application	Low Feed	Low Feed / Precision	Low Carbon Steel / Finishing	Low Carbon Steel / Finishing-Medium	Stainless Steel	Cast Iron	Non-ferrous Metals	Non-ferrous Metals	Non-ferrous Metals	Non-ferrous Metals	Hard Materials	
Ref. Page	B70, B71	B70	B65	B65	B65	B71	B71	B71	C25	C25	C15	
Insert / Toolholder	**(E/F)R-J**	**FR-JSF**	**XP**	**XQ**	**MQ**	No Chipbreaker	**AH**	**R-A3**	**PCD**	**APD**	**CBN**	
SDJCR..-3JX-F.. SDJCR..-11-F..	DC_T325..	DCET325..	DCMT325..	DCMT325..	DCMT325..	DCGW325..	DCGT325..	DCGT325..	DCMT325..	DCMT325..	DCMW325..	

When using **WP** chipbreaker, program corrections are required. ➡ **R51**

Recommended Cutting Conditions ➡ **E55**

Goose-neck Designed for Multiple Passes, Both Roughing & Finishing!

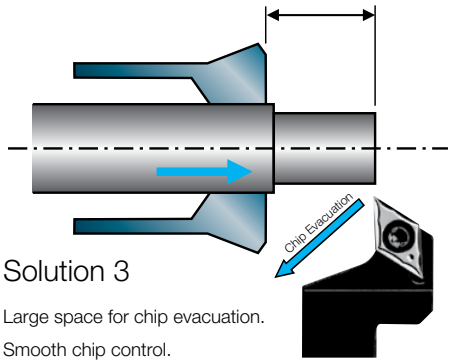


Solution 1

No breakage will occur because the burrs do not contact the guide bushing.

Solution 2

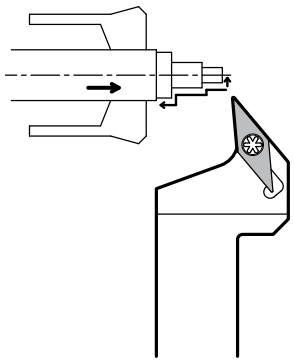
Longitudinal dimensions will be stable. External diameter will be stable by multiple pass machining (roughing and finishing).

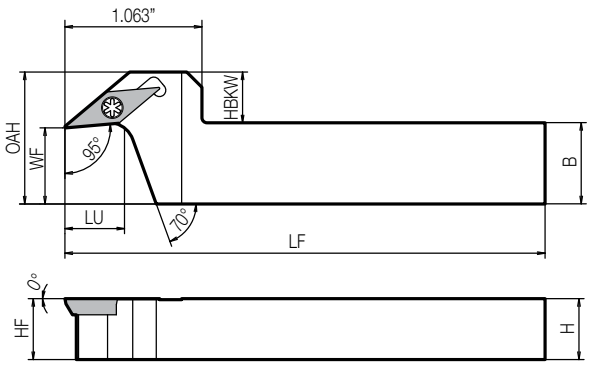


Solution 3

Large space for chip evacuation. Smooth chip control.

SVLP (External / Copying)





• Right-hand Shown

Toolholder Dimensions

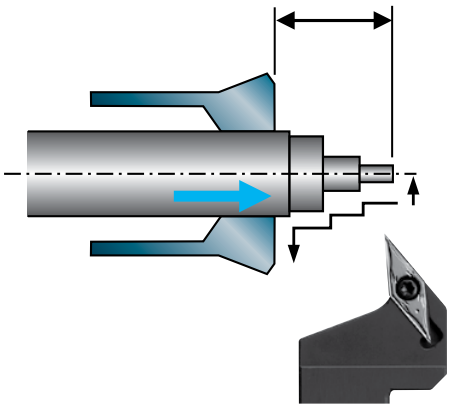
Part Number		Stock	Unit	Dimensions								Standard Corner-R (RE)	Spare Parts	
				H	HF	B	LF	LU	OAH	HBKW	WF		Clamp Screw	Wrench
SVLPR	**52-2JX-F9**	●	inch	0.500	0.500	0.625	4.750	0.472	1.000	0.375	0.562	0.008	SB-2570TR	FT-15
	62.5-2JX-F9	●		0.625	0.625	0.750	4.750	0.472	1.000	0.250	0.562			
SVLPR	**1216JX-11-F15**	●	mm	12	12	16	120	12	26	10	15	0.2	SB-2570TR	FT-8
	1620JX-11-F15	●		16	16	20	120	12	26	6	15			

Applicable Inserts

Application	Minute D.O.C.	Finishing	Finishing	Finishing / Precision	Low Feed	Low Feed / Precision
Ref. Page	B94	B94	B94	B95	B96	B96
Insert / Toolholder	**CF**	**CK**	**GF**	**R-FSF**	**FR-U**	**FR-USF**
SVLPR..-2JX-F.. **SVLPR..-11-F..**	VPGT22..	VPGT22..	VPGT22..	VPET22..	VPET22..	VPET22..

Recommended Cutting Conditions **E55**

One Toolholder for Complex Workpieces

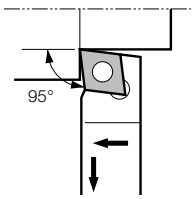


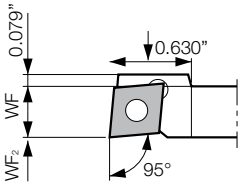
Toolholder for VP type inserts.

Complex workpieces can be processed with one toolholder.

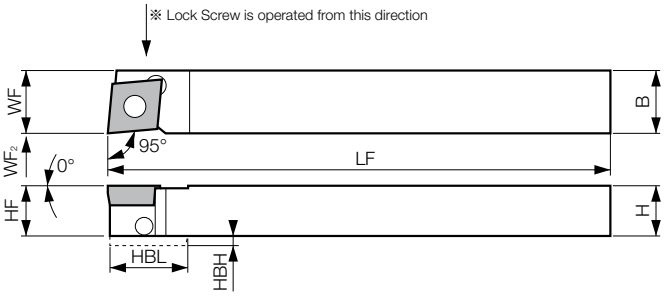
It is available for undercutting and external/face finishing.

■ ACLC-FF (Without Offset • External / Facing)





ACLC□6-3JXFF
ACLC□1010JX-06FF
shown above



• Right-hand Shown

● Toolholder Dimensions

Part Number		Stock R	Stock L	Unit	Dimensions H	HF	HBH	B	LF	HBL	WF	WF_2	Standard Corner-R (RE)	Spare Parts: Anchor Pin	Lock Screw	Wrench
ACLC□	6-2JXFF	●	●	inch	0.375	0.375	-	0.375	4.750	-	0.375	0	0.008	LPF-11	HSB4X8□	FH-2
	6-3JXFF	●	●		0.375	0.375	0.097	0.375	4.750	0.630	0.375	0	0.008	LPF-13		
	8-3JXFF	●	●		0.500	0.500	-	0.500	4.750	-	0.500	0				
	10-3JXFF	●	●		0.625	0.625	-	0.625	4.750	-	0.625	0	0.008	LPF-17		
ACLC□	1010JX-06FF	●	●	mm	10	10	-	10	120	-	10	0	0.2	LPF-11	HSB4X8□	FH-2
	1010JX-09FF	●	●		10	10	2	10	120	16	10	0	0.2	LPF-13		
	1212JX-09FF	●	●		12	12	-	12	120	-	12	0				
	1616JX-09FF	●	●		16	16	-	16	120	-	16	0	0.2	LPF-17		

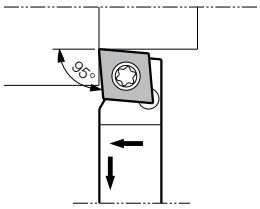
• Lock Screw : HSB4X8R for Right-hand Toolholder, HSB4X8L for Left-hand Toolholder

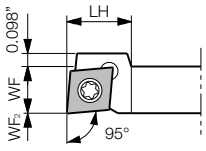
● Applicable Inserts

Application	Finishing	Finishing	Finishing-Medium	Low Feed	Stainless Steel	Cast Iron	Non-ferrous Metals	Non-ferrous Metals	Non-ferrous Metals	Hard Material
Ref. Page	B53	B53	B54	B58, B59	B55	B60	B60	B60	C24	C14
Insert / Toolholder	SKS	SK	GK	(E/F)□-U	MQ	No Chipbreaker	AH	□-A3	PCD	CBN
ACLC□..-2JXFF ACLC□..-06FF	CCGT215..	CCGT215..	CCMT215..	CCGT215..	-	CCGW215..	-	-	CCMT215.. CCGW215..	CCMW215..
ACLC□..-3JXFF ACLC□..-09FF	CCGT325..	CCGT325..	CCMT325..	CCGT325..	CCMT325..	CCGW325..	CCGT325..	CCGT325..	CCMT325.. CCGW325..	CCMW325..

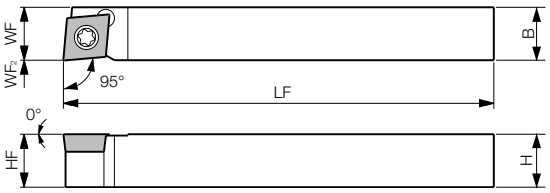
Recommended Cutting Conditions ➡ **E55**

■ SCLC-FF (Without Offset • External / Facing)





SCLC□6-3JXFF
SCLC□1010JX-09FF
shown above



• Right-hand Shown

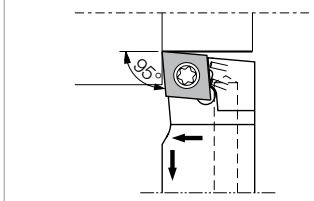
● Toolholder Dimensions

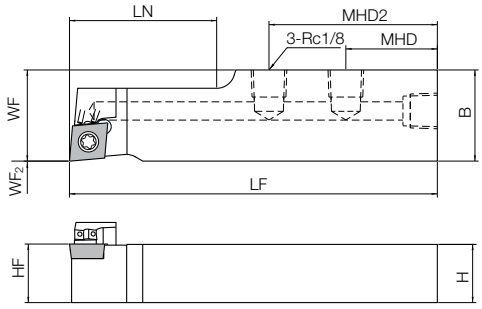
Part Number		Stock R	Stock L	Unit	Dimensions H	HF	B	LF	LH	WF	WF_2	Standard Corner-R (RE)	Spare Parts: Clamp Screw	Wrench
SCLC□	6-2JXFF	●	●	inch	0.375	0.375	0.375	4.750	-	0.375	0	0.008	SB-2570TR	FT-8
	6-3JXFF	●			0.375	0.375	0.375	4.750	0.590	0.375	0	0.008	SB-4085TR	FT-15
	8-3JXFF	●	●		0.500	0.500	0.500	4.750	-	0.500	0			
	10-3JXFF	●	●		0.625	0.625	0.625	4.750	-	0.625	0			
SCLC□	0808F-06FF	●	●	mm	8	8	8	85	-	8	0	0.2	SB-2570TR	FT-8
	1212F-09FF	●	●		12	12	12	85	-	12	0	0.2	SB-4085TR	FT-15
SCLC□	1010JX-06FF	●	●		10	10	10	120	-	10	0	0.2	SB-2570TR	FT-8
	1010JX-09FF	●	●		10	10	10	120	15	10	0	0.2	SB-4085TR	FT-15
	1212JX-09FF	●	●		12	12	12	120	-	12	0			
	1616JX-09FF	●	●		16	16	16	120	-	16	0			
	2020JX-09FF	●	●		20	20	20	120	-	20	0	0.2		

(Customer Service) **800.823.7284 - Option 1**
(Technical Support) **800.823.7284 - Option 2**
Visit us online at **KyoceraPrecisionTools.com**
● : Standard Item △ : Phaseout Item (will be removed from next catalog)
Contact your local Kyocera sales engineer to upgrade old products to new technology

SCLC-FFJCT (Without Offset • External / Copying, Jet Coolant-Through)

SCLC-FFJCT holders are being phased out. Switch to new SCLC-FFJCTM style below.





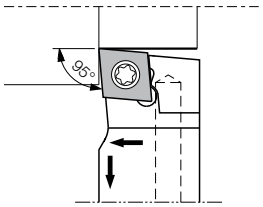
• Right-hand Shown

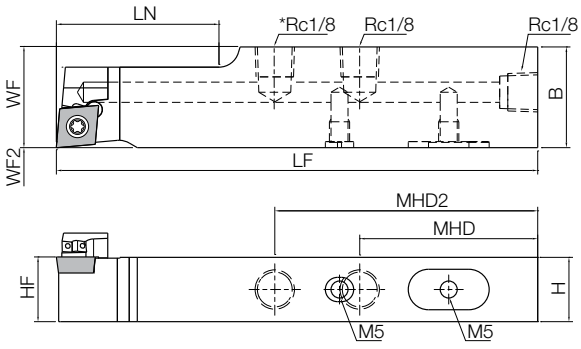
Toolholder Dimensions

Coolant Connections and Pipe Parts ➡ **H14-H15**

Part Number	Stock R	Stock L	Unit	H	HF	B	LF	LN	WF	WF2	MHD	MHD2	Standard Corner-R (RE)	Spare Parts: Clamp Screw	Spare Parts: Wrench	Spare Parts: Plug
SCLCR 62-3FFJCT	△		inch	0.500	0.500	0.750	4.750	1.110	0.750	0	1.378	-	0.008	SB-4085TR	FT-15	GP-1
82.5-3FFJCT	△		inch	0.625	0.625	1.000	4.750	1.582	1.000	0	0.984	1.811	0.008	SB-4085TR	FT-15	GP-1
SCLCR 1220H-09FFJCT	△		mm	12	12	20	100	28	20	0	35	-	0.2	SB-4085TR	FT-15	GP-1
1625H-09FFJCT	△		mm	16	16	25	100	40	25	0	25	46	0.2	SB-4085TR	FT-15	GP-1
2025H-09FFJCT	△		mm	20	20	25	100	40	25	0	25	46	0.2	SB-4085TR	FT-15	GP-1

SCLC-FFJCTM (Without Offset • External / Copying, Direct from Turret Jet Coolant-Through) NEW





*SCLCR5.72··· : 2-Rc1/8
*SCLCR12··· : 2-Rc1/8

• Right-hand Shown

Toolholder Dimensions

Coolant Connections and Pipe Parts ➡ **H18-H19**

Part Number	Stock R	Stock L	Unit	H	HF	B	LF	LN	WF	WF2	MHD	MHD2	Standard Corner-R (RE)	Spare Parts: Clamp Screw	Spare Parts: Wrench	Spare Parts: Plug 1	Spare Parts: Plug 2
SCLCR 5.72-3FFJCTM	●		inch	0.500	0.500	0.708	4.750	1.110	0.708	0	2.150	-	0.008	SB-4085TR	FT-15	GP-1	HS5X4LP
82.5-3FFJCTM	●		inch	0.625	0.625	1.000	4.750	1.585	1.000	0	1.730	2.560	0.008	SB-4085TR	FT-15	GP-1	HS5X4LP
SCLCR 1218JX-09FFJCTM	●		mm	12	12	18	120	28	18	0	54	-	0.2	SB-4085TR	FT-15	GP-1	HS5X4LP
1625JX-09FFJCTM	●		mm	16	16	25	120	40	25	0	44	65	0.2	SB-4085TR	FT-15	GP-1	HS5X4LP
2025JX-09FFJCTM	●		mm	20	20	25	120	40	25	0	44	65	0.2	SB-4085TR	FT-15	GP-1	-

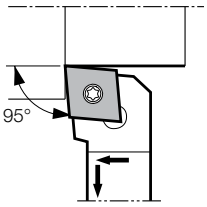
Applicable Inserts

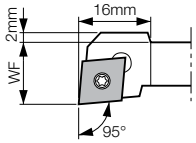
Application	Finishing	Finishing	Finishing-Medium	Low Feed	Stainless Steel	Cast Iron	Non-ferrous Metals	Non-ferrous Metals	Non-ferrous Metals	Hard Material
Ref. Page	B53	B53	B54	B58, B59	B55	B60	B60	B60	C24	C14
Insert / Toolholder	SKS	SK	GK	(E/F)R/L-U	MQ	No Chipbreaker	AH	R/L-A3	PCD	CBN
SCLCR/L..-2JXFF SCLCR/L..-06FF	CCGT215..	CCGT215..	CCMT215..	CCGT215..	-	CCGW215..	-	-	CCMT215.. CCGW215..	CCMW215..
SCLCR/L..-3JXFF SCLCR/L..-3..(JCT) SCLCR/L..-09FF(JCT)	CCGT325..	CCGT325..	CCMT325..	CCGT325..	CCMT325..	CCGW325..	CCGT325..	CCGT325..	CCMT325.. CCGW325..	CCMW325..

Recommended Cutting Conditions ➡ **E55**

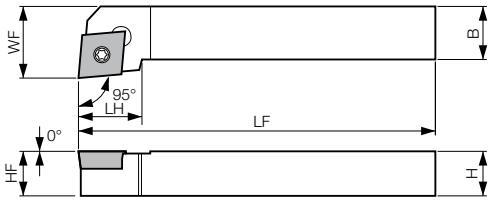
● : Standard Item △ : Phaseout Item (will be removed from next catalog)
Contact your local Kyocera sales engineer to upgrade old products to new technology

SCLC (External / Facing)





SCLC□1010F-09
shown above



• Right-hand Shown

Toolholder Dimensions

Part Number		Stock R	Stock L	Unit	Dimensions H	HF	B	LF	LH	WF	Standard Corner-R (RE)	Spare Parts: Clamp Screw	Spare Parts: Wrench	Spare Parts: Wrench
SCLC□	6-2X	●		inch	0.375	0.375	0.375	3.000	0.354	0.500	0.004	SB-2570TR	FT-8	-
SCLC□	8-3A	●	●	inch	0.500	0.500	0.500	4.000	0.551	0.625	0.004	SB-4085TR	FT-15	-
	10-3C	●		inch	0.625	0.625	0.625	5.000	0.572	0.750				
	12-3C	●	●	inch	0.750	0.750	0.750	5.000	0.572	0.875				
	16-3D	●		inch	1.000	1.000	1.000	6.000	0.790	1.250	0.008	SB-4085TR	FT-15	-
SCLC□	1010F-06	●	●	mm	10	10	10	80	9	12	0.2	SB-2570TR	FT-8	-
	1010F-09	●	●	mm	10	10	10	80	14	14	0.2	SB-4085TR	FT-15	-
	1212H-09	●	●	mm	12	12	12	100	14	16				
	1616H-09	●	●	mm	16	16	16	100	15	20				
	2020K-09	●	●	mm	20	20	20	125	20	25				
	2525M-09	●	●	mm	25	25	25	150	22	32				
SCLC□	1616H-12	●	●	mm	16	16	16	100	20	20	0.4	SB-5090TR	-	LTW-20
	2020K-12	●	●	mm	20	20	20	125	22	25				
	2525M-12	●	●	mm	25	25	25	150	22	32				

Applicable Inserts

Application	Finishing	Finishing	Finishing-Medium	Low Feed	Stainless Steel	Cast Iron	Non-ferrous Metals	Non-ferrous Metals	Non-ferrous Metals	Hard Material
Ref. Page	B53	B53	B54	B58, B59	B55	B60	B60	B60	C24	C14
Insert / Toolholder	SKS	SK	GK	(E/F)□-U	MQ	No Chipbreaker	AH	□-A3	PCD	CBN
SCLC□..-2.. SCLC□..-06	CCGT215..	CCGT215..	CCMT215..	CCGT215..	-	CCGW215..	-	-	CCMT215.. CCGW215..	CCMW215..
SCLC□..-3.. SCLC□..-09	CCGT325..	CCGT325..	CCMT325..	CCGT325..	CCMT325..	CCGW325..	CCGT325..	CCGT325..	CCMT325.. CCGW325..	CCMW325..
SCLC□..-12	-	-	CCMT43..	-	-	-	-	CCGT43..	-	-

Recommended Cutting Conditions ➡ **E55**

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(Technical Support) **800.823.7284 - Option 2**
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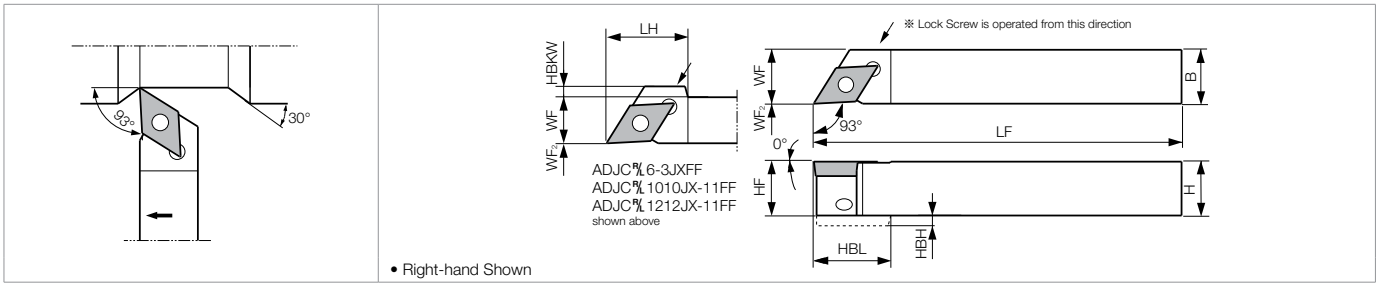
● : Standard Item △ : Phaseout Item (will be removed from next catalog)
Contact your local Kyocera sales engineer to upgrade old products to new technology

ADJC-FF (Without Offset • External / Copying)



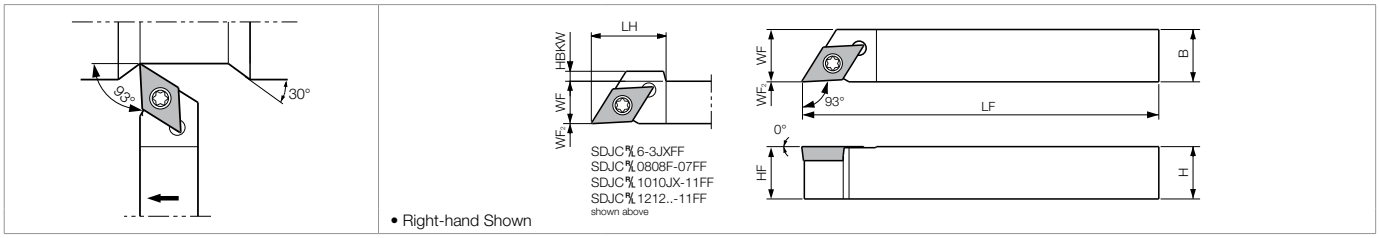
• Right-hand Shown

Toolholder Dimensions

Part Number		Stock R	Stock L	Unit	H	HF	HBH	B	LF	LH HBL	WF	HBKW	WF_2	Standard Corner-R (RE)	Spare Parts: Anchor Pin	Spare Parts: Lock Screw	Spare Parts: Wrench
ADJC□	6-2JXFF	●	●	inch	0.375	0.375	-	0.375	4.750	-	0.375	-	0	0.008	LPF-11	HSB4X8□	FH-2
	6-3JXFF	●	●		0.375	0.375	0.097	0.375	4.750	0.787	0.375	0.137	0	0.008	LPF-13		
	8-3JXFF	●	●		0.500	0.500	-	0.500	4.750	-	0.500	-	0				
	10-3JXFF	●	●		0.625	0.625	-	0.625	4.750	-	0.625	-	0	0.008	LPF-17		
ADJC□	1010JX-07FF	●	●	mm	10	10	-	10	120	-	10	-	0	0.2	LPF-11	HSB4X8□	FH-2
	1010JX-11FF	●	●		10	10	2	10	120	20	10	3	0	0.2	LPF-13		
	1212JX-11FF	●	●		12	12	-	12	120	20	12	1	0				
	1616JX-11FF	●	●		16	16	-	16	120	-	16	-	0	0.2	LPF-17		

• Lock Screw : HSB4X8R for Right-hand Toolholder, HSB4X8L for Left-hand Toolholder

SDJC-FF (Without Offset • External / Copying)



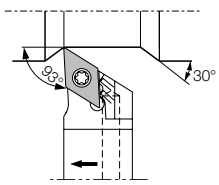
• Right-hand Shown

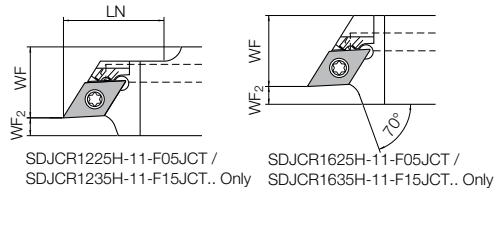
Toolholder Dimensions

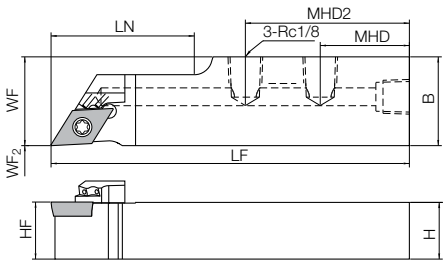
Part Number		Stock R	Stock L	Unit	H	HF	B	LF	LH	WF	HBKW	WF_2	Standard Corner-R (RE)	Drawing	Spare Parts: Clamp Screw	Spare Parts: Wrench
SDJC□	6-2JXFF	●		inch	0.375	0.375	0.375	4.750	-	0.375	-	0	0.008	Fig.1	SB-2570TR	FT-8
	6-3JXFF	●			0.375	0.375	0.375	4.750	0.787	0.375	0.137				SB-4085TR	FT-15
	8-3JXFF	●	●		0.500	0.500	0.500	4.750	-	0.500	-					
	10-3JXFF	●			0.625	0.625	0.625	4.750	-	0.625	-					
SDJC□	0808F-07FF	●	●	mm	8	8	8	85	14	8	0.5	0	0.2	Fig.1	SB-2570TR	FT-8
	1212F-11FF	●	●		12	12	12	85	20	12	1.0				SB-4085TR	FT-15
SDJC□	1010JX-07FF	●	●		10	10	10	120	-	10	-	0	0.2	Fig.1	SB-2570TR	FT-8
	1010JX-11FF	●	●		10	10	10	120	20	10	3.0				SB-4085TR	FT-15
	1212JX-11FF	●	●		12	12	12	120	20	12	1.0					
	1616JX-11FF	●	●		16	16	16	120	-	16	-					
	2020JX-11FF	●	●		20	20	20	120	-	20	-					

SDJC-JCT (Without Offset • External / Copying, Jet Coolant-Through)

**SDJC-JCT holders are being phased out.
Switch to new SDJC-JCTM style below.**







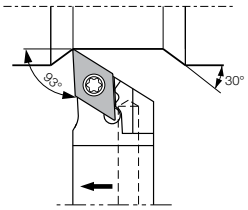
• Right-hand Shown

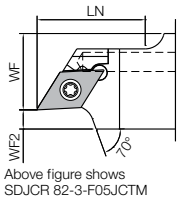
Toolholder Dimensions

Coolant Connections and Pipe Parts ➡ **H14-H15**

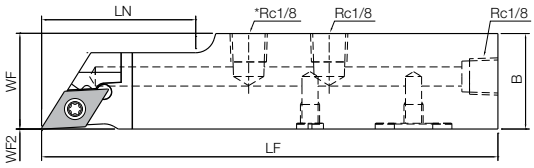
Part Number	Stock R	Stock L	Unit	H	HF	B	LF	LN	WF	WF_2	MHD	MHD2	Standard Corner-R (RE)	Spare Parts: Clamp Screw	Spare Parts: Wrench	Spare Parts: Plug
SDJCR 62-3FFJCT	△		in	0.500	0.500	0.750	4.750	1.110	0.750	0	1.378	-	0.008	SB-4085TR	FT-15	GP-1
82.5-3FFJCT	△			0.625	0.625	1.000	4.750	1.582	1.000		0.984	1.811				
SDJCR 1220H-11FFJCT	△		mm	12	12	20	100	28	20	0	35	-	0.2	SB-4085TR	FT-15	GP-1
1625H-11FFJCT	△			16	16	25		40	25		25	46				
2025H-11FFJCT	△			20	20	25		40	25		25	46				
SDJCR 1225H-11-F05JCT	△			12	12	25	100	28	20	5	35	-	0.2			
1235H-11-F15JCT	△			12	12	35		28	20	15	35	-				
SDJCR 1625H-11-F05JCT	△			16	16	25	100	-	20	5	25	46	0.2			
1635H-11-F15JCT	△			16	16	35		-	20	15	25	46				

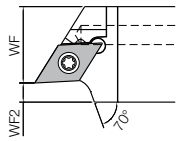
SDJC-JCTM (Without Offset • External / Copying, Direct from Turret Jet Coolant-Through) NEW



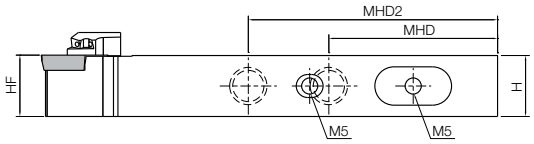


Above figure shows
SDJCR 82-3-F05JCTM
SDJCR 112-3-F15JCTM
SDJCR 1225 JX 11 F05JCTM
SDJCR 1235 JX 11 F15JCTM





Above figure shows
SDJCR 82.5-3-F05JCTM
SDJCR 112.5-3-F15JCTM
SDJCR 1625 JX 11 F05JCTM
SDJCR 1635 JX 11 F 15 JCTM



*SDJCR5.72-3FFJCTM : 2-Rc1/8
*SDJCR82-3-F05JCTM : 2-Rc1/8
*SDJCR112-3-F15JCTM : 2-Rc1/8
*SDJCR12··· : 2-Rc1/8

• Right-hand Shown

Toolholder Dimensions

Coolant Connections and Pipe Parts ➡ **H18-H19**

Part Number	Stock R	Stock L	Unit	H	HF	B	LF	LN	WF	WF_2	MHD	MHD2	Standard Corner-R (RE)	Spare Parts: Clamp Screw	Spare Parts: Wrench	Spare Parts: Plug 1	Spare Parts: Plug 2
SDJCR 5.72-3FFJCTM	●		in	0.500	0.500	0.708	4.750	1.110	0.708	0	2.150	-	0.008	SB-4085TR	FT-15	GP-1	HS5X4LP
82.5-3FFJCTM	●			0.625	0.625	1.000		1.585	1.000		1.730	2.560					
SDJCR 82-3-F05JCTM	●			0.500	0.500	1.000	4.750	1.585	1.000	0.197	1.730	2.560	0.008	SB-4085TR	FT-15	GP-1	HS5X4LP
112-3-F15JCTM	●					1.375		1.110	1.375	0.591	2.150	-					
82.5-3-F05JCTM	●			0.625	0.625	1.000		1.585	1.000	0.197	1.730	2.560					
112.5-3-F15JCTM	●					1.375		1.110	1.375	0.591	2.150	-					
SDJCR 1218JX-11FFJCTM	●		mm	12	12	18	120	28	18	0	54	-	0.2	SB-4085TR	FT-15	GP-1	HS5X4LP
1625JX-11FFJCTM	●			16	16	25		40	25		44	65					
2025JX-11FFJCTM	●			20	20												-
SDJCR 1225JX11F05JCTM	●			12	12	25	120	28	20	5	54	-	0.2				HS5X4LP
1235JX11F15JCTM	●					35				15							
SDJCR 1625JX11F05JCTM	●			16	16	25	120	-	20	5	44	65	0.2				
1635JX11F15JCTM	●					35				15							

(Customer Service) **800.823.7284 - Option 1**
(Technical Support) **800.823.7284 - Option 2**
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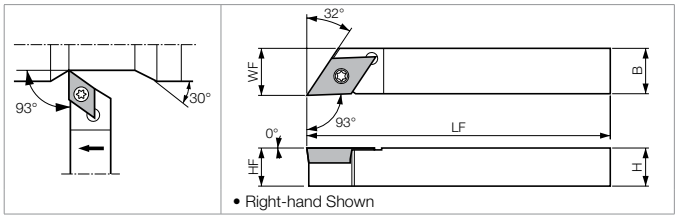
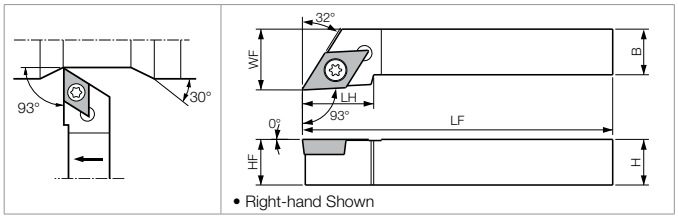
SDJC-F (External / Copying)



• Right-hand Shown

SDJC (External / Copying)



• Right-hand Shown

Toolholder Dimensions

Part Number		Stock R	Stock L	Unit	Dimensions H	HF	B	LF	LH	WF	HBKW	WF_2	Standard Corner-R (RE)	Spare Parts: Clamp Screw	Spare Parts: Wrench
SDJC□	6-2CF	●		inch	0.375	0.375	0.375	5.000	-	0.395	-	-	0.004	SB-2570TR	FT-8
SDJC□	8-3DF	●			0.500	0.500	0.500	6.000		0.520	-	-	1/32	SB-4085TR	FT-15
SDJC□	6-2X	●			0.375	0.375	0.375	3.000	0.472	0.500	-	-	0.004	SB-2570TR	FT-8
SDJC□	8-3A	●	●		0.500	0.500	0.500	4.000	0.709	0.625	-	-		SB-4085TR	FT-15
	10-3C	●	●		0.625	0.625	0.625	5.000	0.709	0.750					
	12-3C	●	●		0.750	0.750	0.750			0.875					
	16-3D	●			1.000	1.000	1.000	6.000	0.810	1.250			0.008		
SDJC□	1010F-07	●	●	mm	10	10	10	80	12	12	-	-	0.2	SB-2570TR	FT-8
SDJC□	1010F-11	●	●		10	10	10	80	18	12	-	-	0.2	SB-4085TR	FT-15
	1212H-11	●	●		12	12	12	100	18	16	-	-			
	1616H-11	●	●		16	16	16	100	18	20	-	-			
	2020K-11	●	●		20	20	20	125	18	25	-	-			
	2525M-11	●	●		25	25	25	150	23	32	-	-			

Applicable Inserts

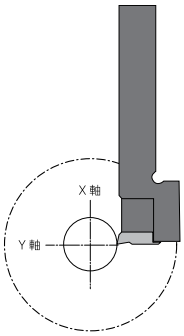
Application	Minute D.O.C.	Finishing	Finishing	Finishing	Finishing	Finishing-Medium	Finishing-Medium	Finishing	Finishing / Precision	Low Feed
Ref. Page	B62	B62	B62	B63	B63	B64	B63	B67	B66	B68, B69
Insert / Toolholder	CF	SKS	SK	WP (Wiper)	PP	GK	GQ	□-F	□-FSF	(E/F) □-U
□DJC□..-2.. □DJC□..-07...	DCGT215..	DCGT215..	DCGT215..	DCMX215..	DCMT215..	DCMT215..	DCGT215..	DCGT215..	DCET215..	DCGT215..
□DJC□..-3... □DJC□..-11... SDJCR..-11...JCT(M)	DCGT325..	DCGT325..	DCGT325..	DCMX325..	DCMT325..	DCMT325..	DCGT325..	DCGT325..	DCET325..	DCGT325..

Application	Low Feed / Precision	Low Feed	Low Carbon Steel / Finishing	Low Carbon Steel / Finishing-Medium	Stainless Steel	Cast Iron	Non-ferrous Metals	Non-ferrous Metals	Non-ferrous Metals	Hard materials
Ref. Page	B68	B70, B71	B65	B65	B65	B71	B71	B71	C25	C15
Insert / Toolholder	F□-USF	(E/F) □-J	XP	XQ	MQ	No Chipbreaker	AH	□-A3	PCD	CBN
□DJC□..-2.. □DJC□..-07...	DCET215..	DCET215..	DCMT215..	-	DCMT215..	DCGW215..	-	-	DCMT215..	DCMW215..
□DJC□..-3... □DJC□..-11... SDJCR..-11...JCT(M)	DCET325..	DC_T325..	DCMT325..	DCMT325..	DCMT325..	DCGW325..	DCGT325..	DCGT325..	DCMT325..	DCMW325..

When using **WP** chipbreaker, program corrections are required. → **R51**

Recommended Cutting Conditions → **E55**

SDJC-FF-Y (Y-axis External / Copying)



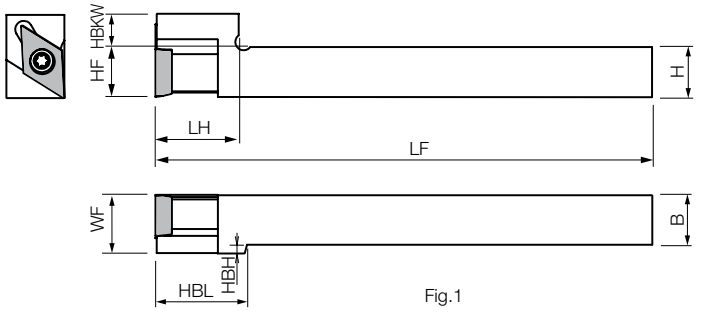


Fig.1

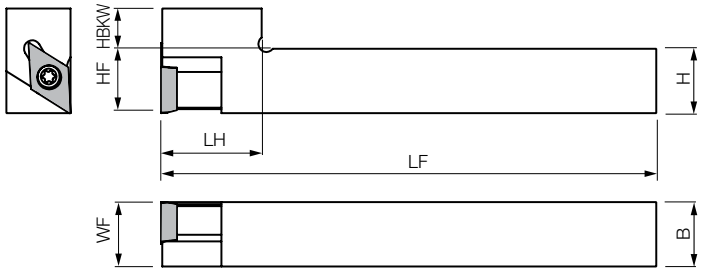


Fig.2

• Right-hand Shown

Toolholder Dimensions

Part Number	Stock R	Stock L	Unit	H	HF	B	LF	LH	WF	HBKW	HBL	HBH	WF_2	Standard Corner-R (RE)	Drawing	Spare Parts: Clamp Screw	Spare Parts: Wrench
SDJCR 1212JX-11FF-Y	●		mm	12	12	12	120	20	14	8	22	2	0	0.2	Fig.1	SB-4085TR	FT-15
1616JX-11FF-Y	●		mm	16	16	16	120	25	16	10	-	-	0	0.2	Fig.2	SB-4085TR	FT-15

Applicable Inserts

Application	Minute D.O.C.	Finishing	Finishing	Finishing	Finishing	Finishing	Finishing-Medium	Finishing-Medium	Finishing	Finishing / Precision	Low Feed	Low Feed / Precision
Ref. Page	B62	B62	B62	B62	B63	B63	B64	B63	B67	B66	B68, B69	B68
Insert / Toolholder	**CF**	**GF**	**SKS**	**SK**	**WP** (Wiper)	**PP**	**GK**	**GQ**	**R-F**	**R-FSF**	**(E/F) R-U**	**FR-USF**
SDJCR..-11FF-Y	DCGT325..	DCGT325..	DCGT325..	DCGT325..	DCMX325..	DCMT325..	DCMT325..	DCGT325..	DCGT325..	DCET325..	DCGT325..	DCET325..

Application	Low Feed	Low Feed / Precision	Low Carbon Steel / Finishing	Low Carbon Steel / Finishing-Medium	Stainless Steel	Cast Iron	Non-ferrous Metals	Non-ferrous Metals	Non-ferrous Metals	Non-ferrous Metals	Hard Materials	
Ref. Page	B70, B71	B70	B65	B65	B65	B71	B71	B71	C25	C25	C15	
Insert / Toolholder	**(E/F)R-J**	**FR-JSF**	**XP**	**XQ**	**MQ**	No Chipbreaker	**AH**	**R-A3**	**PCD**	**APD**	**CBN**	
SDJCR..-11FF-Y	DC_T325..	DCET325..	DCMT325..	DCMT325..	DCMT325..	DCGW325..	DCGT325..	DCGT325..	DCMT325..	DCMT325..	DCMW325..	

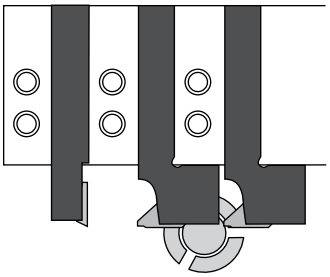
When using **WP** chipbreaker, program corrections are required. R51

Recommended Cutting Conditions **E55**

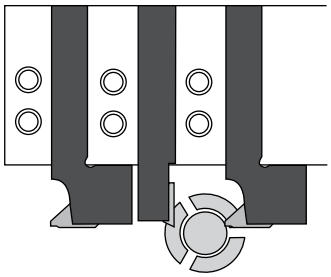
Precautions

Do not use Y-axis toolholders side-by-side to prevent interference (Only two Y-axis holders can be used at the same time)

Interference

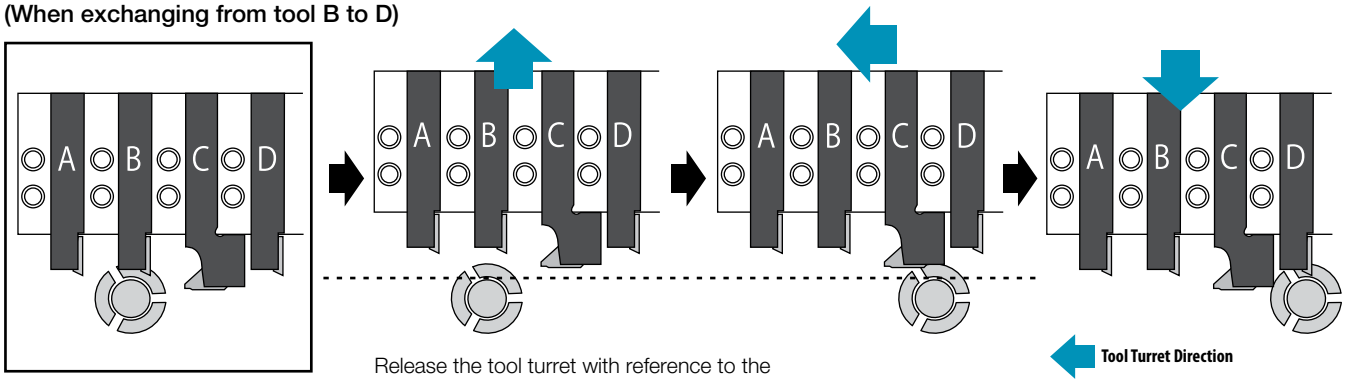


Without Interference



Standard toolholders may be mounted between two Y-axis toolholders

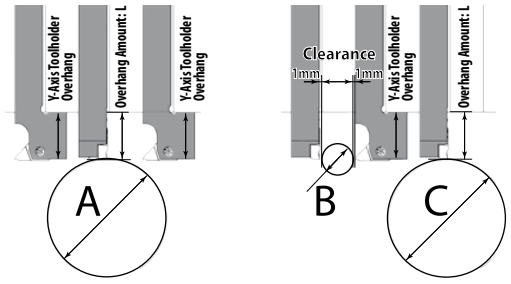
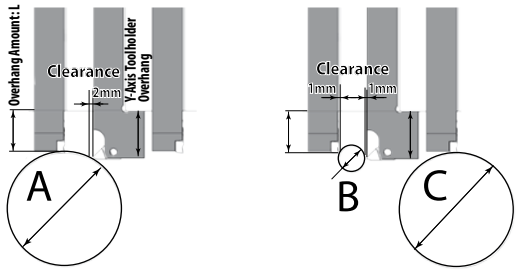
When changing the tool, set the retracted position with reference to the cutting edge of the Y-axis holder (When exchanging from tool B to D)



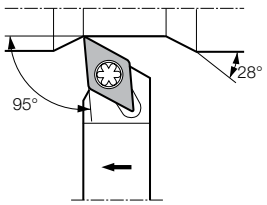
Release the tool turret with reference to the overhang amount of the Y-axis toolholder

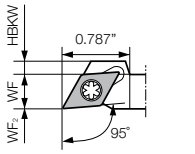
Note that using other toolholder styles together will result in different outside diameters

(Unit: mm)

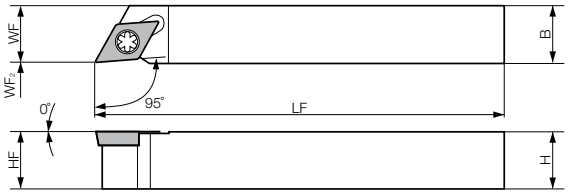
Y-axis Toolholder Overhang	Examples	Overhang Amount : L / Available Outside Cutting Dia. (Ø)	20	22	25
20		A	Without Restriction	Without Restriction	Without Restriction
		B	13.0	13.0	13.0
		C	Without Restriction	Without Restriction	Without Restriction
25		A	38.0	58.0	Without Restriction
		B	14.9	13.6	13.0
		C	45.0	60.0	Without Restriction

SDLC-FF (Without Offset • External / Copying)





SDLC□6-3JXFF
SDLC□8-3JXFF
SDLC□1010..-11FF
SDLC□1212..-11FF
shown above

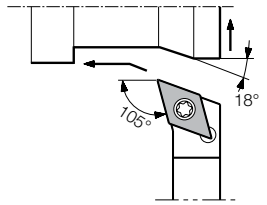


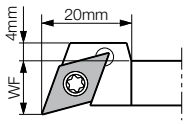
• Right-hand Shown

Toolholder Dimensions

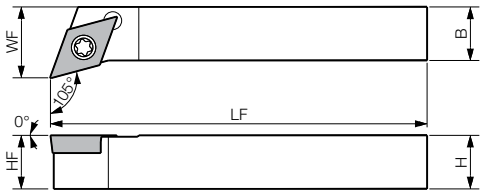
Part Number		Stock R	Stock L	Unit	Dimensions H	HF	B	LF	WF	HBKW	WF_2	Standard Corner-R (RE)	Spare Parts: Clamp Screw	Spare Parts: Wrench
SDLC□	8-3JXFF	●		inch	0.500	0.500	0.500	4.750	0.500	0.051	0	0.008	SB-4085TR	FT-15
	10-3JXFF	●			0.625	0.625	0.625	4.750	0.625	-	0			
SDLC□	1010JX-07FF	●	●	mm	10	10	10	120	10	-	0	0.2	SB-2570TR	FT-8
	1212JX-07FF	●	●		12	12	12	120	12	-	0			
	1616JX-07FF	●	●		16	16	16	120	16	-	0			
SDLC□	1010JX-11FF	●	●		10	10	10	120	10	4	0	0.2	SB-4085TR	FT-15
	1212JX-11FF	●	●		12	12	12	120	12	2	0			
	1616JX-11FF	●	●		16	16	16	120	16	-	0			
SDLC□	1212F-07FF	●			12	12	12	85	12	-	0	0.2	SB-2570TR	FT-8
SDLC□	1010F-11FF	●			10	10	10	80	10	4	0	0.2	SB-4085TR	FT-15
	1212F-11FF	●			12	12	12	85	12	2	0			
	1616H-11FF	●			16	16	16	100	16	-	0			

SDXC (External / Facing / Copying)





SDXC□1010JX-11
shown above



• Right-hand Shown

Toolholder Dimensions

Part Number		Stock R	Stock L	Dimensions (mm) H	HF	B	LF	WF	Standard Corner-R (RE)	Spare Parts: Clamp Screw	Spare Parts: Wrench
SDXC□	1010JX-07	●	●	10	10	10	120	12	0.2	SB-2570TR	FT-8
	1010JX-11	●	●	10	10	10	120	12	0.2	SB-4085TR	FT-15
	1212JX-11	●	●	12	12	12	120	16	0.2		
	1616JX-11	●	●	16	16	16	120	20	0.2		

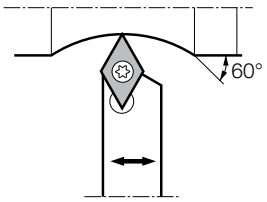
Applicable Inserts

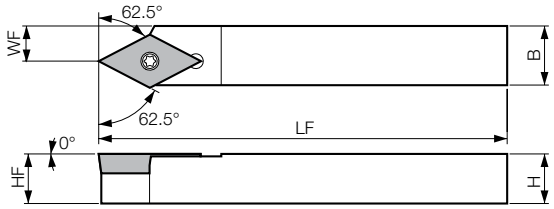
Application	Minute D.O.C.	Finishing	Finishing	Finishing	Finishing	Finishing	Finishing-Medium	Finishing-Medium	Finishing	Finishing / Precision	Low Feed	Low Feed / Precision
Ref. Page	B62	B62	B62	B62	-	B63	B64	B63	B67	B66	B68, B69	B68
Insert / Toolholder	CF	GF	SKS	SK	WP (Wiper)	PP	GK	GQ	R-F	R-FSF	(E/F) R-U	FR-USF
SDLC□..-07... SDXC□..-07	DCGT215..	DCGT215..	DCGT215..	DCGT215..	-	DCMT215..	DCMT215..	DCGT215..	DCGT215..	DCET215..	DCGT215..	DCET215..
SDLC□..-3... / -11... SDXC□..-11	DCGT325..	DCGT325..	DCGT325..	DCGT325..	-	DCMT325..	DCMT325..	DCGT325..	DCGT325..	DCET325..	DCGT325..	DCET325..

Application	Low Feed	Low Feed / Precision	Low Carbon Steel / Finishing	Low Carbon Steel / Finishing-Medium	Stainless Steel	Cast Iron	Non-ferrous Metals	Non-ferrous Metals	Non-ferrous Metals	Non-ferrous Metals	Hard Materials	
Ref. Page	B70, B71	B70	B65	B65	B65	B71	B71	B71	C25	C25	C15	
Insert / Toolholder	(E/F)R-J	FR-JSF	XP	XQ	MQ	No Chipbreaker	AH	R-A3	PCD	APD	CBN	
SDLC□..-07... SDXC□..-07	DCET215..	DCET215..	DCMT215..	-	DCMT215..	DCGW215..	-	-	DCMT215..	DCMT215..	DCMW215..	
SDLC□..-3... / -11... SDXC□..-11	DC_T325..	DCET325..	DCMT325..	DCMT325..	DCMT325..	DCGW325..	DCGT325..	DCGT325..	DCMT325..	DCMT325..	DCMW325..	

Recommended Cutting Conditions ➡ **E55**

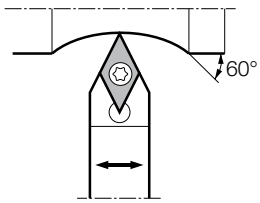
SDNC-F (External / Copying)

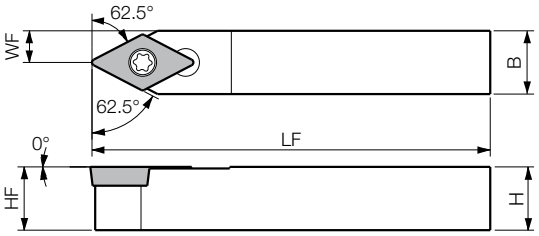




• Right-hand Shown

SDNC (External / Copying)





Toolholder Dimensions

Part Number		Stock R	Stock N	Stock L	Unit	Dimensions H	HF	B	LF	WF	Standard Corner-R (RE)	Spare Parts: Clamp Screw	Spare Parts: Wrench
SDNC℞	1010JX-07F	●		●	mm	10	10	10	120	7	0.2	SB-2570TR	FT-8
SDNCN	6-2JX		●		inch	0.375	0.375	0.375	4.750	0.187	0.008	SB-2570TR	FT-8
	8-2JX		●			0.500	0.500	0.500	4.750	0.250			
	6-3JX		●			0.375	0.375	0.375	4.750	0.187	0.008	SB-4085TR	FT-15
	8-3JX		●			0.500	0.500	0.500	4.750	0.250			
	10-3JX		●			0.625	0.625	0.625	4.750	0.312			
SDNCN	1010JX-07		●		mm	10	10	10	120	5	0.2	SB-2570TR	FT-8
	1212JX-07		●			12	12	12	120	6			
SDNCN	1010JX-11		●			10	10	10	120	5	0.2	SB-4085TR	FT-15
	1212JX-11		●			12	12	12	120	6			
	1616JX-11		●			16	16	16	120	8			
SDNCN	1010F-11		●			10	10	10	80	5	0.2	SB-4085TR	FT-15
	1616H-11		●			16	16	16	100	8			

Applicable Inserts

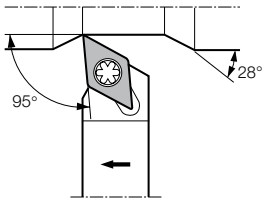
Application	Minute D.O.C.	Finishing	Finishing	Finishing	Finishing	Finishing	Finishing-Medium	Finishing-Medium	Finishing	Finishing / Precision	Low Feed	Low Feed / Precision
Ref. Page	B62	B62	B62	B62	-	B63	B64	B63	B67	B66	B68, B69	B68
Insert / Toolholder	CF	GF	SKS	SK	WP (Wiper)	PP	GK	GQ	R-F	R-FSF	(E/F) R-U	FR-USF
SDNC℞...-07F SDNCN...-2JX SDNCN...-07	DCGT215..	DCGT215..	DCGT215..	DCGT215..	-	DCMT215..	DCMT215..	DCGT215..	DCGT215..	DCET215..	DCGT215..	DCET215..
SDNCN...-3 SDNCN...-11	DCGT325..	DCGT325..	DCGT325..	DCGT325..	-	DCMT325..	DCMT325..	DCGT325..	DCGT325..	DCET325..	DCGT325..	DCET325..

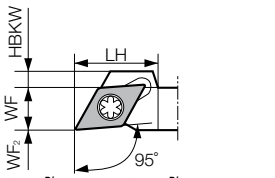
Application	Low Feed	Low Feed / Precision	Low Carbon Steel / Finishing	Low Carbon Steel / Finishing-Medium	Stainless Steel	Cast Iron	Non-ferrous Metals	Non-ferrous Metals	Non-ferrous Metals	Non-ferrous Metals	Hard Materials	
Ref. Page	B70, B71	B70	B65	B65	B65	B71	B71	B71	C25	C25	C15	
Insert / Toolholder	(E/F)R-J	FR-JSF	XP	XQ	MQ	No Chipbreaker	AH	R-A3	PCD	APD	CBN	
SDNC℞...-07F SDNCN...-2JX SDNCN...-07	DCET215..	DCET215..	DCMT215..	-	DCMT215..	DCGW215..	-	-	DCMT215..	DCMT215..	DCMW215..	
SDNCN...-3 SDNCN...-11	DC_T325..	DCET325..	DCMT325..	DCMT325..	DCMT325..	DCGW325..	DCGT325..	DCGT325..	DCMT325..	DCMT325..	DCMW325..	

Recommended Cutting Conditions ➡ **E55**

● : Standard Item △ : Phaseout Item (will be removed from next catalog)
Contact your local Kyocera sales engineer to upgrade old products to new technology

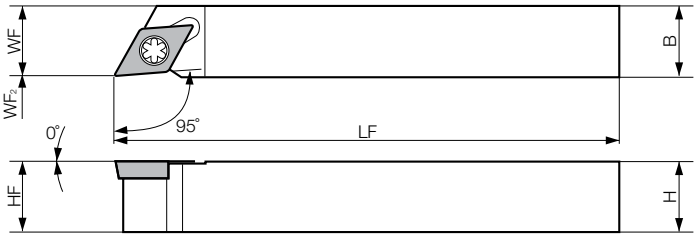
SDLP-FF (Without Offset • External / Copying)





SDLP□6-3JXFF
SDLP□8-3JXFF
shown above

SDLP□0808F-07FF
SDLP□1212F-11FF
SDLP□1010JX-11FF
SDLP□1212JX-11FF
shown above



• Right-hand Shown

Toolholder Dimensions

Part Number	Stock R	Stock L	Unit	Dimensions H	HF	B	LF	LH	WF	HBKW	WF_2	Standard Corner-R(RE)	Spare Parts: Clamp Screw	Spare Parts: Wrench
SDLP□ 0808F-07FF	●	●	mm	8	8	8	85	14	8	0.5	0	0.2	SB-2570TR	FT-8
SDLP□ 1010JX-07FF	●	●		10	10	10	120	-	10	-	0	0.2	SB-2570TR	FT-8
1010JX-11FF	●	●		10	10	10	120	20	10	4.0	0	0.2	SB-4085TR	FT-15
1212JX-11FF	●	●		12	12	12	120	20	12	2.0	0			
1616JX-11FF	●	●		16	16	16	120	-	16	-	0			

Applicable Inserts

Application	Finishing / Precision	Low Feed / Precision
Ref. Page	B72	B72
Insert / Toolholder	□-FSF	F□-USF
SDLP□..-07FF	DPET215..	DPET215..
SDLP□..-11FF	DPET325..	DPET325..

Recommended Cutting Conditions E55

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● : Standard Item △ : Phaseout Item (will be removed from next catalog)
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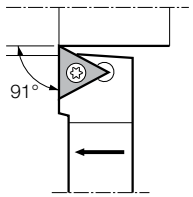
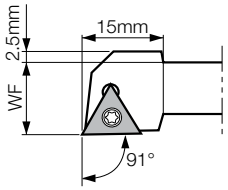
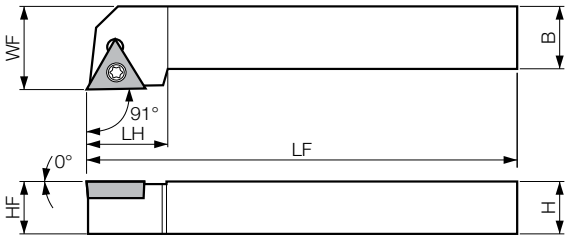
STGC(P) (External)





STGC(P)□1010F-11
shown above



• Right-hand Shown

Toolholder Dimensions

Part Number		Stock R	Stock L	Unit	Dimensions H	HF	B	LF	LH	WF	Standard Corner-R(RE)	Spare Parts: Clamp Screw	Spare Parts: Wrench
STGC□	0808E-08	●		mm	8	8	8	70	12	10	0.2	SB-2050TR	FT-6
	1010F-08	●	●		10	10	10	80	12	12			
STGC□	1010F-11	●	●		10	10	10	80	15	14	0.4	SB-2570TR	FT-8
	1212H-11	●	●		12	12	12	100	15	16			
	1616H-11	●	●		16	16	16	100	15	20			
	2020K-11	●	●		20	20	20	125	15	25			
	2525M-11	●	●		25	25	25	150	20	32			
STGP□	0808E-08	●			8	8	8	70	12	10	0.2	SB-2050TR	FT-6
STGP□	1010F-11	●	●		10	10	10	80	15	14	0.2	SB-3080TR	FT-10
	1212H-11	●	●		12	12	12	100	15	16			
	1616H-11	●	●		16	16	16	100	15	20			

Applicable Inserts (STGC)

Application	Low Feed	Low Feed / Precision	Cast Iron	Non-ferrous Metals	Non-ferrous Metals
Ref. Page	B78	B77	B79	B79	C26
Insert / Toolholder	(E/F) □-U	F□-USF	Without Chipbreaker	□-A3	PCD
STGC□..-08	TCGT1515..	TCET1515..	TCGW1515..	-	TCMT1515..
STGC□..-11	TCGT22..	TCET22..	TCGW22..	TCGT22..	TCMT22.. TCGW22..

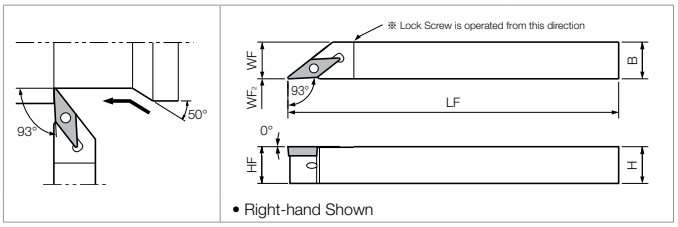
Applicable Inserts (STGP)

Application	Minute D.O.C.	Finishing	Finishing-Medium	Finishing	Finishing / Precision	Low Feed / Precision	Medium	Low Carbon Steel / Finishing	Low Carbon Steel / Finishing-Medium	Cast Iron
Ref. Page	B80	B80	B81	B82, B83	B85	B86	B84	B81	B81	B86
Insert / Toolholder	CF	PP	HQ	□	□-FSF	F□-USF	□-H	XP	XQ	No Chipbreaker
STGP□..-08	TPGT1515..	-	-	TPGH1515..	TPET1515..	TPET1515..	-	-	-	TPGB1515..
STGP□..-11	-	TPMT22..	TPMT22..	TPGH22..	TPET22..	TPET22..	TPGH22..	TPMT22..	TPMT22..	TPGB22..

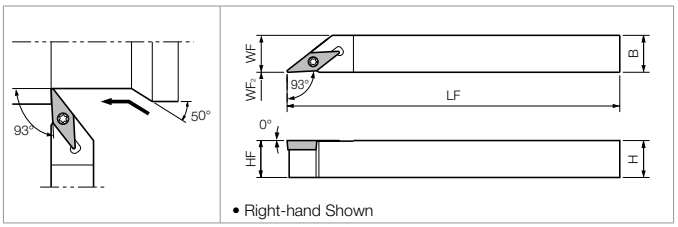
Application	Non-ferrous Metals	Non-ferrous Metals	Hard Materials
Ref. Page	C26 ~ C28	C27	C16
Insert / Toolholder	PCD	APD	CBN
STGP□..-08	TPMH1515.. TPGB1515..	-	TPGB1515..
STGP□..-11	TPMH22.. TPGB22..	TPMT22..	TPGB22..

Recommended Cutting Conditions E55

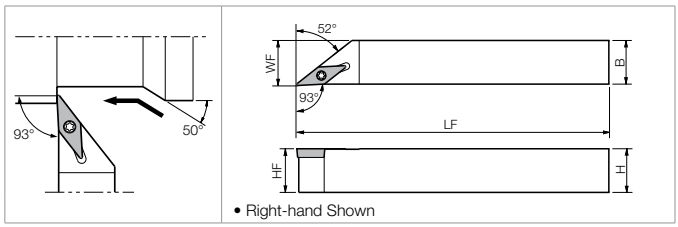
AVJB-FF (Without Offset • External / Copying)



SVJB-FF (Without Offset • External / Copying)



SVJB-F (External / Copying)



Toolholder Dimensions

Part Number		Stock R	Stock L	Unit	H	HF	B	LF	WF	WF_2	Standard Corner-R (RE)	Spare Parts: Anchor Pin	Spare Parts: Lock Screw	Spare Parts: Clamp Screw	Spare Parts: Wrench
AVJB□	6-2JXFF	●	●	inch	0.375	0.375	0.375	4.750	0.375	0	1/64	LPF-11	HSB4X8□	-	FH-2
	8-2JXFF	●	●		0.500	0.500	0.500	4.750	0.500			LPF-1113			
	10-2JXFF	●	●		0.625	0.625	0.625	4.750	0.625			LPF-1117			
AVJB□	1010JX-11FF	●	●	mm	10	10	10	120	10	0	0.4	LPF-11	HSB4X8□	-	FH-2
	1212JX-11FF	●	●		12	12	12	120	12			LPF-1113			
	1616JX-11FF	●	●		16	16	16	120	16			LPF-1117			
SVJB□	6-2JXFF	●	●	inch	0.375	0.375	0.375	4.750	0.375	0	1/64	-	-	SB-2570TR	FT-8
	8-2JXFF	●	●		0.500	0.500	0.500	4.750	0.500						
	10-2JXFF	●			0.625	0.625	0.625	4.750	0.625						
SVJB□	1010JX-11FF	●	●	mm	10	10	10	120	10	0	0.4	-	-	SB-2570TR	FT-8
	1212JX-11FF	●	●		12	12	12	120	12						
	1616JX-11FF	●	●		16	16	16	120	16						
	2020JX-11FF	●	●		20	20	20	120	20						
SVJB□	6-2CF	●	●	inch	0.375	0.375	0.375	5.000	0.395	-	1/64	-	-	SB-2570TR	FT-8
	8-2DF	●	●		0.500	0.500	0.500	6.000	0.520						

• Lock Screw : HSB4X8R for Right-hand Toolholder, HSB4X8L for Left-hand Toolholder

Applicable Inserts

Application	Finishing	Finishing	Finishing-Medium	Finishing	Finishing / Precision	Finishing-Medium	Non-ferrous Metals	Hard Materials
Ref. Page	B89	B89	B89	B90	B89	B91	C28	C17
Insert / Toolholder	GP	VF	HQ	□-F	□-FSF	□-Y	PCD	CBN
AVJB□..-2... AVJB□..-11FF SVJB□..-2... SVJB□..-11FF	VBMT22..	VBMT22..	VBMT22..	VBGT22..	VBET22..	VBGT22..	VBMT22..	VBGW22..

Recommended Cutting Conditions → **E55**

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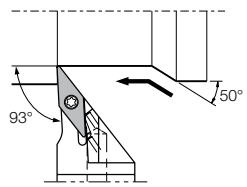
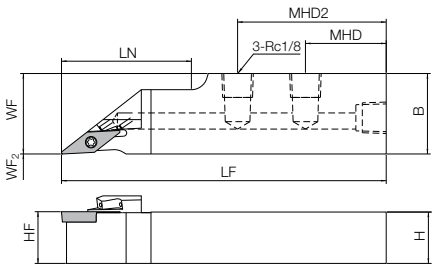
● : Standard Item △ : Phaseout Item (will be removed from next catalog)
Contact your local Kyocera sales engineer to upgrade old products to new technology

SVJB-FFJCT (Without Offset • External / Copying, Jet Coolant-Through)

SVJB-JCT holders are being phased out. Switch to new SVJB-JCTM style below.





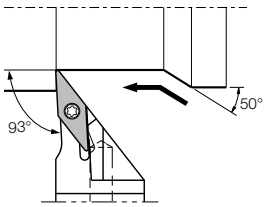
• Right-hand Shown

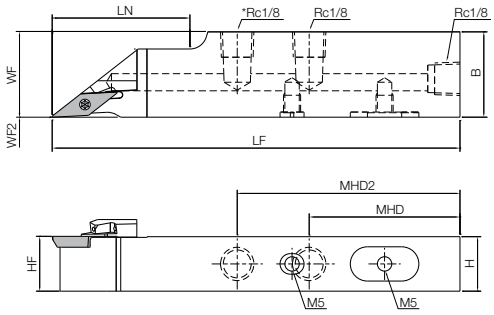
Toolholder Dimensions

Coolant Connections and Pipe Parts ➡ **H14-H15**

Part Number	Stock R	Stock L	Unit	H	HF	B	LF	LN	WF	WF2	MHD	MHD2	Standard Corner-R (RE)	Spare Parts: Clamp Screw	Spare Parts: Wrench	Spare Parts: Plug
SVJBR 62-2FFJCT	△		inch	0.500	0.500	0.750	4.750	1.110	0.750	0	1.378	-	1/64	SB-2570TR	FT-8	GP-1
82.5-2FFJCT	△		inch	0.625	0.625	1.000	4.750	1.110	1.000	0	0.984	1.811	1/64	SB-2570TR	FT-8	GP-1
SVJBR 1220H-11FFJCT	△		mm	12	12	20	100	28	20	0	35	-	0.4	SB-2570TR	FT-8	GP-1
1625H-11FFJCT	△		mm	16	16	25	100	40	25	0	25	46	0.4	SB-2570TR	FT-8	GP-1
2025H-11FFJCT	△		mm	20	20	25	100	40	25	0	25	46	0.4	SB-2570TR	FT-8	GP-1

SVJB-FFJCTM (Without Offset • External / Copying, Direct from Turret Jet Coolant-Through) NEW





*SVJBR5.72··· : 2-Rc1/8
*SVJBR12··· : 2-Rc1/8
(Coolant outlet : Single)

• Right-hand Shown

Toolholder Dimensions

Coolant Connections and Pipe Parts ➡ **H18-H19**

Part Number	Stock R	Stock L	Unit	H	HF	B	LF	LN	WF	WF2	MHD	MHD2	Standard Corner-R (RE)	Spare Parts: Clamp Screw	Spare Parts: Wrench	Spare Parts: Plug 1	Spare Parts: Plug 2
SVJBR 5.72-2FFJCTM	●		inch	0.500	0.500	0.708	4.750	1.110	0.708	0	2.150	-	0.016	SB-2570TR	FT-8	GP-1	HS5X4LP
82.5-2FFJCTM	●		inch	0.625	0.625	1.000	4.750	1.585	1.000	0	1.730	2.560	0.016	SB-2570TR	FT-8	GP-1	HS5X4LP
SVJBR 1218JX-11FFJCTM	●		mm	12	12	18	120	28	18	0	54	-	0.4	SB-2570TR	FT-8	GP-1	HS5X4LP
1625JX-11FFJCTM	●		mm	16	16	25	120	40	25	0	44	65	0.4	SB-2570TR	FT-8	GP-1	HS5X4LP
2025JX-11FFJCTM	●		mm	20	20	25	120	40	25	0	44	65	0.4	SB-2570TR	FT-8	GP-1	-

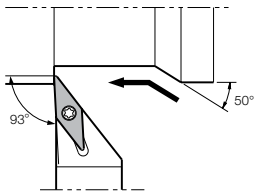
Applicable Inserts

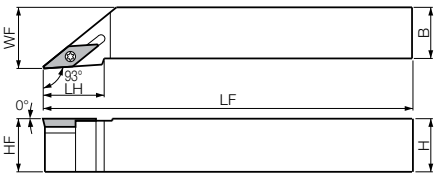
Application	Finishing	Finishing	Finishing-Medium	Finishing	Finishing / Precision	Finishing-Medium	Non-ferrous Metals	Hard Materials
Ref. Page	➡ B89	➡ B89	➡ B89	➡ B90	➡ B89	➡ B91	➡ C28	➡ C17
Insert / Toolholder	GP	VF	HQ	R/L-F	R/L-FSF	R/L-Y	PCD	CBN
SVJBR..-2FFJCT(M) SVJBR..-11FFJCT(M)	VBMT22..	VBMT22..	VBMT22..	VBGT22..	VBET22..	VBGT22..	VBMT22..	VBGW22..

Recommended Cutting Conditions ➡ **E55**

● : Standard Item △ : Phaseout Item (will be removed from next catalog)
Contact your local Kyocera sales engineer to upgrade old products to new technology

SVJB (External / Copying)





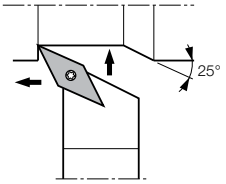
• Right-hand Shown

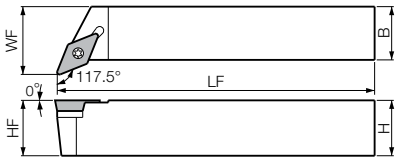
Toolholder Dimensions

Part Number	Stock R	Stock L	Unit	H	HF	B	LF	WF	WF_2	Standard Corner-R (RE)	Clamp Screw	Wrench	Shim	Shim Screw	Wrench
SVJBR/L 8-2A	●	●	inch	0.500	0.500	0.500	4.000	0.625	-	1/64	SB-2570TR	FT-8	-	-	-
12-3C	●			0.750	0.750	0.750	5.000	0.875		1/32	SB-4085TR	T-15			
16-3D	●			1.000	1.000	1.000	6.000	1.250		1/32					
SVJBR/L 2020K-11	●	●	mm	20	20	20	125	25	-	0.4	SB-2570TR	FT-8	-	-	-
2525M-11	●	●		25	25	25	150	32							
SVJBR/L 2020K-16N	●	●		20	20	20	125	25	-	0.8	SB-40125TRN	FT-15	SVN-32N (SVN-32S)	SS-4N	LW-4
2525M-16N	●	●		25	25	25	150	32							

• For insert with corner-R (RE) = 0.008" or 1/64", shim in parenthese is recommended (sold separately)

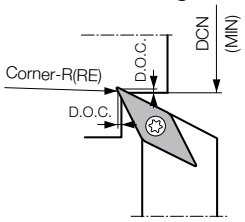
SVPB (External / Facing / Copying / Undercutting)





• Right-hand Shown

Undercutting Diameter of SVPB



Corner-R (RE)	D.O.C.	DCN (MIN)
0.016	0.020	Ø0.984
	0.039	Ø1.181
0.032	0.020	Ø1.772
	0.039	Ø2.165

Toolholder Dimensions

Part Number	Stock R	Stock L	H	HF	B	LF	WF	Standard Corner-R (RE)	Clamp Screw	Wrench	Shim	Shim Screw	Wrench
SVPBR/L 1010JX-11	●	●	10	10	10	120	14.5	0.4	SB-2570TR	FT-8	-	-	-
1212JX-11	●	●	12	12	12	120	16.5						
1616JX-11	●	●	16	16	16	120	20.5						
SVPBR/L 2020K-11	●	●	20	20	20	125	25.0	0.4	SB-2570TR	FT-8	-	-	-
2525M-11	●	●	25	25	25	150	32.0						
SVPBR/L 2020K-16N	●	●	20	20	20	125	25.0	0.8	SB-40125TRN	FT-15	SVN-32N (SVN-32S)	SS-4N	LW-4
2525M-16N	●	●	25	25	25	150	32.0						

• For insert with corner-R (RE) = 0.008" or 1/64", shim in parenthese is recommended (sold separately)

Applicable Inserts

Application	Finishing	Finishing	Finishing-Medium	Finishing	Finishing / Precision	Finishing-Medium	Non-ferrous Metals	Non-ferrous Metals	Non-ferrous Metals	Hard Materials
Ref. Page	B89	B89	B89	B90	B89	B91	B93	B93	C28	C17
Insert / Toolholder	GP	VF	HQ	R/L-F	R/L-FSF	R/L-Y	AH	R/L-A3	PCD	CBN
SVJBR/L..-2... SVJBR/L..-11 SVPBR/L..-11	VBMT22..	VBMT22..	VBMT22..	VBGT22..	VBET22..	VBGT22..	-	-	VBMT22..	VBGW22..
SVJBR/L..-3... SVJBR/L..-16N SVPBR/L..-16N	VBMT33..	VBMT33..	VBMT33..	-	-	VBGT33..	VCGT33..	VCGT33..	VBMT33..	VBGW33..

Recommended Cutting Conditions ➔ **E55**

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● : Standard Item △ : Phaseout Item (will be removed from next catalog)
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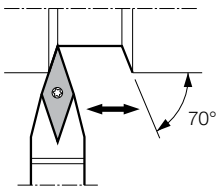
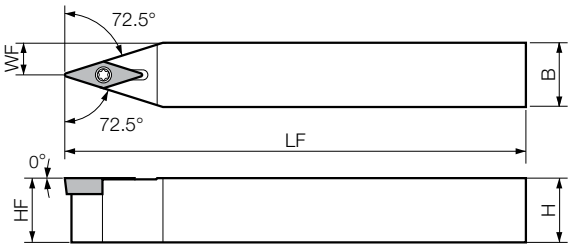
SVVB (External / Copying)





Toolholder Dimensions

Part Number		Stock	Unit	Dimensions H	HF	B	LF	WF	Standard Corner-R(RE)	Spare Parts: Clamp Screw	Wrench	Shim	Shim Screw	Wrench
SVVBN	**6-2JX**	●	inch	0.375	0.375	0.375	4.750	0.187	0.016	SB-2570TR	FT-8	-	-	-
	8-2JX	●		0.500	0.500	0.500	4.750	0.250						
	10-2JX	●		0.625	0.625	0.625	4.750	0.312						
SVVBN	**1010JX-11**	●	mm	10	10	10	120	5.0	0.4	SB-2570TR	FT-8	-	-	-
	1212JX-11	●		12	12	12	120	6.0						
	1616JX-11	●		16	16	16	120	8.0						
SVVBN	**1010F-11**	●		10	10	10	80	5.0	0.4	SB-2570TR	FT-8	-	-	-
	1616H-11	●		16	16	16	100	8.0						
	2020K-11	●		20	20	20	125	10.0						
	2525M-11	●		25	25	25	150	12.5						
SVVBN	**2020K-16N**	●		20	20	20	125	10.0	0.8	SB-40125TRN	FT-15	SVN-32N (SVN-32S)	SS-4N	LW-4
	2525M-16N	●		25	25	25	150	12.5						

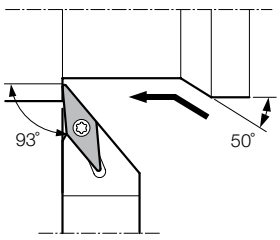
• For insert with corner-R (RE) = 0.008" or 1/64", shim in parenthese is recommended (sold separately)

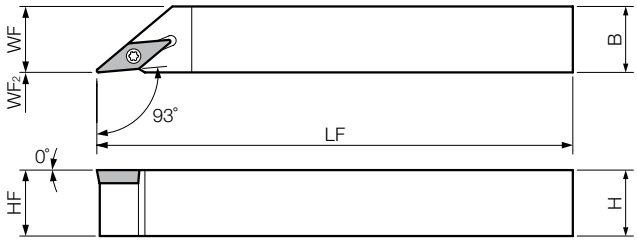
Applicable Inserts

Application	Finishing	Finishing	Finishing-Medium	Finishing	Finishing / Precision	Finishing-Medium	Non-ferrous Metals	Non-ferrous Metals	Non-ferrous Metals	Hard Materials
Ref. Page	B89	B89	B89	B90	B89	B91	B93	B93	C28	C17
Insert / Toolholder	**GP**	**VF**	**HQ**	**R/L-F**	**R/L-FSF**	**R/L-Y**	**AH**	**R/L-A3**	**PCD**	**CBN**
SVVBN..-2JXFF **SVVBN..-11**	VBMT22..	VBMT22..	VBMT22..	VBGT22..	VBET22..	VBGT22..	-	-	VBMT22..	VBGW22..
SVVBN..-16N	VBMT33..	VBMT33..	VBMT33..	-	-	VBGT33..	VCGT33..	VCGT33..	VBMT33..	VBGW33..

Recommended Cutting Conditions ➡ **E55**

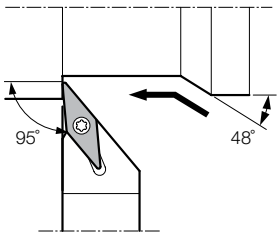
SVJC-FF (Without Offset • External / Copying)

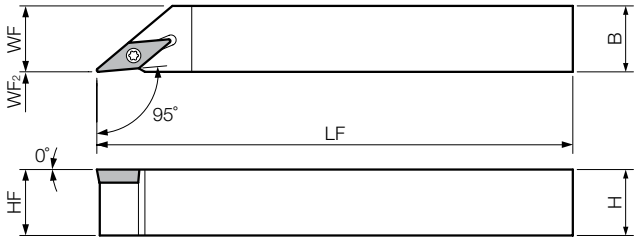




• Right-hand Shown

SVLC-FF (Without Offset • External / Copying)





• Right-hand Shown

Toolholder Dimensions

Part Number		Stock R	Stock L	Unit	Dimensions H	HF	B	LF	WF	WF_2	Standard Corner-R (RE)	Spare Parts: Clamp Screw	Spare Parts: Wrench
SVJC□	1010JX-11FF	●	●	mm	10	10	10	120	10	0	0.2	SB-2570TR	FT-8
	1212F-11FF	●	●		12	12	12	85	12				
	1212JX-11FF	●	●		12	12	12	120	12				
	1616JX-11FF	●	●		16	16	16		16				
	2020JX-11FF	●	●		20	20	20		20				
SVLC□	1212F-11FF	●	●		12	12	12	85	12	0	0.2	SB-2570TR	FT-8
	1212JX-11FF	●	●		12	12	12	120	12				
	1616JX-11FF	●	●		16	16	16		16				

Applicable Inserts

Application	Minute D.O.C.	Finishing	Finishing	Finishing	Finishing-Medium
Ref. Page	B92	B92	B92	B93	B93
Insert / Toolholder	CF	GF	SKS	□-F	□-Y
SVJC□...11FF	VCGT22..	VCGT22..	VCGT22..	VCET22..	VCET22..
SVLC□...11FF					

Recommended Cutting Conditions ➡ **E55**

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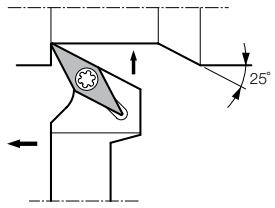
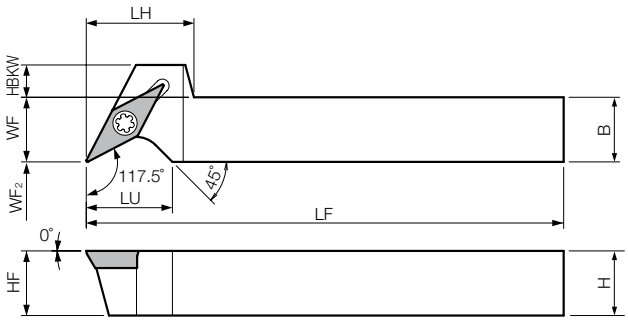
SVPC-FF (Without Offset • External / Facing / Copying / Undercutting)



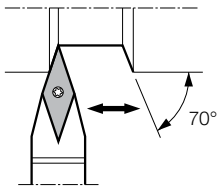


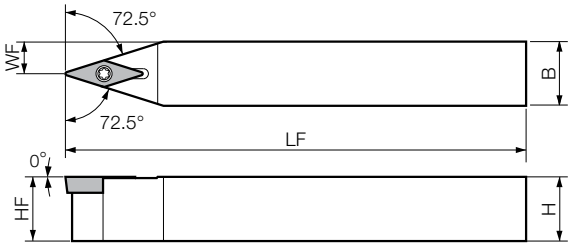
• Right-hand Shown

Toolholder Dimensions

Part Number		Stock		Unit	Dimensions									Standard Corner-R (RE)	Spare Parts	
															Clamp Screw	Wrench
		R	L		H	HF	B	LF	LU	LH	WF	HBKW	WF_2			
SVPCR	**1010JX-11FF**	●		mm	10	10	10	120	16	20	10	8	0	0.2	SB-2570TR	FT-8
	1212F-11FF	●			12	12	12	85	16		12	6				
	1212JX-11FF	●			12	12	12	120	16		12	6				
	1616JX-11FF	●			16	16	16	120	20		16	2				

SVVC (External / Copying)





Toolholder Dimensions

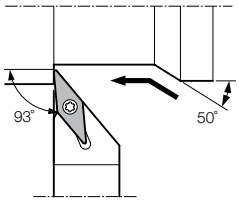
Part Number		Stock	Unit	Dimensions					Standard Corner-R (RE)	Spare Parts	
										Clamp Screw	Wrench
				H	HF	B	LF	WF			
SVVCN	**1010JX-11**	●	mm	10	10	10	120	5	0.2	SB-2570TR	FT-8
	1212JX-11	●		12	12	12		6			
	1616JX-11	●		16	16	16		8			

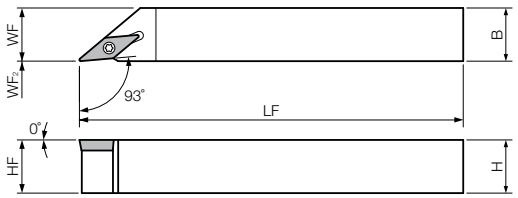
Applicable Inserts

Application	Minute D.O.C.	Finishing	Finishing	Finishing	Finishing-Medium
Ref. Page	B92	B92	B92	B93	B93
Insert / Toolholder	CF	GF	SKS	-F	-Y
					
SVPCR...11FF	VCGT22..	VCGT22..	VCGT22..	VCET22..R-F	VCET22..R-Y
SVVCN...11				VCET22..-F	VCET22..-Y

Recommended Cutting Conditions ➡ **E55**

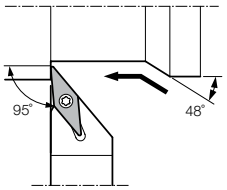
SVJP-FF (Without Offset • External / Copying)

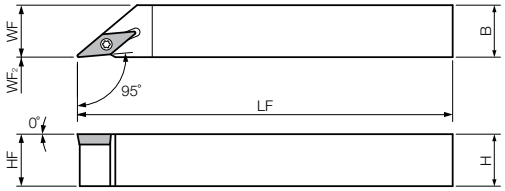




• Right-hand Shown

SVLP-FF (Without Offset • External / Copying)





• Right-hand Shown

Toolholder Dimensions

Part Number		Stock R	Stock L	Unit	Dimensions H	HF	B	LF	LN	WF	WF_2	MHD	MHD2	Standard Corner-R (RE)	Spare Parts: Clamp Screw	Spare Parts: Wrench
SVJP□	8-2JXFF	●	●	inch	0.500	0.500	0.500	4.750	-	0.500	0	-	-	0.008	SB-2570TR	FT-8
	10-2JXFF	●			0.625	0.625	0.625	4.750		0.625						
SVJP□	1212F-11FF	●	●	mm	12	12	12	85	-	12	0	-	-	0.2	SB-2570TR	FT-8
	1212JX-11FF	●	●		12	12	12	120		12						
	1616JX-11FF	●	●		16	16	16	120		16						
	2020JX-11FF	●	●		20	20	20	120		20						
SVLP□	8-2JXFF	●		inch	0.500	0.500	0.500	4.750	-	0.500	0	-	-	0.008	SB-2570TR	FT-8
SVLP□	1010JX-08FF	●	●	mm	10	10	10	120	-	10	0	-	-	0.1	SB-2050TR	FT-6
	1212JX-08FF	●	●		12	12	12	120		12						
	1616JX-08FF	●	●		16	16	16	120		16						
SVLP□	1212JX-11FF	●	●		12	12	12	120	-	12	0	-	-	0.2	SB-2570TR	FT-8
	1616JX-11FF	●	●		16	16	16	120		16						
SVLP□	1212F-08FF	●			12	12	12	85		12	0			0.1	SB-2050TR	FT-6
	1212F-11FF	●			12	12	12	85		12				0.2	SB-2570TR	FT-8

Applicable Inserts

Application	Minute D.O.C.	Finishing	Finishing	Finishing	Finishing / Precision	Low Feed	Low Feed / Precision
Ref. Page	B94	B94	B94	B94	B95	B96	B96
Insert / Toolholder	CF	SKS	CK	GF	□-FSF	F□-U	F□-USF
SVLP□...-15JXFF SVLP□...-08FF	-	-	VPGT1515..	-	VPET1515..	-	VPET1515..
SVJP□...-2JXFF SVJP□...-11FF SVLP□...-2JXFF SVLP□...-11FF	VPGT22..	VPGT22..	VPGT22..	VPGT22..	VPET22..	VPET22..	VPET22..

Recommended Cutting Conditions E55

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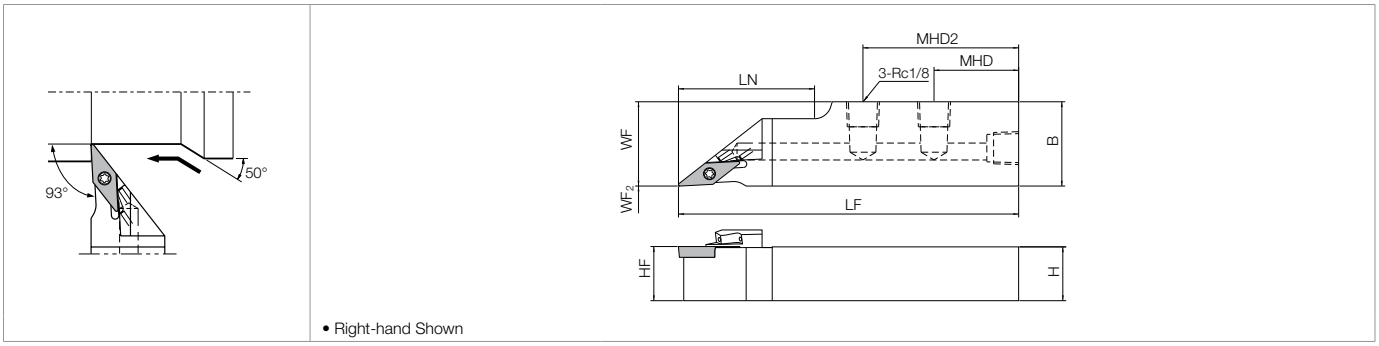
SVJP-FFJCT (Without Offset • External / Copying, Jet Coolant-Through)

SVJP-FFJCT holders are being phased out. Switch to new SVJP-FFJCTM style below.



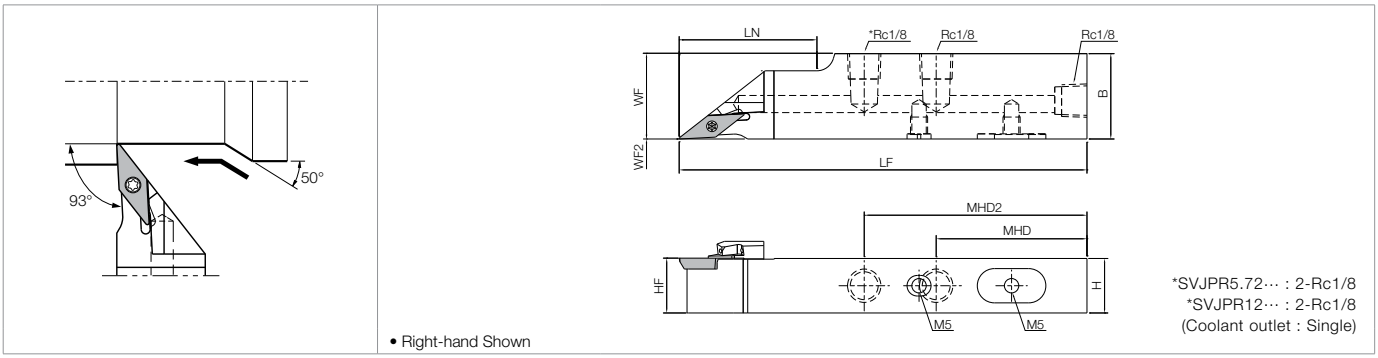
• Right-hand Shown

Toolholder Dimensions

Coolant Connections and Pipe Parts ➡ **H14-H15**

Part Number	Stock R	Stock L	Unit	H	HF	B	LF	LN	WF	WF_2	MHD	MHD2	Standard Corner-R (RE)	Spare Parts: Clamp Screw	Spare Parts: Wrench	Spare Parts: Plug
SVJPR 1220H-11FFJCT	△		mm	12	12	20	100	28	20	0	35	-	0.2	SB-2570TR	FT-8	GP-1
SVJPR 1625H-11FFJCT	△		mm	16	16	25	100	40	25	0	25	46	0.2	SB-2570TR	FT-8	GP-1
SVJPR 2025H-11FFJCT	△		mm	20	20	25	100	40	25	0	25	46	0.2	SB-2570TR	FT-8	GP-1

SVJP-FFJCTM (Without Offset • External / Copying, Direct from Turret Jet Coolant-Through) NEW



• Right-hand Shown

*SVJPR5.72··· : 2-Rc1/8
*SVJPR12··· : 2-Rc1/8
(Coolant outlet : Single)

Toolholder Dimensions

Coolant Connections and Pipe Parts ➡ **H18-H19**

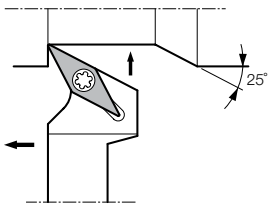
Part Number	Stock R	Stock L	Unit	H	HF	B	LF	LN	WF	WF_2	MHD	MHD2	Standard Corner-R (RE)	Spare Parts: Clamp Screw	Spare Parts: Wrench	Spare Parts: Plug 1	Spare Parts: Plug 2
SVJPR 5.72-2FFJCTM	●		inch	0.500	0.500	0.708	4.750	1.110	0.708	0	2.150	-	0.008	SB-2570TR	FT-8	GP-1	HS5X4LP
82.5-2FFJCTM	●		inch	0.625	0.625	1.000		1.585	1.000		1.730	2.560					
SVJPR 1218JX-11FFJCTM	●		mm	12	12	18	120	28	18	0	54	-	0.2	SB-2570TR	FT-8	GP-1	HS5X4LP
1625JX-11FFJCTM	●		mm	16	16	25		40	25		44	65					
2025JX-11FFJCTM	●		mm	20	20												-

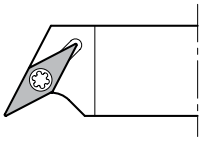
Applicable Inserts

Application	Minute D.O.C.	Finishing	Finishing	Finishing	Finishing / Precision	Low Feed	Low Feed / Precision
Ref. Page	➡ B94	➡ B94	➡ B94	➡ B94	➡ B95	➡ B96	➡ B96
Insert / Toolholder	CF	SKS	CK	GF	R%-FSF	F R%-U	F R%-USF
SVJPR...-11FFJCT SVJPR...-2FFJCTM SVJPR...-11FFJCTM	VPGT22..	VPGT22..	VPGT22..	VPGT22..	VPET22..	VPET22..	VPET22..

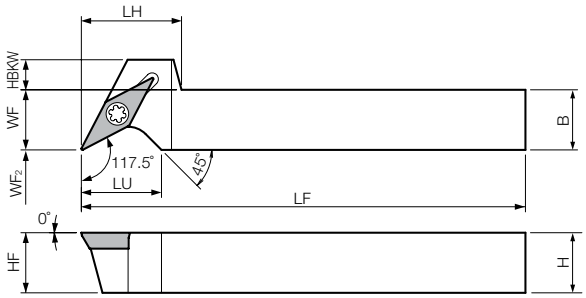
Recommended Cutting Conditions ➡ **E55**

SVPP-FF (Without Offset • External / Facing / Copying / Undercutting)





SVPPR10-15JXFF
SVPPR1616..-08FF
shown above



• Right-hand Shown

Toolholder Dimensions

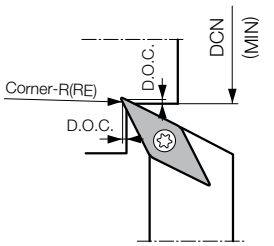
Part Number		Stock	Unit	Dimensions									Standard Corner-R(RE)	Spare Parts	
				H	HF	B	LF	LU	LH	WF	HBKW	WF_2		Clamp Screw	Wrench
SVPPR	**8-15JXFF**	●	inch	0.500	0.500	0.500	4.750	0.551	0.630	0.500	0.051	0	0.004	SB-2050TR	FT-6
SVPPR	**8-2JXFF**	●		0.500	0.500	0.500	4.750	0.630	0.787	0.500	0.209	0		SB-2570TR	FT-8
	10-2JXFF	●		0.625	0.625	0.625	4.750	0.787	0.787	0.625	0.084	0			
SVPPR	**1010JX-08FF**	●	mm	10	10	10	120	12	16	10.0	4	0	0.1	SB-2050TR	FT-6
	1212JX-08FF	●		12	12	12	120	12	16	12.0	2	0			
	1616JX-08FF	●		16	16	16	120	12	-	16.0	-	0			
SVPPR	**1010JX-11FF**	●		10	10	10	120	16	20	10.0	8	0	0.2	SB-2570TR	FT-8
	1212JX-11FF	●		12	12	12	120	16	20	12.0	6	0			
	1616JX-11FF	●		16	16	16	120	16	20	16.0	2	0			
SVPPR	**1212F-08FF**	●		12	12	12	85	12	16	12.0	2	0	0.1	SB-2050TR	FT-6
	1212F-11FF	●		12	12	12	85	16	20	12.0	6	0	0.2	SB-2570TR	FT-8

Applicable Inserts

Application	Minute D.O.C.	Finishing	Finishing	Finishing	Finishing / Precision	Low Feed	Low Feed / Precision
Ref. Page	B94	B94	B94	B94	B95	B96	B96
Insert / Toolholder	**CF**	**SKS**	**CK**	**GF**	**-FSF**	**F-U**	**F-USF**
SVPPR...-15JXFF **SVPPR...-08FF**	-	-	VPGT1515..	-	VPET1515..	-	VPET1515..
SVPPR...-2JXFF **SVPPR...-11FF**	VPGT22..	VPGT22..	VPGT22..	VPGT22..	VPET22..	VPET22..	VPET22..

Recommended Cutting Conditions **E55**

Undercutting Diameter of SVPP-FF



(in)

Corner-R (RE)	D.O.C.	DCN (MIN)
0.008	0.020	Ø0.787
	0.039	Ø0.984

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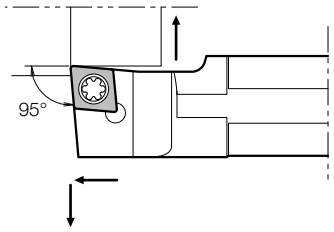
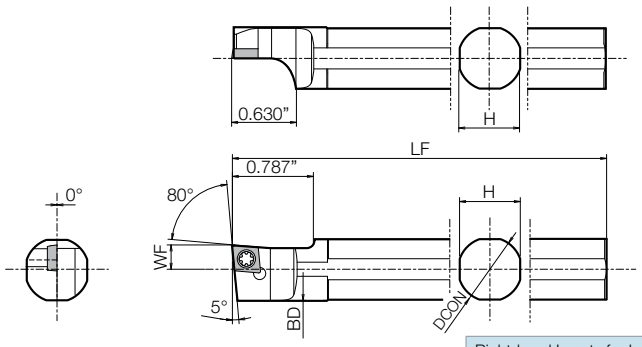
S...SCLC (External / Facing)





• Left-hand Shown

Right-hand Inserts for Left-hand Toolholders.

Toolholder Dimensions

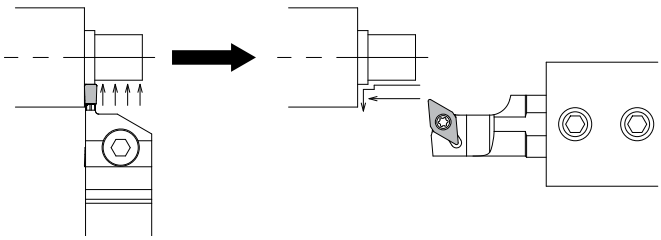
Part Number	Stock	Unit	Dimensions					Standard Corner-R(RE)	Spare Parts	
			DCON	LF	WF	BD	H		Clamp Screw	Wrench
S15F -SCLCL06	●	inch	0.625	3.346	0.236	0.606	0.590	0.016	SB-2570TR	FT-8
S19G -SCLCL06	●		0.750	3.543	0.236	0.724	0.669			
S19K -SCLCL06	●		0.750	4.724	0.236	0.724	0.669			
S19G -SCLCL09	●		0.750	3.543	0.393	0.724	0.669	0.016	SB-4065TR	FT-5
S19K -SCLCL09	●		0.750	4.724	0.393	0.724	0.669			
S25K -SCLCL09	●		1.000	4.724	0.393	0.976	0.905			
S12F -SCLCL06	●	mm	12	80	6	13.4	11	0.4	SB-2560TR	FT-8
S14H -SCLCL06	●		14	100	6	13.4	13			
S16F -SCLCL06	●		16	85	6	15.4	15	0.4	SB-2570TR	
S20G -SCLCL06	●		20	90	6	19.4	18			
S20K -SCLCL06	●		20	120	6	19.4	18			
S20G -SCLCL09	●		20	90	10	19.4	18	0.4	SB-4065TR	FT-15
S20K -SCLCL09	●		20	120	10	19.4	18			
S25.0H -SCLCL09	●		25	100	10	24.4	23			

Applicable Inserts

Application	Finishing	Finishing	Finishing-Medium	Low Feed	Stainless Steel	Cast Iron	Non-ferrous Metals	Non-ferrous Metals	Non-ferrous Metals	Hard Materials
Ref. Page	B53	B53	B54	B58, B59	B55	B60	B60	B60	C24	C14
Insert / Toolholder	SKS	SK	GK	(E/F)R-U	MQ	No Chipbreaker	AH	R-A3	PCD	CBN
S...SCLCL06	CCGT215..	CCGT215..	CCMT215..	CCGT215..	-	CCGW215..	-	-	CCMT215.. CCGW215..	CCMW215..
S...SCLCL09	CCGT325..	CCGT325..	CCMT325..	CCGT325..	CCMT325..	CCGW325..	CCGT325..	CCGT325..	CCMT325.. CCGW325..	CCMW325..

Recommended Cutting Conditions E55

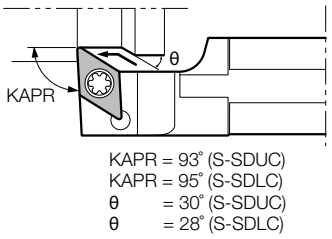
Finishing with Sleeve Holder



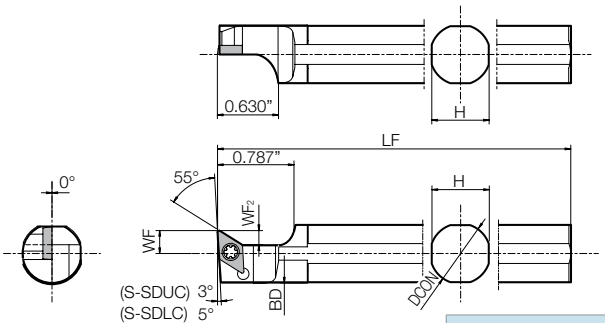
1) Roughing by grooving toolholder

2) Finishing by Sleeve Holder improves chip control and reduces cutting time

S...SDUC (External / Copying) / S...SDLC (External / Copying)



KAPR = 93° (S-SDUC)
KAPR = 95° (S-SDLC)
θ = 30° (S-SDUC)
θ = 28° (S-SDLC)



• Left-hand Shown

Right-hand Inserts for Left-hand Toolholders.

Toolholder Dimensions

Part Number	Stock	Unit	Dimensions						Standard Corner-R (RE)	Spare Parts	
			DCON	LF	WF	BD	H	WF_2		Clamp Screw	Wrench
S15F -SDUCL07	●	inch	0.625	3.346	0.236	0.606	0.590	0.150	1/64	SB-2560TR	FT-8
S19G -SDUCL07	●		0.750	3.543	0.236	0.724	0.669	0.150			
S19K -SDUCL07	●		0.750	4.724	0.236	0.724	0.669	0.150			
S19G -SDUCL11	●		0.750	3.543	0.393	0.724	0.669	0.228	1/64	SB-4085TR	FT-15
S19K -SDUCL11	●		0.750	4.724	0.393	0.724	0.669	0.228			
S25K -SDUCL11	●		1.000	4.724	0.393	0.976	0.905	0.228			
S15F -SDLCL07	●		0.625	3.346	0.236	0.606	0.590	0.150	1/64	SB-2560TR	FT-8
S19G -SDLCL07	●		0.750	3.543	0.236	0.724	0.669	0.150			
S19K -SDLCL07	●		0.750	4.724	0.236	0.724	0.669	0.150			
S19G -SDLCL11	●		0.750	3.543	0.393	0.724	0.669	0.228	1/64	SB-4085TR	FT-15
S19K -SDLCL11	●		0.750	4.724	0.393	0.724	0.669	0.228			
S25K -SDLCL11	●		1.000	4.724	0.393	0.976	0.905	0.228			
S14H -SDUCL07	●	mm	14	100	6	13.4	13	3.8	0.4	SB-2560TR	FT-8
S20G -SDUCL07	●		20	90	6	19.4	18	3.8			
S20K -SDUCL07	●		20	120	6	19.4	18	3.8			
S20G -SDUCL11	●		20	90	10	19.4	18	5.8	0.4	SB-4085TR	FT-15
S20K -SDUCL11	●		20	120	10	19.4	18	5.8			
S22K -SDUCL11	●		22	120	10	21.4	20	5.8			
S25.0H -SDUCL11	●		25	100	10	24.4	23	5.8			
S12F -SDLCL07	●		12	80	6	13.4	11	3.8	0.4	SB-2560TR	FT-8
S14H -SDLCL07	●		14	100	6	13.4	13	3.8			
S16F -SDLCL07	●		16	85	6	15.4	15	3.8			
S20G -SDLCL07	●		20	90	6	19.4	18	3.8			
S20K -SDLCL07	●		20	120	6	19.4	18	3.8			
S20G -SDLCL11	●		20	90	10	19.4	18	5.8	0.4	SB-4085TR	FT-15
S20K -SDLCL11	●		20	120	10	19.4	18	5.8			
S22K -SDLCL11	●		22	120	10	21.4	20	5.8			
S25.0H -SDLCL11	●		25	100	10	24.4	23	5.8			

Applicable Inserts

Application	Minute D.O.C.	Finishing	Finishing	Finishing	Finishing	Finishing-Medium	Finishing-Medium	Finishing	Finishing / Precision	Low Feed
Ref. Page	B62	B63	B63	B63	B63	B64	B63	B67	B66	B68, B69
Insert / Toolholder	**CF**	**SKS**	**SK**	**WP** (Wiper)	**PP**	**GK**	**GQ**	**R-F**	**R-FSF**	**(E/F) R-U**
S...SD□CL07	DCGT215..	DCGT215..	DCGT215..	DCMX215..	DCMT215..	DCMT215..	DCGT215..	DCGT215..	DCET215..	DCGT215..
S...SD□CL11	DCGT325..	DCGT325..	DCGT325..	DCMX325..	DCMT325..	DCMT325..	DCGT325..	DCGT325..	DCET325..	DCGT325..
Application	Low Feed / Precision	Low Feed	Low Carbon Steel / Finishing	Low Carbon Steel/ Finishing-Medium	Stainless Steel	Cast Iron	Non-ferrous Metals	Non-ferrous Metals	Non-ferrous Metals	Hard materials
Ref. Page	B68	B70, B71	B65	B65	B65	B71	B71	B71	C25	C15
Insert / Toolholder	**FR-USF**	**(E/F)R-J**	**XP**	**XQ**	**MQ**	**Without Chipbreaker**	**AH**	**R-A3**	**PCD**	**CBN**
S...SD□CL07	DCET215..	DCET215..	DCMT215..	-	DCMT215..	DCGW215..	-	-	DCMT215..	DCMW215..
S...SD□CL11	DCET325..	DC_T325..	DCMT325..	DCMT325..	DCMT325..	DCGW325..	DCGT325..	DCGT325..	DCMT325..	DCMW325..

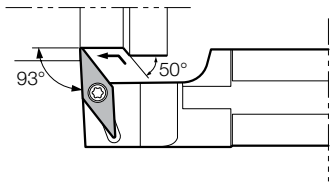
When using **WP** chipbreaker, program corrections are required. (S...SDLC type cannot be used) R51

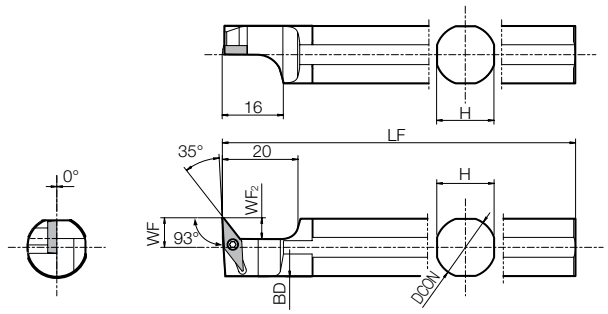
Recommended Cutting Conditions E55

(Customer Service) 800.823.7284 - Option 1
(Technical Support) 800.823.7284 - Option 2
Visit us online at KyoceraPrecisionTools.com

● : Standard Item □ : Made to Order △ : Phaseout Item (will be removed from next catalog)
Contact your local Kyocera sales engineer to upgrade old products to new technology

S...SVUB(C) (External / Copying)





• Left-hand Shown

Right-hand Inserts for Left-hand Toolholders.

Toolholder Dimensions

Part Number	Stock	Unit	Dimensions						Standard Corner-R (RE)	Spare Parts	
			DCON	LF	WF	BD	H	WF_2		Clamp Screw	Wrench
S15F -SVUCL08	●	inch	0.625	3.346	0.315	0.606	0.591	0.217	1/64	SB-2050TR	FT-6
S19G -SVUCL11	●		0.750	3.543	0.413	0.724	0.669	0.315	0.008	SB-2570TR	FT-8
S19K -SVUCL11	●		0.750	4.724	0.413	0.724	0.669	0.315			
S25K -SVUCL11	●		1.000	4.724	0.413	0.976	0.906	0.315			
S19K -SVUBL11	●		0.750	4.724	0.413	0.724	0.669	0.315	1/64	SB-2570TR	FT-8
S25K -SVUBL11	●		1.000	4.724	0.413	0.976	0.906	0.315			
S12F -SVUCL08	●	mm	12	80	7.5	13.4	11	5.5	0.4	SB-2050TR	FT-6
S14H -SVUCL08	●		14	100	7.5	13.4	13	5.5			
S16F -SVUCL08	●		16	85	8	15.4	15	5.5			
S20G -SVUCL11	●		20	90	10.5	19.4	18	8	0.2	SB-2570TR	FT-8
S20K -SVUCL11	●		20	120	10.5	19.4	18	8			
S25.0H -SVUCL11	●		25	100	10.5	24.4	23	8			
S20G -SVUBL11	●		20	90	10.5	19.4	18	8	0.4	SB-2570TR	FT-8
S20K -SVUBL11	●		20	120	10.5	19.4	18	8			
S25.0H -SVUBL11	●		25	100	10.5	24.4	23	8			

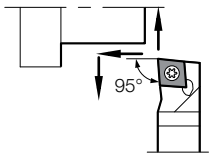
Applicable Inserts

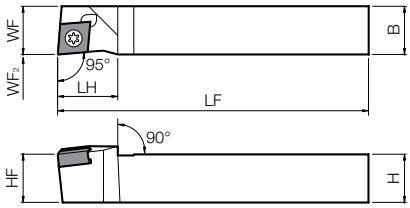
Application	Minute D.O.C.	Finishing	Finishing	Finishing	Finishing	Finishing-Medium	Finishing	Finishing / Precision	Finishing-Medium
Ref. Page	B92	B92	B92	B89	B89, B92	B89, B92	B90, B93	B89	B91, B93
Insert / Toolholder	**CF**	**GF**	**SKS**	**GP**	**VF**	**HQ**	**R-F**	**R-FSF**	**R-Y**
S...SVUCL08	-	-	-	-	VCMT1515..	VCMT1515..	-	-	-
S...SVUBL11	-	-	-	VBMT22..	VBMT22..	VBMT22..	VBGT22..	VBET22..	VBGT22..
S...SVUCL11	VCGT22..	VCGT22..	VCGT22..	-	-	-	VCET22..	-	VCET22..

Application	Non-ferrous Metals	Hard Materials
Ref. Page	C28	C17
Insert / Toolholder	**PCD**	**CBN**
S...SVUCL08	VCMT1515..	VCGW1515..
S...SVUBL11	VBMT22..	VBGW22..
S...SVUCL11	-	-

Recommended Cutting Conditions **E55**

SCLN (Without Offset • External / Facing)





Side Rake Angle : - 6°
Inclination Angle : - 6°

• Right-hand Shown

Toolholder Dimensions

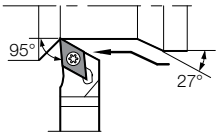
Part Number	Stock	Unit	Dimensions H	HF	B	LF	LH	WF	WF_2	Standard Corner-R (RE)	Spare Parts: Clamp Screw	Spare Parts: Wrench	Applicable Inserts
SCLNR 6-2.4FF	●	inch	0.375	0.375	0.375	6.00	0.590	0.375	0	0.008	SB-3080TR	LTW-10SS	CNGU242.. CNMU242..
8-2.4DF	●		0.500	0.500	0.500	6.00	0.590	0.500	0				
10-2.4CF	●		0.625	0.625	0.625	5.00	0.590	0.625	0				
SCLNR 1010K-07FF	●	mm	10	10	10	120	15	10	0	0.2	SB-3080TR	LTW-10SS	CNGU242.. CNMU242..
1212F-07FF	●		12	12	12	85	15	12	0				
1212K-07FF	●		12	12	12	120	15	12	0				
1616K-07FF	●		16	16	16	120	15	16	0				

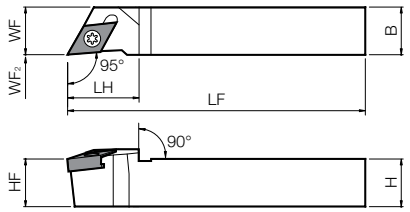
Applicable Inserts

Application	Finishing-Medium	Medium-Roughing	Finishing	Low Feed
Ref. Page	B50	B50	B50	B50
Insert / Toolholder	SK	GK	FR-F	(F/E)R-U
SCLNR...-2.4... SCLNR...-07FF	CNGU242..	CNMU242..	CNGU242..	CNGU242..

Recommended Cutting Conditions **E49**

SDLN (Without Offset • External / Copying)





Side Rake Angle : - 6°
Inclination Angle : - 7°

• Right-hand Shown

Toolholder Dimensions

Part Number	Stock	Unit	Dimensions H	HF	B	LF	LH	WF	WF_2	Standard Corner-R (RE)	Spare Parts: Clamp Screw	Spare Parts: Wrench	Applicable Inserts
SDLNR 6-2.2FF	●	inch	0.375	0.375	0.375	6.00	0.708	0.375	0	0.008	SB-3080TR	LTW-10SS	DNGU222.. DNMU222..
8-2.2DF	●		0.500	0.500	0.500	6.00	0.708	0.500	0				
10-2.2CF	●		0.625	0.625	0.625	5.00	0.708	0.625	0				
SDLNR 1010K-08FF	●	mm	10	10	10	120	18	10	0	0.2	SB-3080TR	LTW-10SS	DNGU222.. DNMU222..
1212F-08FF	●		12	12	12	85	18	12	0				
1212K-08FF	●		12	12	12	120	18	12	0				
1616K-08FF	●		16	16	16	120	18	16	0				

Applicable Inserts

Application	Finishing-Medium	Medium-Roughing	Finishing	Low Feed
Ref. Page	B51	B51	B51	B51
Insert / Toolholder	SK	GK	FR-F	(F/E)R-U
SDLNR...2.2... SDLNR...-08FF	DNGU222..	DNMU222..	DNGU222..	DNGU222..

Recommended Cutting Conditions **E49**

(Customer Service) **800.823.7284 - Option 1**
(Technical Support) **800.823.7284 - Option 2**
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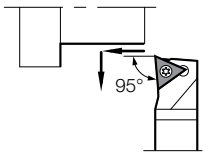
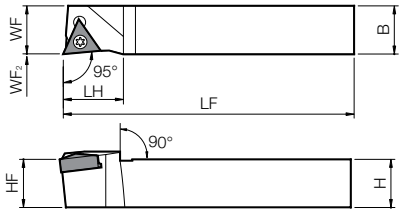
● : Standard Item △ : Phaseout Item (will be removed from next catalog)
Contact your local Kyocera sales engineer to upgrade old products to new technology

STLN (Without Offset • External / Up Facing)





Side Rake Angle : - 6°
Inclination Angle : - 7°

• Right-hand Shown

Toolholder Dimensions

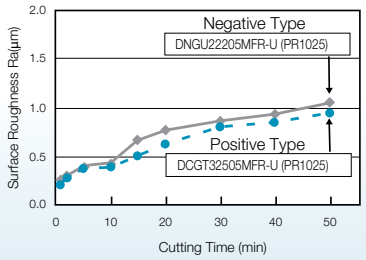
Part Number		Stock	Unit	Dimensions							Standard Corner-R (RE)	Spare Parts		Applicable Inserts
				H	HF	B	LF	LH	WF	WF_2		Clamp Screw	Wrench	
STLNR	6-1.8FF	●	inch	0.375	0.375	0.375	6.00	0.590	0.375	0	0.008	SB-2570TR	LTW-8SS	TNGU182..
	8-1.8DF	●		0.500	0.500	0.500	6.00	0.590	0.500	0				
STLNR	1010K-09FF	●	mm	10	10	10	120	15	10	0	0.2	SB-2570TR	LTW-8SS	TNGU182..
	1212F-09FF	●		12	12	12	85	15	12	0				
	1212K-09FF	●		12	12	12	120	15	12	0				
	1616K-09FF	●		16	16	16	120	15	16	0				

Applicable Inserts

Application	Finishing	Low Feed
Ref. Page	B52	B52
Insert / Toolholder	FR-F	(E/F)R-U
STLNR...1.8... STLNR...-09FF	TNGU182..	TNGU182..

Double-sided design allows both edges to be used. Compared to the positive type, the double-sided design offers less cost per insert and more stability.

Surface roughness comparison (Sharp edge)

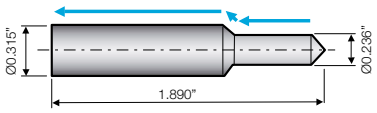


<Cutting Conditions>
Workpiece Material : 1045 Steel Vc = 325 sfm, D.O.C. = 0.059", f = 0.0012 ipr, Wet

(Internal Evaluation)

Case Studies

303 Stainless Steel



<Spool <0.236" Dia. portion>
• Vc = 225 sfm
• D.O.C. = 0.049"
• f = 0.001 ipr
• Wet
<0.315" Dia. portion>
• Vc = 425 sfm
• D.O.C. = 0.001"
• f = 0.001 ipr
• Wet

Required Surface 0.8μmRa

DNGU22205MF-SK (PR1025)	60,000 pcs/Insert (4 edges)
Competitor D (DCGT)	20,000 pcs/Insert (2 edges)

Competitor D (DCGT) machined 10,000 pcs/edge. PR1025 machined 15,000 pcs/edge resulting in 3 times longer tool life per insert.

(User Evaluation)

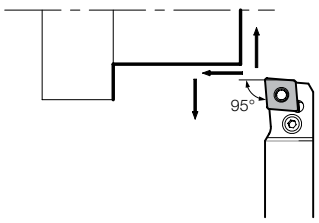
Recommended Cutting Conditions

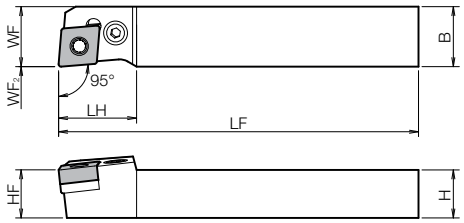
Workpiece Material	PR1225	PR1535	PR1705	PR1725
Free-Cutting Steel	-	-	● Vc=330sfm (200~490)	◔ Vc=330sfm (200~490)
Carbon Steel / Alloy Steel	◔ Vc=330sfm (200~500)	◔ Vc=330sfm (200~490)	◔ Vc=430sfm (200~720)	● Vc=430sfm (200~660)
Stainless Steel	◔ Vc=260sfm (160~490)	◔ Vc=330sfm (200~590)	-	◔ Vc=330sfm (260~490)

● : Continuous to Light interruption / 1st Recommendation
◔ : Continuous to Light interruption / 2nd Recommendation

● : Standard Item △ : Phaseout Item (will be removed from next catalog)
Contact your local Kyocera sales engineer to upgrade old products to new technology

PCLN-FF (Without Offset • External / Facing)





Side Rake Angle : - 6°
Inclination Angle : - 6°

• Right-hand Shown

Toolholder Dimensions

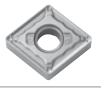
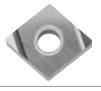
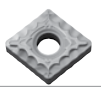
Part Number		Stock	Dimensions (mm)							Standard Corner-R (RE)	Spare Parts					
			H	HF	B	LF	LH	WF	WF_2		Lever	Lock Screw	Shim	Shim Pin	Punch	Wrench
PCLNR	**1620JX-12FF**	●	16	16	20	120	26	20	0	0.8	LL-2N	LS-2N	LC-42N	LSP-2	PC-2	LW-3
	2020JX-12FF	●	20	20												

Applicable Inserts (1st Recommendation)

Application	Finishing-Medium	Medium-Roughing
Ref. Page	B19	B19
Insert / Toolholder	**FP-SK** 	**FP-TK** 
PCLNR...-12FF	CNGG43..FP-SK	CNGG43..FP-TK

Recommended Cutting Conditions ➡ **E49**

Applicable Inserts (CN□□ Optional)

Application	Finishing	Finishing-Medium	Finishing	Finishing-Medium	Finishing-Medium	Finishing-Medium	Medium-Roughing	Medium-Roughing	Medium-Roughing	Medium-Roughing / High Feed Rate
Insert	**WF** (Wiper) 	**WE** (Wiper) 	**PP** 	**PQ** 	**CQ** 	**CJ** 	**GS** 	**PG** 	**PS** 	**PT** 
Size	43..	43..	43..	43..	43..	43..	43..	43..	43..	43..
Ref. Page	B16	B16	B16	B16	B17	B17	B17	B17	B17	B18
Application	Roughing	Roughing	Single Sided / Roughing / High Feed Rate	Finishing	Medium	Soft Steel / Small D.O.C.	Soft Steel / Finishing	Soft Steel / Medium	Soft Steel / Roughing	Stainless Steel / Finishing
Insert	**Standard** 	**PH** 	**PX** 	**R/L-S** 	**R/L** 	**XF** 	**XP** 	**XQ** 	**XS** 	**MQ** 
Size	43..	43..	43..	-	43..	43..	43..	43..	43..	43..
Ref. Page	B18	B18	B19	-	B22	B19	B19	B19	B19	B20
Application	Stainless Steel / Medium-Roughing	Stainless Steel / Medium-Roughing	Cast Iron	Cast Iron	Cast Iron	Cast Iron	Cast Iron	Cast Iron	Cast Iron	Cast Iron
Insert	**MS** 	**MU** 	**KQ** 	**KG** 	**KH** 	**C** 	**ZS** 	**GC** 	**Without Chipbreaker** 	**Ceramic** 
Size	43..	43..	43..	43..	43..	43..	43..	43..	43..	43..
Ref. Page	B20	B20	B21	B21	B21	B21	B21	B21	B21	B108
Application	Non-ferrous Metals	Non-ferrous Metals	Non-ferrous Metals	Heat-Resistant Alloys	Heat-Resistant Alloy Roughing	Heat-Resistant Alloy Roughing	Hard Materials			
Insert	**A3** 	**AH** 	**PCD** 	**SQ** 	**SG** 	**R/L-SX** 	**CBN**			
Size	43..	43..	43..	43..	43..	43..	43..			
Ref. Page	B22	B22	C23	B20	B20	B21	C6, C7			

(Customer Service) **800.823.7284 - Option 1**
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● : Standard Item △ : Phaseout Item (will be removed from next catalog)
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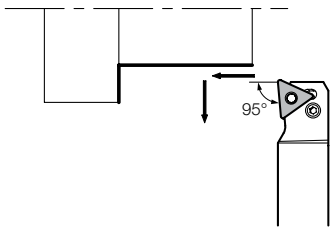
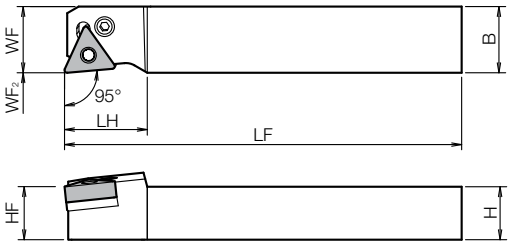
PTLN-FF (Without Offset • External / Up Facing)





Side Rake Angle : - 6°
Inclination Angle : - 6°

• Right-hand Shown

Toolholder Dimensions

Part Number		Stock	Dimensions (mm)							Standard Corner-R (RE)	Spare Parts					
			H	HF	B	LF	LH	WF	WF_2		Lever	Lock Screw	Shim	Shim Pin	Punch	Wrench
PTLNR	**1620JX-16FF**	●	16	16	20	120	24	20	0	0.8	LL-1N	LS-1N	LT-32N ※LT-32N-20	LSP-1	PC-1	FH-2.5
	2020JX-16FF	●	20	20												

※ When using inserts whose corner R (RE) is greater than 1/16", please purchase and use **LT-32N-20** shim to prevent workpiece and shim interference

Applicable Inserts (1st Recommendation)

Application	Finishing-Medium	Medium-Roughing	Large D.O.C.
Ref. Page	B38	B39	B38
Insert / Toolholder	**FP-SK**	**FP-TK**	**R-LD**
PTLNR...-16FF	TNGG33..FP-SK	TNGG33..FP-TK	TNMG33..R-LD

Recommended Cutting Conditions **E49**

Applicable Inserts (TN□□ Optional)

Application	Finishing	Finishing-Medium	Finishing-Medium	Medium-Roughing	Medium-Roughing	Medium-Roughing	Medium-Roughing / High Feed Rate	Medium-Roughing / High Feed Rate	Medium-Roughing	Single Sided / Roughing / High Feed	Roughing
Insert	**PP**	**PQ**	**CQ**	**GS**	**PG**	**PS**	**PT**	**GT**	**PH**	**PX**	**Standard**
Size	33..	33..	33..	33..	33..	33..	33..	33..	33..	33..	33..
Ref. Page	B36	B36	B36	B36	B36	B37	B37	B37	B37	B38	B37
Application	Finishing	Finishing-Roughing	Medium-Roughing Low Cutting Force	Soft Steel / Small D.O.C.	Soft Steel / Finishing	Soft Steel / Medium	Soft Steel / Roughing	Stainless Steel / Finishing	Stainless Steel / Medium-Roughing	Stainless Steel / Medium-Roughing	Heat-Resistant Alloy Roughing
Insert	**R-S**	**R-□**	**R-25R**	**XF**	**XP**	**XQ**	**XS**	**MQ**	**MS**	**MU**	**SG**
Size	33..	33..	33..	33..	33..	33..	33..	33..	33..	33..	33..
Ref. Page	B42	B42, B43	B43	B38	B38	B38	B38	B39	B39	B39	B39
Application	Cast Iron	Cast Iron	Cast Iron	Cast Iron	Cast Iron	Non-ferrous Metals	Non-ferrous Metals	Non-ferrous Metals	Hard Materials		
Insert	**KQ**	**KG**	**KH**	**ZS**	**Ceramic**	**R-A3**	**AH**	**PCD**	**CBN**		
Size	33..	33..	33..	33..	33..	33..	33..	33..	33..		
Ref. Page	B40	B40	B40	B40	B113	B41	B41	C23	C10, C11		

KSTB...CCET

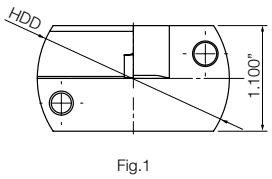


Fig.1

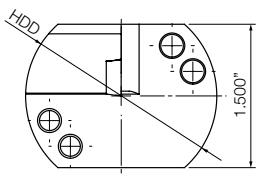
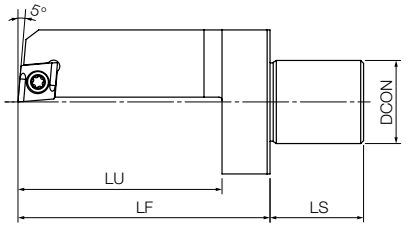


Fig.2



Toolholder Dimensions

Part Number	Stock	Dimensions (in)					Drawing	Spare Parts		Applicable Inserts ➔ B53~B60		Reference Machine
		DCON	HDD	LF	LU	LS		Clamp Screw	Wrench			
KSTB SR16/20 CCET215	●	0.866	2.000	2.250	1.875	1.073	Fig.1	SB-2560TR	FT-8	CCET CCGT	215	SR16, SR20
KSTB SR16/20 CCET325	●	0.866	2.000	2.250	1.875	1.073	Fig.1	SB-4085TR	FT-15		325	SR16, SR20
KSTB SR32J CCET325	●	0.866	2.000	2.625	2.125	0.980	Fig.2	SB-4085TR	FT-15		325	SR32J

KSTB...DCET

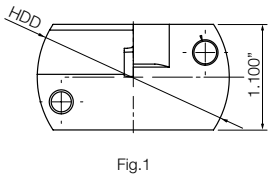


Fig.1

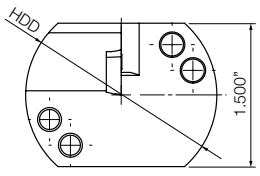
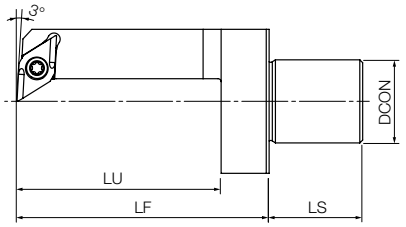


Fig.2



Toolholder Dimensions

Part Number	Stock	Dimensions (in)					Drawing	Spare Parts		Applicable Inserts ➔ B62~B71		Reference Machine
		DCON	HDD	LF	LU	LS		Clamp Screw	Wrench			
KSTB SR16/20 DCET215	●	0.866	2.000	2.250	1.875	1.073	Fig.1	SB-2560TR	FT-8	DCET DCGT	215	SR16, SR20
KSTB SR16/20 DCET325	●	0.866	2.000	2.250	1.875	1.073	Fig.1	SB-4085TR	FT-15		325	SR16, SR20
KSTB SR32J DCET325	●	0.866	2.000	2.625	2.125	0.980	Fig.2	SB-4085TR	FT-15		325	SR32J

KSTB...VBET

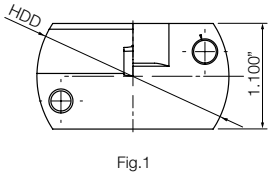


Fig.1

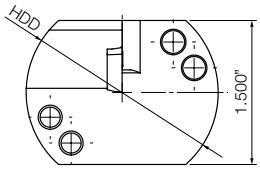
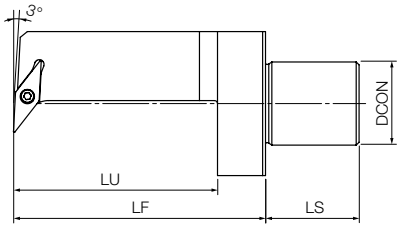


Fig.2



Toolholder Dimensions

Part Number	Stock	Dimensions (in)					Drawing	Spare Parts		Applicable Inserts ➔ B89~B90		Reference Machine
		DCON	HDD	LF	LU	LS		Clamp Screw	Wrench			
KSTB SR16/20 VBET22	●	0.866	2.000	2.250	1.875	1.073	Fig.1	SB-2570TR	FT-8	VBET	22	SR16, SR20
KSTB SR32J VBET22	●	0.866	2.000	2.625	2.125	0.980	Fig.2	SB-2570TR	FT-8		22	SR32J

Note: All KSTB holders are right-hand, which require neutral or left-hand inserts

● : Standard Item △ : Phaseout Item (will be removed from next catalog)
Contact your local Kyocera sales engineer to upgrade old products to new technology

KSTB...TGF

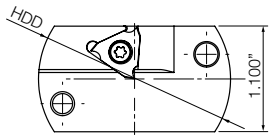


Fig.1

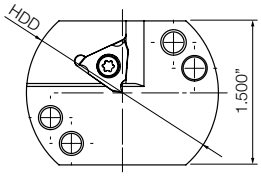
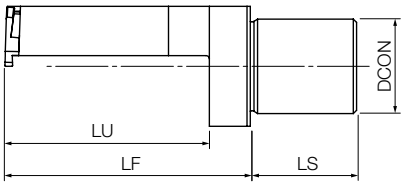


Fig.2



Toolholder Dimensions

Part Number	Stock	Dimensions (in)					Drawing	Spare Parts		Applicable Inserts	Reference Machine
		DCON	HDD	LF	LU	LS		Clamp Screw	Wrench		
KSTB SR16/20 TGF32	●	0.866	2.000	2.250	1.875	1.073	Fig.1	SB-4070TRS	FT-10	TGF32L..	SR16, SR20
KSTB SR32J TGF32	●	0.866	2.000	2.625	2.125	0.980	Fig.2	SB-4070TRS	FT-10		SR32J

KSTB...TT

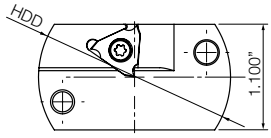


Fig.1

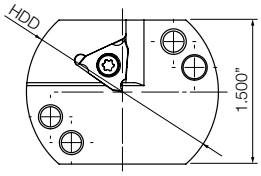
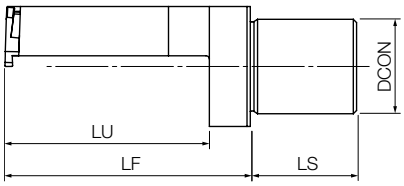


Fig.2

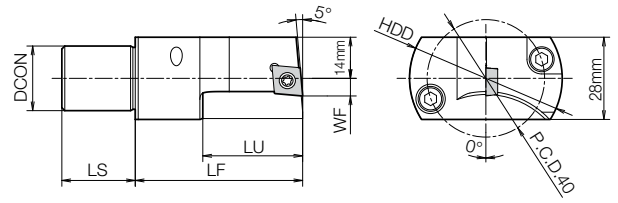


Toolholder Dimensions

Part Number	Stock	Dimensions (in)					Drawing	Spare Parts		Applicable Inserts	Reference Machine
		DCON	HDD	LF	LU	LS		Clamp Screw	Wrench		
KSTB SR16/20 TT32	●	0.866	2.000	2.250	1.875	1.073	Fig.1	SB-4070TRS	FT-10	TT32..	SR16, SR20
KSTB SR32J TT32	●	0.866	2.000	2.625	2.125	0.980	Fig.2	SB-4070TRS	FT-10		SR32J

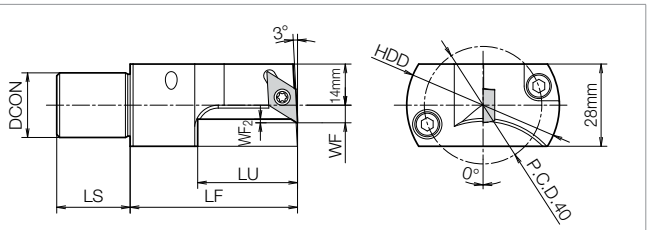
Note: All KSTB holders are right-hand, which require neutral or left-hand inserts

SF22F-SCLC (External / Facing) [for CC..32.. Inserts B53~B60]



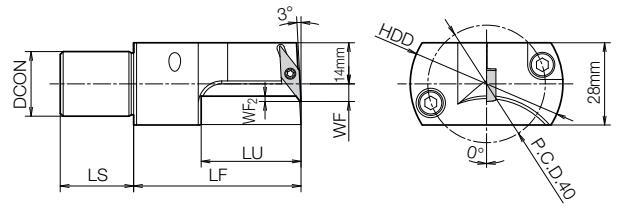
• Left-hand Shown

SF22F-SDUC (External / Facing) [for DC..32.. Inserts B62~B71]



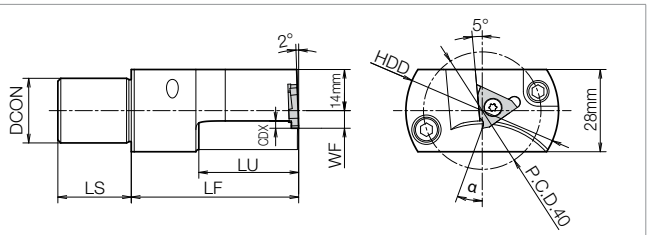
• Left-hand Shown

SF22F-SVUB (External / Copying) [for VB..22.. Inserts B89~B91]



• Left-hand Shown

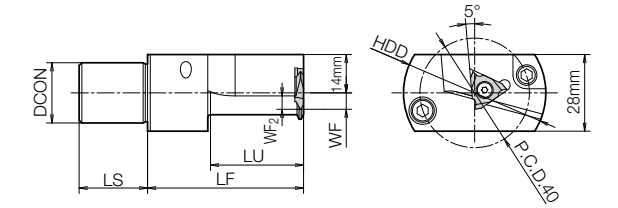
SF22F-KTGF (External Grooving) [for TGF32R... Inserts G21]



• Left-hand Shown

*Dimension **CDX** shows the available grooving depth

SF22F-KTTX (External Threading) [for TTX32R... Inserts J29]



• Left-hand Shown

α (°)	Insert Grade
20°	PR1115, PR1215 PR930, KW10
11°	KPD001
6°	TC40

Toolholder Dimensions

Part Number	Stock	Dimensions (mm)							Standard Corner-R (RE)	Spare Parts					
										Insert Screw	Wrench	Mounting Bolt	Wrench	Adjustment Screw	Wrench
		DCON	HDD	LF	LS	LU	WF	WF_2 CDX							
SF22F-SCLCL09-40P	△	22	52	57	25	34	6	-	0.2	SB-4085TR	FT-15	HH5X30	LW-4	HS3X4	LW-1.5
SF22F-SDUCL11-40P	△							1.5	0.2						
SF22F-SVUBL11-40P	△							3.0	0.2	SB-2570TR	FT-8				
SF22F-KTGFL16-40P	△							2.5	-	SB-4070TRS	FT-10				
SF22F-KTTXL16-40P	△							4.0	-	SB-4070TRW	FT-8				

Note: All SF22F holders are left-hand, which require neutral or right-hand inserts

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● : Standard Item △ : Phaseout Item (will be removed from next catalog)
Contact your local Kyocera sales engineer to upgrade old products to new technology

Recommended Cutting Conditions - External Turning (Positive Insert)

[D.O.C. Indicates Radius]

ISO Classification	Workpiece Material	Hardness	Cutting Range	Application	Recommended Chipbreaker	Recommended Grade	Corner-R (RE)	Lower Limit - **Recommendation** - Upper Limit		
								Vc (sfm)	D.O.C. (in)	Feed Rate f (ipr)
※P	Low-carbon Steel Low-carbon Alloy	HB ≦ 300	Precision Finishing	Continuous	F	PR1725	0.002	330 - **490** - 660	0.002 - **0.003** - 0.006	0.001 - **0.002** - 0.004
				Interrupted		PR1725	0.008	260 - **390** - 520	0.002 - **0.004** - 0.008	0.001 - **0.004** - 0.006
			Precision Finishing (Molded Chipbreaker)	Continuous	CF	PR1725	0.008	330 - **490** - 660	0.001 - **0.002** - 0.004	0.001 - **0.002** - 0.005
			Finishing	Continuous	GF	PR1725	0.008	330 - **460** - 590	0.008 - **0.020** - 0.039	0.002 - **0.004** - 0.008
				Interrupted		PR1725	1/64	260 - **390** - 520	0.008 - **0.020** - 0.039	0.002 - **0.004** - 0.008
			Finishing-Medium	Continuous	GQ	PR1725	0.008	260 - **390** - 520	0.031 - **0.118** - 0.197	0.001 - **0.002** - 0.004
				Interrupted		PR1725	1/64	200 - **330** - 460	0.031 - **0.079** - 0.118	0.001 - **0.002** - 0.004
			Low Feed & Large D.O.C.	Continuous	J, U	PR1725	0.008	260 - **330** - 460	0.020 - **0.079** - 0.138	0.001 - **0.002** - 0.004
	Medium-carbon Steel Medium-carbon Alloy	HB ≦ 330	Precision Finishing	Continuous	F	PR1725	0.002	330 - **490** - 660	0.002 - **0.003** - 0.006	0.001 - **0.002** - 0.004
				Interrupted		PR1725	0.008	260 - **390** - 520	0.002 - **0.004** - 0.008	0.001 - **0.004** - 0.006
			Precision Finishing (Molded Chipbreaker)	Continuous	CF	PR1725	0.008	330 - **490** - 660	0.001 - **0.002** - 0.004	0.001 - **0.002** - 0.005
			Finishing	Continuous	GF	PR1725	0.008	330 - **460** - 590	0.008 - **0.020** - 0.039	0.002 - **0.004** - 0.008
				Interrupted		PR1725	1/64	260 - **390** - 520	0.008 - **0.020** - 0.039	0.002 - **0.004** - 0.008
			Finishing-Medium	Continuous	GQ	PR1725	0.008	260 - **390** - 520	0.031 - **0.118** - 0.197	0.001 - **0.002** - 0.004
				Interrupted		PR1725	1/64	200 - **330** - 460	0.031 - **0.079** - 0.118	0.001 - **0.002** - 0.004
			Low Feed & Large D.O.C.	Continuous	J, U	PR1725	0.008	260 - **330** - 460	0.020 - **0.079** - 0.138	0.001 - **0.002** - 0.004
	High-carbon Alloy	HB ≦ 280	Precision Finishing	Continuous	F	PR1725	0.002	330 - **490** - 660	0.002 - **0.003** - 0.006	0.001 - **0.002** - 0.004
				Interrupted		PR1725	0.008	260 - **390** - 520	0.002 - **0.004** - 0.008	0.001 - **0.004** - 0.006
			Precision Finishing (Molded Chipbreaker)	Continuous	CF	PR1725	0.008	330 - **490** - 660	0.001 - **0.002** - 0.004	0.001 - **0.002** - 0.005
			Finishing	Continuous	GF	PR1725	0.008	330 - **460** - 590	0.008 - **0.020** - 0.039	0.002 - **0.004** - 0.008
				Interrupted		PR1725	1/64	260 - **390** - 520	0.008 - **0.020** - 0.039	0.002 - **0.004** - 0.008
			Finishing-Medium	Continuous	GQ	PR1725	0.008	260 - **390** - 520	0.012 - **0.059** - 0.118	0.001 - **0.002** - 0.004
				Interrupted		PR1725	1/64	200 - **330** - 460	0.012 - **0.039** - 0.079	0.001 - **0.002** - 0.004
			Low Feed & Large D.O.C.	Continuous	J, U	PR1725	0.008	260 - **330** - 460	0.020 - **0.079** - 0.138	0.001 - **0.002** - 0.004
M	Stainless Steel (Austenitic)	HB ≦ 220	Finishing	Continuous	GF	PR1225	0.008	260 - **330** - 390	0.004 - **0.012** - 0.020	0.001 - **0.002** - 0.004
				Interrupted		PR1535	1/64	200 - **260** - 330	0.012 - **0.020** - 0.039	0.002 - **0.004** - 0.006
			Medium	Continuous	GQ	PR1225	0.008	260 - **330** - 390	0.020 - **0.059** - 0.118	0.001 - **0.003** - 0.005
				Interrupted		PR1535	1/64	200 - **260** - 330	0.020 - **0.039** - 0.079	0.002 - **0.004** - 0.006
	Stainless Steel (Precipitation Hardend)	HB ≦ 300	Finishing	Continuous	GF	PR1225	0.008	130 - **200** - 260	0.004 - **0.012** - 0.020	0.001 - **0.002** - 0.004
				Interrupted		PR1535	1/64	100 - **160** - 230	0.012 - **0.020** - 0.039	0.002 - **0.004** - 0.006
			Medium	Continuous	GQ	PR1225	0.008	130 - **200** - 260	0.020 - **0.039** - 0.079	0.001 - **0.003** - 0.005
				Interrupted		PR1535	1/64	100 - **160** - 230	0.020 - **0.039** - 0.059	0.002 - **0.004** - 0.006
K	Gray Cast Iron	HB ≦ 250	Finishing	Continuous	Standard	CA310	1/64	330 - **390** - 490	0.008 - **0.020** - 0.039	0.004 - **0.006** - 0.008
				Interrupted		CA315	1/64	260 - **330** - 390	0.008 - **0.020** - 0.039	0.002 - **0.004** - 0.006
			Medium	Continuous	Standard	CA310	1/64	330 - **390** - 490	0.020 - **0.039** - 0.079	0.004 - **0.006** - 0.008
				Interrupted		CA315	1/32	260 - **330** - 390	0.020 - **0.039** - 0.079	0.002 - **0.004** - 0.006
	Nodular Cast Iron	HB ≦ 270	Finishing	Continuous	Standard	CA310	1/64	260 - **330** - 390	0.008 - **0.020** - 0.039	0.004 - **0.006** - 0.008
				Interrupted		CA315	1/64	200 - **260** - 330	0.008 - **0.020** - 0.039	0.002 - **0.004** - 0.006
			Medium	Continuous	Standard	CA315	1/64	260 - **330** - 390	0.020 - **0.039** - 0.079	0.004 - **0.006** - 0.008
				Interrupted		CA320	1/32	200 - **260** - 330	0.020 - **0.039** - 0.079	0.002 - **0.004** - 0.006
N	Non-ferrous Metals Copper Alloy Aluminum Alloy (Si 10% Under) etc.	HB ≦ 100	High Speed Finishing (Glossy Surface Finish)	Continuous	Without Chipbreaker	KPD001	0.008	490 - **820** - 1150	0.002 - **0.004** - 0.012	0.002 - **0.004** - 0.006
			Finishing (Long Tool Life)	Continuous	F	PDL025	0.008	330 - **490** - 660	0.002 - **0.012** - 0.020	0.001 - **0.003** - 0.004
				Interrupted		PDL025	1/64	330 - **490** - 660	0.002 - **0.012** - 0.020	0.001 - **0.003** - 0.004
			Finishing	Continuous	F	KW10	0.008	330 - **490** - 660	0.002 - **0.012** - 0.020	0.001 - **0.003** - 0.004
				Interrupted		KW10	1/64	330 - **490** - 660	0.002 - **0.012** - 0.020	0.001 - **0.003** - 0.004
			Medium	Continuous	U	KW10	0.008	330 - **490** - 660	0.008 - **0.020** - 0.059	0.001 - **0.004** - 0.008
				Interrupted		KW10	1/64	330 - **490** - 660	0.008 - **0.020** - 0.059	0.001 - **0.004** - 0.008
S	Titanium Alloys	HB ≦ 400	Precision Finishing (Glossy Surface Finish)	Continuous	Without Chipbreaker	KPD001	0.008	330 - **390** - 490	0.002 - **0.004** - 0.012	0.001 - **0.003** - 0.004
				Interrupted		KPD001	1/64	230 - **330** - 390	0.002 - **0.004** - 0.012	0.001 - **0.003** - 0.004
			Medium	Continuous	F, U	KW10	1/64	100 - **160** - 230	0.004 - **0.020** - 0.039	0.001 - **0.004** - 0.008
				Interrupted		KW10	1/64	100 - **160** - 230	0.004 - **0.020** - 0.039	0.001 - **0.004** - 0.008
	Heat-restistant Alloys	HB ≦ 350	Finishing	Continuous	F, U	KW10	1/64	30 - **100** - 160	0.004 - **0.012** - 0.020	0.001 - **0.002** - 0.004
				Interrupted	Without Chipbreaker	KW10	1/32	30 - **100** - 160	0.008 - **0.020** - 0.028	0.001 - **0.002** - 0.004
			Finishing	Continuous	MQ	PR1535	1/64	130 - **200** - 260	0.004 - **0.012** - 0.020	0.001 - **0.002** - 0.004
				Interrupted		PR1535	1/32	130 - **200** - 260	0.004 - **0.012** - 0.020	0.001 - **0.002** - 0.004
H	Hardened Steel Hard Materials	40 ~ 50 HRC	Finishing	Continuous	GK	PR1425	0.008	130 - **200** - 260	0.004 - **0.012** - 0.020	0.001 - **0.003** - 0.004
				Interrupted		PR1425	1/64	130 - **200** - 260	0.004 - **0.012** - 0.020	0.001 - **0.003** - 0.004
		50 ~ 68 HRC	Finishing	Continuous	ME MET	KBN05M	0.008	260 - **390** - 490	0.004 - **0.012** - 0.020	0.001 - **0.003** - 0.004
				Interrupted		KBN05M	1/64	200 - **330** - 390	0.004 - **0.012** - 0.020	0.001 - **0.003** - 0.004

※ For machining free-cutting steels, use PR1005 at Vc=650sfm or less. For D.O.C. and feed rate (f), refer to specs for low carbon steels.

Recommended Cutting Conditions - Back Turning

KTKF E12

Workpiece Material		MEGACOAT NANO PLUS		MEGACOAT NANO				MEGACOAT		Notes
		PR1725		PR1535		PR1425		PR1225		
		Grooving	Turning	Grooving	Turning	Grooving	Turning	Grooving	Turning	
Carbon Steel / Alloy Steel	Vc (sfm)	★ 200 ~ 660		☆ 200 ~ 500		☆ 250 ~ 650		☆ 200 ~ 500		Wet
	Feed (ipr)	0.0004 ~ 0.0012	0.0008 ~ 0.0059	0.0004 ~ 0.0012	0.0008 ~ 0.0059	0.0004 ~ 0.0012	0.0008 ~ 0.0059	0.0004 ~ 0.0012	0.0008 ~ 0.0059	
Stainless Steel	Vc (sfm)	☆ 200 ~ 490		★ 200 ~ 425		☆ 200 ~ 500		☆ 200 ~ 425		
	Feed (ipr)	0.0004 ~ 0.0008	0.0008 ~ 0.0039	0.0004 ~ 0.0008	0.0008 ~ 0.0039	0.0004 ~ 0.0008	0.0008 ~ 0.0039	0.0004 ~ 0.0008	0.0008 ~ 0.0039	

Workpiece Material		PVD Coated Carbide		Carbide		PCD		Notes
		PR1025		KW10		KPD001		
		Grooving	Turning	Grooving	Turning	Grooving	Turning	
Carbon Steel / Alloy Steel	Vc (sfm)	☆ 200 ~ 500		-		-		Wet
	Feed (ipr)	0.0004 ~ 0.0012	0.0008 ~ 0.0059	-		-		
Stainless Steel	Vc (sfm)	☆ 175 ~ 400		-		-		
	Feed (ipr)	0.0004 ~ 0.0008	0.0008 ~ 0.0039	-		-		
Cast Iron	Vc (sfm)	-		175 ~ 325		-		
	Feed (ipr)	-		0.0004 ~ 0.0012	0.0008 ~ 0.00395	-		
Aluminum	Vc (sfm)	-		650 ~ 1475		200 ~ 500		
	Feed (ipr)	-		0.0004 ~ 0.0012	0.0008 ~ 0.00395	0.0004 ~ 0.0012	0.0008 ~ 0.00395	
Brass	Vc (sfm)	-		325 ~ 650		200 ~ 425		
	Feed (ipr)	-		0.0004 ~ 0.0008	0.0008 ~ 0.0039	0.0004 ~ 0.0008	0.0008 ~ 0.0039	

KTKF (GTP Chipbreaker) E12

Workpiece Material		MEGACOAT NANO PLUS		MEGACOAT NANO		Notes
		PR1725		PR1535		
		Grooving	Turning	Grooving	Turning	
Carbon Steel / Alloy Steel	Vc (sfm)	★ 200 ~ 660		☆ 200 ~ 490		Wet
	Feed (ipr)	0.001 ~ 0.003	0.002 ~ 0.006	0.001 ~ 0.003	0.002 ~ 0.006	
Stainless Steel	Vc (sfm)	☆ 200 ~ 490		★ 200 ~ 430		
	Feed (ipr)	0.001 ~ 0.002	0.001 ~ 0.004	0.001 ~ 0.002	0.001 ~ 0.004	

KTKF (GQ Chipbreaker) E12

Workpiece Material		MEGACOAT NANO PLUS		MEGACOAT NANO				MEGACOAT		Notes
		PR1725		PR1535		PR1425		PR1225		
		Grooving	Turning	Grooving	Turning	Grooving	Turning	Grooving	Turning	
Carbon Steel / Alloy Steel	Vc (sfm)	★ 200 ~ 660		☆ 200 ~ 500		☆ 250 ~ 650		☆ 200 ~ 500		Wet
	Feed (ipr)	0.0004 ~ 0.0016	0.0008 ~ 0.0059	0.0004 ~ 0.0015	0.0008 ~ 0.0059	0.0004 ~ 0.0015	0.0008 ~ 0.0059	0.0004 ~ 0.0015	0.0008 ~ 0.0059	
Stainless Steel	Vc (sfm)	☆ 200 ~ 490		★ 200 ~ 425		☆ 200 ~ 500		☆ 200 ~ 425		
	Feed (ipr)	0.0004 ~ 0.0012	0.0008 ~ 0.0039	0.0004 ~ 0.0012	0.0008 ~ 0.0039	0.0004 ~ 0.0012	0.0008 ~ 0.0039	0.0004 ~ 0.0012	0.0008 ~ 0.0039	

KTKF (AGT Chipbreaker) E12

Workpiece Material		PCD		Notes
		KPD001		
		Grooving	Turning	
Aluminum	Vc (sfm)	660 ~ 1,640		Wet
	Feed (ipr)	0.001 ~ 0.006	0.001 ~ 0.008	
Brass	Vc (sfm)	330 ~ 1,150		
	Feed (ipr)	0.001 ~ 0.006	0.001 ~ 0.008	

ABS15, ABW15, ABW23 E19~E21

Workpiece Material		MEGACOAT NANO PLUS				MEGACOAT NANO		MEGACOAT		PVD Coated Carbide		Notes
		PR1725		PR1705		PR1425		PR1225		PR930		
		Grooving	Turning	Grooving	Turning	Grooving	Turning	Grooving	Turning	Grooving	Turning	
Carbon Steel / Alloy Steel	Vc (sfm)	★ 200 ~ 590		☆ 260 ~ 660		☆ 250 ~ 600		☆ 200 ~ 500		☆ 250 ~ 325		Wet
	Feed (ipr)	0.0008	0.0008~0.0028	0.0008	0.0008~0.0028	0.0008	0.0008~0.0028	0.0008	0.0008~0.0028	0.0008	0.0008~0.0028	
Stainless Steel	Vc (sfm)	☆ 100 ~ 430		☆ 130 ~ 490		☆ 125 ~ 425		★ 125 ~ 400		☆ 100 ~ 175		
	Feed (ipr)	0.0008	0.0008~0.0020	0.0008	0.0008~0.0020	0.0008	0.0008~0.0020	0.0008	0.0008~0.0020	0.0008	0.0008~0.0020	

Workpiece Material		Carbide		Notes
		KW10		
		Grooving	Turning	
Aluminum	Vc (sfm)	500 ~ 650		Wet
	Feed (ipr)	0.0008	0.0008 ~ 0.0039	
Brass	Vc (sfm)	325 ~ 525		
	Feed (ipr)	0.0012	0.0008 ~ 0.0059	

★ : 1st Recommendation
☆ : 2nd Recommendation

New Part Description (Change in Overall Length) Reference Table for Small Tools (Back Clamp)

Conventional Toolholder						New Swiss Length Toolholder			
Insert Shape	Part Number	Overall Length	Spare Parts: Anchor Pin	Spare Parts: Lock Screw	Spare Parts: Wrench	Part Number	Overall Length	Notes	Ref. to Page
ABS15	AABSR6-15CF	5.00"	LPA-11	HSB4X8R	FH-2	AABSR6-15JXF	4.75"		E19
	AABSR8-15DF	6.00"	LPA-13			AABSR8-15JXF	4.75"		
	-	-	LPA-17			AABSR10-15JXF	4.75"		
	AABSR0810K-40F	125mm	LPA-11	HSB4x8R	FH-2	-	-	No Alternative	-
	AABSR1010K-40F	125mm				AABSR1010JX-40F	120mm		E19
	AABSR1212M-40F	150mm	LPA-13			AABSR1212JX-40F	120mm		
	AABSR1616M-40F	150mm	LPA-17			AABSR1616JX-40F	120mm		
ABW15	AABWR6-15CF	5.00"	LPA-11	HSB4X8R	FH-2	AABWR6-15JXF	4.75"		E20
	AABWR8-15DF	6.00"	LPA-13			AABWR8-15JXF	4.75"		
	-	-	LPA-17			AABWR10-15JXF	4.75"		
	AABWR0810K-40F	125mm	LPA-11	HSB4x8R	FH-2	-	-	No Alternative	-
	AABWR1010K-40F	125mm				AABWR1010JX-40F	120mm		E20
	AABWR1212M-40F	150mm	LPA-13			AABWR1212JX-40F	120mm		
	AABWR1616M-40F	150mm	LPA-17			AABWR1616JX-40F	120mm		
ABW23	AABWR6-23CF	5.00"	LPA-11	HSB4X8R	FH-2	AABWR6-23JXF	4.75"		E21
	AABWR8-23DF	6.00"	LPA-13			AABWR8-23JXF	4.75"		
	-	-	LPA-17			AABWR10-23JXF	4.75"		
	AABWR0810K-50F	125mm	LPA-11	HSB4x8R	FH-2	-	-	No Alternative	-
	AABWR1010K-50F	125mm				AABWR1010JX-50F	120mm		E21
	AABWR1212M-50F	150mm	LPA-13			AABWR1212JX-50F	120mm		
	AABWR1616M-50F	150mm	LPA-17			AABWR1616JX-50F	120mm		
CC..	ACLC□6-2CF	5.00"	LPF-11	HSB4X8□	FH-2	ACLC□6-2JXFF	4.75"		E24
	-	-	LPF-13			ACLC□6-3JXFF	4.75"		
	ACLC□8-3DF	6.00"				ACLC□8-3JXFF	4.75"		
	-	-	LPF-17			ACLC□10-3JXFF	4.75"		
	ACLC□0810K-06F	125mm	LPF-11	HSB4x8R (Right-hand toolholder) HSB4x8L (Left-hand toolholder)	FH-2	SCLC□0808F-06FF	120mm	Clamping system is different.	E24
	ACLC□1010K-06F	125mm				ACLC□1010JX-06FF	120mm		
	ACLC□1010K-09F	125mm	LPF-13			ACLC□1010JX-09FF	120mm		
	ACLC□1212M-09F	150mm				ACLC□1212JX-09FF	120mm		
	ACLC□1616M-09F	150mm	LPF-17			ACLC□1616JX-09FF	120mm		
DC..	ADJC□6-2CF	5.00"	LPF-11	HSB4X8□	FH-2	ADJC□6-2JXFF	4.75"		E27
	-	-	LPF-13			ADJC□6-3JXFF	4.75"		
	ADJC□8-3DF	6.00"				ADJC□8-3JXFF	4.75"		
	-	-	LPF-17			ADJC□10-3JXFF	4.75"		
	ADNCR6-2CF	5.00"	-	-	-	-	-	No Alternative	-
	ADNC□8-3DF	6.00"	-	-	-	-	-	No Alternative	
	ADJC□0810K-07F	125mm	LPF-11	HSB4x8R (Right-hand toolholder) HSB4x8L (Left-hand toolholder)	FH-2	SDJC□0808F-07FF	120mm	Clamping system is different.	E27
	ADJC□1010K-07F	125mm				ADJC□1010JX-07FF	120mm		
	ADJC□1010K-11F	125mm	LPF-13			ADJC□1010JX-11FF	120mm		
	ADJC□1212M-11F	150mm				ADJC□1212JX-11FF	120mm		
	ADJC□1616M-11F	150mm	LPF-17			ADJC□1616JX-11FF	120mm		
	ADNCR0810K-07F	125mm	LPF-11	HSB4x8R	FH-2	-	-	No Alternative	-
	ADNCR1010K-07F	125mm				SDNCN1010JX-07	120mm	Clamping system is different. Neutral	E33
	ADNCR1010K-11F	125mm	LPF-13			SDNCN1010JX-11	120mm		
	ADNCR1212M-11F	150mm				SDNCN1212JX-11	120mm		
	ADNCR1616M-11F	150mm	LPF-17			SDNCN1616JX-11	120mm		
VB..	AVJB□6-2CF	5.00"	LPF-11	HSB4X8□	FH-2	AVJB□6-2JXFF	4.75"		E36
	AVJB□8-2DF	6.00"	LPF-1113			AVJB□8-2JXFF	4.75"		
	-	-	LPF-1117			AVJB□10-2JXFF	4.75"		
	AVJB□1010K-11F	125mm	LPF-11	HSB4x8R (Right-hand toolholder) HSB4x8L (Left-hand toolholder)	FH-2	AVJB□1010JX-11FF	120mm		E36
	AVJB□1212M-11F	150mm	LPF-1113			AVJB□1212JX-11FF	120mm		
	AVJB□1616M-11F	150mm	LPF-1117			AVJB□1616JX-11FF	120mm		
	AVVB□1010K-11F	125mm	LPF-11	HSB4x8R (Right-hand toolholder) HSB4x8L (Left-hand toolholder)	FH-2	SVVBN1010JX-11	120mm	Clamping system is different. Neutral	E39
	AVVB□1212M-11F	150mm	LPF-1113			SVVBN1212JX-11	120mm		
	AVVB□1616M-11F	150mm	LPF-1117			SVVBN1616JX-11	120mm		

Note) The corresponding alternative toolholder may be different from the conventional toolholder in insert clamping system or insert size.
Make sure of their specifications by referring to the catalog or other documents.

New Part Description (Change in Overall Length) Reference Table for Small Tools (Screw Clamp)

Conventional Toolholder					New Swiss Length Toolholder			
Insert Shape	Part Number	Overall Length	Spare Parts: Clamp Screw	Spare Parts: Wrench	Part Number	Overall Length	Notes	Ref. to Page
	SABSR6-15CF	5.00"	SB-3080TR	FT-10	SABSR6-15JXF	4.75"		E19
	SABSR8-15DF	6.00"			SABSR8-15JXF	4.75"		
	-	-			SABSR10-15JXF	4.75"		
ABS15	SABSR0810K-40F	125mm	SB-3080TR	FT-10	-	-	No Alternative	-
	SABSR1010K-40F	125mm			SABSR1010JX-40F	120mm		E19
	SABSR1212M-40F	150mm			SABSR1212JX-40F	120mm		
	SABSR1616M-40F	150mm			SABSR1616JX-40F	120mm		
	SABWR6-15CF	5.00"	SB-3080TR	FH-2	SABWR6-15JXF	4.75"		E20
	SABWR8-15DF	6.00"			SABWR8-15JXF	4.75"		
	-	-			SABWR10-15JXF	4.75"		
ABW15	SABWR0810K-40F	125mm	SB-3080TR	FT-10	-	-	No Alternative	-
	SABWR1010K-40F	125mm			SABWR1010JX-40F	120mm		E20
	SABWR1212M-40F	150mm			SABWR1212JX-40F	120mm		
	SABWR1616M-40F	150mm			SABWR1616JX-40F	120mm		
	SABWR6-23CF	5.00"	SB-3080TR	FT-10	SABWR6-23JXF	4.75"		E21
	SABWR8-23DF	6.00"			SABWR8-23JXF	4.75"		
	-	-			SABWR10-23JXF	4.75"		
ABW23	SABWR0810K-50F	125mm	SB-3080TR	FT-10	-	-	No Alternative	-
	SABWR1010K-50F	125mm			SABWR1010JX-50F	120mm		E21
	SABWR1212M-50F	150mm			SABWR1212JX-50F	120mm		
	SABWR1616M-50F	150mm			SABWR1616JX-50F	120mm		
	SCLC□6-2X	3.00"	SB-2570TR	FT-8	SCLC□6-2JXFF	4.75"		E24
	SCAC□6-2C	5.00"	-	-	-	-	Cutting edge angle is different	
	SCGCR6-2X	3.00"	-	-	-	-		
	-	-	SB-4085TR	FT-15	SCLC□6-3JXFF	4.75"		
	SCLC□8-3A	4.00"			SCLC□8-3JXFF	4.75"	No Alternative	
	SCAC□8-3D	6.00"	-	-	-	-	Cutting edge angle is different	
	SCGCR8-3A	4.00"	-	-	-	-		
	SCLC□10-3C	5.00"	SB-4085TR	FT-15	SCLC□10-3JXFF	4.75"		
CC..	SCGCR10-3C	5.00"	-	-	-	-	Cutting edge angle is different	
	SCLC□12-3C	5.00"	-	-	-	←	No Alternative	
	SCAC□0808K-06	125mm	SB-2570TR	FT-8	SCLC□0808F-06FF	85mm	Cutting edge angle is different.	E24
	SCAC□1010K-06	125mm			SCLC□1010JX-06FF	120mm		
	SCAC□1010K-09	125mm	SB-4085TR	FT-15	SCLC□1010JX-09FF	120mm		
	SCAC□1212M-09	150mm			SCLC□1212JX-09FF	120mm		
	SCAC□1616M-09	150mm			SCLC□1616JX-09FF	120mm		
	SCACR1212F-09FF	85mm	SB-4085TR	FT-15	SCLCR1212JX-09FF	120mm		
	SCLC□0808E-06	70mm	SB-2570TR	FT-8	SCLC□0808F-06FF	85mm		
	SDJC□6-2CF	5.00"	SB-2570TR	FT-8	SDJC□6-2JXFF	4.75"		E27
	SDJC□6-2X	3.00"	-	-	-	-		
	-	-	SB-4085TR	FT-15	SDJC□6-3JXFF	4.75"		
	SDJC□8-3DF	6.00"			SDJC□8-3JXFF	4.75"		
	SDJC□8-3A	4.00"	-	-	-	-		
	SDJC□10-3C	5.00"	SB-4085TR	FT-15	SDJC□10-3JXFF	4.75"		
	SDJC□12-3C	5.00"	-	-	-	-	No Alternative	
DC..	-	-	SB-4085TR	FT-15	SDJCR52-3JX-F3	4.75"		E22
					SDJCR52-3JX-F9	4.75"		
					SDJCR62.5-3JX-F3	4.75"		
					SDJCR62.5-3JX-F9	4.75"		
	SDJC□0808F-07F	80mm	SB-2570TR	FT-8	SDJC□0808F-07FF	85mm		E27
	SDJC□1010F-07F	80mm			SDJC□1010JX-07FF	120mm		
	SDJC□1010F-11F	80mm	SB-4085TR	FT-15	SDJC□1010JX-11FF	120mm		
	SDJC□1212H-11F	100mm			SDJC□1212JX-11FF	120mm		
	SDJC□1616H-11F	100mm			SDJC□1616JX-11FF	120mm		
	-	-	SB-2570TR	FT-8	SDLC□6-2JXFF	4.75"		E32

Note) The corresponding alternative toolholder may be different from the conventional toolholder in insert clamping system or insert size.
Make sure of their specifications by referring to the catalog or other documents.

New Part Description (Change in Overall Length) Reference Table for Small Tools (Screw Clamp)

Conventional Toolholder					New Swiss Length Toolholder			
Insert Shape	Part Number	Overall Length	Spare Parts: Clamp Screw	Spare Parts: Wrench	Part Number	Overall Length	Notes	Ref. to Page
DC..	-	-	SB-4085TR	FT-15	SDLC□6-3JXFF	4.75"		E32
		-			SDLC□8-3JXFF	4.75"		
		-			SDLC□10-3JXFF	4.75"		
	SDLC□1010F-07FF	80mm	SB-2570TR	FT-8	SDLC□1010JX-07FF	120mm		E32
	SDLC□1212H-07FF	100mm			SDLC□1212F-07FF	85mm	Short length type	
					SDLC□1212JX-07FF	120mm		
	SDLC□1616H-07FF	100mm			SDLC□1616JX-07FF	120mm		
	SDLC□1212H-11FF	100mm	SB-4085TR	FT-15	SDLC□1212JX-11FF	120mm		
	SDLCL1616H-11FF	100mm			SDLCL1616JX-11FF	120mm		
	SDNC□6-2CF	5.00"	SB-2570TR	FT-8	SDNC□6-2JXF	4.75"		E33
	SDNCN6-2X	3.00"			SDNCN6-2JX	4.75"		
	-	-	SB-4085TR	FT-15	SDNCN6-3JX	4.75"		
		-	SB-2570TR	FT-8	SDNCN8-2JX	4.75"		
	SDNC□8-3DF	6.00"	SB-4085TR	FT-15	SDNCN8-3JX	4.75"		
	SDNCN8-3A	4.00"	-	-	-	-		
	SDNCN10-3C	5.00"	SB-4085TR	FT-15	SDNCN10-3JX	4.75"		
	SDNCN12-3C	5.00"	-	-	-	-	No Alternative	
	SDNC□1010F-07F	80mm	SB-2570TR	FT-8	SDNC□1010JX-07F	120mm		E33
	SDNC□1010F-11F	80mm	SB-4085TR	FT-15	SDNC□1010JX-07F	120mm	Insert size is different.	
					SDNCN1010JX-11	120mm	Neutral	
	SDNC□1212H-11F	100mm	SB-4085TR	FT-15	SDNCN1212F-11	85mm	Neutral Short length type	
					SDNCN1212JX-11	120mm	Neutral	
	SDNC□1616H-11F	100mm	SB-4085TR	FT-15	SDNCN1616JX-11	120mm	Neutral	
	SDNCN0808E-07	70mm	SB-2570TR	FT-8	SDNCN0808F-07	85mm		
	SDNCN1010F-07	80mm			SDNCN1010JX-07	120mm		
	SDNCN1212H-07	100mm			SDNCN1212JX-07	120mm		
	SDNCN1212H-11	100mm	SB-4085TR	FT-15	SDNCN1212F-11	85mm		
					SDNCN1212JX-11	120mm	Short length type	
	SDXC□1010F-07	80mm	SB-2570TR	FT-8	SDXC□1010JX-07	120mm		E32
	SDXC□1010F-11	80mm	SB-4085TR	FT-15	SDXC□1010JX-11	120mm		
	SDXC□1212H-11	100mm			SDXC□1212JX-11	120mm		
	SDXC□1616H-11	100mm			SDXC□1616JX-11	120mm		
DP..	-	-	SB-2570TR	FT-8	SDLP□6-2JXFF	4.75"		E34
		-	SB-4085TR	FT-15	SDLP□6-3JXFF	4.75"		
		-			SDLP□8-3JXFF	4.75"		
		-			SDLP□10-3JXFF	4.75"		
	SDLP□0808F-07F	80mm	SB-2570TR	FT-8	SDLP□0808F-07FF	85mm		E34
	SDLP□1010F-07F	80mm			SDLP□1010JX-07FF	120mm		
	SDLP□1010F-11F	80mm	SB-4085TR	FT-15	SDLP□1010JX-11FF	120mm		
	SDLP□1212H-11F	100mm			SDLP□1212JX-11FF	120mm		
	SDLP□1616H-11F	100mm			SDLP□1616JX-11FF	120mm		
VB..	SVJB□6-2CF	5.00"	SB-2570TR	FT-8	SVJB□6-2JXFF	4.75"		E36
	SVJB□6-2X	3.00"	-	-	-	-		
	SVJB□8-2DF	6.00"	SB-2570TR	FT-8	SVJB□8-2JXFF	4.75"		
	SVJB□8-2A	4.00"	-	-	-	4.75"		
	-		SB-2570TR	FT-8	SVJB□10-2JXFF	4.75"		
	SVJB□12-3C	5.00"	-	-	-	-	No Alternative	
	SVJB□1010F-11F	80mm	SB-2570TR	FT-8	SVJB□1010JX-11FF	120mm		E34
	SVJB□1212H-11F	100mm			SVJB□1212JX-11FF	120mm		
	SVJB□1616H-11F	100mm			SVJB□1616JX-11FF	120mm		
	SVPB□1010F-11	80mm	SB-2570TR	FT-8	SVPB□1010JX-11	120mm		E38
	SVPB□1212H-11	100mm			SVPB□1212JX-11	120mm		
	SVPB□1616H-11	100mm			SVPB□1616JX-11	120mm		

Note) The corresponding alternative toolholder may be different from the conventional toolholder in insert clamping system or insert size.
Make sure of their specifications by referring to the catalog or other documents.

New Part Description (Change in Overall Length) Reference Table for Small Tools (Screw Clamp)

Conventional Toolholder					New Swiss Length Toolholder			
Insert Shape	Part Number	Overall Length	Spare Parts: Clamp Screw	Spare Parts: Wrench	Part Number	Overall Length	Notes	Ref. to Page
VB..	-	-	SB-2570TR	FT-8	SVVBN6-2JX	4.75"		E39
		-			SVVBN8-2JX	4.75"		-
		-			SVVBN10-2JX	4.75"		
	SVVBN1212H-11	100mm	SB-2570TR	FT-8	SVVBN1212JX-11	120mm		E39
VP..	-	-	SB-2570TR	FT-8	SVJP□8-2JXFF	4.75"		
		-			SVJP□10-2JXFF	4.75"		
		-	SB-2550TR	FT-6	SVLP□6-15JXFF	4.75"		E42
		-			SVLP□8-15JXFF	4.75"		
		-			SVLP□10-15JXFF	4.75"		
		-	SB-2570TR	FT-8	SVLP□8-2JXFF	4.75"		
		-			SVLP□10-2JXFF	4.75"		
		-	SB-2570TR	FT-15	SVLPR52-2JX-F9	4.75"		E23
		-			SVLPR62.5-2JX-F9	4.75"		
	SVLP□1010F-08FF	80mm	SB-2050TR	FT-6	SVLP□1010JX-08FF	120mm		E42
	SVLP□1212H-08FF	100mm			SVLP□1212F-08FF	85mm	Short length type	
					SVLP□1212JX-08FF	120mm		
	SVLP□1616H-08FF	100mm			SVLP□1616JX-08FF	120mm		
	SVLP□1010F-11F	80mm	SB-2570TR	FT-8	SVLP□1010JX-08FF	120mm	Insert size is different.	
	SVLP□1212H-11F	100mm			SVLP□1212F-11FF	85mm	Short length type	
					SVLP□1212JX-11FF	120mm		
	SVLP□1616H-11F	100mm			SVLP□1616JX-11FF	120mm		
	-	-	SB-2570TR	FT-8	SVPPR6-2JXFF	4.75"		E44
		-			SVPPR8-2JXFF	4.75"		
		-			SVPPR10-2JXFF	4.75"		
		-	SB-2050TR	FT-6	SVPPR6-15JXFF	4.75"		
		-			SVPPR8-15JXFF	4.75"		
		-			SVPPR10-15JXFF	4.75"		
	SVPPR1010F-11	80mm	SB-2570TR	FT-8	SVPBR1010JX-11	120mm	Insert relief angle is different.	E38
					SVPPR1010JX-11FF	120mm	Without Offset	E44
	SVPPR1212H-11	100mm			SVPBR1212JX-11	120mm	Insert relief angle is different.	E38
					SVPPR1212JX-11FF	120mm	Without Offset	E44
	SVPPR1616H-11	100mm			SVPBR1616JX-11	120mm	Insert relief angle is different.	E38
					SVPPR1616JX-11FF	120mm	Without Offset	E44
	SVPPL1616H-11	100mm	SB-2570TR	FT-8	SVPBL1616JX-11	120mm	Insert relief angle is different.	E38
TC..	STGCR6-1.5X	3.00"	-	-	-	-	No Alternative	-
	STGC□8-2A	4.00"	-	-		-		
WP..	SWLP□8-2A	4.00"	-	-		-	No Alternative	
	SWLPR12-3C	5.00"	-	-		-		

Note) The corresponding alternative toolholder may be different from the conventional toolholder in insert clamping system or insert size.
Make sure of their specifications by referring to the catalog or other documents.

New Part Description Reference Table for Small Tools (Screw Clamp) Toolholders for Back Turning

Conventional Toolholder					New Swiss Length Toolholder		
Insert Shape	Part Number	Overall length	Clamp Screw	Wrench	Part Number	Overall length	Ref. to Page
TKFB..	KTKF□1010K-12	125mm	SB-4590TRWN	LTW-10S	KTKF□1010JX-12	120mm	E12
	KTKF□1212M-12	150mm			KTKF□1212JX-12	120mm	
	KTKF□1616M-12	150mm			KTKF□1616JX-12	120mm	
	KTKF□1010K-16	125mm			KTKF□1010JX-16	120mm	
	KTKF□1212M-16	150mm			KTKF□1212JX-16	120mm	
	KTKF□1616M-16	150mm			KTKF□1616JX-16	120mm	

Note) The corresponding alternative toolholder may be different from the conventional toolholder in insert clamping system or insert size.
Make sure of their specifications by referring to the catalog or other documents.

BORING

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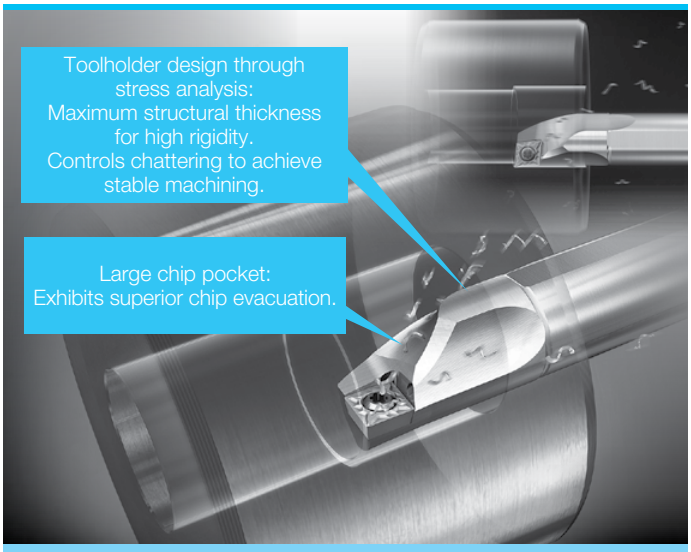
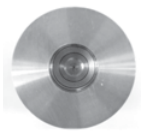
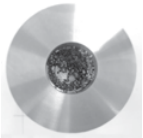
New Dynamic Bar

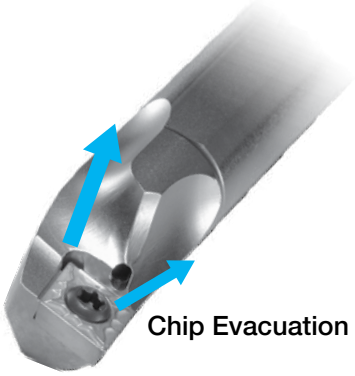


Dynamic design driven by the latest computer simulation technology.

Superior Chip Evacuation (External Coolant)

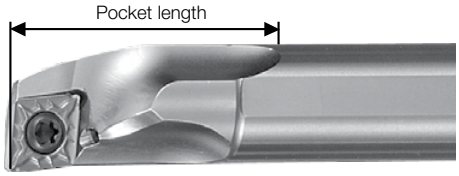
	Dynamic Bar	Competitor A	Competitor B
Inside the Workpiece			

In Competitor A and B's products chips remain inside the workpiece, but chips from Dynamic Bar are all evacuated from the workpiece.



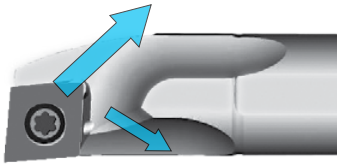
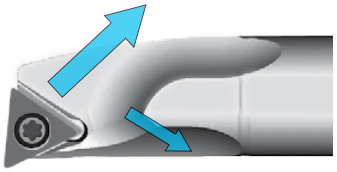
Chip Evacuation Direction

Pocket Length Comparison



Part Number	Pocket length (mm)	
	Dynamic Bar	Competitor A
A16-SCLPR09-18 type	37	29
A20-SCLCR09-22 type	48	32

Chip Evacuation Direction

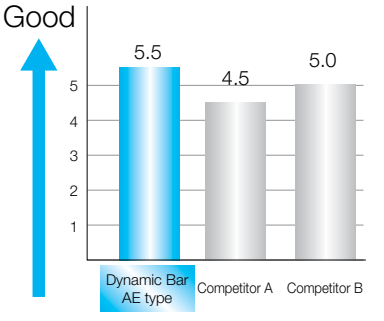
SCLC(P)	STLB(P)
	

Better Evacuation with Dual Chip Flow

Dynamic Bar with Superior Chip Evacuation

High rigidity and chattering resistance is achieved by using a special alloy designed with stress analysis technology.
Achieve previously unobtained surface finish and dimensional accuracy.

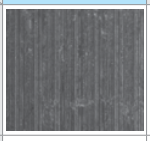
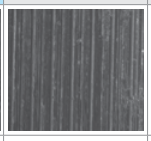
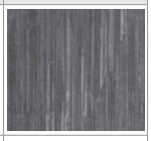
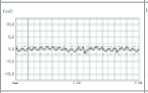
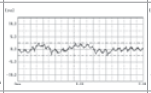
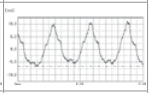
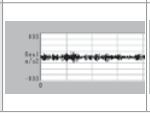
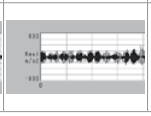
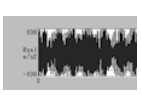
Anti-chatter Vibration Performance



<Cutting Conditions>
4415
Vc = 490 sfm
D.O.C. = 0.020"
f = 0.004 ipr
S16-SCLPR09
CPMH321L-Y

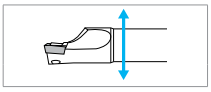
Surface Finish Comparison

Vibration of the Dynamic Bar was minimal even at high cutting speeds, enabling stable machining.

	Dynamic Bar	Competitor A	Competitor B
Surface Wall			
Surface Roughness	 Ra=0.4µm Rz=2.3µm	 Ra=0.6µm Rz=3.6µm	 Ra=3.4µm Rz=14.0µm
Oscillatory Waveform			

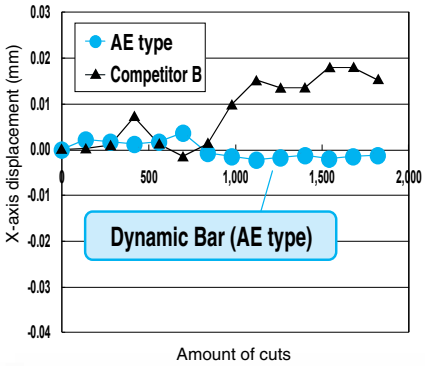
<Cutting Conditions>
4415
Vc = 690 sfm
D.O.C. = 0.020"
f = 0.004 ipr
A16Q-SCLPR09-18
CPMH321XP(PV7020)
L/D = 4
External Coolant

Direction of Vibration Measurement



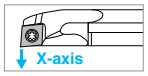
Cutting Point Precision

The AE Dynamic Bar resists deflection to maintain precise cutting edge positional accuracy through the use of a special alloy, thereby achieving high precision machining.



<Cutting Conditions>
SCM435
Vc = 590 sfm
D.O.C. = 0.079"
f = 0.008 ipr
S/A16Q-SCLPR09-18 type
CPMH090308(CA5525)
L/D = 4
External Coolant

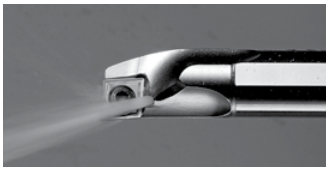
Direction of Measurement



Toolholder Lineup

- Excellent Bar (AE Type)

Excellent Bar with coolant hole (internal coolant) (A···AE) enables better chip evacuation.



- Steel Bar

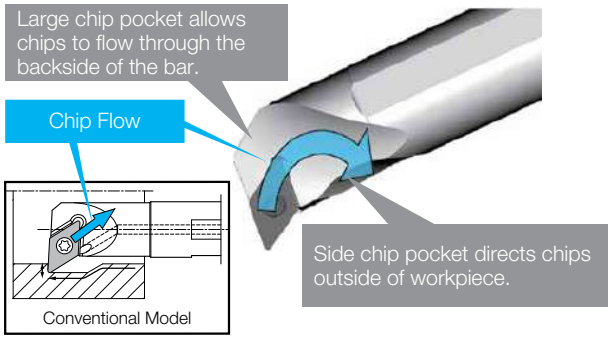
The steel shank bar (without coolant hole) provides superior cost performance



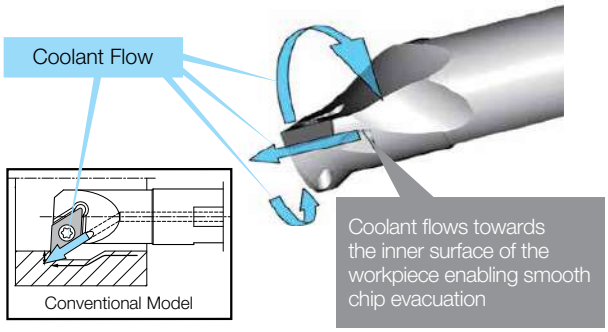
Advantages of Dynamic Bar SDUC

New Design Focusing on Chip Evacuation

Streamlined pocket enables effective chip evacuation.

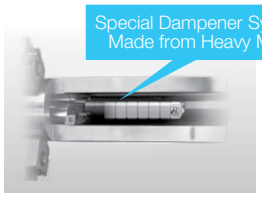


Coolant flows toward the workpiece's inner surface.



AD Bars Interchangeable Head Boring Bars with Anti-vibration Dampener System

- The AD (Advanced Dampener) system enables a maximum overhang of 6 times L/D.
- Highly efficient machining: The anti-vibration dampener enables large cutting-depths and high feed rates.
- Applicable for a variety of machining conditions due to the interchangeable head design.







Double Clamp Boring Bars for Negative Inserts

Stable machining with Double Clamp and Direction Adjustment Coolant Hole.

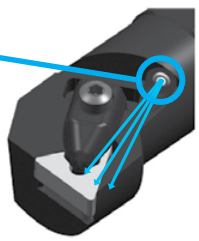
Improved Clamping Rigidity

Firmly clamp the insert in two directions with one action. Ensure quick, accurate, and repeatable insert position.



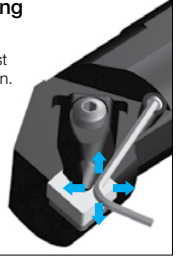
Direction Adjustment Mechanism Coolant Hole

Discharge direction of coolant is adjustable to focus directly on cutting edge.
*Not applicable to high-pressure coolant



Nozzle Setting

Use wrench to adjust coolant hole direction.



EZ Bar

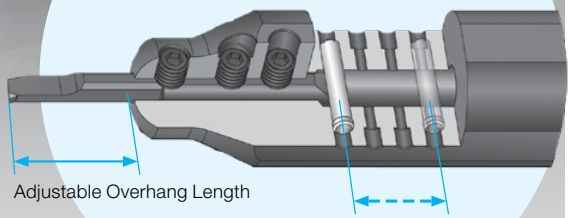
Kyocera's Original EZ Adjust Structure

- Easy adjustment and high precision
- EZ Bar minimizes deviation with high rigidity clamping

MEGACOAT PR1225 for Stable Cutting and Extended Tool Life



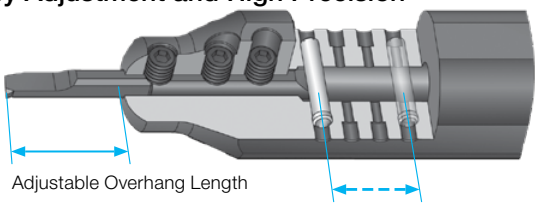
Kyocera's Original EZ Adjust Structure



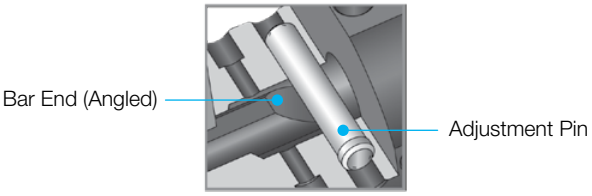
EZ Adjust Structure

Bar overhang is adjustable by replacing adjustment pin.
Internal coolant sleeve (EZH-CT) is available.

1 Easy Adjustment and High Precision



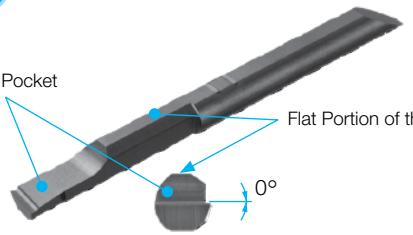
Excellent Clamping Force



Bar is Firmly Clamped on the Slanted End by the Adjustment Pin

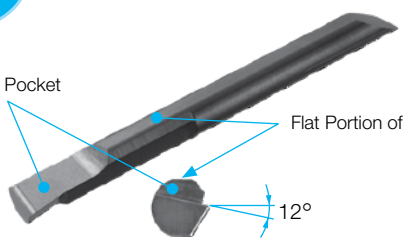
2 2 Bar Types

Precision Oriented — **HP** (High Precision)



F18

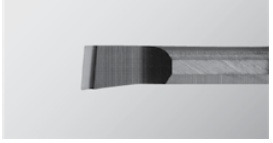
Cost Oriented — **ST** (Standard)



F20

* Chip pocket angles are different.
* Even when using the same sleeve, the Min, Bore Dia. can be different depending on which bar is attach.

3 3 Chipbreakers for Various Applications

H Chipbreaker (Without Lead Angle)	F Chipbreaker (With Lead Angle)	NB Chipbreaker (Without Chipbreaker)
		
Tough Edge (General Purpose)	**Sharp Cutting** (For Finishing)	**Non-ferrous Metals**

2 Types of Corner-R (RE) for Each Chipbreaker

H Chipbreaker: 0.003", 0.006" (0.08mm, 0.15mm)
F Chipbreaker: 0.002", 0.006" (0.05mm, 0.15mm)
NB (No Chipbreaker): 0.002" (0.05mm) - PR1225
0.0014" (0.035mm) - PCD / CBN

* Lineup Depends on Description

EZVB for Boring, Internal Profiling and Copying



EZ Bar PLUS Indexable Type



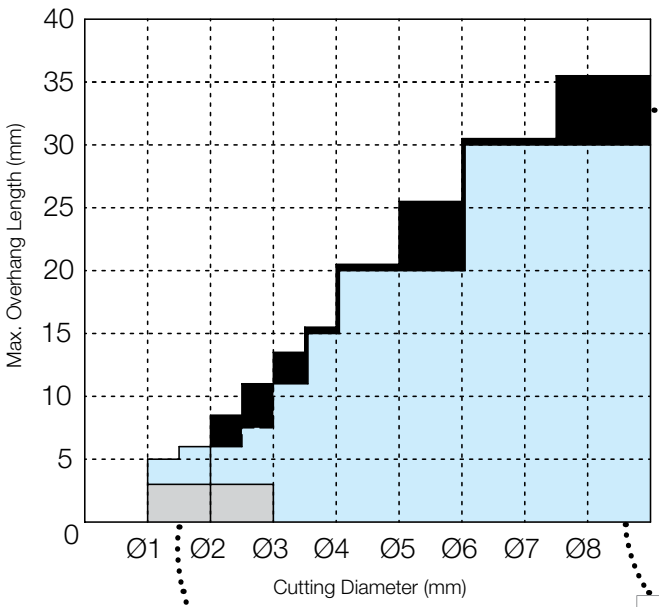
EZBT for Back Boring



EZBF 90° Lead Type



Usage Classification (Solid Bar type: Minimum Cutting Dia. 1mm)



EZ Bar
Easy Adjustment & High Precision



F16





Twin Bars F44~F45



SVN F40

Square Shank Straight



S...SVN F41

Standard Round Shank



SVNS F40

Swiss IQ Bars F38

Boring Bar Identification System (Round Shank)

S	Steel
A	Steel (with Coolant Hole)
C	Carbide
E	Carbide (with Coolant Hole)

	ANSI (in)	ISO (mm)		ANSI (in)	ISO (mm)
F:	3.00	80	Q:	7.00	180
G:	3.50	90	R:	8.00	200
H:	4.00	100	S:	10.00	250
J:	4.50	110	T:	12.00	300
K:	5.00	125	U:	14.00	350
L:	5.50	140	V:	16.00	400
M:	6.00	150	W:	18.00	450
N:	6.50	160	Y:	20.00	500
P:	6.75	170	X:	Special	

C : Top Clamp
M : Multi Lock
P : Lock Pin Only or Lever Lock
S : Screw Clamp
W : Wedge Lock

C : 80° Diamond
D : 55° Diamond
J : 70° Diamond
R : Round
S : 90° Square
T : 60° Triangle
V : 35° Diamond
W : 80° Trigon

R : Right-hand
L : Left-hand

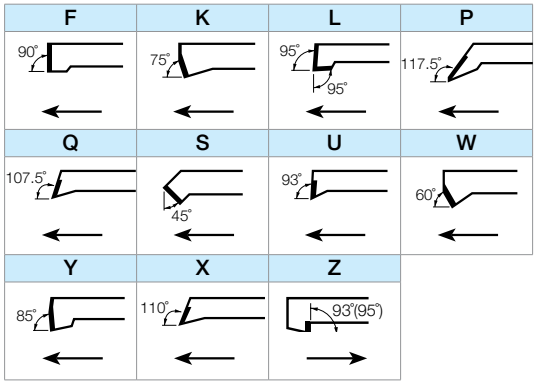
Manufacturer's Optional Mark or Number
A : Dynamic Bar
AE : Excellent Bar (Dynamic Bar type)
E : Excellent Bar

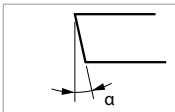
	Shank	Toolholder Length	Clamping System	Insert Shape	Hand of Tool	Others
ANSI (inch)	S	08	M – S	C	L	P	R	3 – AE
ISO (metric)	S	12	M – S	C	L	P	R	09 – 16	A

Shank Diameter	Cutting Edge Angle	Insert Relief Angle	Insert Size	Min. Bore Dia.

ANSI
A two-digit number that indicates the shank diameter in 1/16" increments.

ISO
Shank diameter in mm

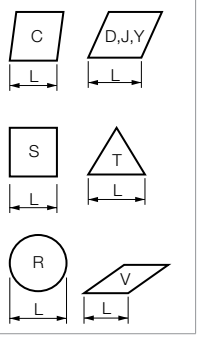




B : 5° Positive
C : 7° Positive
D : 15° Positive
E : 20° Positive
N : 0° Negative
P : 11° Positive

ANSI
Number of 1/8 increments of I.C.

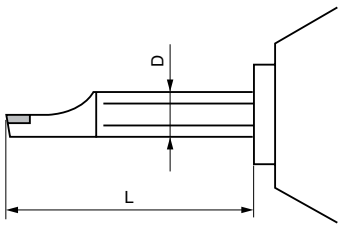
ISO



- Anti-vibration interchangeable head mechanism Boring Bar "AD Bar"
  For the identification system for boring bars with interchangeable head, Ref. to page F87

Guidelines for Overhang Length of Boring Bar (Workpiece Material 1045)

Overhang Length (L / D)	Shank Material
3	Steel
4	Steel (Dynamic Bar)
5	Excellent
5.5	Excellent (Dynamic Bar)
6	AD Bars (with Anti-vibration Dampener System)
7	Carbide



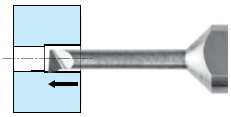
Carbide Shank Boring Bar

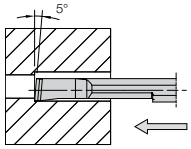
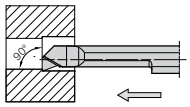
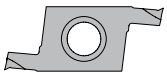
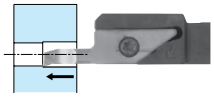
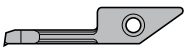
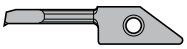
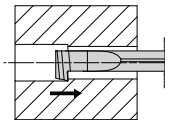
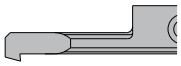
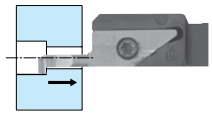
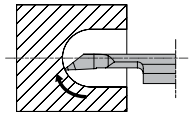
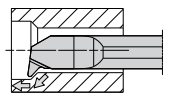
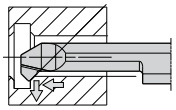
Short Shank Series

Short Shank Types with length of 1/2 and 2/3 of standard type are available. (1/2 or 2/3 is shown at the end of the description) When installing on machines, no additional machining (to change toolholder length) is required.

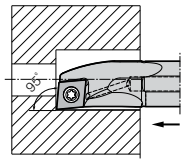
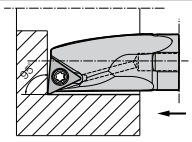
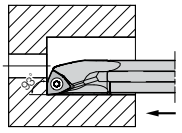
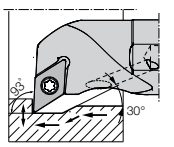
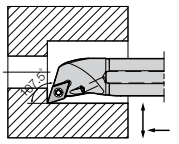
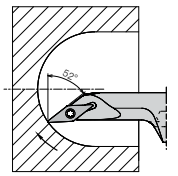
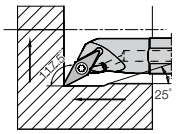
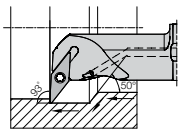
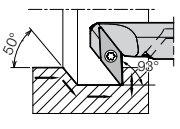


Solid Micro Bars

Application	Solid Micro Bars	Shape	Application
Boring / Profiling	**MBS** Standard Length → F14		
	MBE Extended Reach → F15		

Application	Solid Micro Bars	Shape	Shank Type Max. Overhang Length L/D	Min. Bore Dia. DMIN (mm) 1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0	6.5	7.0	7.5	8.0	Toolholder / Sleeve Ref. Page	Application
Boring	**EZB-HP** EZ Bar → F18		Solid L/D = ~5			●	●	●	●	●	●	●		●				●	→ F32~ → F37	
	EZB-HP-LT EZ Bar (Long Type) → F19		Solid			●	●	●	●	●		●		●						
	EZB-ST EZ Bar → F20		Solid L/D = ~5			●	●	●	●	●	●		●		●		●			
	EZB-NB EZ Bar (MEGACOAT) → F21		Solid L/D = ~5			●	●	●	●	●	●		●		●		●			
	EZB-NB CBN EZ Bar → F21		Solid L/D = ~5					●		●		●		●		●				
	EZB-NB PCD EZ Bar → F21		Solid L/D = ~5							●		●		●		●				
	EZBF EZ Bar (90° Lead Type) NEW → F22		Solid					●		●		●		●						
	TWB Twin Bars → F44		Solid	●	●	●	●	●											→ F44	
	TWBT Twin Bars → F45		Solid	●	●	●	●	●											→ F45	
	VNB-S Swiss IQ Bars → F38		Solid	●	●	●	●	●	●	●									→ F40 → F41	
	VNB Swiss IQ Bars → F38		Solid			●		●		●		●		●		●				
	VNBX-S Swiss IQ Bars → F42		Solid	●	●	●		●	●	●									→ F43	
Back Boring	**EZBT** EZ Bar NEW → F23		Solid							●		●							→ F32~ → F37	
	VNBT Swiss IQ Bars → F39		Solid							●		●							→ F40 → F41	
Internal Facing/ Profiling	**EZVB** EZ Bar → F23		Solid						●		●		●		●				→ F32~ → F37	
Copying	**EZBP** EZ Bar NEW → F25		Solid			●		●		●		●		●					→ F32~ → F37	
Chamfering	**EZBC** EZ Bar (45° Chamfering) NEW → F26		Solid									●		●		●			→ F32~ → F37	

Dynamic Bars (inch)

Application	Shape	Boring Bar Type	Shank Type Max. Overhang Length L/D	Coolant Hole Yes	Coolant Hole No	Min. Bore Dia. DMIN (in) 0.240	0.312	0.392	0.413	0.450	0.480	0.512	0.551	0.580	0.630	0.700	0.770	0.787	0.790	0.825	0.930	0.980	1.180	1.200	1.240	1.300	1.340	Toolholder / Sleeve Ref. Page
Boring / Internal Facing		A...SCLC-AE	Excellent L/D = ~5.5	●						●			● (0.600)			●				●			●				F46
		E...SCLC-A	Carbide L/D = ~7.0	●						●			● (0.600)			●											
		A...SCLP-AE	Excellent L/D = ~5.5	●				●		●			●		●				●				●				F50
		A...STLB(P)-AE	Excellent L/D = ~5.5	●			●			●			●		●				●					● (1.280)			F62
		S...STLB-AE	Excellent L/D = ~5.5		○	●																					
Boring		A...SWUB(P)-AE	Excellent L/D = ~5.5	●					● (0.472)					●		●				●			●				F76
		S...SWUB-AE	Excellent L/D = ~5.5		○	●	●																				
Copying		A...SDUC-AE	Excellent L/D = ~5.5	●							●			●				●				● (1.063)				●		F54
		E...SDUC-A	Carbide L/D = ~7.0	●							●			●				●										
		A...SDQC-AE	Excellent L/D = ~5.5	●						●				●				●				●						F56
		E...SDQC-A	Carbide L/D = ~7.0	●						●				●				●										
		A...SVJB-AE	Excellent L/D = ~5.5	●																		● (0.984)	●					F68
		A...SVPC(B)-AE	Excellent L/D = ~5.5	●										●					●			●	●		●			F70
		A...SVUC(B)-AE	Excellent L/D = ~5.5	●										●					●			●					●	F72
Back Boring		A...SVZC(B)-AE	Excellent L/D = ~5.5	●										●					●			●					●	

Min. Bore Dia. DMIN is indicated by the figure under ● depending on the boring bar size.

800.823.7284
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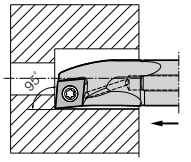
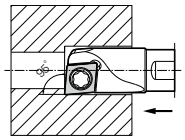
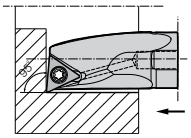
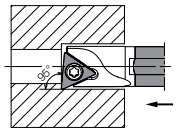
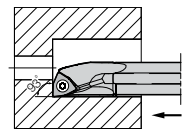
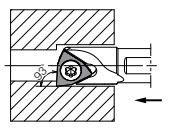
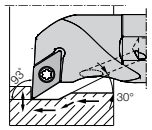
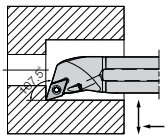
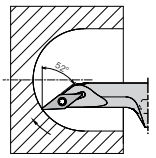
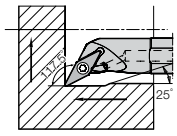
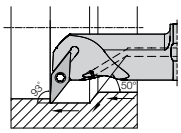
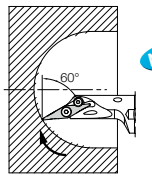
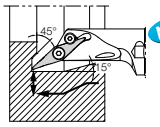
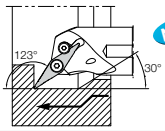
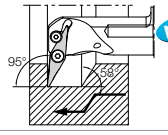
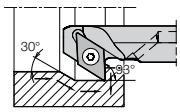
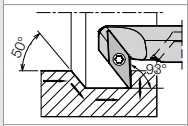
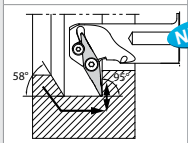
Dynamic Bars / EZ Bar PLUS (metric)

Application	Shape	Boring Bar Type	Shank Type Max. Overhang Length L/D	Coolant Hole Yes	Coolant Hole No	Min. Bore Dia. DMIN (mm) 5	6	7	8	10	12	13	14	16	18	20	22	23	25	26	27	30	31	32	34	40	50	Toolholder / Sleeve Ref. Page
Boring / Internal Facing		A...SCLC-AE	Excellent L/D = ~5.5	●						●	●		●		●		●				●							F46
		S...SCLC-AE	Excellent L/D = ~5.5		○	●	●	●	●																			
		S...SCLC-A	Steel L/D = ~4.0		○					●	●		●		●		●				●							
		C...SCLC-AN	Carbide L/D = ~7.0		○	●	●	●	●																			
		E...SCLC-A(N)	Carbide L/D = ~7.0	●						●	●		●		●		●				●							
		A...SCLP-AE	Excellent L/D = ~5.5	●							●		●	●	●		●				●							F50
		S...SCLP-A	Steel L/D = ~4.0		○						●		●	●	●		●				●							
		E...SCLP-A(N)	Carbide L/D = ~7.0	●							●		●	●	●		●				●							
	EZ Bar PLUS 	S...SCLC-EZP	Steel L/D = ~3.0		○	●	●	●	●	●																	F29
		C...SCLC-EZP	Carbide L/D = ~5.0		○	●	●	●	●	●																	
		A...STLP-AE	Excellent L/D = ~5.5	●						●	●		●	●	●		●		●		●							F62
		S...STLB-AE			○				●																			
		S...STLB(P)-A	Steel L/D = ~4.0		○				●	●	●		●	●	●		●				●							
		E...STLP-A(N)	Carbide L/D = ~7.0	●						●	●		●	●	●		●		●		●							
		C...STLB-AN			○				●																			
		A...STLC-AE	Excellent L/D = ~5.5	●						●	●		●		●		●											F63
		S...STLC-A	Steel L/D = ~4.0		○					●	●		●		●		●											
	EZ Bar PLUS 	S...STLB(P)-EZP	Steel L/D = ~3.0		○				●	●																	F30
		C...STLB(P)-EZP	Carbide L/D = ~5.0		○				●	●																	
Boring		S...SWUB-AE	Excellent L/D = ~5.5		○		●	●	●																		F76
		A...SWUB(P)-AE	Excellent L/D = ~5.5	●						●	●		●		●		●											
		S...SWUB(P)-A	Steel L/D = ~4.0		○		●	●	●	●	●		●		●		●											
		C...SWUB-A	Carbide L/D = ~7.0		○		●	●	●																			
		E...SWUB(P)-A	Carbide L/D = ~7.0	●						●	●		●		●		●											
	EZ Bar PLUS 	S...SWUB-EZP	Steel L/D = ~3.0		○		●	●	●																		F31
		C...SWUB-EZP	Carbide L/D = ~5.0		○		●	●	●																			

Dynamic Bars (metric)

Application	Shape	Boring Bar Type	Shank Type Max. Overhang Length L/D	Max. Overhang Length L/D	Coolant Hole Yes	Coolant Hole No	Min. Bore Dia. DMIN (mm) 5	6	7	8	10	12	13	14	16	18	20	22	23	25	26	27	30	31	32	34	40	50	Toolholder / Sleeve Ref. Page
Copying		A...SDUC-AE	Excellent	~5.5	●									●	●		●		●			●			●				
		S...SDUC-A	Steel	~4.0		○								●	●		●		●			●			●				F54
		E...SDUC-A	Carbide	~7.0	●									●	●		●		●			●			●				
		A...SDQC-AE	Excellent	~5.5	●							●			●		●			●			●						
		S...SDQC-A	Steel	~4.0		○							●		●		●			●			●						F56
		E...SDQC-A	Carbide	~7.0	●								●		●		●			●			●						
		A...SVJB(C)-AE	Excellent	~5.5	●										●		●			●			●				●	●	
		A...SVJP-AE			●										●														F68
		S...SVJB(C)-A	Steel	~4.0		○									●		●			●			●				●	●	
		S...SVJP-A				○									●														
		A...SVPC(B)-AE	Excellent	~5.5	●								●			●		●			●			●				
		S...SVPC(B)-A	Steel	~4.0		○							●			●		●			●			●				F70
		E...SVPC(B)-A	Carbide	~7.0	●								●			●		●			●			●				
		A...SVUB(C)-AE	Excellent	~5.5	●										●		●			●						●	●	
		S...SVUB(C)-A	Steel	~4.0		○									●		●			●						●	●	F72
		E...SVUB(C)-A	Carbide	~7.0	●											●				●			29			●		
		NEW A...SZJB-AE	Excellent	~5.5	●																	28	●				●	
		NEW A...SZXB-AE	Excellent		●															●			●				●	F80
		NEW A...SZQB-AE	Excellent		●																	●			●		●	
		NEW A...SZLB-AE	Excellent		●																		●			●	●	
Back Boring		A...SDZC-AE	Excellent	~5.5	●									●	●		●		●			●			●				
		S...SDZC-A	Steel	~4.0		○								●	●		●		●			●			●				F57
		E...SDZC-A	Carbide	~7.0	●									●	●		●		●			●							
		A...SVZB(C)-AE	Excellent	~5.5	●										●		●			●						●	●	
		S...SVZB(C)-A	Steel	~4.0		○									●		●			●						●	●	F72
		NEW A...SZZB-AE	Excellent	~5.5	●																		●			●	●	F80

Min. Bore Dia. DMIN is indicated by the figure under ● depending on the boring bar size.

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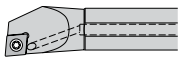
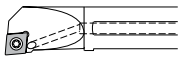
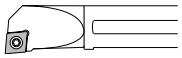
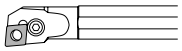
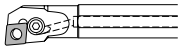
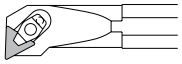
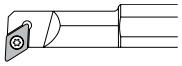
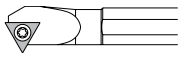
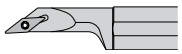
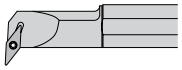
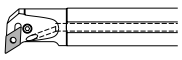
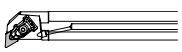
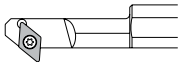
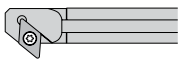
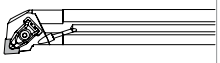
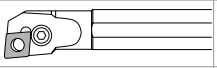
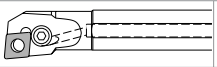
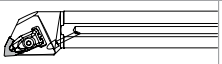
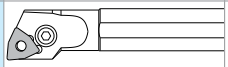
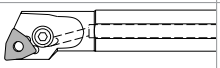
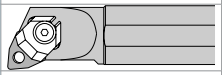
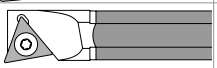
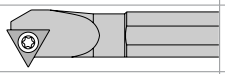
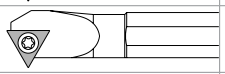
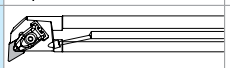
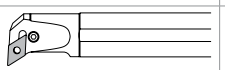
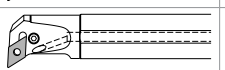
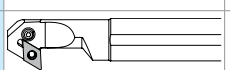
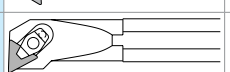
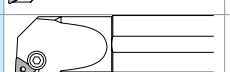
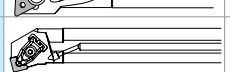
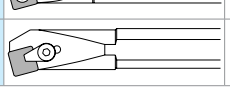
Boring Bars (inch)

Application	Boring Bar Type	Shape	Shank Type Max. Overhang Length L/D	Coolant Hole Yes	Coolant Hole No	Insert Type	Min. Bore Dia. DMIN (in) 0.240	0.312	0.394	0.415	0.472	0.480	0.550	0.600	0.630	0.709	0.770	0.787	0.790	0.912	0.984	1.180	1.250	1.260	1.340	1.500	1.570	1.750	2.020	Toolholder / Sleeve Ref. Page
Boring / Internal Facing	A...SCLC-E		Excellent L/D = ~5.0	●		Positive			●		●				● (0.632)	●					●									
	S...SCLC-E		Excellent L/D = ~5.0		○	Positive	● (0.197)																							
	A...SCLC		Steel L/D = ~3.0	●		Positive				●		●		●			●													F48
	S...SCLC		Steel L/D = ~3.0		○	Positive			●		●				●			● (0.788)			●				● (1.338)					
	C...SCLC		Carbide L/D = ~7.0		○	Positive	● (0.197)		●		●				●			● (0.788)			●									
	A...DCLN		Steel L/D = ~3.0	●		Negative																	●			●		●		F91
	S...PCLN		Steel L/D = ~3.0		○	Negative																				● (1.550)			●	F92
	A...PCLN		Steel L/D = ~3.0	●		Negative													●		● (1.060)			●						
	A...DWLN		Steel L/D = ~3.0	●		Negative																	●			●		●		F101
Boring	S...STUP(B)		Steel L/D = ~3.0		○	Positive		●	● (0.392)		●				●			●		●										F65
	S...SWUB		Steel L/D = ~3.0		○	Negative	●	●																						F78
	C...SWUB		Carbide L/D = ~7.0		○	Positive	●	●																						F79
	S...CTUP		Steel L/D = ~3.0		○	Positive									● (0.625)						● (1.060)				● (1.350)					F85
Copying	S...SDUC		Steel L/D = ~3.0		○	Positive							● (0.564)				● (0.750)				● (0.980)									F58
	S...STWP		Steel L/D = ~3.0		○	Positive					● (0.476)				●			● (0.786)			● (0.970)		● (1.240)							F66
	S...SVJB-E		Excellent L/D = ~5.0		○	Positive																●					●			F74
	S...SVJB		Steel L/D = ~3.0		○	Positive									●			● (0.780)			●									
	S...SVUC(B)-E		Excellent L/D = ~5.0		○	Positive									●				●		● (0.980)				●		●			F75
	A...PDUN		Steel L/D = ~3.0	●		Negative															● (1.060)			●			●			F93
	A...DDUN		Steel L/D = ~3.0	●		Negative																				●		●		F94
Back Boring	S...SDZC		Steel L/D = ~3.0		○	Positive							●		●			●			●									F59
	S...SVZC(B)-E		Excellent L/D = ~5.0		○	Positive									●				●		● (0.980)				●		●			F75

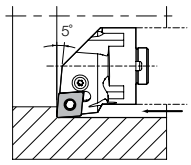
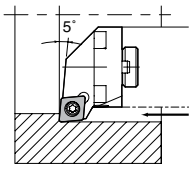
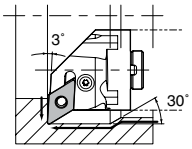
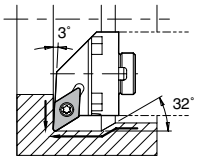
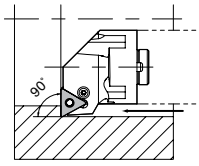
Min. Bore Dia. DMIN is indicated by the figure under ● depending on the boring bar size.

Boring Bars (metric)

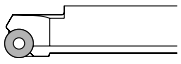
Application	Boring Bar Type	Overview Shape	Shank Type Max. Overhang Length L/D	Coolant Hole Yes	Coolant Hole No	Insert Type	Min. Bore Dia. DMIN (mm) 5	6	7	8	10	12	14	16	18	20	25	30	32	40	50	63	Toolholder / Sleeve Ref. Page
Boring / Internal Facing	A...DCLN12		Steel L/D = ~3.0	●		Negative													●	●	●		F91
	S...PCLN○○		Steel L/D = ~3.0		○	Negative										●	● 27		●	●	●		F92
	A...PCLN09		Steel L/D = ~3.0	●		Negative										●	● 27		●				F92
	A...DWLN08		Steel L/D = ~3.0	●		Negative													●	●	●		F101
	S...PWLN○○		Steel L/D = ~3.0		○	Negative										●	● 27		●	●	●		F100 F102
	A...PWLN06		Steel L/D = ~3.0	●		Negative										●	● 27		●				F100
	S...WWLN08-E		Excellent L/D = ~5.0		○	Negative											● 28		● 34	●			F102
	C...STXP(B)		Carbide L/D = ~7.0		○	Positive			● 7.5	● 9	● 11												F67
	C...SJLC		Carbide L/D = ~7.0		○	Positive	● 5.5																F60
Copying	S...STWP-E		Excellent L/D = ~5.0		○	Positive						●		●		●	●		●				F66
	S...STWP		Steel L/D = ~3.0		○	Positive						●		●		●	●						F66
	A...DDUN15		Steel L/D = ~3.0	●		Negative														●	●	●	F94
	S...PDUN11		Steel L/D = ~3.0		○	Negative											● 27		●	●			F93
	A...PDUN11		Steel L/D = ~3.0	●		Negative											● 27		●	●			F93
	S...PDUN15		Steel L/D = ~3.0		○	Negative													●	● 44	● 54		F95
	S...PDQN15		Steel L/D = ~3.0		○	Negative													●	● 44	● 54		F95
Back Boring	C...STZB		Carbide L/D = ~7.0		○	Positive				● 8.5													F67
	C...SJZC		Carbide L/D = ~7.0		○	Positive		● 6.5															F60
	S...PDZN15		Steel L/D = ~3.0		○	Negative													●	● 44	● 54		F95
Boring	S...CTUP		Steel L/D = ~3.0		○	Positive								●		●	● 27		● 34	● 43	●		F85
	A...DTFN○○		Steel L/D = ~3.0	●		Negative													●	●	●		F98
	S...PTUN○○		Steel L/D = ~3.0		○	Negative										●	●	●	●	●	●		F99
	A...PTUN11		Steel L/D = ~3.0	●		Negative										●	●		●				F99
	A...DSKN12		Steel L/D = ~3.0	●		Negative													●	●	●		F97
	S...SSKP		Steel L/D = ~3.0		○	Positive										●	●						F84
	S...CSKP		Steel L/D = ~3.0		○	Positive										●	● 27		● 34	● 43			F84

Min. Bore Dia. DMIN is indicated by the figure under ● depending on the boring size.

AD Bars Interchangeable Head Boring Bars with Anti-vibration Dampener System

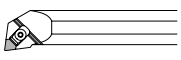
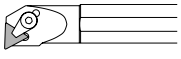
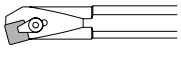
Application	Boring Bar Type	Shape	Shank Type Max. Overhang Length L/D	Coolant Hole Yes	Coolant Hole No	Insert Type	Min. Bore Dia. DMIN (mm) 7	8	10	12	14	16	18	20	25	30	32	40	43	50	63	Toolholder / Sleeve Ref. Page
Boring / Internal Facing	**HA...PCLN12**		Anti-Vibration Dampener L/D = ~5.5	●		Negative												●		●	●	F87
Boring / Internal Facing	**HA...SCLC09**		Anti-Vibration Dampener L/D = ~6.0	●		Positive												●				F89
Copying	**HA...PDUN15**		Anti-Vibration Dampener L/D = ~6.0	●		Negative													●	●	●	F88
Copying	**HA...SDUC11**		Anti-Vibration Dampener L/D = ~6.0	●		Positive												●				F89
Boring	**HA...PTFN16**		Anti-Vibration Dampener L/D = ~6.0	●		Negative												●		●	●	F88

Toolholders for Bearing Machining (Square Shank)

Application	Boring Bar Type	Shape	Min. Bore Dia. DMIN (mm) 20	25	30	32	40	50	Toolholder / Sleeve Ref. Page
Boring	**SRCP-B**		●			●			F86

Application	Boring Bar Type	Shape	Min. Bore Dia. DMIN (mm) 20	25	30	32	40	50	Toolholder / Sleeve Ref. Page
Round-Chamfering	**CBSN-B**		●						F86

Boring Bars for Ceramic / Solid CBN Tools (L/D = ~3)

Application	Boring Bar Type	Shape	Min. Bore Dia. DMIN (mm) 16	18	20	25	30	32	40	50	Toolholder / Sleeve Ref. Page
Boring / Internal Facing	**S...CELN**									●	F103
Boring	**S...CTUP**		●		●	● 27		● 34	● 43	●	F85
Boring	**S...CSKP**				●	● 27		● 34	● 43		F84

Application	Boring Bar Type	Shape	Min. Bore Dia. DMIN (mm) 20	25	30	32	40	50	Toolholder / Sleeve Ref. Page
Boring	**S...CTUN-A**				● 30 mm ● 1.18 in				F104

Min. Bore Dia. DMIN is indicated by the figure under ● depending on the boring size.

MBS (Micro Internal Diameter Profile Boring)



• MBS Bars are Right-hand

MBS Standard Length (Inch)

Uncoated		AlTiN Coating		Dimensions (in)			
Part Number	Stock	Part Number	Stock	DC $^{+0.0000}_{-0.0025}$	DCON	LF	CDX
MBS-0150.030	●	MBS-0150L030	●	0.0150	1/8	1 1/2	0.030
MBS-0200.030	●	MBS-0200L030	●	0.0200	1/8	1 1/2	0.030
MBS-0250.050	●	MBS-0250L050	●	0.0250	1/8	1 1/2	0.050
MBS-0300.050	●	MBS-0300L050	●	0.0300	1/8	1 1/2	0.050
MBS-0350.050	●	MBS-0350L050	●	0.0350	1/8	1 1/2	0.050
MBS-0400.050	●	MBS-0400L050	●	0.0400	1/8	1 1/2	0.050
MBS-0450.100	●	MBS-0450L100	●	0.0450	1/8	1 1/2	0.100
MBS-0500.100	●	MBS-0500L100	●	0.0500	1/8	1 1/2	0.100
MBS-0550.100	●	MBS-0550L100	●	0.0550	1/8	1 1/2	0.100
MBS-0600.100	●	MBS-0600L100	●	0.0600	1/8	1 1/2	0.100
MBS-0800.250	●	MBS-0800L250	●	0.0800	1/8	1 1/2	0.250
MBS-1000.375	●	MBS-1000L375	●	0.1000	1/8	1 1/2	0.375
MBS-1100.500	●	MBS-1100L500	●	0.1100	1/8	1 1/2	0.500
MBS-1200.600	●	MBS-1200L600	●	0.1200	3/16	2	0.600
MBS-1400.700	●	MBS-1400L700	●	0.1400	3/16	2	0.700
MBS-1600.800	●	MBS-1600L800	●	0.1600	3/16	2 1/2	0.800
MBS-1800.900	●	MBS-1800L900	●	0.1800	1/4	2 1/2	0.900
MBS-2000.1000	●	MBS-2000L1000	●	0.2000	1/4	3	1.000
MBS-2200.1250	●	MBS-2200L1250	●	0.2200	1/4	3	1.250
MBS-2400.1500	●	MBS-2400L1500	●	0.2400	1/4	3	1.500

MBS Standard Length (Metric)

Uncoated		AlTiN Coating		Dimensions (mm)			
Part Number	Stock	Part Number	Stock	DC $^{+0.00}_{-0.06}$	DCON	LF	CDX
MBS-0157.039	●	MBS-0157L039	●	0.40	3.00	38.00	1.00
MBS-0197.039	●	MBS-0197L039	●	0.50	3.00	38.00	1.00
MBS-0236.051	●	MBS-0236L051	●	0.60	3.00	38.00	1.30
MBS-0276.051	●	MBS-0276L051	●	0.70	3.00	38.00	1.30
MBS-0315.051	●	MBS-0315L051	●	0.80	3.00	38.00	1.30
MBS-0354.051	●	MBS-0354L051	●	0.90	3.00	38.00	1.30
MBS-0394.098	●	MBS-0394L098	●	1.00	3.00	38.00	2.50
MBS-0433.098	●	MBS-0433L098	●	1.10	3.00	38.00	2.50
MBS-0472.098	●	MBS-0472L098	●	1.20	3.00	38.00	2.50
MBS-0512.098	●	MBS-0512L098	●	1.30	3.00	38.00	2.50
MBS-0591.236	●	MBS-0591L236	●	1.50	3.00	38.00	6.00
MBS-0669.276	●	MBS-0669L276	●	1.70	3.00	38.00	7.00
MBS-0787.315	●	MBS-0787L315	●	2.00	3.00	38.00	8.00
MBS-1181.591	●	MBS-1181L591	●	3.00	5.00	50.00	15.00
MBS-1378.787	●	MBS-1378L787	●	3.50	5.00	50.00	20.00
MBS-1575.866	●	MBS-1575L866	●	4.00	5.00	50.00	22.00
MBS-1772.906	●	MBS-1772L906	●	4.50	8.00	65.00	23.00
MBS-1969.984	●	MBS-1969L984	●	5.00	8.00	65.00	25.00
MBS-2165.1063	●	MBS-2165L1063	●	5.50	8.00	65.00	27.00
MBS-2362.1142	●	MBS-2362L1142	●	6.00	8.00	65.00	29.00

Series MBS Workpiece Materials

Coating	P Steel ~30HRC	P Steel 30~40HRC	H Hardened Steel ~55HRC	H Hardened Steel ~68HRC	M Stainless Steel	K Cast Iron	N Aluminum	N Graphite	N Copper Alloy	N Brass	N CFRP	N Plastic	N Thermoset Plastic	N High Density Plastic	S Nickel / Cobalt	S Titanium Alloy
AlTiN	★	★	★	☆	☆	☆			☆						☆	☆
Uncoated	★	★	★	☆	☆		☆		☆	☆				☆		

★ : Priority ☆ : Applicable Materials

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(Technical Support) 800.823.7284 - Option 2
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● : Standard Item △ : Phaseout Item (will be removed from next catalog)
Contact your local Kyocera sales engineer to upgrade old products to new technology

MBE (Micro Internal Diameter Profile Boring)



• MBE Bars are Right-hand

MBE Extended Reach (Inch)

Uncoated		AlTiN Coating		Dimensions (in)			
Part Number	Stock	Part Number	Stock	DC $^{+0.0000}_{-0.0025}$	DCON	LF	CDX
MBE-0150.075	●	MBE-0150L075	●	0.0150	1/8	1 1/2	0.075
MBE-0200.075	●	MBE-0200L075	●	0.0200	1/8	1 1/2	0.075
MBE-0250.125	●	MBE-0250L125	●	0.0250	1/8	1 1/2	0.125
MBE-0300.125	●	MBE-0300L125	●	0.0300	1/8	1 1/2	0.125
MBE-0350.125	●	MBE-0350L125	●	0.0350	1/8	1 1/2	0.125
MBE-0400.125	●	MBE-0400L125	●	0.0400	1/8	1 1/2	0.125
MBE-0450.250	●	MBE-0450L250	●	0.0450	1/8	1 1/2	0.250
MBE-0500.250	●	MBE-0500L250	●	0.0500	1/8	1 1/2	0.250
MBE-0550.250	●	MBE-0550L250	●	0.0550	1/8	1 1/2	0.250
MBE-0600.250	●	MBE-0600L250	●	0.0600	1/8	1 1/2	0.250
MBE-0800.500	●	MBE-0800L500	●	0.0800	1/8	1 1/2	0.500
MBE-1000.600	●	MBE-1000L600	●	0.1000	1/8	1 1/2	0.600
MBE-1100.700	●	MBE-1100L700	●	0.1100	1/8	1 1/2	0.700
MBE-1200.850	●	MBE-1200L850	●	0.1200	3/16	2	0.850
MBE-1400.900	●	MBE-1400L900	●	0.1400	3/16	2	0.900
MBE-1600.1100	●	MBE-1600L1100	●	0.1600	3/16	2 1/2	1.100
MBE-1800.1250	●	MBE-1800L1250	●	0.1800	1/4	2 1/2	1.250
MBE-2000.1400	●	MBE-2000L1400	●	0.2000	1/4	3	1.400
MBE-2200.1500	●	MBE-2200L1500	●	0.2200	1/4	3	1.500
MBE-2400.1750	●	MBE-2400L1750	●	0.2400	1/4	3	1.750

MBE Standard Reach (Metric)

Uncoated		AlTiN Coating		Dimensions (mm)			
Part Number	Stock	Part Number	Stock	DC $^{+0.00}_{-0.06}$	DCON	LF	CDX
MBE-0157.079	●	MBE-0157L079	●	0.40	3.00	38.00	2.00
MBE-0197.079	●	MBE-0197L079	●	0.50	3.00	38.00	2.00
MBE-0236.118	●	MBE-0236L118	●	0.60	3.00	38.00	3.00
MBE-0276.118	●	MBE-0276L118	●	0.70	3.00	38.00	3.00
MBE-0315.118	●	MBE-0315L118	●	0.80	3.00	38.00	3.00
MBE-0354.118	●	MBE-0354L118	●	0.90	3.00	38.00	3.00
MBE-0394.197	●	MBE-0394L197	●	1.00	3.00	38.00	5.00
MBE-0433.197	●	MBE-0433L197	●	1.10	3.00	38.00	5.00
MBE-0472.197	●	MBE-0472L197	●	1.20	3.00	38.00	5.00
MBE-0512.197	●	MBE-0512L197	●	1.30	3.00	38.00	5.00
MBE-0591.394	●	MBE-0591L394	●	1.50	3.00	38.00	10.00
MBE-0669.394	●	MBE-0669L394	●	1.70	3.00	38.00	10.00
MBE-0787.394	●	MBE-0787L394	●	2.00	3.00	38.00	10.00
MBE-1181.787	●	MBE-1181L787	●	3.00	5.00	50.00	20.00
MBE-1378.984	●	MBE-1378L984	●	3.50	5.00	50.00	25.00
MBE-1575.1063	●	MBE-1575L1063	●	4.00	5.00	50.00	27.00
MBE-1772.1260	●	MBE-1772L1260	●	4.50	8.00	65.00	32.00
MBE-1969.1260	●	MBE-1969L1260	●	5.00	8.00	65.00	32.00
MBE-2165.1260	●	MBE-2165L1260	●	5.50	8.00	65.00	32.00
MBE-2362.1378	●	MBE-2362L1378	●	6.00	8.00	65.00	35.00

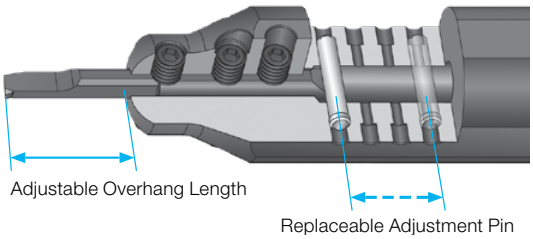
Series MBE Workpiece Materials

Coating	P Steel ~30HRC	P Steel 30~40HRC	H Hardened Steel ~55HRC	H Hardened Steel ~68HRC	M Stainless Steel	K Cast Iron	N Aluminum	N Graphite	N Copper Alloy	N Brass	N CFRP	N Plastic	N Thermoset Plastic	N High Density Plastic	S Nickel / Cobalt	S Titanium Alloy
AlTiN	★	★	★	☆	☆	☆			☆						☆	☆
Uncoated	★	★	★	☆	☆		☆		☆	☆				☆		

★ : *Priority* ☆ : *Applicable Materials*

● : Standard Item △ : Phaseout Item (will be removed from next catalog)
Contact your local Kyocera sales engineer to upgrade old products to new technology

Kyocera's Original EZ Adjust Structure

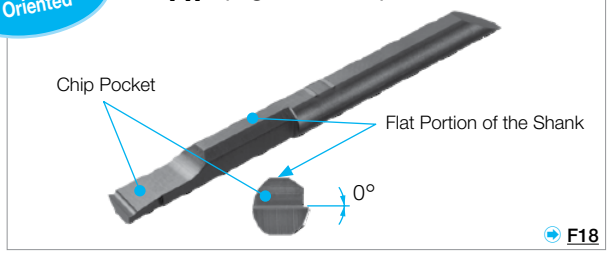


- Easy Adjustment and High Precision
- EZ Bar Minimizes Deviation with High Rigidity Clamping Force
- Wide of Tooling for Various Applications

2 Types of Bars

Precision Oriented

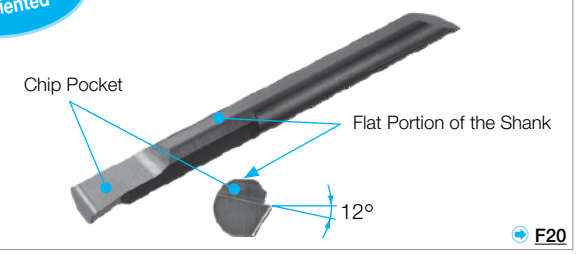
HP (High Precision)



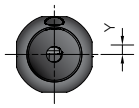
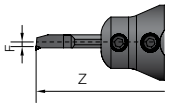
F18

Cost Oriented

ST (Standard)



F20

Insert Setting Image		Insert Tolerance	Offset (F)	Overall length (Z)	Edge Height (Y)	Min. Bore Dia.
 Y = Edge Height	 F = Offset Z = Insert length	Precision-oriented HP Type (High Precision)	±0.025mm	±0.05mm	+0.05/0mm	Same as Shank Dia.
		Cost-oriented ST Type (Standard)	±0.060mm	±0.10mm	+0.06/0mm	Not same as Shank Dia.

* See "Dimensions" page for details.

"EZ Bar PLUS" Indexable EZ Bar Lineup Expansion



3 Types of Sleeves

EZH-CT



High Precision, with Coolant Hole (Adjustable)

EZH-HP



Overhang Length is Adjustable (Adjustable)

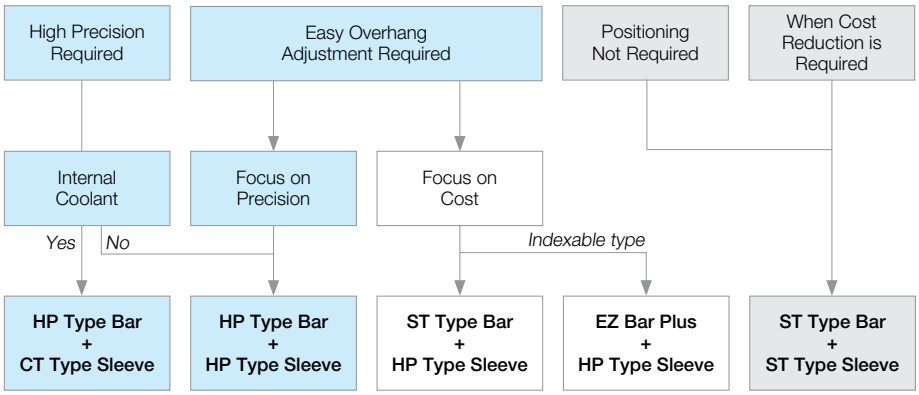
EZH-ST



Not-Adjustable

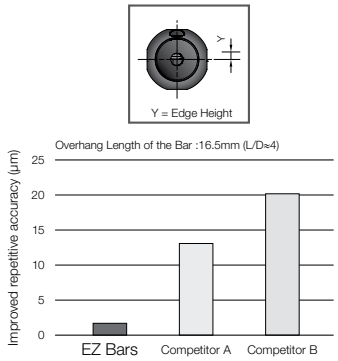
800.823.7284
Visit us online at KyoceraPrecisionTools.com

How to Select Bars and Sleeves for Each Application



HP Type Bar + CT/HP Type Sleeve

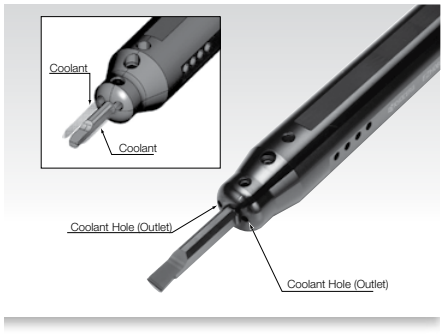
Excellent repeatability and drastic tool change time reduction



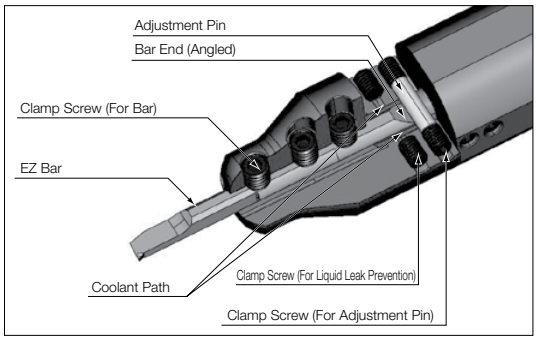
EZH-CT (high precision / with coolant hole) is added to the EZH sleeve lineup

Kyocera's unique EZ adjust structure and internal coolant system improve dimensional accuracy and surface roughness!

EZH-CT Coolant System



EZH-CT Internal Stucture



How to Set Bar in Sleeve

How to use adjustment pin and prevent coolant leakage (Fig.1)

① Put the adjustment pin into the hole according to the overhang length and push it into the sleeve using the wrench "LW-1.5".
② Tighten the clamp screw for the adjustment pin "HS3X4P" using the wrench "LW-1.5" from both sides of the sleeve.
③ Put the additional clamp screws "HS3X4P" into the un-used adjustment pin holes to prevent coolant leakage using the wrench "LW-1.5" and fix them from both sides of the sleeve.

How to secure the bar (Fig.2)

① With the chip pocket upward, set the bar into the sleeve. Press the angled face of the bar end with the adjustment pin. Make sure that the bar does not rotate. **(Fig.3)**
② Tighten the clamp screw with wrench "LW-2" and secure the bar. (Use "LW-1.5" if shank dia. is 3mm or less.)

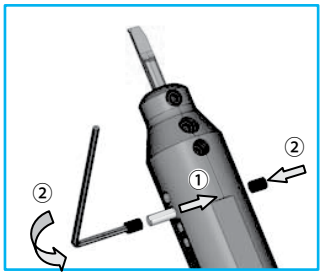


Fig.1 How to use the adjustment pin

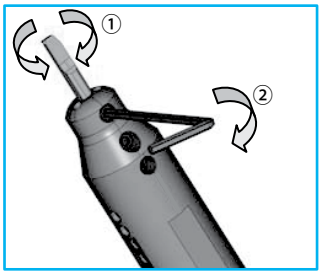


Fig.2 How to secure the bar

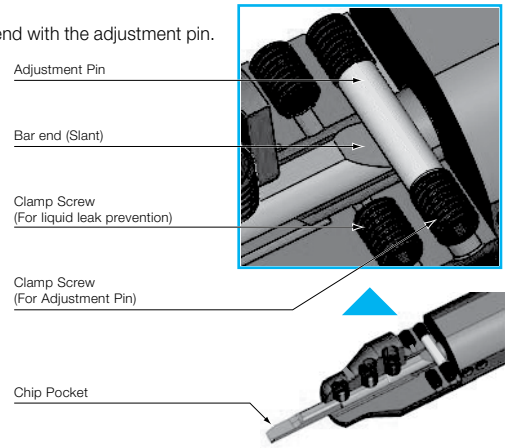
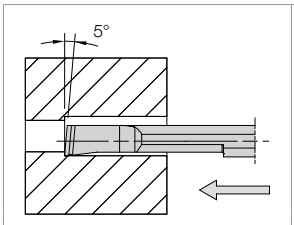
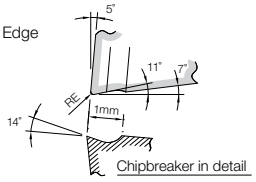


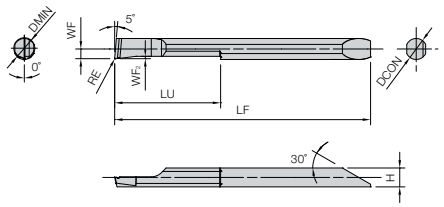
Fig.3 Clamped bar

EZB-HP (Boring)

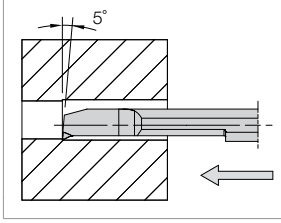


H Chipbreaker
- Chipbreaker Parallel to Cutting Edge
- Tough Edge (General Purpose)

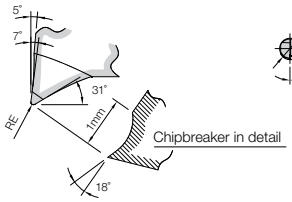


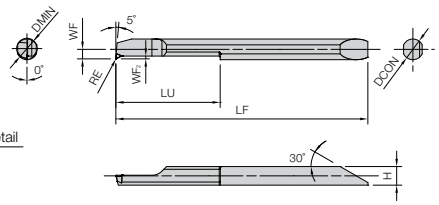


- Right-hand Shown



F Chipbreaker
- Lead Angle on Chipbreaker
- Sharp Edge (For Finishing)





- Right-hand Shown

EZ Bar Dimensions (metric)

Part Number		Min. Bore Dia.	Dimensions (mm)							Grade: MEGACOAT NANO PLUS (NEW) PR1725 R	MEGACOAT NANO PLUS PR1725 L	MEGACOAT PR1225 R	MEGACOAT PR1225 L	Carbide GW05 R	Carbide GW05 L	Applicable Sleeve ➡ F32~F37
		DMIN	DCON	H	LF	LU	WF	WF_2	RE							
EZB®	020020HP-008H	2	2	1.8	32	8	0.85	0.25	0.08 $^{\pm0.015}$	●		●	●	●		EZH020…
	025025HP-008H	2.5	2.5	2.3	35	10.5	1.1	0.25	0.08 $^{\pm0.015}$	●		●	●	●		EZH025…
	025025HP-015H								0.15 $^{\pm0.020}$	●		●				
	030030HP-008H	3	3	2.7	38.9	13	1.35	0.3	0.08 $^{\pm0.015}$	●		●	●	●		EZH030…
	030030HP-015H								0.15 $^{\pm0.020}$	●		●				
	035035HP-008H	3.5	3.5	3.2	41.9	15	1.6	0.4	0.08 $^{\pm0.015}$	●		●	●	●		EZH035…
	035035HP-015H								0.15 $^{\pm0.020}$	●		●				
	040040HP-008H	4	4	3.6	48.8	20	1.85	0.4	0.08 $^{\pm0.015}$	●		●	●	●		EZH040…
	040040HP-015H								0.15 $^{\pm0.020}$	●		●				
	045045HP-008H	4.5	4.5	4.1	51.1	22.5	2.1	0.5	0.08 $^{\pm0.015}$	●		●	●	●		EZH045…
	045045HP-015H								0.15 $^{\pm0.020}$	●		●				
	050050HP-008H	5	5	4.6	58.1	25	2.35	0.5	0.08 $^{\pm0.015}$	●		●	●	●		EZH050…
	050050HP-015H								0.15 $^{\pm0.020}$	●		●				
	060060HP-008H	6	6	5.6	66.1	30	2.85	0.6	0.08 $^{\pm0.015}$	●		●	●	●		EZH060…
	060060HP-015H								0.15 $^{\pm0.020}$	●		●				
	070070HP-008H	7	7	6.3	73.8	35	3.3	0.7	0.08 $^{\pm0.015}$	●		●	●	●		EZH070…
	070070HP-015H								0.15 $^{\pm0.020}$	●		●				
	080080HP-008H	8	8	7.2	84.8	40	3.75	0.8	0.08 $^{\pm0.015}$	●		●	●	●		EZH080…
	080080HP-015H								0.15 $^{\pm0.020}$	●		●				
EZBR	020020HP-005F	2	2	1.8	32	8	0.85	0.25	0.05 $^{\pm0.010}$	●		●				EZH020…
	025025HP-005F	2.5	2.5	2.3	35	10.5	1.1	0.3	0.05 $^{\pm0.010}$	●		●				EZH025…
	025025HP-015F								0.15 $^{\pm0.020}$	●		●				
	030030HP-005F	3	3	2.7	38.9	13	1.35	0.4	0.05 $^{\pm0.010}$	●		●				EZH030…
	030030HP-015F								0.15 $^{\pm0.020}$	●		●				
	035035HP-005F	3.5	3.5	3.2	41.9	15	1.6	0.5	0.05 $^{\pm0.010}$	●		●				EZH035…
	035035HP-015F								0.15 $^{\pm0.020}$	●		●				
	040040HP-005F	4	4	3.6	48.8	20	1.85	0.5	0.05 $^{\pm0.010}$	●		●				EZH040…
	040040HP-015F								0.15 $^{\pm0.020}$	●		●				
	045045HP-005F	4.5	4.5	4.1	51.1	22.5	2.1	0.7	0.05 $^{\pm0.010}$	●		●				EZH045…
	045045HP-015F								0.15 $^{\pm0.020}$	●		●				
	050050HP-005F	5	5	4.6	58.1	25	2.35	0.7	0.05 $^{\pm0.010}$	●		●				EZH050…
	050050HP-015F								0.15 $^{\pm0.020}$	●		●				
	060060HP-005F	6	6	5.6	66.1	30	2.85	0.9	0.05 $^{\pm0.010}$	●		●				EZH060…
	060060HP-015F								0.15 $^{\pm0.020}$	●		●				
	070070HP-005F	7	7	6.3	73.8	35	3.3	1	0.05 $^{\pm0.010}$	●		●				EZH070…
	070070HP-015F								0.15 $^{\pm0.020}$	●		●				
	080080HP-005F	8	8	7.2	84.8	40	3.75	1	0.05 $^{\pm0.010}$	●		●				EZH080…
	080080HP-015F								0.15 $^{\pm0.020}$	●		●				

Tolerance: Offset ±0.025mm (of the reference pin), overall length ±0.05mm, edge height +0.05/0mm

Recommended Cutting Conditions ➡ F27-F28

EZ Bar Identification System

EZ B R 020 020 HP - 008 H

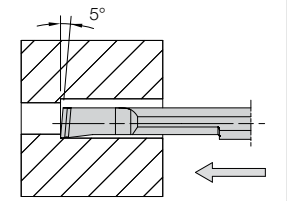
EZ	Application	Insert Hand	Min. Bore Dia.	Shank Dia.	Precision	Corner-R (RE)	Chipbreaker
Symbol of Bar	**B**: B-Boring Bar	**R**: Right-hand **L**: Left-hand	020 : 2.0mm 025 : 2.5mm	020 : 2.0mm 025 : 2.5mm	**HP**: High Precision **ST**: Standard	008 : 0.08mm 015 : 0.15mm	**H**: H Chipbreaker (Tough Edge) **F**: F Chipbreaker (Sharp Edge) **NB**: Without chipbreaker

EZ Bars are sold in 1 piece boxes.

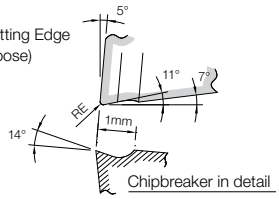
● : Standard Item △ : Phaseout Item (will be removed from next catalog)
Contact your local Kyocera sales engineer to upgrade old products to new technology

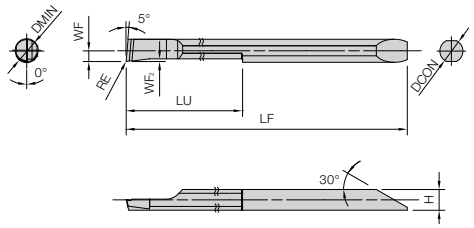
(Customer Service) 800.823.7284 - Option 1
(Technical Support) 800.823.7284 - Option 2
Visit us online at KyoceraPrecisionTools.com

EZB-HP (Boring, Long Type)



H Chipbreaker
- Chipbreaker Parallel to Cutting Edge
- Tough Edge (General Purpose)





- Right-hand Shown

EZ Bar Dimensions (metric)

Part Number		Min. Bore Dia.	Dimensions (mm)										Grade	Applicable Sleeve ➡ F32~F37
		DMIN	DCON	H	LF	LU	*Overhang Length				WF	WF_2	RE	MEGACOAT PR1225	
							No.1	No.2	No.3	No.4					
EZBR	020020HP-008H-LT	2	2	1.8	36	12	12.5	8.5	-	-	0.85	0.25	0.08 ±0.015	●	EZH020…
	025025HP-008H-LT	2.5	2.5	2.3	39.5	15	15.5	11.5	-	-	1.1			●	EZH025…
	030030HP-008H-LT	3	3	2.7	47.9	18	22.5	18.5	14.5	-	1.35	0.3		●	EZH030…
	035035HP-008H-LT	3.5	3.5	3.2	51.9	21	*25.5	21.5	17.5	-	1.6	0.4		●	EZH035…
	040040HP-008H-LT	4	4	3.6	60.8	28	*32.5	28.5	24.5	20.5	1.85			●	EZH040…
	050050HP-008H-LT	5	5	4.6	73.1	35	*40.5	35.5	30.5	25.5	2.35	0.5		●	EZH050…
	060060HP-008H-LT	6	6	5.6	83.1	42	*47.5	42.5	37.5	32.5	2.85	0.6		●	EZH060…

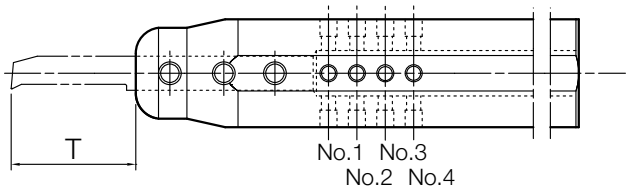
Tolerance: Offset ±0.025mm (of the reference pin), overall length ±0.05mm, edge height +0.05/0mm

Recommended Cutting Conditions ➡ F27-F28

Long Type Overhang Amount T (mm)

Part Number		*Overhang Length (mm)			
		No.1	No.2	No.3	No.4
EZBR	020020HP-008H-LT	12.5	8.5	-	-
	025025HP-008H-LT	15.5	11.5	-	-
	030030HP-008H-LT	22.5	18.5	14.5	-
	035035HP-008H-LT	*25.5	21.5	17.5	-
	040040HP-008H-LT	*32.5	28.5	24.5	20.5
	050050HP-008H-LT	*40.5	35.5	30.5	25.5
	060060HP-008H-LT	*47.5	42.5	37.5	32.5

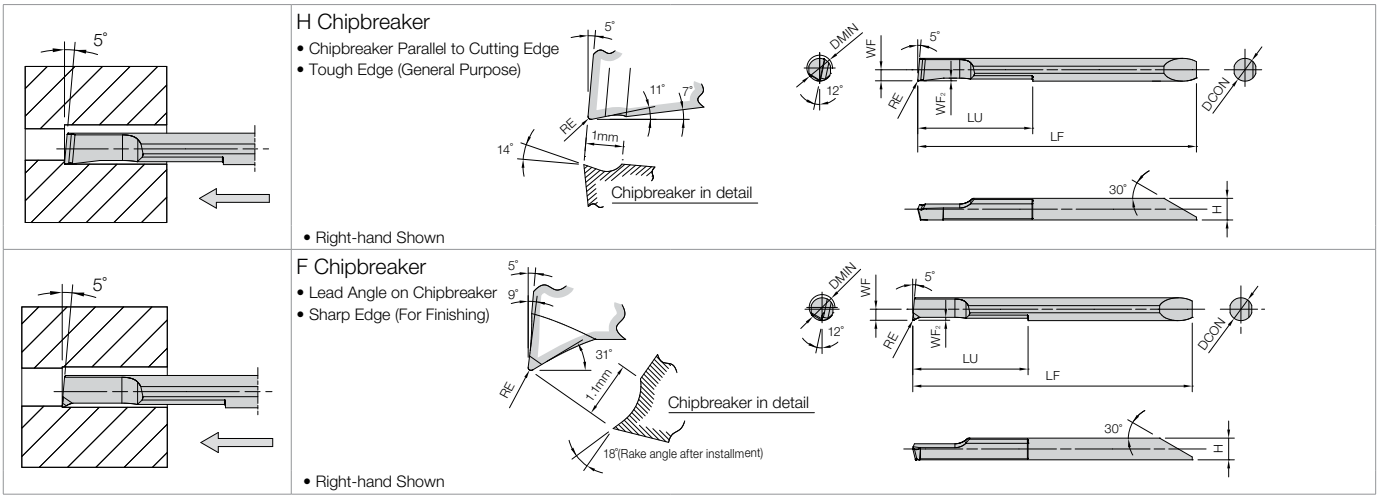
*To use full overhang, inserts with modified LU dimension are required.



EZ Bars are sold in 1 piece boxes.

● : Standard Item △ : Phaseout Item (will be removed from next catalog)
Contact your local Kyocera sales engineer to upgrade old products to new technology

EZB-ST (Boring)



EZ Bar Dimensions (metric)

Part Number		Min. Bore Dia.	Dimensions (mm)							NEW Grade		Applicable Sleeve
										MEGACOAT NANO PLUS	MEGACOAT	
		DMIN	DCON	H	LF	LU	WF	WF_2	RE	PR1725	PR1225	F32~F37
EZBR	020017ST-008H	2.0	1.7	1.5	27.3	7.0	0.79	0.19	0.08 ±0.015	●	●	EZH017…
	025020ST-008H	2.5	2.0	1.82	32.0	8.0	0.94	0.16	0.08 ±0.015	●	●	EZH020…
	025020ST-015H								0.15 ±0.020	●	●	
	030025ST-008H	3.0	2.5	2.3	35.0	10.5	1.19	0.15	0.08 ±0.015	●	●	EZH025…
	030025ST-015H								0.15 ±0.020	●	●	
	035030ST-008H	3.5	3.0	2.8	39.0	13.0	1.44	0.18	0.08 ±0.015	●	●	EZH030…
	035030ST-015H								0.15 ±0.020	●	●	
	040035ST-008H	4.0	3.5	3.3	42.0	15.0	1.69	0.24	0.08 ±0.015	●	●	EZH035…
	040035ST-015H								0.15 ±0.020	●	●	
	045040ST-008H	4.5	4.0	3.8	49.0	20.0	1.94	0.27	0.08 ±0.015	●	●	EZH040…
	045040ST-015H								0.15 ±0.020	●	●	
	055050ST-008H	5.5	5.0	4.8	58.2	25.0	2.44	0.33	0.08 ±0.015	●	●	EZH050…
	055050ST-015H								0.15 ±0.020	●	●	
	065060ST-008H	6.5	6.0	5.8	66.2	30.0	2.94	0.38	0.08 ±0.015	●	●	EZH060…
	065060ST-015H								0.15 ±0.020	●	●	
	075070ST-008H	7.5	7.0	6.8	74.2	35.0	3.44	0.44	0.08 ±0.015	●	●	EZH070…
	075070ST-015H								0.15 ±0.020	●	●	
EZBR	020017ST-005F	2.0	1.7	1.5	27.3	7.0	0.79	0.20	0.05 ±0.010	●	●	EZH017…
	025020ST-005F	2.5	2.0	1.82	32.0	8.0	0.94	0.16	0.05 ±0.010	●	●	EZH020…
	025020ST-015F								0.15 ±0.020	●	●	
	030025ST-005F	3.0	2.5	2.3	35.0	10.5	1.19	0.20	0.05 ±0.010	●	●	EZH025…
	030025ST-015F								0.15 ±0.020	●	●	
	035030ST-005F	3.5	3.0	2.8	39.0	13.0	1.44	0.26	0.05 ±0.010	●	●	EZH030…
	035030ST-015F								0.15 ±0.020	●	●	
	040035ST-005F	4.0	3.5	3.3	42.0	15.0	1.69	0.33	0.05 ±0.010	●	●	EZH035…
	040035ST-015F								0.15 ±0.020	●	●	
	045040ST-005F	4.5	4.0	3.8	49.0	20.0	1.94	0.31	0.05 ±0.010	●	●	EZH040…
	045040ST-015F								0.15 ±0.020	●	●	
	055050ST-005F	5.5	5.0	4.8	58.2	25.0	2.44	0.45	0.05 ±0.010	●	●	EZH050…
	055050ST-015F								0.15 ±0.020	●	●	
	065060ST-005F	6.5	6.0	5.8	66.2	30.0	2.94	0.59	0.05 ±0.010	●	●	EZH060…
	065060ST-015F								0.15 ±0.020	●	●	
	075070ST-005F	7.5	7.0	6.8	74.2	35.0	3.44	0.65	0.05 ±0.010	●	●	EZH070…
	075070ST-015F								0.15 ±0.020	●	●	

Tolerance: Offset ±0.06mm (of the reference pin), overall length ±0.1mm, edge height +0.06/0mm

Recommended Cutting Conditions F27-F28

EZ Bars are sold in 1 piece boxes.

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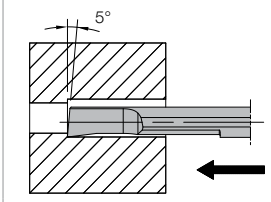
EZB-NB (Boring)



<PR1225>

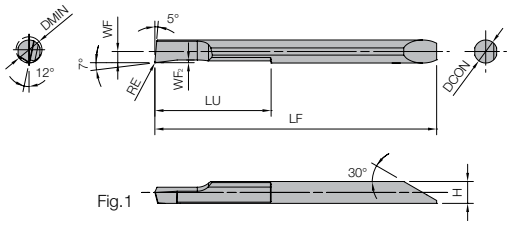
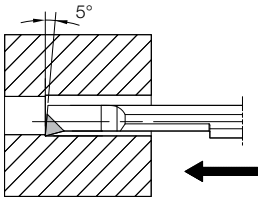


Fig.1

• Right-hand Shown



<KBN, KPD>

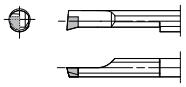


Fig.2 EZBR030 type

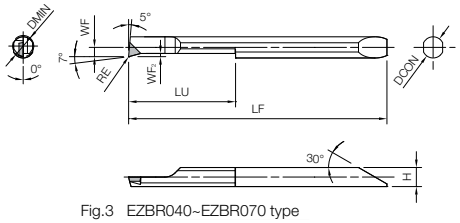


Fig.3 EZBR040~EZBR070 type

• Right-hand Shown

EZ Bar Dimensions (metric)

Part Number		Min. Bore Dia.	Dimensions (mm)							Drawing	Grade				Applicable Sleeve ➔ F32~F37
											MEGA COAT	Carbide	CBN	PCD	
		DMIN	DCON	H	LF	LU	WF	WF_2	RE		PR1225	GW05	KBN05M	KPD001	
EZBR	020017-005NB	2.0	1.7	1.50	27.3	7.0	0.79	0.20	±0.015 0.050	Fig.1	●	●			EZH017…
	025020-005NB	2.5	2.0	1.82	32.0	8.0	0.94	0.16			●	●			EZH020…
	030025-005NB	3.0	2.5	2.30	35.0	10.5	1.19	0.16			●	●			EZH025…
	035030-005NB	3.5	3.0	2.80	39.0	13.0	1.44	0.19			●	●			EZH030…
	040035-005NB	4.0	3.5	3.30	42.0	15.0	1.69	0.25			●	●			EZH035…
	045040-005NB	4.5	4.0	3.80	49.0	20.0	1.94	0.28			●	●			EZH040…
	055050-005NB	5.5	5.0	4.80	58.2	25.0	2.44	0.33			●	●			EZH050…
	065060-005NB	6.5	6.0	5.80	66.2	30.0	2.94	0.39			●	●			EZH060…
	075070-005NB	7.5	7.0	6.80	74.2	35.0	3.44	0.45			●	●			EZH070…
EZBR	030030-003NB	3.0	3.0	2.60	38.8	13.0	1.25	0.30	±0.015 0.035	Fig.2			●		EZH030…
	040040-003NB	4.0	4.0	3.60	48.8	20.0	1.75	0.50		Fig.3			●		EZH040…
	050050-003NB	5.0	5.0	4.60	58.1	25.0	2.25	0.50					●		EZH050…
	060060-003NB	6.0	6.0	5.60	66.1	30.0	2.75	0.50					●		EZH060…
	070070-003NB	7.0	7.0	6.60	74.1	35.0	3.25	0.50					●		EZH070…
EZBR	040040-003NB	4.0	4.0	3.60	48.8	20.0	1.75	0.50	±0.015 0.035	Fig.3				●	EZH040…
	050050-003NB	5.0	5.0	4.60	58.1	25.0	2.25	0.50						●	EZH050…
	060060-003NB	6.0	6.0	5.60	66.1	30.0	2.75	0.50						●	EZH060…
	070070-003NB	7.0	7.0	6.60	74.1	35.0	3.25	0.50						●	EZH070…

Recommended Cutting Conditions ➔ F27-F28

Edge Preparation

Grade	Edge Preparation	Notes
PR1225	Sharp Edge	-
KBN05M	T00315	0.003" × 15° Chamfered Cutting Edge
KPD001	Sharp Edge	-

EZ Bars are sold in 1 piece boxes.

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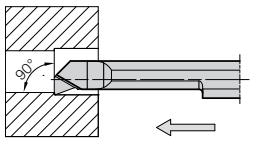
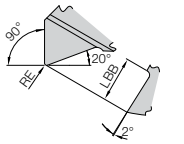
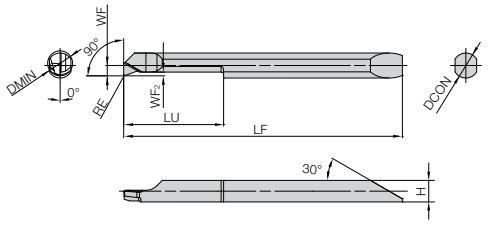
EZBF (90° Lead Boring) NEW





Chipbreaker in detail



• Right-hand Shown

EZ Bar Dimensions (metric)

Part Number		Min. Bore Dia.	Dimensions (mm)								Grade MEGACOAT	Applicable Sleeve → F32~F37
		DMIN	DCON	H	LF	LU	WF	WF_2	LBB	RE	PR1225	
EZBFR	030030-008	3	3	2.5	37.7	12	1.2	0.45	1.5	$0.08^{\pm0.015}$	●	EZH030…
	040040-008	4	4	3.45	44.6	16	1.65	0.55	2.0	$0.08^{\pm0.015}$	●	EZH040…
	050050-015	5	5	4.3	52.7	20	2.15	0.7	2.4	$0.15^{\pm0.02}$	●	EZH050…
	060060-015	6	6	5.15	59.6	24	2.55	0.85	2.8	$0.15^{\pm0.02}$	●	EZH060…

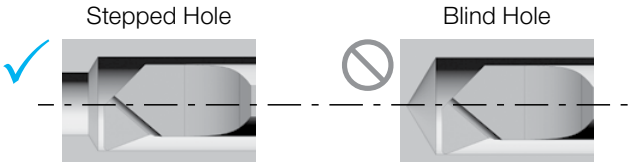
Tolerance: Offset ±0.05mm (of the reference pin), overall length ±0.05mm, edge height +0.05/0mm

Recommended Cutting Conditions

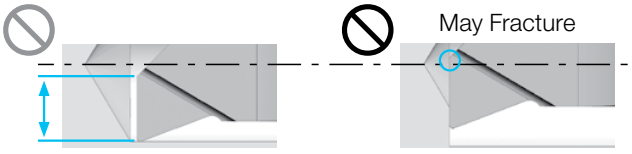
Workpiece Material	Insert Grade (Vc : sfm)	EZBFR030		EZBFR040		EZBFR050/060		Notes
	MEGACOAT	Depth of Cut: D.O.C. (inch), Feed: f (ipr)						
	PR1225	D.O.C.	f	D.O.C.	f	D.O.C.	f	
Carbon Steel / Alloy Steel	100~330	~0.0079	~0.0020	~0.0118	~0.0020	~0.0197	~0.0020	Wet
Stainless Steel	100~260	~0.0079	~0.0020	~0.0118	~0.0020	~0.0197	~0.0020	

EZBF Machining Notes

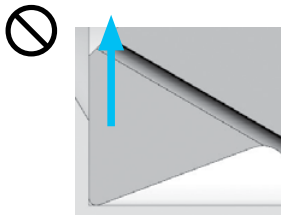
1. Machining into blind holes is not recommended



2. If front cutting edge exceeds beyond workpiece center line, fracturing may occur



3. Up facing is not recommended



For Min Bore Diameter: Ø4mm, Front cutting edge length: 1.9mm

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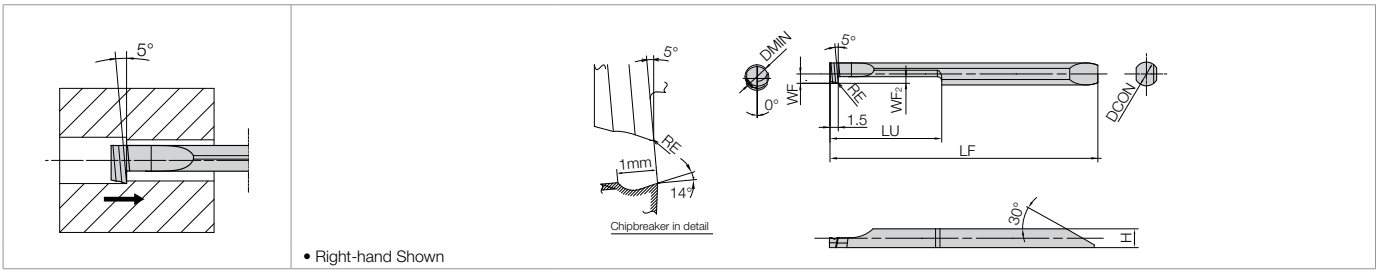
NEW ITEMS!

EZBT (Back Boring) NEW



• Right-hand Shown

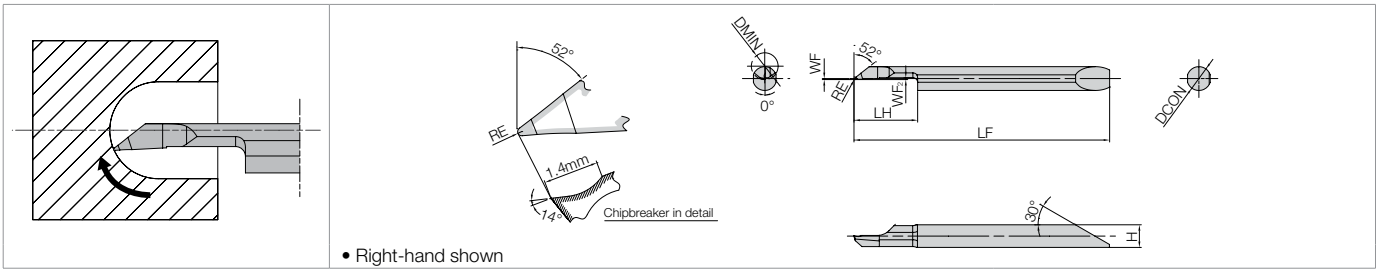
EZ Bar Dimensions (metric)

Part Number	Min. Bore Dia.	Dimensions (mm)							Grade		Applicable Sleeve ➡ F32~F37
									MEGACOAT	Carbide	
	DMIN	DCON	H	LF	LU	WF	WF_2	RE	PR1225	GW05	
EZBTR 040040-005	4	4	3.45	48.7	20	1.7	1.2	$0.05^{\pm 0.02}$	●	●	EZH040…
050050-005	5	5	4.3	58.7	25	2.15	1.5		●	●	EZH050…

Recommended Cutting Conditions

Workpiece Material	Insert Grade (Vc : sfm)		EZBTR040		EZBTR050		Notes
	MEGACOAT	Carbide	Depth of Cut: D.O.C. (inch), Feed: f (ipr)				
	PR1225	GW05	D.O.C.	f	D.O.C.	f	
Carbon Steel / Alloy Steel	100~330	-	~0.018	~0.003	~0.020	~0.004	Wet
Stainless Steel	100~260	-	~0.018	~0.002	~0.020	~0.003	
Non-ferrous Material	-	100~330	~0.018	~0.004	~0.020	~0.006	

EZVB (Boring / Internal Facing / Internal Profiling)



• Right-hand shown

Toolholder Dimensions

Part Number	Min. Bore Dia.	Dimensions (mm)								Grade	Applicable Sleeve ➡ F32~F37
										MEGACOAT	
	DMIN	DCON	H	LF	LH	WF	WF_2	RE		PR1225	
EZVBR 035030-010	3.5	3.0	2.8	38.0	8.0	0.17	0.22	0.1 ±0.015		●	EZH030…
045040-010	4.5	4.0	3.8	43.0	10.0	0.17	0.26	0.1 ±0.015		●	EZH040…
055050-010	5.5	5.0	4.8	50.2	12.0	0.17	0.29	0.1 ±0.015		●	EZH050…
065060-010	6.5	6.0	5.8	55.2	14.0	0.17	0.32	0.1 ±0.015		●	EZH060…

Recommended Cutting Conditions

Workpiece Material	Insert Grade (Vc : sfm)	EZVBR035		EZVBR045		EZVBR055/065		Notes
	MEGACOAT	Depth of Cut: D.O.C. (inch), Feed: f (ipr)						
	PR1225	D.O.C.	f	D.O.C.	f	D.O.C.	f	
Carbon Steel / Alloy Steel	100~330	~0.0020	~0.0016	~0.0028	~0.0028	~0.0039	~0.0028	Wet
Stainless Steel	100~260	~0.0012	~0.0012	~0.0020	~0.0020	~0.0028	~0.0020	

EZ Bars are sold in 1 piece boxes.

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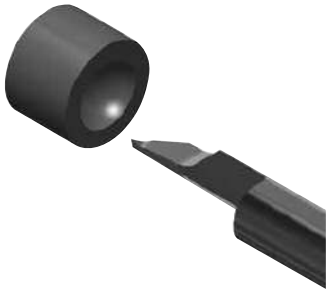
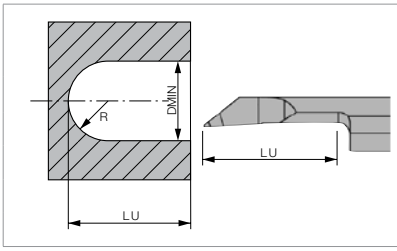
EZVB Application (Internal Spherical Machining, Internal Facing, Internal Profiling)

1. Application Range

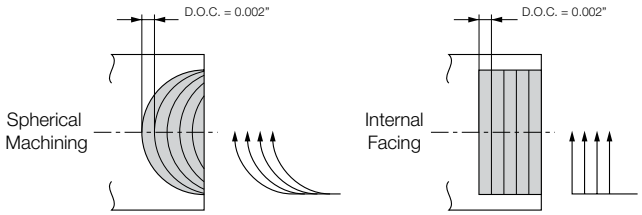




Part Number		Min. Bore Dia.	R	LU
		DMIN	mm	mm
EZVBR	035030-010	3.5	1.75	8.0
	045040-010	4.5	2.25	10.0
	055050-010	5.5	2.75	12.0
	065060-010	6.5	3.25	14.0

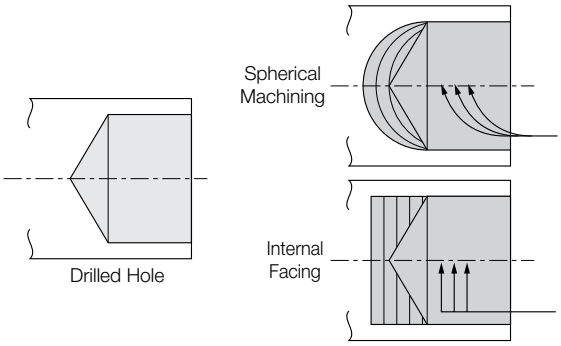
2. Application

Without Existing Hole



(Note) f should be under 0.0012 ipr during internal facing

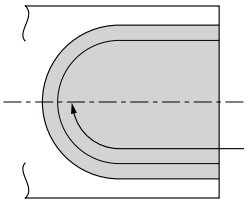
With Pre-Drilled Hole



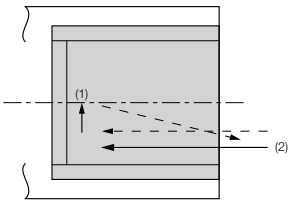
(Note) f should be under 0.0012 ipr during internal facing

Finishing

Spherical Machining

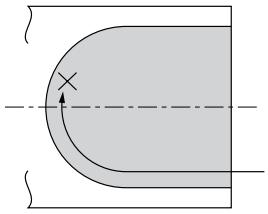


Internal Facing

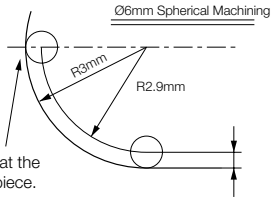


Machining Process
(1) Finish the internal face first.
(2) Next, finish the internal diameter.

3. Caution

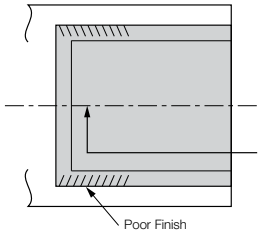


When machining past the center of the workpiece, insert may break.



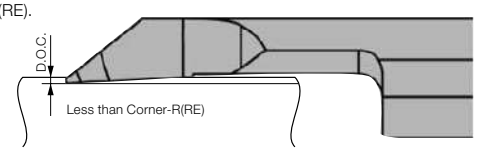
Fix the insert edge at the center of the workpiece.

Adjust the machining program to radius minus the value of Corner-R(RE).



This type of machining is possible, but the chips might scratch the surface.

For internal profiling, ap should be less than the value of Corner-R(RE).



[Burrs may occur, if D.O.C. is bigger than Corner-R(RE)]

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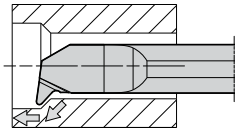
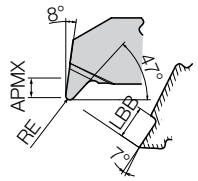
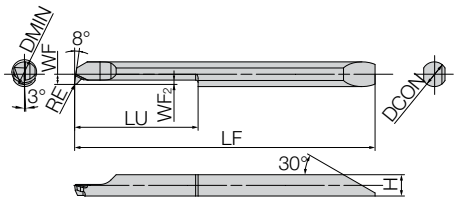
NEW ITEMS!

EZBP (Internal Profiling) NEW





Chipbreaker Detail



• Right-hand Shown

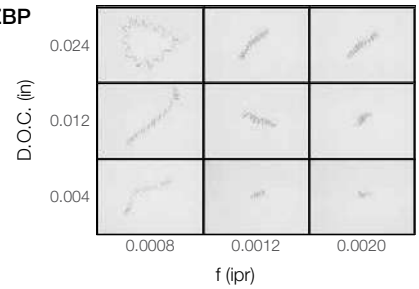
EZ Bar Dimensions (metric)

Part Number	Min. Bore Dia.	Dimensions (mm)									Grade MEGACOAT	Applicable Sleeve ➡ F32~F37
	DMIN	DCON	H	LF	LU	WF	WF_2	LBB	RE	APMX	PR1225	
EZBPR 020020-005-08	2	2	1.65	31.8	8	0.55	0.35	1.0	0.05 ±0.01	0.3	●	EZH020…
020020-005-10				33.8	10						●	
020020-005-12				35.8	12						●	
030030-005-12	3	3	2.5	37.7	12	1.05	0.45	1.2	0.05 ±0.01	0.4	●	EZH030…
030030-005-15				40.7	15						●	
040040-015	4	4	3.45	48.7	20	1.65	0.65	1.5	0.15 ±0.02	0.6	●	EZH040…
050050-015	5	5	4.3	57.8	25	2	1.1	2.2	0.15 ±0.02	0.8	●	EZH050…
060060-015	6	6	5.15	65.7	30	2.45	1.35	2.5	0.15 ±0.02	1	●	EZH060…

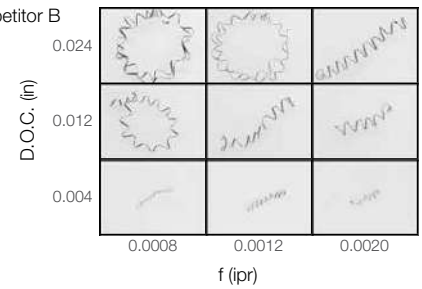
Chip Control Comparison (Internal Evaluation)

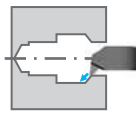
Copying

EZBP



Competitor B



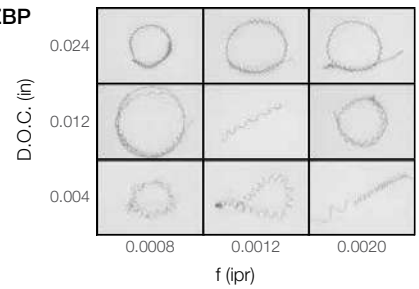


Cutting Conditions : Vc = 260 sfm, Wet
Workpiece : 1045 (Ø14mm)
EZBPR040040-015 PR1225

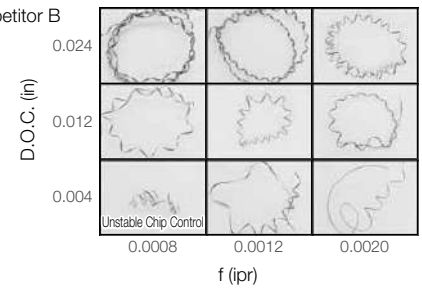
EZBP showed better chip breaking in a wide range of machining applications compared to competitor B

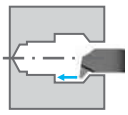
Boring

EZBP



Competitor B





Cutting Conditions : Vc = 260 sfm, Wet
Workpiece : 1045 (Ø14mm)
EZBPR040040-015 PR1225

EZBP showed better chip control than competitor B

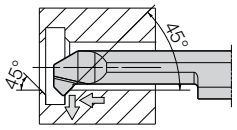
Recommended Cutting Conditions

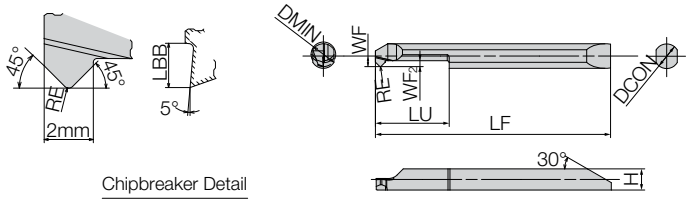
Workpiece Material	Insert Grade (Vc : sfm)	EZBPR020020-005-08/10/12		EZBPR030030-005-12/15		EZBPR040040-015		EZBPR050050-015		EZBPR060060-015		Notes
	MEGACOAT	Depth of Cut: D.O.C. (inch), Feed: f (ipr)										
	PR1225	D.O.C.	f	D.O.C.	f	D.O.C.	f	D.O.C.	f	D.O.C.	f	
Carbon Steel / Alloy Steel	100-330	~0.0118	~0.0020	~0.0157	~0.0020	~0.0236	~0.0020	~0.0315	~0.0020	~0.0394	~0.0020	Wet
Stainless Steel	100-260	~0.0118	~0.0020	~0.0157	~0.0020	~0.0236	~0.0020	~0.0315	~0.0020	~0.0394	~0.0020	

EZ Bars are sold in 1 piece boxes.

● : Standard Item △ : Phaseout Item (will be removed from next catalog)
Contact your local Kyocera sales engineer to upgrade old products to new technology

EZBC (45° Chamfering) NEW





Chipbreaker Detail

• Right-hand Shown

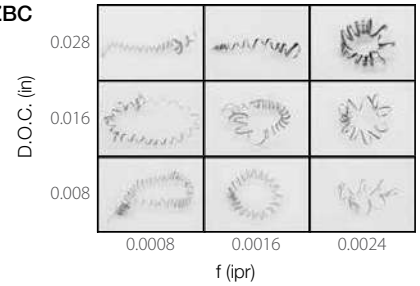
EZ Bar Dimensions (metric)

Part Number		Min. Bore Dia.	Dimensions (mm)								Grade	Applicable Sleeve
											MEGACOAT	F32~F37
		DMIN	DCON	H	LF	LU	WF	WF_2	LBB	RE	PR1225	
EZBCR	050050-020-15	5	5	4.3	47.8	15	2.15	1.2	1.8	0.02 ±0.02	●	EZH050…
	050050-020-20				52.8	20					●	
	060060-020-18	6	6	5.15	53.7	18	2.65	1.9	2.5		●	EZH060…
	060060-020-24				59.7	24					●	
	070070-020-21	7	7	6.2	59.7	21	3	2.5	3.1		●	EZH070…
	070070-020-42				80.7	28					●	

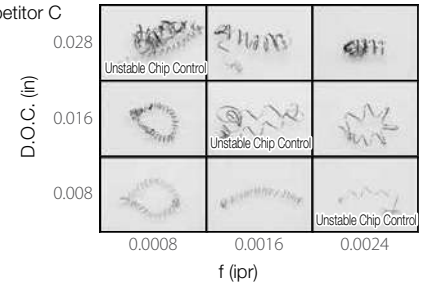
Chip Control Comparison (Internal Evaluation)

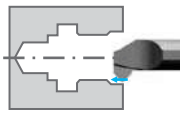
Boring

EZBC



Competitor C



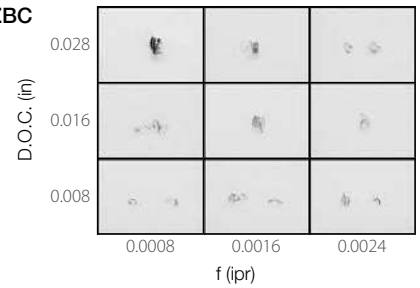


Cutting Conditions : Vc = 260 sfm, Wet
Workpiece : 304 (Ø14mm)
EZBCR050050-020-15 PR1225

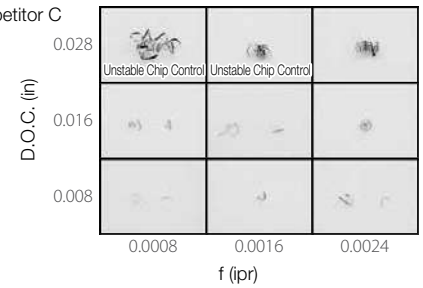
EZBC reduced chip clogging and showed stable chip control

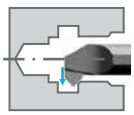
Chamfering

EZBC



Competitor C





Cutting Conditions : Vc = 260 sfm, Wet
Workpiece : 304 (Ø14mm)
EZBCR050050-020-15 PR1225

EZBC showed improved chip evacuation and better chip control at large D.O.C. compared to competitor C

Recommended Cutting Conditions

Workpiece Material	Insert Grade (Vc : sfm)	EZBC050050-020-15/20		EZBC060060-020-18/24		EZBC070070-020-21/42		Notes
	MEGACOAT	Depth of Cut: D.O.C. (inch), Feed: f (ipr)						
	PR1225	D.O.C.	f	D.O.C.	f	D.O.C.	f	
Carbon Steel / Alloy Steel	100-330	~0.0276	~0.0024	~0.0276	~0.0024	~0.0276	~0.0024	Wet
Stainless Steel	100-260	~0.0276	~0.0024	~0.0276	~0.0024	~0.0276	~0.0024	

EZ Bars are sold in 1 piece boxes.

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● : Standard Item △ : Phaseout Item (will be removed from next catalog)
Contact your local Kyocera sales engineer to upgrade old products to new technology

Recommended Cutting Conditions

H Chipbreaker (EZB-HP...H Type / EZB-ST...H Type)

Workpiece Material	Insert Grade (Vc : sfm)			EZB□020/025		EZB□030/035		EZB□040/045		EZB□050/055/060/065/070/075/080		Notes
	MEGACOAT NANO PLUS	MEGACOAT	Carbide	Depth of Cut: D.O.C. (inch), Feed: f (ipr)								
	PR1725	**PR1225**	**GW05**	D.O.C.	f	D.O.C.	f	D.O.C.	f	D.O.C.	f	
Carbon Steel / Alloy Steel	100~330	100~330	-	~0.0118	~0.0012	~0.0157	~0.0016	~0.0177	~0.0028	~0.0197	~0.0039	Wet
Stainless Steel	100~260	100~260	-	~0.0079	~0.0008	~0.0118	~0.0012	~0.0138	~0.0020	~0.0157	~0.0028	
Non-ferrous Material	-	-	~330	~0.0118	~0.0020	~0.0157	~0.0024	~0.0177	~0.0039	~0.0197	~0.0059	

H Chipbreaker (EZB-HP...H-LT Long Type)

Workpiece Material	Insert Grade (Vc : sfm)	EZBR020/025/030/035		EZBR040/050/060		Notes
	MEGACOAT	Depth of Cut: D.O.C. (inch), Feed: f (ipr)				
	PR1225	D.O.C.	f	D.O.C.	f	
Carbon Steel / Alloy Steel	100~200	~0.0118	~0.0020	~0.0157	~0.0039	Wet
Stainless Steel	70~130	~0.0098	~0.0020	~0.0118	~0.0028	

F Chipbreaker (EZB-HP...F Type / EZB-ST...F Type)

Workpiece Material	Insert Grade (Vc : sfm)	EZBR020/025		EZBR030/035		EZBR040/045		EZBR050/055/060/065/070/075/080		Notes
	MEGACOAT	Depth of Cut: D.O.C. (inch), Feed: f (ipr)								
	PR1225	D.O.C.	f	D.O.C.	f	D.O.C.	f	D.O.C.	f	
Carbon Steel / Alloy Steel	100~330	~0.0079	~0.0012	~0.0079	~0.0020	~0.0118	~0.0028	~0.0118	~0.0028	Wet
Stainless Steel	100~260	~0.0079	~0.0008	~0.0079	~0.0012	~0.0098	~0.0020	~0.0098	~0.0020	

NB (Without Chipbreaker)

Workpiece Material	Insert Grade (Vc : sfm)		EZBR020/025		EZBR030/035		EZBR040/045		EZBR050/055/060/065/075		Notes
	MEGACOAT	Carbide	Depth of Cut: D.O.C. (inch), Feed: f (ipr)								
	PR1225	**GW05**	D.O.C.	f	D.O.C.	f	D.O.C.	f	D.O.C.	f	
Carbon Steel / Alloy Steel	100~330	-	~0.0118	~0.0012	~0.0157	~0.0016	~0.0177	~0.0028	~0.0197	~0.0039	Wet
Stainless Steel	100~260	-	~0.0079	~0.0008	~0.0118	~0.0012	~0.0138	~0.0020	~0.0157	~0.0028	
Non-ferrous Material	-	~330	~0.0118	~0.0020	~0.0157	~0.0024	~0.0177	~0.0028	~0.0197	~0.0039	

Workpiece Material	Insert Grade (Vc : sfm)		EZBR030		EZBR040/045		EZBR050/060/070		Notes
	MEGACOAT CBN	PCD	Depth of Cut: D.O.C. (inch), Feed: f (ipr)						
	KBN05M	**KPD001**	D.O.C.	f	D.O.C.	f	D.O.C.	f	
Non-ferrous Material	-	~980	-	-	~0.0177	~0.0039	~0.0197	~0.0059	Wet
Hardened Materials (Heat-Treated Steel)	~330	-	~0.0028	~0.0012	~0.0039	~0.0020	~0.0059	~0.0028	

EZ Bar Compatibility

EZ Bar is compatible with conventional Micro-Bars

Sleeve \ Bar	**EZB...HP**	**EZB...ST/NB**	**HPB...**(Conventional)
EZH...CT/HP	✓	✓	※1 ※2 ✓ (Compatible)
EZH...ST	✓	✓	※1 ✓ (Compatible)
PSH...(Discontinued Sleeve)	※1 ✓ (Compatible)	※1 ✓ (Compatible)	✓

※1 Some diameters of conventional Micro-Bars are incompatible

※2 Use them without Adjustment Pins. Overhang length of bar is not adjustable.

● : Standard Item △ : Phaseout Item (will be removed from next catalog)

Contact your local Kyocera sales engineer to upgrade old products to new technology

Recommended Cutting Conditions

EZBF (90° Lead Boring)

Workpiece Material	Insert Grade (Vc : sfm)	EZBFR030		EZBFR040		EZBFR050/060		Notes
	MEGACOAT	Depth of Cut: D.O.C. (inch), Feed: f (ipr)						
	PR1225	D.O.C.	f	D.O.C.	f	D.O.C.	f	
Carbon Steel / Alloy Steel	100~330	~0.0079	~0.0020	~0.0118	~0.0020	~0.0197	~0.0020	Wet
Stainless Steel	100~260	~0.0079	~0.0020	~0.0118	~0.0020	~0.0197	~0.0020	

EZBT (Back Boring)

Workpiece Material	Insert Grade (Vc : sfm)		EZBTR040		EZBTR050		Notes
	MEGACOAT	Carbide	Depth of Cut: D.O.C. (inch), Feed: f (ipr)				
	PR1225	**GW05**	D.O.C.	f	D.O.C.	f	
Carbon Steel / Alloy Steel	100~330	-	~0.018	~0.003	~0.020	~0.004	Wet
Stainless Steel	100~260	-	~0.018	~0.002	~0.020	~0.003	
Non-ferrous Material	-	100~330	~0.018	~0.004	~0.020	~0.006	

EZVB (Boring / Internal Facing / Internal Profiling)

Workpiece Material	Insert Grade (Vc : sfm)	EZVBR035		EZVBR045		EZVBR055/065		Notes
	MEGACOAT	Depth of Cut: D.O.C. (inch), Feed: f (ipr)						
	PR1225	D.O.C.	f	D.O.C.	f	D.O.C.	f	
Carbon Steel / Alloy Steel	100~330	~0.0020	~0.0016	~0.0028	~0.0028	~0.0039	~0.0028	Wet
Stainless Steel	100~260	~0.0012	~0.0012	~0.0020	~0.0020	~0.0028	~0.0020	

EZBP (Copying)

Workpiece Material	Insert Grade (Vc : sfm)	EZBPR020020-005-08/10/12		EZBPR030030-005-12/15		EZBPR040040-015		EZBPR050050-015		EZBPR060060-015		Notes
	MEGACOAT	Depth of Cut: D.O.C. (inch), Feed: f (ipr)										
	PR1225	D.O.C.	f	D.O.C.	f	D.O.C.	f	D.O.C.	f	D.O.C.	f	
Carbon Steel / Alloy Steel	100-330	~0.0118	~0.0020	~0.0157	~0.0020	~0.0236	~0.0020	~0.0315	~0.0020	~0.0394	~0.0020	Wet
Stainless Steel	100-260	~0.0118	~0.0020	~0.0157	~0.0020	~0.0236	~0.0020	~0.0315	~0.0020	~0.0394	~0.0020	

EZBC (45° Chamfering)

Workpiece Material	Insert Grade (Vc : sfm)	EZBC050050-020-15/20		EZBC060060-020-18/24		EZBC070070-020-21/42		Notes
	MEGACOAT	Depth of Cut: D.O.C. (inch), Feed: f (ipr)						
	PR1225	D.O.C.	f	D.O.C.	f	D.O.C.	f	
Carbon Steel / Alloy Steel	100-330	~0.0276	~0.0024	~0.0276	~0.0024	~0.0276	~0.0024	Wet
Stainless Steel	100-260	~0.0276	~0.0024	~0.0276	~0.0024	~0.0276	~0.0024	

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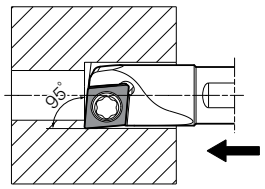
S-SCLC-EZ(P)

Maximum overhang length - L/D = ~3



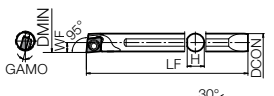


Fig.1



Fig.2-1

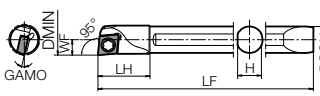


Fig.2

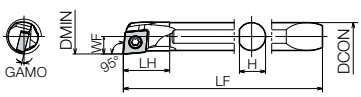


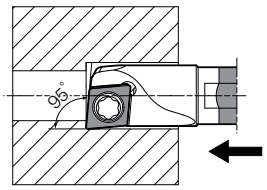
Fig.3

• Right-hand shown

• Left-hand insert for Right-hand toolholder

C-SCLC-EZ(P)

Maximum overhang length - L/D = ~5



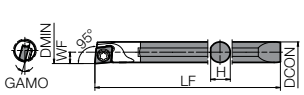


Fig.4



Fig.5-1

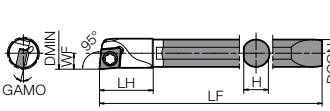


Fig.5

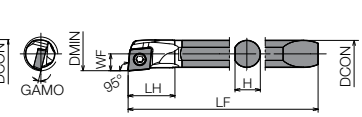


Fig.6

• Right-hand shown

• Left-hand insert for Right-hand toolholder

Toolholder Dimensions

	Part Number	Stock (R)	Min. Bore Dia. DMIN	Dimensions (mm) DCON	H	LF	LH	WF	GAMO	Standard Corner-R (RE)	Coolant Hole	Drawing	Spare Parts: Clamp Screw	Spare Parts: Wrench	Applicable Sleeve → F32~F37
Steel	S045X-SCLCR03-050EZP	●	5.0	4.5	4.3	42.4	-	2.5	15°	0.2		Fig.1	SB-1635TR		EZH045…
	S050X-SCLCR03-060EZP	●	6.0	5.0	4.7	48.4	9.0	3.0	13°	0.2		Fig.2	SB-1635TR	FT-6	EZH050…
	S060X-SCLCR04-070EZP	●	7.0	6.0	5.7	54.4	10.0	3.5	13°	0.2	No	Fig.2	SB-2035TR		EZH060…
	S070X-SCLCR04-080EZP	●	8.0	7.0	6.7	60.4	10.3	4.0	11°	0.2		Fig.2	SB-2035TR		EZH070…
	S080X-SCLCR06-100EZP	●	10.0	8.0	7.5	69.5	13.3	5.0	14°	0.4		Fig.3	SB-2545TR	FT-8	EZH080…
Carbide	C045X-SCLCR03-050EZP	●	5.0	4.5	4.3	51.4	-	2.5	15°	0.2		Fig.4	SB-1635TR		EZH045…
	C050X-SCLCR03-060EZP	●	6.0	5.0	4.7	58.4	9.0	3.0	13°	0.2		Fig.5	SB-1635TR	FT-6	EZH050…
	C060X-SCLCR04-070EZP	●	7.0	6.0	5.7	66.4	10.0	3.5	13°	0.2	No	Fig.5	SB-2035TR		EZH060…
	C070X-SCLCR04-080EZP	●	8.0	7.0	6.7	74.4	11.0	4.0	11°	0.2		Fig.5	SB-2035TR		EZH070…
	C080X-SCLCR06-100EZP	●	10.0	8.0	7.5	85.5	14.0	5.0	14°	0.4		Fig.6	SB-2545TR	FT-8	EZH080…

Applicable Inserts

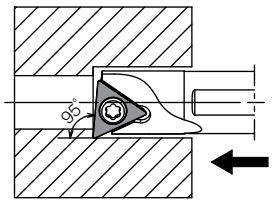
Application	Minute D.O.C.	Finishing	Finishing	Finishing	Finishing	Finishing	Finishing	Finishing-Medium	Finishing-Medium	Medium
Ref. Page	→ B53	→ B53	→ B53	→ B53	→ B53	→ B54	→ B54	→ B54	→ B54	→ B54, B55
Insert / Toolholder	CF	PF	GF	SKS	SK	WP (Wiper)	PP	GK	HQ	Standard
...SCLCR03-...	CCGT1109..	CCGT1109..	-	-	-	-	-	-	-	-
...SCLCR04-...	CCGT1411..	CCGT1411..	-	-	-	-	-	-	-	-
...SCLCR06-...	-	CCGT215..	CCGT215..	CCGT215..	CCGT215..	CCMT215..	CCMT215..	CCMT215..	CCMT215..	CCGT215..

Application	Finishing-Medium	Finishing	Finishing / Precision	Low Feed	Finishing / Precision	Cast Iron	Non-ferrous Metals	Hard Material
Ref. Page	→ B53	→ B56	→ B55	→ B58, B59	→ B57	→ B60	→ C24	→ C14
Insert / Toolholder	GQ	L-F	L-FSF	(E/F)L-U	FL-USF	Without Chipbreaker	PCD	CBN
...SCLCR03-...	-	CCGT1109..	CCET1109..	-	-	-	-	CCMW1109..
...SCLCR04-...	-	CCGT1411..	CCET1411..	-	-	-	CCGW1411..	CCMW1411..
...SCLCR06-...	CCGT215..	-	-	CCGT215..	CCET215..	CCGW215...	CCMT215.. CCGW215...	CCMW215..

Recommended Cutting Conditions → F116-F117
Other Applicable Sleeves → F106-F110

S-STLB(P)-EZP

Maximum overhang length - L/D = ~3



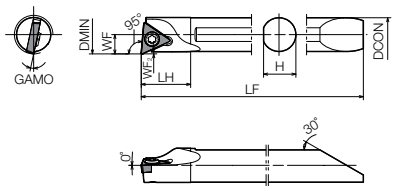


Fig.1

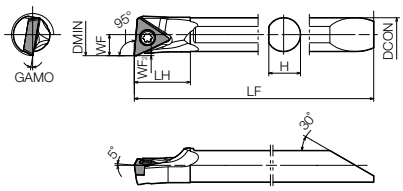


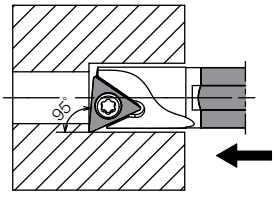
Fig.2

• Right-hand shown

• Left-hand insert for Right-hand toolholder

C-STLB(P)-EZP

Maximum overhang length - L/D = ~5



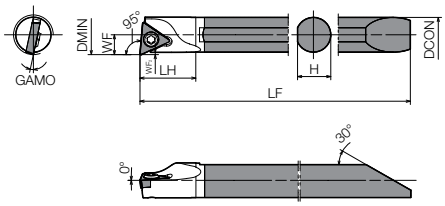


Fig.3

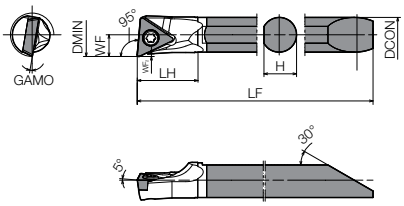


Fig.4

• Right-hand shown

• Left-hand insert for Right-hand toolholder

Toolholder Dimensions

	Part Number	Stock (R)	Min. Bore Dia. DMIN	Dimensions (mm) DCON	H	LF	LH	WF	WF2	GAMO	Standard Corner-R (RE)	Coolant Hole	Drawing	Spare Parts: Clamp Screw	Spare Parts: Wrench	Applicable Sleeve ➡ F32~F37
Steel	S070X-STLBR06-080EZP*	●	8	7	6.7	60.4	10.3	4	0.4	12°	0.2	No	Fig.1	SB-2035TR	FT-6	EZH070…
Steel	S080X-STLPR09-100EZP	●	10	8	7.5	69.5	13.3	5	0.5	10°	0.4	No	Fig.2	SB-2545TR	FT-8	EZH080…
Carbide	C070X-STLBR06-080EZP*	●	8	7	6.7	74.4	11	4	0.4	12°	0.2	No	Fig.3	SB-2035TR	FT-6	EZH070…
Carbide	C080X-STLPR09-100EZP	●	10	8	7.5	85.5	14	5	0.5	10°	0.4	No	Fig.4	SB-2545TR	FT-8	EZH080…

* TB□□1212... type insert cannot be used.

Applicable Inserts

Application	Minute D.O.C.	Finishing	Finishing	Finishing	Finishing	Finishing	Finishing	Finishing-Medium	Finishing	Medium
Ref. Page	➡ B76, B80	➡ B76, B80	➡ B80	➡ B80	➡ B85	➡ B81	➡ B76	➡ B81	➡ B76, B82, B83	➡ B84
Insert / Toolholder	CF	PF	*WP (Wiper)	PP	R-P	GP	DP	HQ	L	L-H
...STLBR06-...	TBGT121..	TBGT121...	-	-	-	-	TBMT121..	-	TBGT121..	-
...STLPR09-...	TPGT1815..	TPMT1815..	TPMX1815..	TPMT1815..	TPEH1815..	TPMT1815..	-	TPMT1815..	TPGH1815..	TPGH1815..

Application	Soft Steel / Finishing	Cast Iron	Non-ferrous Metals	Hard Material
Ref. Page	➡ B81	➡ B76, B86	➡ C26, C27	➡ C16
Insert / Toolholder	XP	Without Chipbreaker	PCD	CBN
...STLBR06-...	-	TBGW121..	TBMT121.. TBGW121..	-
...STLPR09-...	TPMT1815..	TPGB1815..	TPMH1815.. TPGB1815..	TPGB1815..

Recommended Cutting Conditions ➡ F116-F117
Other Applicable Sleeves ➡ F106-F110

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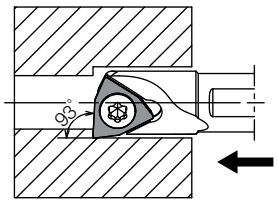
S-SWUB-EZP

Maximum overhang length - L/D = ~3



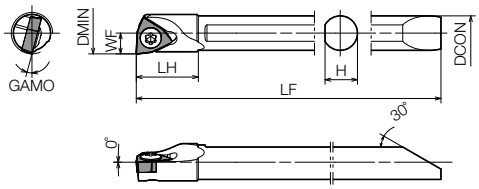


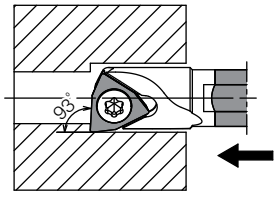
Fig.1

• Right-hand shown

• Left-hand insert for Right-hand toolholder

C-SWUB-EZP

Maximum overhang length - L/D = ~5



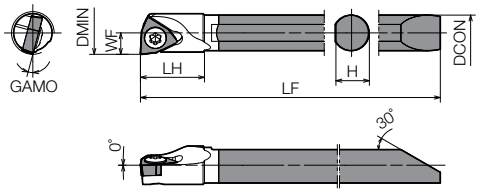


Fig.2

• Right-hand shown

• Left-hand insert for Right-hand toolholder

Toolholder Dimensions

	Part Number	Stock (R)	Min. Bore Dia. DMIN	Dimensions (mm) DCON	H	LF	LH	WF	GAMO	Standard Corner-R (RE)	Coolant Hole	Drawing	Spare Parts: Clamp Screw	Spare Parts: Wrench	Applicable Sleeve ➡ F32~F37
Steel	S050X-SWUBR06-060EZP	●	6.0	5.0	4.7	48.4	9.0	3.0	15°	0.2	No	Fig.1	SB-2035TR	FT-6	EZH050…
Steel	S060X-SWUBR06-070EZP	●	7.0	6.0	5.7	54.4	10.0	3.5	13°						EZH060…
Steel	S070X-SWUBR08-080EZP	●	8.0	7.0	6.7	60.4	10.3	4.0	15°						EZH070…
Carbide	C050X-SWUBR06-060EZP	●	6.0	5.0	4.7	58.4	9.0	3.0	15°	0.2	No	Fig.2	SB-2035TR	FT-6	EZH050…
Carbide	C060X-SWUBR06-070EZP	●	7.0	6.0	5.7	66.4	10.0	3.5	13°						EZH060…
Carbide	C070X-SWUBR08-080EZP	●	8.0	7.0	6.7	74.4	11.0	4.0	15°						EZH070…

Applicable Inserts

Application	Minute D.O.C.	Finishing	Finishing	Finishing	Finishing	Cast Iron	Non-ferrous Metals	Hard Material
Ref. Page	➡ B97	➡ B97	➡ B97	➡ B98	➡ B98	➡ B98	➡ C29	➡ C18
Insert / Toolholder	L-CF	L-PF	L-DP	L-P	L-F	Without Chipbreaker	PCD	CBN
...SWUBR06-...	WBGT121..	WBGT121..	WBMT121..	-	WBGT121..	WBGW121..	WBMT121..	WBGW121..
...SWUBR08-...	-	WBGT1515..	WBMT1515..	WBET1515..	WBGT1515..	WBGW1515..	WBMT1515..	WBGW1515..

Recommended Cutting Conditions ➡ **F116-F117**

Other Applicable Sleeves ➡ **F106-F110**

EZH-CT (Sleeve)

With Coolant Hole and EZ Adjust Structure

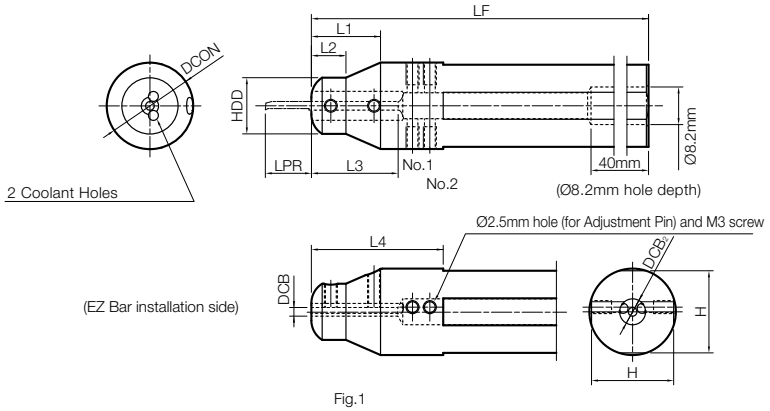


Fig.1

Part Number		Stock	Dimensions (mm)										LPR (mm) Overhang Length of Bar *2				Drawing	Applicable EZ Bar ➡ F18~F21, F25 ➡ J32
			DCB	DCON	HDD	DCB2	H	LF	L1	L2	*1 L3	L4	Adjustment Pin Setting Position No.1	No.2	No.3	No.4		
EZH	01719CT-120	●	1.7	0.75"	13	6	18.0	120	16	8	16	30.5	7.5	3.5	-	-	Fig.1	EZBR...017...
	01720CT-120	●		20			19.0	120										
	01722CT-135	●		22			21.0	135				41.5						
	01725.0CT-135	●		25			24.0	135				30.5						
	01725.4CT-120	●		1.00"			24.4	120										
EZH	02019CT-120	●	2.0	0.75"	13	6	18.0	120	16	8	20	30.5	8.5	4.5	-	-	Fig.1	EZBR...020... EZBPR...020...
	02020CT-120	●		20			19.0	120										
	02022CT-135	●		22			21.0	135				41.5						
	02025.0CT-135	●		25			24.0	135				30.5						
	02025.4CT-120	●		1.00"			24.4	120										
EZH	02519CT-120	●	2.5	0.75"	13	6	18.0	120	16	8	20	30.5	11.0	7.0	-	-	Fig.1	EZBR...025... EZTR...025...
	02520CT-120	●		20			19.0	120										
	02522CT-135	●		22			21.0	135				41.5						
	02525.0CT-135	●		25			24.0	135				30.5						
	02525.4CT-120	●		1.00"			24.4	120										

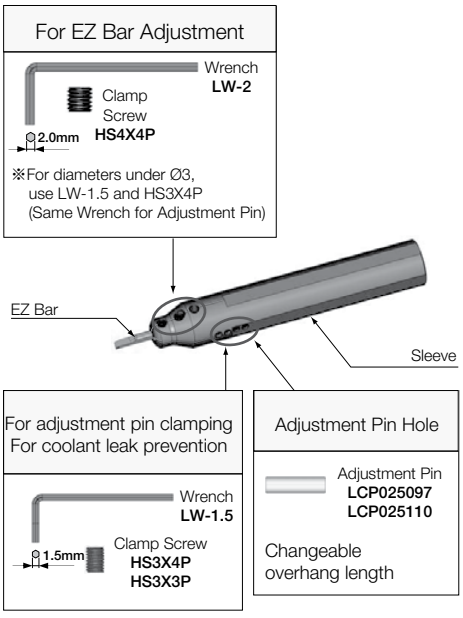
*1 L3 shows DCB length

*2 Dimension LPR shows overhang length of the EZB Bar when attached to sleeve.

• Choose sleeves (DCB) to match DCON dimension of bar.

Spare Parts (for EZH-CT Sleeves)

Part Number		Spare Parts				
		Adjustment Pin	Clamp Screw	Wrench	Clamp Screw	Wrench
EZH	017...CT-..	LCP025097	HS3X4P (for adjustment pin, coolant leak prevention)	LW-1.5 Tightening Torque 1N • m	HS3X4P (for bar)	LW-1.5 Tightening Torque 1N • m
	020...CT-..					
	025...CT-..					
	030...CT-..					
EZH	035...CT-..	LCP025097	HS3X4P (for adjustment pin, coolant leak prevention)	LW-1.5 Tightening Torque 1N • m	HS4X4P (for bar)	LW-2 Tightening Torque 2N • m
	040...CT-..					
	045...CT-..					
	050...CT-..					
	060...CT-..					
	070...CT-..					
	080...CT	LCP025110	HS3X3P (for adjustment pin, coolant leak prevention)			



1) If EZ Bar shank dia. is Ø2.5mm or less, use 6 clamp screws (HS3X4P), distributed as follows:
   For adjustment pin.....2 pcs
   For coolant leak prevention.....2 pcs
   For bar.....2 pcs

2) If EZ Bar shank dia. is Ø3.0mm, use 9 clamp screws (HS3X4P), distributed as follows:
   For adjustment pin.....2 pcs
   For coolant leak prevention.....4 pcs
   For bar.....3 pcs

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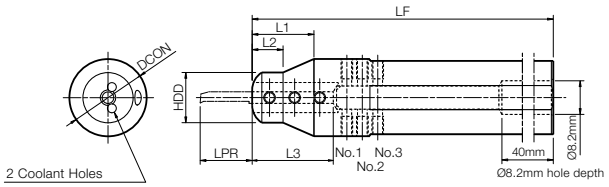
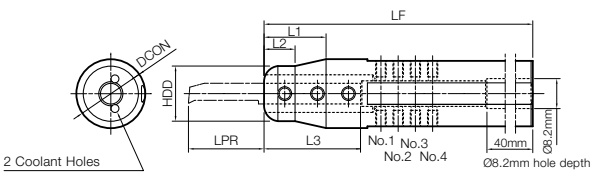
EZH-CT (Sleeve)

With Coolant Hole and EZ Adjust Structure





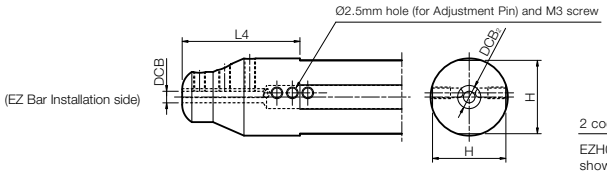
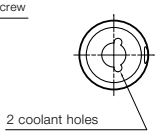


Fig.2



EZH07..CT coolant hole shape is as shown on the figure above.

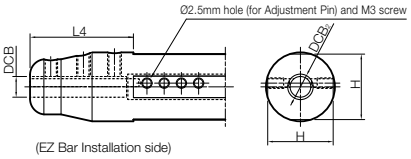


Fig.3

Part Number		Stock	Dimensions (mm)										LPR (mm) Overhang Length of Bar *2				Drawing	Applicable EZ Bar or EZ Bar PLUS ➡ F18~F31 ➡ G63, G96 ➡ J32
			DCB	DCON	HDD	DCB2	H	LF	L1	L2	*1 L3	L4	Adjustment Pin Setting Position					
													No.1	No.2	No.3	No.4		
EZH	03019CT-120	●	3.0	0.75"	13	6.0	18.0	120	16	8	21	30.5	13.5	9.5	5.5	-	Fig.2	EZB□...030... EZBFR...030... EZVBR...030... EZBPR...030... EZGR...030... EZTR...030...
	03020CT-120	●		20			19.0	120										
	03022CT-135	●		22			21.0	135				41.5						
	03025.0CT-135	●		25			24.0	135				30.5						
	03025.4CT-120	●		1.00"			24.4	120										
EZH	03519CT-120	●	3.5	0.75"	13	6.0	18.0	120	16	8	21	31.1	15.5	11.5	7.5	-	Fig.2	EZB□...035... EZTR...035...
	03520CT-120	●		20			19.0	120										
	03522CT-135	●		22			21.0	135				41.5						
	03525.0CT-135	●		25			24.0	135				31.1						
	03525.4CT-120	●		1.00"			24.4	120										
EZH	04019CT-120	●	4.0	0.75"	13	6.0	18.0	120	16	8	22	32.7	20.5	16.5	12.5	8.5	Fig.3	EZB□...040... EZBFR...040... EZBTR...040... EZVBR...040... EZBPR...040... EZG□...040... EZFG□...040... EZTR...040...
	04020CT-120	●		20			19.0	120										
	04022CT-135	●		22			21.0	135				41.5						
	04025.0CT-135	●		25			24.0	135				32.7						
	04025.4CT-120	●		1.00"			24.4	120										
EZH	04519CT-120	●	4.5	0.75"	16	6	18	120	18	9	23	30.0	23 (14)	18.5 (9.5)	14 (-)	9.5 (-)	Fig.3	EZB□...045... _045X-...050EZP
	04520CT-120	●		20			19	120										
	04522CT-135	●		22			21	135				44.0						
	04525.0CT-135	●		25			24	135				30.0						
	04525.4CT-120	●		1.00"			24.4	120										
EZH	05019CT-120	●	5.0	0.75"	16	6.0	18.0	120	18	9	26	30.0	25.5 (15.5)	20.5 (10.5)	15.5 (-)	10.5 (-)	Fig.3	EZB□...050... EZBFR...050... EZBTR...050... EZVBR...050... EZBPR...050... EZBCR...050... EZG□...050... EZFG□...050... EZTR...050-... _050X-...-060EZP
	05020CT-120	●		20			19.0	120										
	05022CT-135	●		22			21.0	135				44.0						
	05025.0CT-135	●		25			24.0	135				30.0						
	05025.4CT-120	●		1.00"			24.4	120										
EZH	06019CT-120	●	6.0	0.75"	16	7.4	18.0	120	18	9	28	30.0	30.5 (18.5)	25.5 (13.5)	20.5 (-)	15.5 (-)	Fig.3	EZB□...060... EZBFR...060... EZVBR...060... EZBPR...060... EZBCR...060... EZG□...060-... EZTR...060-... _060X-...-070EZP
	06020CT-120	●		20			19.0	120										
	06022CT-135	●		22			21.0	135				41.5						
	06025.0CT-135	●		25			24.0	135				30.0						
	06025.4CT-120	●		1.00"			24.4	120										
EZH	07019CT-120	●	7.0	0.75"	16	7.4	18.0	120	18	9	29	30.0	35.5 (21.5)	30.5 (16.5)	25.5 (11.5)	20.5 (-)	Fig.3	EZB□...070... EZBCR...070... EZG□...070-... EZFG□...070-... EZTR...070-... _070X-...-080EZP
	07020CT-120	●		20			19.0	120										
	07022CT-135	●		22			21.0	135				44.0						
	07025.0CT-135	●		25			24.0	135				30.0						
	07025.4CT-120	●		1.00"			24.4	120										
EZH	08019CT-120	●	8.0	0.75"	16	8.6	18	120	18	9	33	34.0	40.5 (24.5)	35.5 (19.5)	30.5 (14.5)	25.5 (-)	Fig.3	EZB□...080... _080X-...-100EZP
	08020CT-120	●		20			19	120										
	08022CT-135	●		22			21	135				44.0						
	08025.0CT-135	●		25			24	135				34.0						
	08025.4CT-120	●		1.00"			24.4	120										

*1 L3 shows DCB length

*2 Dimension LPR shows overhang length of the EZB Bar when attached to sleeve. Dimensions in ( ) show overhang length of EZ Bar PLUS.

• Choose sleeves (DCB) to match DCON dimension of bar.

EZ Bar Mounting Procedure (EZH-CT Sleeve) ➡ F17

● : Standard Item △ : Phaseout Item (will be removed from next catalog)

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EZH-HP (Sleeve)

Adjustable

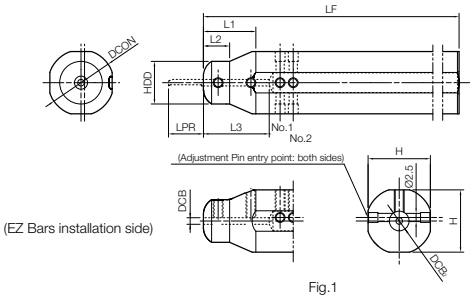

Fig.1

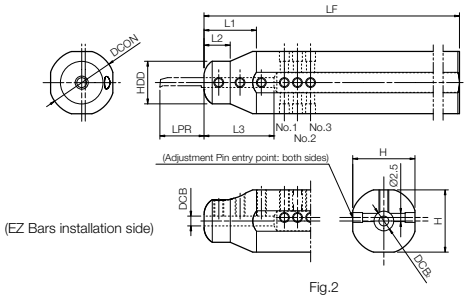

Fig.2

Part Number	Stock	Dimensions (mm)									LPR (mm) Overhang Length of Bar *2				Drawing	Applicable EZ Bar or EZ Bar PLUS → F18~F31 → G63, G96 → J32
		DCB	DCON	HDD	DCB2	H	LF	L1	L2	*1 L3	Adjustment Pin Setting Position No.1	No.2	No.3	No.4		
EZH 01716HP-100	●	1.7	16	13	6	15.0	100	16	8	16	7.5	3.5	-	-	Fig.1	EZBR...017...
01719HP-120	●		0.75"			18.0	120									
01720HP-120	●		20			19.0	120									
01722HP-135	●		22			21.0	135									
01725.0HP-135	●		25			24.0	135									
01725.4HP-120	●		1.00"			24.4	120									
EZH 02016HP-100	●	2.0	16	13	6	15.0	100	16	8	20	8.5	4.5	-	-	Fig.1	EZB□...020...
02019HP-120	●		0.75"			18.0	120									
02020HP-120	●		20			19.0	120									
02022HP-135	●		22			21.0	135									
02025.0HP-135	●		25			24.0	135									
02025.4HP-120	●		1.00"			24.4	120									
EZH 02516HP-100	●	2.5	16	13	6	15.0	100	16	8	20	11.0	7.0	-	-	Fig.1	EZB□...025... EZTR...025...
02519HP-120	●		0.75"			18.0	120									
02520HP-120	●		20			19.0	120									
02522HP-135	●		22			21.0	135									
02525.0HP-135	●		25			24.0	135									
02525.4HP-120	●		1.00"			24.4	120									
EZH 03016HP-100	●	3.0	16	13	6	15.0	100	16	8	21	13.5	9.5	5.5	-	Fig.2	EZB□...030... EZBFR...030... EZVBR...030... EZBPR...030... EZGR...030... EZTR...030...
03019HP-120	●		0.75"			18.0	120									
03020HP-120	●		20			19.0	120									
03022HP-135	●		22			21.0	135									
03025.0HP-135	●		25			24.0	135									
03025.4HP-120	●		1.00"			24.4	120									
EZH 03516HP-100	●	3.5	16	13	6	15.0	100	16	8	22	15.5	11.5	7.5	-	Fig.2	EZB□...035... EZTR...035...
03519HP-120	●		0.75"			18.0	120									
03520HP-120	●		20			19.0	120									
03522HP-135	●		22			21.0	135									
03525.0HP-135	●		25			24.0	135									
03525.4HP-120	●		1.00"			24.4	120									
EZH 04016HP-100	●	4.0	16	13	6	15	100	16	8	24	20.5	16.5	12.5	8.5	Fig.4 (F23)	EZB□...040... EZBFR...040... EZBTR...040... EZVBR...040... EZBPR...040... EZG□...040... EZFG□...040... EZTR...040...
04019HP-120	●		19.05			18	120									
04020HP-120	●		20			19	120									
04022HP-135	●		22			21	135									
04025.0HP-135	●		25			24	135									
04025.4HP-120	●		25.4			24.4	120									

*1 L3 shows DCB length

*2 Dimension LPR shows overhang length of the EZB Bar when attached to sleeve.

• Choose sleeves (DCB) to match DCON dimension of bar.

Spare Parts (for EZH-HP Sleeves)

Part Number	Spare Parts: Adjustment Pin	Clamp Screw	Wrench	Clamp Screw	Wrench	Applicable EZB Bar and EZ Bar PLUS	
EZH 017...HP-..	LCP025140	HS3X4P (for adjustment pin and bar)	LW-1.5 Tightening Torque 1N • m	HS3X4P (for bar)	LW-1.5 Tightening Torque 1N • m	EZBR...017...	
020...HP-..						EZB□...020...	
025...HP-..						EZB□...025...	EZ_R...025-...
030...HP-..						EZB□...030...	EZ_R...030-...
EZH 035...HP-..	LCP025140	HS3X4P (only for adjustment pin)	LW-1.5 Tightening Torque 1N • m	HS4X4P (for bar)	LW-2 Tightening Torque 2N • m	EZB□...035...	EZ_R...035-...
040...HP-..						EZB□...040...	EZ_□...040-...
045...HP-..						_045X-...-050EZP	
050...HP-..						EZB□...050... _050X-...-060EZP	EZ_□...050-...
060...HP-..						EZB□...060... _060X-...-070EZP	EZ_□...060-...
070...HP-..						EZB□...070... _070X-...-080EZP	EZ_□...070-...
080...HP-..						_080X-...-100EZP	

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EZH-HP (Sleeve)

Adjustable

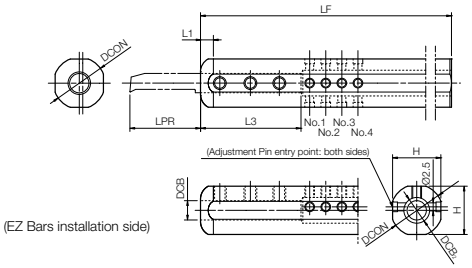

Fig.3

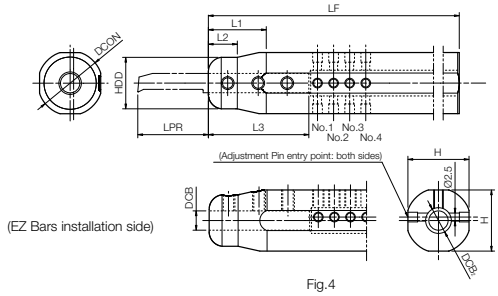

Fig.4

Part Number		Stock	Dimensions (mm)									LPR (mm) Overhang Length of Bar *2				Drawing	Applicable EZ Bar or EZ Bar PLUS ➡ F18~F31 ➡ G63, G96 ➡ J32
			DCB	DCON	HDD	DCB_2	H	LF	L1	L2	*1 L3	Adjustment Pin Setting Position No.1	No.2	No.3	No.4		
EZH	04516HP-100	●	4.5	16	16	6	15.0	100	4	-	25.3	23.0 (14)	18.5 (9.5)	14.0 (-)	9.5 (-)	Fig.3	EZB□...045... _045X-...-050EZP
	04519HP-120	●		0.75"			18.0	120	18	9						Fig.4	
	04520HP-120	●		20			19.0	120									
	04522HP-135	●		22			21.0	135									
	04525.0HP-135	●		25			24.0	135									
	04525.4HP-120	●		1.00"			24.4	120									
EZH	05016HP-100	●	5.0	16	16	6	15.0	100	4	-	29	25.5	20.5	15.5	10.5	Fig.3	EZB□...050... EZBFR...050... EZBTR...050... EZVBR...050... EZBPR...050... EZBCR...050... EZG□...050... EZFG□...050... EZTR...050... _050X-...-060EZP
	05019HP-120	●		0.75"			18.0	120	18	9						Fig.4	
	05020HP-120	●		20			19.0	120									
	05022HP-135	●		22			21.0	135									
	05025.0HP-135	●		25			24.0	135									
	05025.4HP-120	●		1.00"			24.4	120									
EZH	06016HP-100	●	6.0	16	16	8	15.0	100	4	-	31	30.5 (18.5)	25.5 (13.5)	20.5 (-)	15.5 (-)	Fig.3	EZB□...060... EZBFR...060... EZVBR...060... EZBPR...060... EZBCR...060... EZG□...060... EZTR...060... _060X-...-070EZP
	06019HP-120	●		0.75"			18.0	120	18	9						Fig.4	
	06020HP-120	●		20			19.0	120									
	06022HP-135	●		22			21.0	135									
	06025.0HP-135	●		25			24.0	135									
	06025.4HP-120	●		1.00"			24.4	120									
EZH	07016HP-100	●	7.0	16	16	8	15.0	100	4	-	33	35.5	30.5	25.5	20.5	Fig.3	EZB□...070... EZBCR...070... EZG□...070... EZFG□...070... EZTR...070... _070X-...-080EZP
	07019HP-120	●		0.75"			18.0	120	18	9						Fig.4	
	07020HP-120	●		20			19.0	120									
	07022HP-135	●		22			21.0	135									
	07025.0HP-135	●		25			24.0	135									
	07025.4HP-120	●		1.00"			24.4	120									
EZH	08019HP-120	●	8.0	0.75"	16	8.4	18.0	120	18	9	37	40.5 (24.5)	35.5 (19.5)	30.5 (14.5)	25.5 (-)	Fig.4	EZB□...080... _080X-...-100EZP
	08020HP-120	●		20			19.0	120									
	08022HP-135	●		22			21.0	135									
	08025.0HP-135	●		25			24.0	135									
	08025.4HP-120	●		1.00"			24.4	120									

*1 L3 shows DCB length
*2 Dimension LPR shows overhang length of the EZB Bar when attached to sleeve. Dimensions in ( ) show overhang length of EZ Bar PLUS.
• Choose sleeves (DCB) to match DCON dimension of bar.

EZ Bar Identification System

EZ H 017 16 HP - 100

EZ Symbol of Bar	Application	Shank Dia. of EZB Bar	Sleeve Shank Dia.	Precision	Overall Length of Sleeve
	H-Sleeve	017 : 1.7mm	16 : 16.00mm	CT: High Precision with Coolant Hole	100 : 100mm
		025 : 2.5mm	25.4 : 25.40mm	HP: Precision / ST: Standard	120 : 120mm

EZ Bar Mounting Procedure

● How to use adjustment pin (Fig.1)

① Put the adjustment pin into the hole.
② Push it into the sleeve, using the wrench "LW-1.5."
③ Tighten the clamp screw "HS3X4P" with wrench "LW-1.5" to fix the adjustment screw.

●How to secure bar (Fig.2)

① With the chip pocket upward, set the bar in sleeve.
Press the slant of the end of the bar against the adjustment pin.
Make sure that the bar does not rotate. (Fig.3)
② Tighten the clamp screw with wrench "LW-2"and secure the bar.
(Use "LW-1.5" if shank dia. is 3mm or less.)

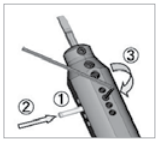

Fig. 1:
How to Use Adjustment Pin



Fig. 2:
How to Secure Bar

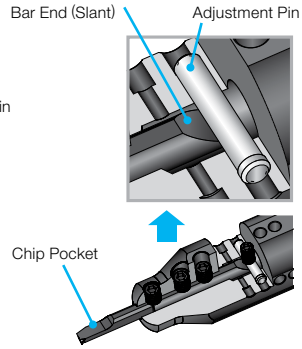

Fig. 3: Clamped Bar

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EZH-ST (Sleeve)

NOT Adjustable

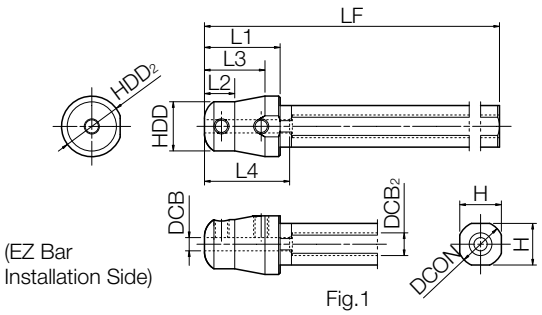

Fig.1

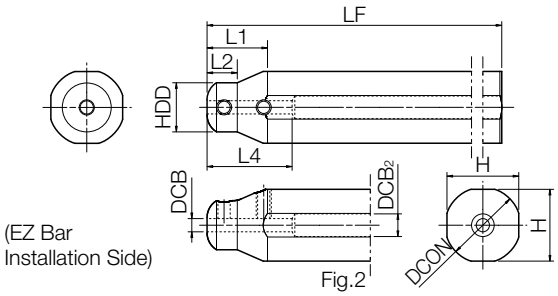

Fig.2

Part Number		Stock	Dimensions (mm)											Drawing	Applicable EZ Bar or EZ Bar PLUS ➡ F18~F31 ➡ G63, G96 ➡ J32
			DCB	DCON	HDD	HDD2	DCB2	H	LF	L1	L2	L3	*L4		
EZH	01712ST-80	●	1.7	12	13	16	6	11	80	20	8	16	16	Fig.1	EZBR...017...
	01716ST-100	●		16		-		15	100	16		-		Fig.2	
	01719ST-120	●		0.750"				18	120						
	01720ST-120	●		20				19	120						
	01722ST-135	●		22				21	135						
	01725.0ST-135	●		25				24	135						
	01725.4ST-120	●		1.000"				24.4	120						
EZH	02012ST-80	●	2	12	13	16	6	11	80	20	8	16	20	Fig.1	EZB□...020... EZBPR...020...
	02016ST-100	●		16		-		15	100	16		-		Fig.2	
	02019ST-120	●		0.750"				18	120						
	02020ST-120	●		20				19	120						
	02022ST-135	●		22				21	135						
	02025.0ST-135	●		25				24	135						
	02025.4ST-120	●		1.000"				24.4	120						
EZH	02512ST-80	●	2.5	12	13	16	6	11	80	20	8	16	20	Fig.1	EZB□...025... EZTR...025...
	02516ST-100	●		16		-		15	100	16		-		Fig.2	
	02519ST-120	●		0.750"				18	120						
	02520ST-120	●		20				19	120						
	02522ST-135	●		22				21	135						
	02525.0ST-135	●		25				24	135						
	02525.4ST-120	●		1.000"				24.4	120						
EZH	03012ST-80	●	3	12	13	16	6	11	80	20	8	16	21	Fig.1	EZB□...030... EZBFR...030... EZVBR...030... EZBPR...030... EZGR...030... EZTR...030...
	03016ST-100	●		16		-		15	100	16		-		Fig.2	
	03019ST-120	●		0.750"				18	120						
	03020ST-120	●		20				19	120						
	03022ST-135	●		22				21	135						
	03025.0ST-135	●		25				24	135						
	03025.4ST-120	●		1.000"				24.4	120						
EZH	03512ST-80	●	3.5	12	13	16	6	11	80	20	8	16	22	Fig.1	EZB□...035... EZTR...035...
	03516ST-100	●		16		-		15	100	16		-		Fig.2	
	03519ST-120	●		0.750"				18	120						
	03520ST-120	●		20				19	120						
	03522ST-135	●		22				21	135						
	03525.0ST-135	●		25				24	135						
	03525.4ST-120	●		1.000"				24.4	120						
EZH	04012ST-80	●	4	12	13	16	6	11	80	20	8	16	24	Fig.1	EZB□...040... EZBFR...040... EZBTR...040... EZVBR...040... EZBPR...040... EZG□...040... EZFG□...040... EZTR...040...
	04016ST-100	●		16		-		15	100	16		-		Fig.2	
	04019ST-120	●		0.750"				18	120						
	04020ST-120	●		20				19	120						
	04022ST-135	●		22				21	135						
	04025.0ST-135	●		25				24	135						
	04025.4ST-120	●		1.000"				24.4	120						

* L4 shows DCB length

- Choose sleeves (DCB) to match DCON dimension of bar.
- Adjustment pin cannot be installed in EZH-ST sleeves. To adjust overhang of EZB insert, please use EZH-CT or EZH-HP sleeves.

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EZH-ST (Sleeve)

NOT Adjustable

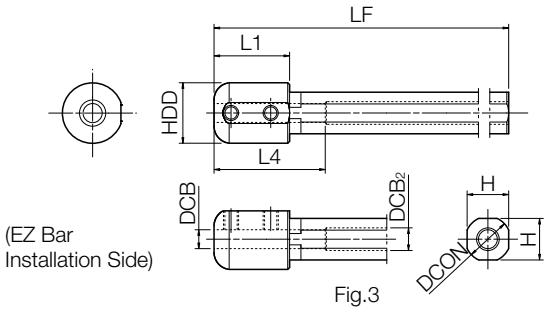


Fig.3

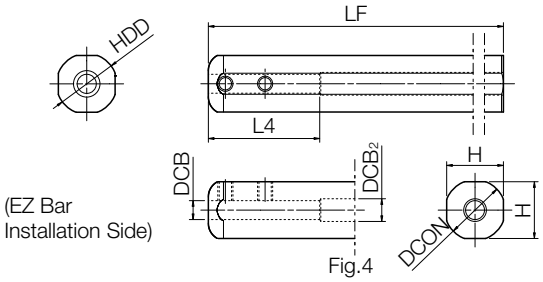


Fig.4

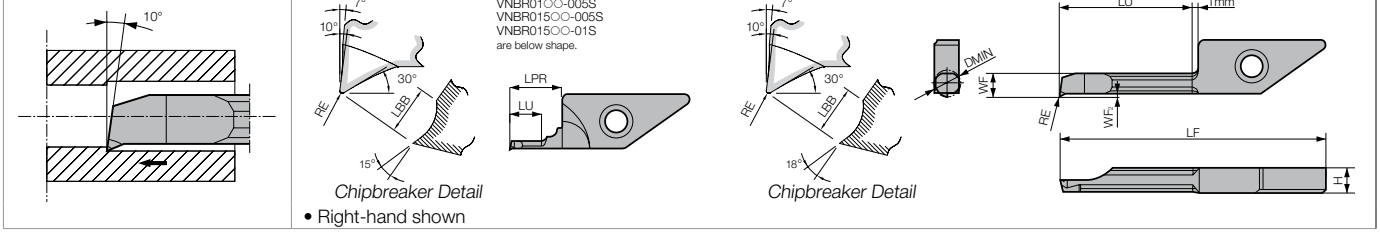
Part Number		Stock	Dimensions (mm)											Drawing	Applicable EZ Bar or EZ Bar PLUS → F18~F31 → G63, G96 → J32
			DCB	DCON	HDD	HDD2	DCB2	H	LF	L1	L2	L3	*L4		
EZH	05012ST-80	●	5	12	16	-	6	11	80	20	-	-	29	Fig.3	EZB□...050... EZBFR...050... EZBTR...050... EZVBR...050... EZBPR...050... EZBCR...050... EZG□...050... EZFG□...050... EZTR...050... _050X-...-060EZP
	05016ST-100	●		16				15	100	-				Fig.4	
	05019ST-120	●		0.750"				18	120	18	9			Fig.2	
	05020ST-120	●		20				19	120						
	05022ST-135	●		22				21	135						
	05025.0ST-135	●		25				24	135						
	05025.4ST-120	●		1.000"				24.4	120						
EZH	06012ST-80	●	6	12	16	-	8	11	80	20	-	-	31	Fig.3	EZB□...060... EZBFR...060... EZVBR...060... EZBPR...060... EZBCR...060... EZG□...060... EZTR...060... _060X-...-070EZP
	06016ST-100	●		16				15	100	-				Fig.4	
	06019ST-120	●		0.750"				18	120	18	9			Fig.2	
	06020ST-120	●		20				19	120						
	06022ST-135	●		22				21	135						
	06025.0ST-135	●		25				24	135						
	06025.4ST-120	●		1.000"				24.4	120						
EZH	07012ST-80	●	7	12	16	-	8	11	80	20	-	-	33	Fig.3	EZB□...070... EZBCR...070... EZG□...070... EZFG□...070... EZTR...060... _070X-...-080EZP
	07016ST-100	●		16				15	100	-				Fig.4	
	07019ST-120	●		0.750"				18	120	18	9			Fig.2	
	07020ST-120	●		20				19	120						
	07022ST-135	●		22				21	135						
	07025.0ST-135	●		25				24	135						
	07025.4ST-120	●		1.000"				24.4	120						
EZH	08016ST-100	●	8	16	16	-	8.4	15	100	-	-	-	37	Fig.4	EZB□...080... _080X-...-100EZP
	08019ST-120	●		0.750"				18	120	18	9			Fig.2	
	08020ST-120	●		20				19	120						
	08022ST-135	●		22				21	135						
	08025.0ST-135	●		25				24	135						
	08025.4ST-120	●		1.000"				24.4	120						

* L4 shows DCB length
- Choose sleeves (DCB) to match DCON dimension of bar.
- Adjustment pin cannot be installed in EZH-ST sleeves. To adjust overhang of EZB insert, please use EZH-CT or EZH-HP sleeves.

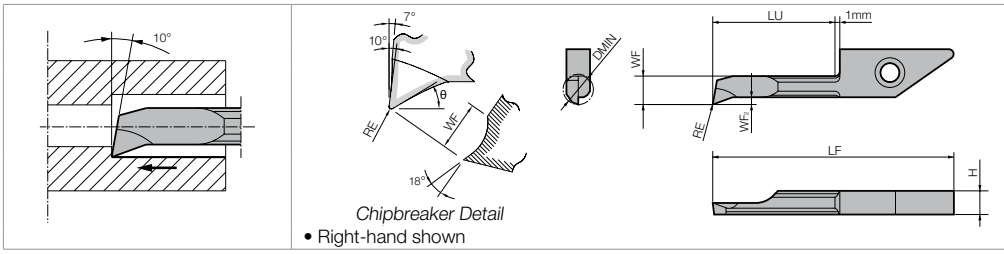
Spare Parts (for EZH-ST Sleeves)

Part Number		Spare Parts		Applicable EZ Bar			Applicable EZ Bar PLUS
		Clamp Screw	Wrench	EZB-HP EZB-HP-LT EZB-ST EZB-NB	EZBF EZBT EZVB	EZG EZFG EZT	S/C-SCLC S/C-STLB(P) S/C-SWUB
							
EZH	017...ST-..	HS3X4P	LW-1.5 Tightening Torque 1 Nm	EZBR...017...	-		-
	020...ST-..			EZB□...020...	EZBPR...020-...		
	025...ST-..			EZB□...025...	EZTR...025-...		-
	030...ST-..			EZB□...030...	EZ_R...030-...		-
EZH	035...ST-..	HS4X4P	LW-2 Tightening Torque 1 Nm	EZB□...035...	EZTR...035-...		-
	040...ST-..			EZB□...040...	EZ_R...040-...		-
	050...ST-..			EZB□...050...	EZ_R...050-...		_050X-...-060EZP
	060...ST-..			EZB□...060...	EZ_R...060-...		_060X-...-070EZP
	070...ST-..			EZB□...070...	EZ_R...070-...		_070X-...-080EZP
	080...ST-..			EZB□...080...	-		_080X-...-100EZP

VNB-S (Boring) [Corner-R (RE) Minus Tolerance]

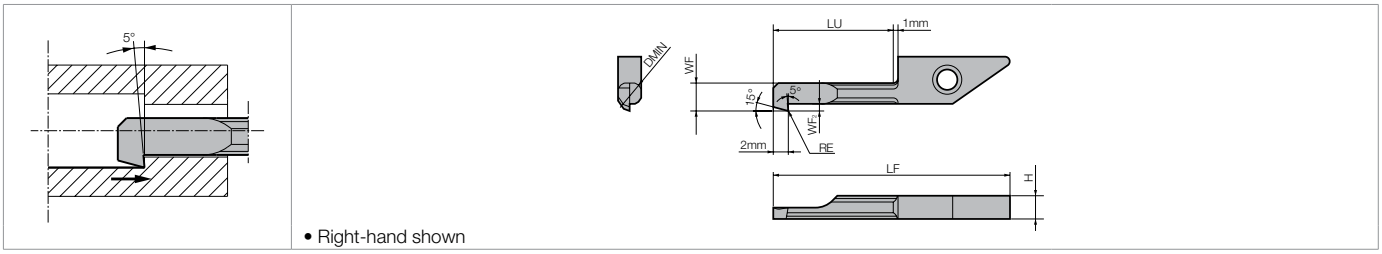


VNB (Boring)



-NB Type (Without Chipbreaker)	
Top Shape	Grades
	Coated Carbide Carbide
	PCD

VNBT (Back Boring)



Insert Dimensions (VNB-S)

Part Number	Min.Bore Dia.	Dimensions (mm)								Grade				
										MEGA COAT	PVD Coated Carbide	Carbide	PCD	
	DMIN	H	LF	LU	LPR	WF	WF_2	RE	LBB	PR1225	PR930	KW10	KPD001	KPD010
VNBR 0103-005S	1.0	3.9	26.5	3.0	7	0.85	0.20	+0 -0.02 0.05	0.7	●	●			
0105-005S			26.5	5.0		0.85	0.20			●	●			
01503-005S	1.5		26.5	3.0		1.3	0.20			●	●			
01505-005S			26.5	5.0		1.3	0.20			●	●			
0206-005S	2.0		26.5	6.0	-	1.8	0.25	+0 -0.02 0.05	0.8	●	●			
025075-005S	2.5		28.1	7.5		2.1	0.40			●	●			
0311-005S	3.0		30.8	11.0		2.6	0.40			●	●			
03515-005S	3.5		34.8	15.0		3.0	0.50			●	●			
0411-005S	4.0		30.8	11.0		3.5	0.50			●	●			
0420-005S			39.8	20.0		3.5	0.50			●	●			
VNBR 01503-01S	1.5	3.9	26.5	3.0	7	1.3	0.20	+0 -0.03 0.10	0.7	●	●			
01505-01S			26.5	5.0		1.3	0.20			●	●			
0206-01S	2.0		26.5	6.0	-	1.8	0.25	+0 -0.03 0.10	0.8	●	●			
025075-01S	2.5		28.1	7.5		2.1	0.40			●	●			
0311-01S	3.0		30.8	11.0		2.6	0.40			●	●			
03515-01S	3.5		34.8	15.0		3.0	0.50			●	●			
0411-01S	4.0		30.8	11.0		3.5	0.50			●	●			
0420-01S			39.8	20.0		3.5	0.50			●	●			
VNBR 0411-02S	4.0	3.9	30.8	11.0	-	3.5	0.50	+0 -0.04 0.20	0.8	●	●			
0420-02S			39.8	20.0						●	●			

Recommended Cutting Conditions ➔ **F105**

Swiss IQ Bars are sold in 5 piece boxes.

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Insert Dimensions (VNB / VNB-NB / VNBT)

Part Number		Min. Bore Dia.	Dimensions (mm)								Grade				
											MEGA COAT	PVD Coated Carbide	Carbide	PCD	
		DMIN	H	LF	LU	WF	WF_2	RE	LBB	θ	PR1225	PR930	KW10	KPD001	KPD010
VNBR	0206-003	2	3.9	26.5	6	1.8	0.25	0.03	1.2	24°	●	●	●		
	0311-003	3		30.8	11	2.6	0.40	0.03	1.8	24°	●	●	●		
	0411-003	4		30.8	11	3.5	0.50	0.03	2.7	23°	●	●	●		
	0420-003			39.8	20	3.5	0.50				●	●	●		
	0511-003	5		30.8	11	4.5	0.70	0.03	3.0	23°	●	●	●		
	0520-003			39.8	20	4.5	0.70				●	●	●		
	0620-003	6		39.8	20	5.3	1.00	0.03	3.0	24°	●	●	●		
	0630-003			49.8	30	5.3	1.00				●	●	●		
	0720-003	7		39.8	20	6.2	1.00					●	●		
	0730-003			49.8	30	6.2	1.00					●	●		
VNBR	0206-01	2	3.9	26.5	6	1.8	0.25	0.10	1.2	24°	●	●	●		
	0311-01	3		30.8	11	2.6	0.40	0.10	1.8	24°	●	●	●		
	0411-01	4		30.8	11	3.5	0.50	0.10	2.7	23°	●	●	●		
	0420-01			39.8	20	3.5	0.50				●	●	●		
	0511-01	5		30.8	11	4.5	0.70	0.10	3.0	23°	●	●	●		
	0520-01			39.8	20	4.5	0.70				●	●	●		
	0620-01	6		39.8	20	5.3	1.00	0.10	3.0	24°	●	●	●		
	0630-01			49.8	30	5.3	1.00				●	●			
	0720-01	7		39.8	20	6.2	1.00					●	●		
	0730-01			49.8	30	6.2	1.00					●			
VNBR	0206-02	2	3.9	26.5	6	1.8	0.25	0.20	1.2	24°	●	●	●		
	0311-02	3		30.8	11	2.6	0.40	0.20	1.8	24°	●	●	●		
	0411-02	4		30.8	11	3.5	0.50	0.20	2.7	23°	●	●	●		
	0420-02			39.8	20	3.5	0.50				●	●	●		
	0511-02	5		30.8	11	4.5	0.70	0.20	3.0	23°	●	●	●		
	0520-02			39.8	20	4.5	0.70				●	●	●		
	0620-02	6		39.8	20	5.3	1.00	0.20	3.0	24°	●	●	●		
	0630-02			49.8	30	5.3	1.00				●	●	●		
	0720-02	7		39.8	20	6.2	1.00				●	●	●		
	0730-02			49.8	30	6.2	1.00				●	●	●		
VNBR	0206-003NB	2	3.9	26.5	6	1.8	0.25	0.03	-	15°		●	●		
	0311-003NB	3		30.8	11	2.6	0.40					●	●		
	0411-003NB	4		30.8	11	3.5	0.50					●	●		
	0420-003NB			39.8	20	3.5	0.50					●	●		
	0511-003NB	5		30.8	11	4.5	0.70					●	●		
	0520-003NB			39.8	20	4.5	0.70					●	●		
	0620-003NB	6		39.8	20	5.3	1.00					●	●		
	0630-003NB			49.8	30	5.3	1.00					●	●		
	0720-003NB	7		39.8	20	6.2	1.00					●	●		
	0730-003NB			49.8	30	6.2	1.00					●	●		
VNBR	0206-02NB	2	3.9	26.5	6	1.8	0.25	0.20	-	15°			●		
	0311-02NB	3		30.8	11	2.6	0.40						●		
	0411-02NB	4		30.8	11	3.5	0.50						●	●	△
	0420-02NB			39.8	20	3.5	0.50						●	●	△
	0511-02NB	5		30.8	11	4.5	0.70						●	●	△
	0520-02NB			39.8	20	4.5	0.70						●	●	△
	0620-02NB	6		39.8	20	5.3	1.00						●	●	△
	0630-02NB			49.8	30	5.3	1.00						●	●	△
	0720-02NB	7		39.8	20	6.2	1.00						●	●	△
	0730-02NB			49.8	30	6.2	1.00						●	●	
VNBTR	0411-003	4	3.9	30.8	11	3.6	1.00	0.03	-	-		●	●		
	0420-003			39.8	20	3.6	1.00					●			
	0511-003	5		30.8	11	4.6	1.30					●	●		
	0520-003			39.8	20	4.6	1.30					●			
VNBTR	0411-01	4	3.9	30.8	11	3.6	1.00	0.10	-	-	●	●	●		
	0420-01			39.8	20	3.6	1.00				●	●			
	0511-01	5		30.8	11	4.6	1.30				●	●	●		
	0520-01			39.8	20	4.6	1.30				●	●			

Recommended Cutting Conditions ➡ F105

Swiss IQ Bars are sold in 5 piece boxes. *PCD Inserts are sold in 1 piece boxes.*

● : Standard Item △ : Phaseout Item (will be removed from next catalog)
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SVN-N (Without Side Stopper) SVNS (With Side Stopper) SVNS-N (Without Side Stopper / Without Setscrew)

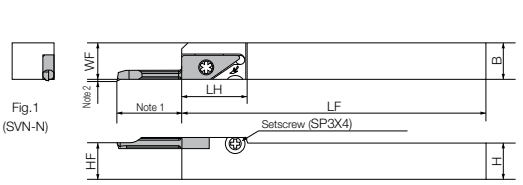

Fig.1 (SVN-N)

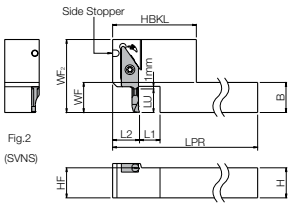

Fig.2 (SVNS)

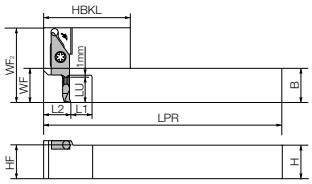

Fig.3 (SVNS-N)

• Right-hand shown

• Right-hand Insert for Right-hand Toolholder

Toolholder Dimensions

Note 1 & Note 2 : See Insert Dimension Table. (F38~F39)

Part Number		Stock	Unit	Dimensions H= HF	B	LF LPR	LH HBKL	L1	L2	WF	WF2	LU	Drawing	Spare Parts: Clamp Screw	Wrench	Side Stopper	Wrench	Set Screw	Applicable Inserts
SVNR	1010H-12N	●	mm	10	10	100	22	-	-	10	-	-	Fig.1	SB-3080TR	FT-10	-	-	SP3X4	VNBR....-... VNBTR....-... VNGR....-.. VNFGR....-.. VNTR....-..
	1212K-12N	●		12	12	125	22	-	-	12	-	-							
	1616K-12N	●		16	16	125	22	-	-	16	-	-							
	2020K-12N	●		20	20	125	22	-	-	20	-	-							
	2525M-12N	●		25	25	150	22	-	-	25	-	-							
SVNSR	8-12-11	●	inch	0.500	0.500	6.0	1.772	0.394	0.472	0.500	1.299	0.433	Fig.2	SB-3080TR	LTW-10S	HS3X4	LW-1.5	-	(VNBR..11-...)※ (VNBTR..11-...)※ (VNGR....-11)※ (VNTR...-11)※
	8-12-20	●		0.500	0.500	6.0	1.772	0.394	0.492	0.500	1.654	0.787							(VNBR..20-...)※ (VNBTR..20-...)※ (VNGR....-20)※
	12-12-11	●		0.750	0.750	8.0	1.772	0.630	0.472	0.750	1.299	0.433							(VNBR..11-...)※ (VNBTR..11-...)※ (VNGR....-11)※ (VNTR...-11)※
	12-12-20	●		0.750	0.750	8.0	1.772	0.630	0.492	0.750	1.654	0.787							(VNBR..20-...)※ (VNBTR..20-...)※ (VNGR....-20)※
SVNSR	1010K-12-06N	●	mm	10	10	125	45	10	12	10	29	6	Fig.3	SB-3080TR	LTW-10S	-	-	-	(VNBR..06-...)
	1010K-12-11N	●		10	10	125	45	10	12	10	33	11	Fig.3	SB-3080TR	LTW-10S	-	-	-	(VNBR..11-...)※ (VNBTR..11-...)※ (VNGR....-11)※ (VNTR...-11)※
	1212M-12-06N	●		12	12	150	45	10	12	12	29	6	Fig.3	SB-3080TR	LTW-10S	-	-	-	(VNBR..06-...)
	1212M-12-11N	●		12	12	150	45	10	12	12	33	11	Fig.3	SB-3080TR	LTW-10S	-	-	-	(VNBR..11-...)※ (VNBTR..11-...)※ (VNGR....-11)※ (VNTR...-11)※
	1212M-12-20N	●		12	12	150	45	10	13	12	42	20	Fig.3	SB-3080TR	LTW-10S	-	-	-	(VNBR..20-...)※ (VNBTR..20-...)※ (VNGR....-20)※
	1616M-12-06N	●		16	16	150	45	16	12	16	29	6	Fig.3	SB-3080TR	LTW-10S	-	-	-	(VNBR..06-...)
	1616M-12-11N	●		16	16	150	45	16	12	16	33	11	Fig.3	SB-3080TR	LTW-10S	-	-	-	(VNBR..11-...)※ (VNBTR..11-...)※ (VNGR....-11)※ (VNTR...-11)※
	1616M-12-20N	●		16	16	150	45	16	13	16	42	20	Fig.3	SB-3080TR	LTW-10S	-	-	-	(VNBR..20-...)※ (VNBTR..20-...)※ (VNGR....-20)※

※ All Swiss IQ Bar Inserts are used with SVNSR Toolholder, but when setting the cutting edge at the toolholder face level as shown in Fig. 2, use the Insert shown in ( ).
In that case, the toolholder dimension LU becomes the same as HBKL of Insert Dimension.

1) SVN-N / S...SVN-N / S-SVN-SN Toolholders (without side stopper) retain high index accuracy by easy restraint.

2) For high-rigidity clamping, (e.g. when varying load direction of undercutting, internal and external, or face cutting by one tool), changing the SP3X4 screw to a HS3X4 screw (sold separately) enables the toolholder's rigid clamping equivalent to the side stopper holders.

Spare Parts (Optional)

Screw (Side Stopper)	Wrench
	
HS3X4	LW-1.5

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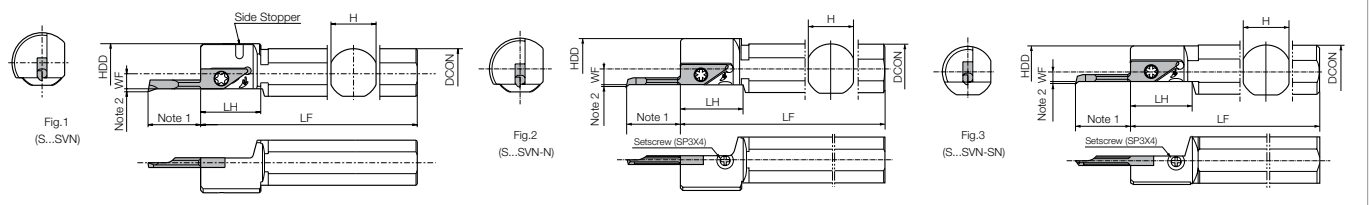
S...SVN (With Side Stopper : Standard) S...SVN-N (Without Side Stopper : Standard) S...SVN-SN (Without Side Stopper : Straight)



• Right-hand shown

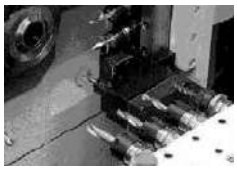
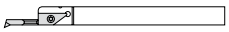
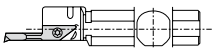
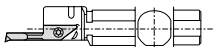
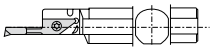
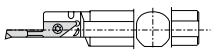
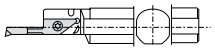
• Right-hand Insert for Right-hand Toolholder

Note 1 & Note 2 : See Insert Dimension Table. (F38~F39)

Toolholder Dimensions

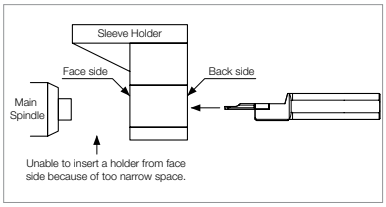
Part Number	Stock	Unit	Dimensions DCON	HDD	H	LF	LH	WF	Drawing	Spare Parts: Clamp Screw	Wrench	Side Stopper	Wrench	Set Screw	Applicable Inserts
S08-SVNR12	●	inch	0.500	0.787	0.480	3.500	0.906	0.157	Fig.1	SB-3080TR	FT-10	HS3X4	LW-1.5	-	VNBR....-.. VNBTR....-... VNGR....-.. VNFGR....-.. VNTR...-..
S12F-SVNR12N	●	mm	12	20.0	11	80	23	4	Fig.2	SB-3080TR	FT-10	-	-	SP3X4	VNBR....-.. VNBTR....-... VNGR....-.. VNFGR....-.. VNTR...-..
S14G-SVNR12N	●		14	20.0	13	90	23	4							
S16H-SVNR12N	●		16	24.0	15	100	23	6							
S19H-SVNR12N	●	inch	0.750	0.945	0.669	3.937	0.945	0.236							
S19N-SVNR12N	●		0.750	0.945	0.669	6.299	0.945	0.236							
S20H-SVNR12N	●	mm	20	24.0	18	100	24	6							
S25H-SVNR12N	●	inch	1.000	1.181	0.905	3.937	0.945	0.236							
S25Q-SVNR12N	●		1.000	1.181	0.905	7.086	0.945	0.236							
S20H-SVNR12SN	●	mm	20	19.5	18	100	23	4	Fig.3	SB-3080TR	FT-10	-	-	SP3X4	
S22K-SVNR12SN	●		22	21.5	20	125	23	4							
S25.0G-SVNR12SN	●		25	24.5	23	90	23	4							

Swiss IQ Bar Selection

Gang-Type (Horizontal)	Gang-Type	Gang-Type (Front Loading Sleeve Type)	Gang-Type (Back Loading Sleeve Type)
			
Square Shank (Straight)	Square Shank (L-Shape)	Square Shank	Square Shank
		—	—
Round Shank (Standard)		Round Shank (Standard)	Round Shank (Standard)
			—
Round Shank (Straight)		Round Shank (Straight)	Round Shank (Straight)
			

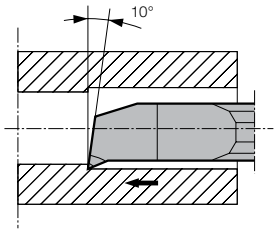
Q: There are standard types (head dia. is larger than shank) and straight types for round shanks. What is each one used for?

A: The straight type is used when it cannot be inserted from the face side of the sleeve holder and can be inserted only from the back side due to space limitation (Refer to Fig. below). On the other hand, the standard type should be installed when it can be inserted from the face side. The head end is used for positioning as stopper.

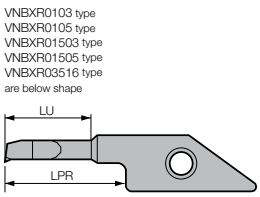


Recommended toolholder may change according to machines used and actual position.
Automatic lathes have various toolpost types other than those above.

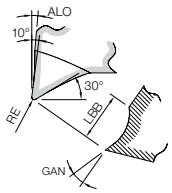
VNBX-S (Boring) [Corner-R(RE) Minus Tolerance]



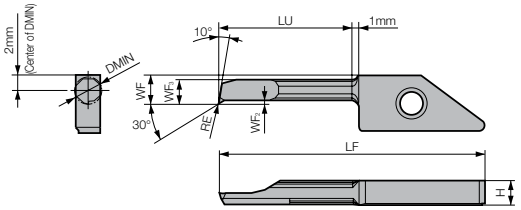
VNBXR0103 type
VNBXR0105 type
VNBXR01503 type
VNBXR01505 type
VNBXR03516 type
are below shape



• Right-hand shown



Chipbreaker Detail



Insert Dimensions (VNBX-S)

Part Number	Min. Bore Dia.	Dimensions (mm)											Grade
													PVD Coated Carbide
	DMIN	H	LF	LU	LPR	WF	WF_2	WF_3	RE	LBB	ALO	GAN	PR930
VNBXR 0103-005S	1.0	3.9	26.5	3	7	2.95	0.20	0.85	$^{+0}_{-0.02}$ 0.05	0.7	7°	15°	●
0105-005S	1.0	3.9	26.5	5	7	2.95	0.20	0.85					●
01503-005S	1.5	3.9	26.5	3	7	2.95	0.20	1.30					●
01505-005S	1.5	3.9	26.5	5	7	2.95	0.20	1.30					●
0206-005S	2.0	3.9	26.5	6	-	3.00	0.25	1.80	$^{+0}_{-0.02}$ 0.05	0.8	8°	18°	●
0311-005S	3.0	3.9	30.8	11	-	3.50	0.40	2.60					●
03511-005S	3.5	3.9	30.8	11	-	3.75	0.45	3.10					●
03516-005S	3.5	3.9	39.8	16	21	3.75	0.45	3.10					●
0411-005S	4.0	3.9	30.8	11	-	4.00	0.50	3.50					●
0420-005S	4.0	3.9	39.8	20	-	4.00	0.50	3.50					●
VNBXR 01503-01S	1.5	3.9	26.5	3	7	2.95	0.20	1.30	$^{+0}_{-0.03}$ 0.10	0.7	7°	15°	●
01505-01S	1.5	3.9	26.5	5	7	2.95	0.20	1.30					●
0206-01S	2.0	3.9	26.5	6	-	3.00	0.25	1.80	$^{+0}_{-0.03}$ 0.10	0.8	8°	18°	●
0311-01S	3.0	3.9	30.8	11	-	3.50	0.40	2.60					●
03511-01S	3.5	3.9	30.8	11	-	3.75	0.45	3.10					●
03516-01S	3.5	3.9	39.8	16	21	3.75	0.45	3.10					●
0411-01S	4.0	3.9	30.8	11	-	4.00	0.50	3.50					●
0420-01S	4.0	3.9	39.8	20	-	4.00	0.50	3.50					●
VNBXR 0411-02S	4.0	3.9	30.8	11	-	4.00	0.50	3.50	$^{+0}_{-0.04}$ 0.20	0.8	8°	18°	●
0420-02S	4.0	3.9	39.8	20	-	4.00	0.50	3.50					●

Recommended Cutting Conditions ➡ **F105**

● VNBX-S Attachment holder for VNBX-S Swiss IQ Bar

1. VNBX-S Attachment holder for VNBX-S Swiss IQ Bar is below (See page ➡ **F43**).
   ① SVNS-XN (Without Side Stopper)
   ② S…SVN-XN (Without Side Stopper)
   ③ S…SVN-SXN (Without Side Stopper)
2. Above holder assures high index accuracy by easy restraint.
3. A holder which attaches setscrews (without side stopper) can be used as binding effect holder as with side stopper holder, once taking off the setscrew, and insert a screw (HS3X4: sold separately) with wrench (LW-1.5: sold separately).

Spare Parts (Optional)

Screw (Side Stopper)	Wrench
	
HS3X4	LW-1.5

Swiss IQ Bars are sold in 5 piece boxes.

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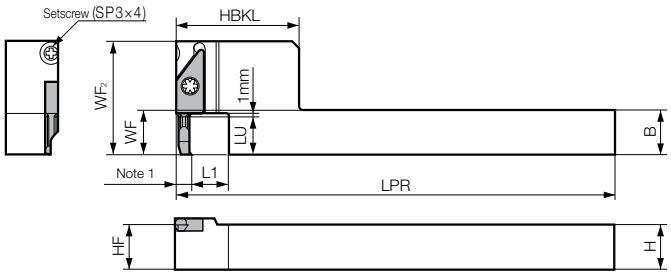
SVNS-XN (Square Shank: L-shape)



• Right-hand shown • Right-hand Insert for Right-hand Toolholder

Note 1 dimension is same size as applicable insert (VNBX) WF dimension

Toolholder Dimensions

Part Number		Stock	Dimensions (mm)									Spare Parts			Applicable Inserts ➔ F42
			H	HF	B	LPR	HBKL	L1	WF	WF_2	LU	Clamp Screw	Wrench	Setscrew	
SVNSR	1010K-12-06XN	●	10	10	10	125	45	10	10	29	6	SB-3080TR	LTW-10S	SP3X4	(VNBXR02..)
	1010K-12-11XN	●	10	10	10	125	45	10	10	33	11				(VNBXR..11..)
	1212M-12-06XN	●	12	12	12	150	45	10	12	29	6				(VNBXR02..)
	1212M-12-11XN	●	12	12	12	150	45	10	12	33	11				(VNBXR..11..)
	1212M-12-20XN	●	12	12	12	150	45	10	12	42	20				(VNBXR0420..)
	1616M-12-06XN	●	16	16	16	150	45	16	16	29	6				(VNBXR02..)
	1616M-12-11XN	●	16	16	16	150	45	16	16	33	11				(VNBXR..11..)
	1616M-12-20XN	●	16	16	16	150	45	16	16	42	20				(VNBXR0420..)

※ All Swiss IQ Bar Inserts are used with an SVNS-XN Toolholder, however, when setting the cutting edge at the face level of the toolholder as shown in Fig., use the insert shown in ( ).

S...SVN-XN (Round Shank: Standard)

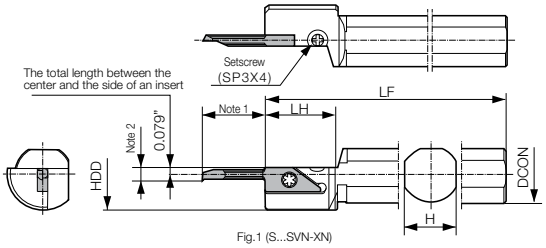


Fig.1 (S...SVN-XN)

• Right-hand shown

S...SVN-SXN (Round Shank: Straight)

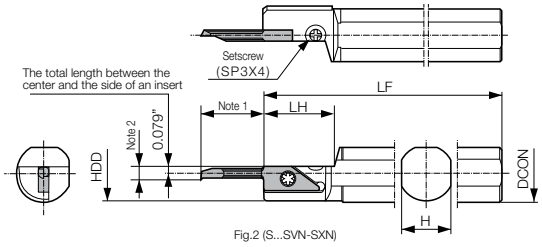


Fig.2 (S...SVN-SXN)

• Right-hand Insert for Right-hand Toolholder

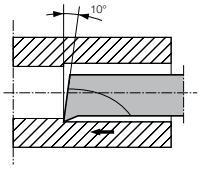
1. Note 1 dimension shows the applicable insert (VNBX) LU dimension +1 mm.
2. Note 2 dimension is same size as applicable insert (VNBX) WF dimension

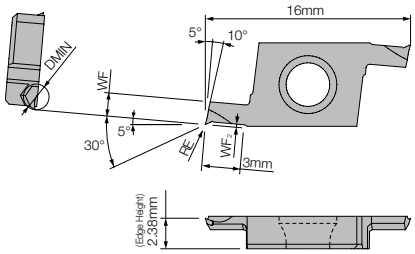
Toolholder Dimensions (Holder center axis core and insert center are coaxial type)

Part Number	Stock	Unit	Dimensions					Drawing	Spare Parts			Applicable Inserts ➔ F42
			DCON	HDD	H	LF	LH		Clamp Screw	Wrench	Setscrew	
S12F-SVNR12XN	●	mm	12	20.0	11	80	23	Fig.1	SB-3080TR	FT-10	SP3X4	VNBXR...
S14G-SVNR12XN	●		14	20.0	13	90	23					
S16H-SVNR12XN	●		16	24.0	15	100	23					
S19H-SVNR12XN	●	inch	0.750	0.945	0.669	3.937	0.945					
S19N-SVNR12XN	●		0.750	0.945	0.669	6.299	0.945					
S20H-SVNR12XN	●	mm	20	24.0	18	100	24					
S25H-SVNR12XN	●	inch	1.000	1.181	0.905	3.937	0.945					
S25Q-SVNR12XN	●		1.000	1.181	0.905	7.086	0.945					
S19H-SVNR12SXN	●	inch	0.750	0.728	0.669	3.397	0.905	Fig.2	SB-3080TR	FT-10	SP3X4	VNBXR...
S20H-SVNR12SXN	●	mm	20	19.5	18	100	23					
S22K-SVNR12SXN	●		22	21.5	20	125	23					
S25.0G-SVNR12SXN	●		25	24.5	23	90	23					

TWIN BAR FOR MICRO BORING

TWB (Micro Boring: Horizontal Type) [Corner-R(RE) Tolerance: +0/-0.02mm, +0/-0.03mm]





• Right-hand shown

Part Number		Min.Bore Dia.	Dimensions (mm)			Insert Grade PVD Coated Carbide	
		DMIN	WF	WF_2	RE	NEW PR1535	PR1025
TWBR	01003-005	1.0	0.85	0.20	+0 -0.02 0.05	●	△
	01503-005	1.5	1.30	0.20		●	△
	02003-005	2.0	1.75	0.25		●	△
	02503-005	2.5	2.10	0.30		●	
	03003-005	3.0	2.40	0.40		●	△
TWBR	01503-010	1.5	1.30	0.20	+0 -0.03 0.10	●	△
	02003-010	2.0	1.75	0.25		●	△
	02503-010	2.5	2.10	0.30		●	△
	03003-010	3.0	2.40	0.40		●	△

STW (Square Shank for Horizontal Type Inserts)

(For Left-hand toolholder for grooving, please see ➔ G100)



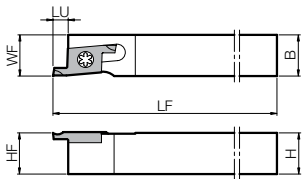


Fig.1

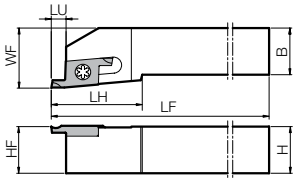


Fig.2

• Right-hand shown

• Right-hand Insert for Right-hand Toolholder, Left-hand Insert for Left-hand Toolholder

Toolholder Dimensions

Part Number		Stock	Dimensions (mm) H	HF	B	LF	LH	WF	LU	Drawing	Spare Parts Clamp Screw	Wrench	Applicable Inserts Above
STWR	1212F-15	●	12	12	12	85	-	12	3	Fig.1	SB-3080TR	LTW-10S	TWBR○○○○○-○○○

S...-STW (Round Shank for Horizontal Type Inserts)

(For Left-hand toolholder for grooving, please see ➔ G100)



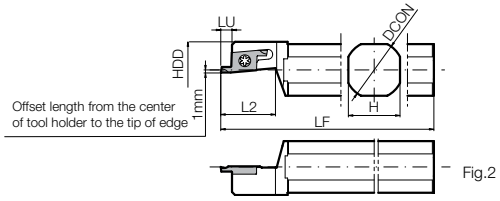


Fig.2

• Right-hand shown

• Right-hand Insert for Right-hand Toolholder, Left-hand Insert for Left-hand Toolholder

Toolholder Dimensions

Part Number		Stock	Dimensions (mm) DCON	HDD	H	LF	L2	LH	LU	Drawing	Spare Parts Clamp Screw	Wrench	Applicable Inserts Above
S20G-	STWR15	●	20.000	19.5	18	90	18	-	3	Fig.2	SB-3080TR	LTW-10S	TWBR○○○○○-○○○
S25.0J-	STWR15	●	25.000	24.5	23	110	22	-	3				

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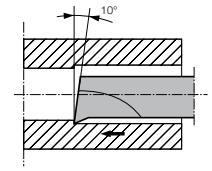
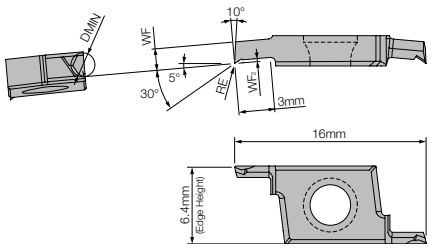
NEW ITEMS!

TWBT (Micro Boring: Vertical Type) [Corner-R(RE) Tolerance: +0/-0.02mm, +0/-0.03mm]



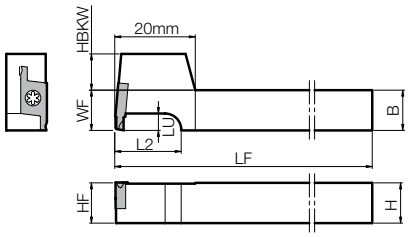


• Right-hand shown

Part Number		Min.Bore Dia.	Dimensions (mm)			Insert Grade PVD Coated Carbide	
		DMIN	WF	WF_2	RE	NEW PR1535	PR1025
TWBTR	01003-005	1.0	0.85	0.20	+0 -0.02 0.05	●	△
	01503-005	1.5	1.30	0.20		●	△
	02003-005	2.0	1.75	0.25		●	
	02503-005	2.5	2.10	0.30		●	△
	03003-005	3.0	2.30	0.40		●	△
TWBTR	01503-010	1.5	1.30	0.20	+0 -0.03 0.1	●	△
	02003-010	2.0	1.75	0.25		●	△
	02503-010	2.5	2.10	0.30		●	△
	03003-010	3.0	2.30	0.40		●	△

STWS (Square Shank for Vertical Type: L-shape)





• Right-hand shown

Toolholder Dimensions

Part Number		Stock	Dimensions (mm) H	HF	B	LF	L2	WF	HBKW	LU	Drawing	Spare Parts Clamp Screw	Spare Parts Wrench	Applicable Inserts
STWSR	1212JX-15T	●	12	12	12	120	16	12	7	3	-	SB-3080TR	LTW-10S	TWBTR○○○○○-○○○ TWFGTR○○○
	1616JX-15T	●	16	16	16	120	20	16	3	3	-			
STWSR	1010F-15T	●	10	10	10	85	16	10	9	3	-	SB-3080TR	LTW-10S	TWBTR○○○○○-○○○ TWFGTR○○○
	1212F-15T	●	12	12	12	85	16	12	7	3	-			

Applicable Inserts: F45, G101

Recommended Cutting Conditions (TWB / TWBT)

Workpiece Material	Recommended Grade (Vc sfm) PVD Coated Carbide PR1535	PR1025	TWBR01003 TWBR01503 TWBTR01003 TWBTR01503 Depth of Cut: D.O.C. (inch), Feed: f (ipr) D.O.C.	f	TWBR02003 TWBR02503 TWBR03003 TWBTR02003 TWBTR02503 TWBTR03003 D.O.C.	f	Notes
Carbon Steel / Alloy Steel	★ 100~330	☆ 100~330	~0.0039	~0.0004	~0.0079	~0.0012	Wet
Stainless Steel	★ 100~260	☆ 100~260	~0.0039	~0.0004	~0.0079	~0.0008	

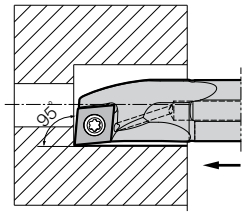
★ : 1st Recommendation ☆ : 2nd Recommendation

Twin Bars are sold in 5 piece boxes.

● : Standard Item △ : Phaseout Item (will be removed from next catalog)
Contact your local Kyocera sales engineer to upgrade old products to new technology

A/S-SCLC-AE Excellent Bar (Boring / Internal Facing)

(Max. Overhang Length **L/D = ~5.5**)



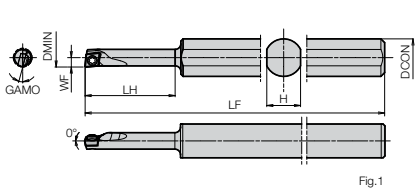


Fig.1

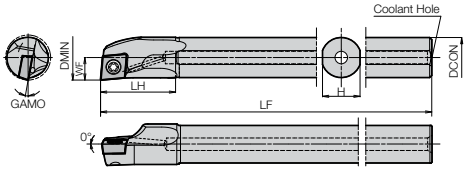


Fig.2

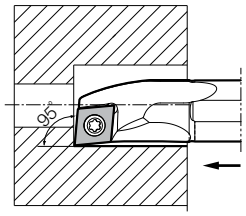
Shank Dia. DCON	Coolant Hole Dia.
Ø8mm	Ø2.5mm
Ø0.375" Ø10mm	Ø3.0mm
Ø0.500" Ø12mm	Ø4.0mm
Ø0.625" Ø16mm	Ø5.0mm
Ø0.750" Ø20mm	Ø5.0mm
Ø1.000" Ø25mm	Ø5.0mm

• Right-hand shown

• Left-hand Insert for Right-hand Toolholder, Right-hand Insert for Left-hand Toolholder

S-SCLC-A Steel Bar (Boring / Internal Facing)

(Max. Overhang Length **L/D = ~4**)



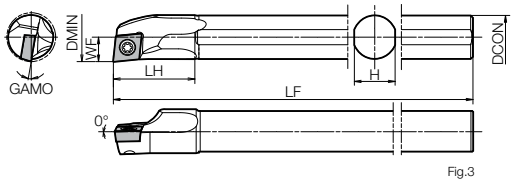


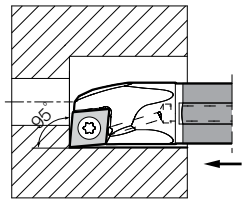
Fig.3

• Right-hand shown

• Left-hand Insert for Right-hand Toolholder, Right-hand Insert for Left-hand Toolholder

C/E-SCLC-A(N) Carbide Shank Bar (Boring / Internal Facing)

(Max. Overhang Length **L/D = ~7**)



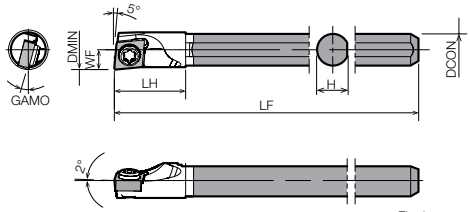


Fig.4

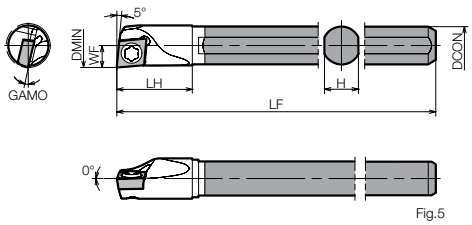


Fig.5

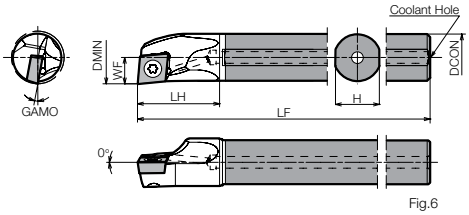


Fig.6

Shank Dia. DCON	Coolant Hole Dia.
Ø8mm	Ø3mm
Ø0.375" Ø10mm	Ø3mm
Ø0.500" Ø12mm	Ø4mm
Ø0.625" Ø16mm	Ø4mm
Ø20mm	Ø6mm
Ø25mm	Ø6mm

• Right-hand shown

• Left-hand Insert for Right-hand Toolholder, Right-hand Insert for Left-hand Toolholder

Toolholder Dimensions

	Part Number	Stock R	Stock L	Unit	Min. Bore Dia. DMIN	Dimensions DCON	H	LF	LH	WF	GAMO	Standard Corner-R (RE)	Coolant Hole	Drawing	Spare Parts: Clamp Screw	Spare Parts: Wrench
Excellent Bar	A06M-SCLC□2AE	●	●	inch	0.480	0.375	0.336	6.000	0.787	0.236	12°	1/64	Yes	Fig.2	SB-2545TR	FT-8
	A08M-SCLC□2AE	●	●		0.600	0.500	0.461	6.000	0.945	0.276	10°					
	A10R-SCLC□3AE	●	●		0.770	0.625	0.586	8.000	1.181	0.354	10°					
	A12S-SCLC□3AE	●	●		0.930	0.750	0.711	10.000	1.417	0.413	8°	1/64	Yes	Fig.2	SB-4065TR	FT-15
	A16T-SCLC□3AE	●	●		1.200	1.000	0.961	12.000	1.811	0.531	6°					
	S10H-SCLC□03-05AE	●	●	mm	5	10	9.0	100	24	2.5	15°	0.2	No	Fig.1	SB-1635TR	FT-6
	S10H-SCLC□03-06AE	●	●		6	10	9.0	100	28	3.0	13°					
	S10H-SCLC□04-07AE	●	●		7	10	9.0	100	32	3.5	13°	0.2	No	Fig.1	SB-2035TR	FT-6
	S10H-SCLC□04-08AE	●	●		8	10	9.0	100	37	4.0	11°					
	A08X-SCLC□06-10AE	●	●		10	8	7.0	120	16	5.0	14°	0.4	Yes	Fig.2	SB-2545TR	FT-8
	A10L-SCLC□06-12AE	●	●		12	10	9.0	140	20	6.0	12°					
	A12M-SCLC□06-14AE	●	●		14	12	11.0	150	24	7.0	10°					
	A16Q-SCLC□09-18AE	●	●		18	16	15.0	180	30	9.0	10°	0.4	Yes	Fig.2	SB-4065TR	FT-15
	A20R-SCLC□09-22AE	●	●		22	20	19.0	200	36	11.0	8°					
	A25S-SCLC□09-27AE	●	●		27	25	24.0	250	46	13.5	6°					
Steel	S08X-SCLC□06-10A	●	●	mm	10	8	7.0	120	16	5.0	14°	0.4	No	Fig.3	SB-2545TR	FT-8
	S10L-SCLC□06-12A	●	●		12	10	9.0	140	20	6.0	12°					
	S12M-SCLC□06-14A	●	●		14	12	11.0	150	24	7.0	10°					
	S16Q-SCLC□09-18A	●	●		18	16	15.0	180	30	9.0	10°	0.4	No	Fig.3	SB-4065TR	FT-15
	S20R-SCLC□09-22A	●	●		22	20	19.0	200	36	11.0	8°					
	S25S-SCLC□09-27A	●	●		27	25	24.0	250	46	13.5	6°					
Carbide	E06N-SCLC□2A	●	●	inch	0.480	0.375	0.336	6.300	0.787	0.236	12°	1/64	Yes	Fig.6	SB-2545TR	FT-8
	E06N-SCLC□2A-2/3	□	□		0.480	0.375	0.336	4.200	0.787	0.236	12°					
	E08Q-SCLC□2A	●	●		0.600	0.500	0.461	7.100	0.906	0.276	10°					
	E08Q-SCLC□2A-2/3	□	□		0.600	0.500	0.461	4.800	0.906	0.276	10°					
	E10X-SCLC□3A	●	●		0.770	0.625	0.586	8.700	1.102	0.354	10°				SB-4065TR	FT-15
	E10X-SCLC□3A-2/3	●	□		0.770	0.625	0.586	5.800	1.102	0.354	10°					
	C04G-SCLC□03-05AN	●	●	mm	5	4	3.8	90	7	2.5	15°	0.2	No	Fig.4	SB-1635TR	FT-6
	C05H-SCLC□03-06AN	●	●		6	5	4.4	100	9	3.0	13°	0.2	No	Fig.5	SB-1635TR	FT-6
	C06J-SCLC□04-07AN	●	●		7	6	5.4	110	10	3.5	13°	0.2	No	Fig.5	SB-2035TR	FT-6
	C07K-SCLC□04-08AN	●	●		8	7	6.4	125	11	4.0	11°					
	E08L-SCLC□06-10AN	●	●		10	8	7.0	140	14	5.0	14°	0.4	Yes	Fig.6	SB-2545TR	FT-8
	E08L-SCLC□06-10AN-2/3	●			10	8	7.0	90	14	5.0	14°					
	E10N-SCLC□06-12AN	●	●		12	10	9.0	160	18	6.0	12°					
	E10N-SCLC□06-12AN-2/3	●			12	10	9.0	105	18	6.0	12°					
	E12Q-SCLC□06-14A	●	●		14	12	11.0	180	23	7.0	10°					
	E12Q-SCLC□06-14A-2/3	●			14	12	11.0	120	23	7.0	10°					
	E16X-SCLC□09-18A	●	●		18	16	15.0	220	28	9.0	10°	0.4	Yes	Fig.6	SB-4065TR	FT-15
	E16X-SCLC□09-18A-2/3	●			18	16	15.0	145	28	9.0	10°					
	E20S-SCLC□09-22A	●	●		22	20	19.0	250	32	11.0	8°					
	E20S-SCLC□09-22A-2/3	●			22	20	19.0	165	32	11.0	8°					
	E25T-SCLC□09-27A	●	●		27	25	24.0	300	38	13.5	6°					
	E25T-SCLC□09-27A-2/3	●			27	25	24.0	200	38	13.5	6°					

Applicable Inserts

Application	Minute D.O.C.	Finishing	Finishing	Finishing	Finishing	Finishing-Medium	Finishing-Medium	Medium	Finishing-Medium	Finishing / Precision
Ref. Page	B53	B53	B53	B54	B54	B54	B54	B54, B55	B53	B55, B56
Insert / Toolholder	CF	PF	SKS	WP (Wiper)	PP	GK	HQ	Standard	GQ	□-F / FSF
...SCLC□03-...	CCGT1109..	CCGT1109..	-	-	-	-	-	-	-	CC□T1109..
...SCLC□04-...	CCGT1411..	CCGT1411..	-	-	-	-	-	-	-	CC□T1411..
...SCLC□2... ...SCLC□06-...	-	CCGT215..	CCGT215..	CCMT215..	CCMT215..	CCMT215..	CCMT215..	CCGT215..	CCGT215..	-
...SCLC□3... ...SCLC□09-...	-	-	CCGT325..	CCMT325	CCMT325	CCMT325	CCMT325..	CCGT325.. CCMT325..	CCGT325..	-

Application	※Finishing	Low Feed	Low Feed / Precision	Stainless Steel	Cast Iron	Non-ferrous Metals	Non-ferrous Metals	Non-ferrous Metals	Non-ferrous Metals	Hardened Materials
Ref. Page	B57	B58, B59	B57	B55	B60	B60	B60	B60	C24	C14
Insert / Toolholder	□-P	(E/F)□-U	F□-USF	MQ	Without Chipbreaker	AP	A3	AH	PCD	CBN
...SCLC□03-...	-	-	-	-	-	-	-	-	-	CCMW1109..
...SCLC□04-...	-	-	-	-	-	-	-	-	CCGW1411..	CCMW1411..
...SCLC□2... ...SCLC□06-...	-	CCGT215..	CCET215..	-	CCGW215..	CCGT215..	-	-	CCMT215.. CCGW215..	CCMW215..
...SCLC□3... ...SCLC□09-...	CCET325..	CCGT325..	CCET325..	CCMT325..	CCGW325..	CCGT325..	CCGT325..	CCGT325..	CCMT325.. CCGW325..	CCMW325..

※For P chipbreaker inserts, **Left-hand** Insert for **Left-hand** Toolholder, **Right-hand Insert** for **Right-hand** Toolholder

Recommended Cutting Conditions ➡ **F116-F117**

Applicable Sleeve ➡ **F107-F110**

● : Standard Item □ : Made to Order △ : Phaseout Item (will be removed from next catalog)

Contact your local Kyocera sales engineer to upgrade old products to new technology

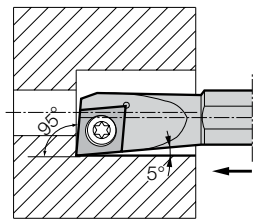
(Customer Service) **800.823.7284 - Option 1**

(Technical Support) **800.823.7284 - Option 2**

Visit us online at **KyoceraPrecisionTools.com**

A-SCLC-E Excellent Twin Hole Bar (Boring / Internal Facing)

(Max. Overhang Length **L/D = ~5**)



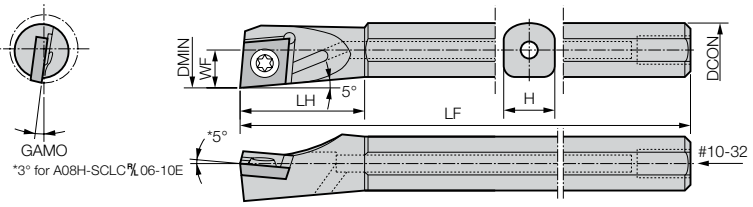


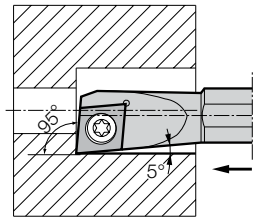
Fig.1

• Right-hand shown

• Left-hand Insert for Right-hand Toolholder, Right-hand Insert for Left-hand Toolholder

S-SCLC-E Excellent Steel Bar (Boring / Internal Facing)

(Max. Overhang Length **L/D = ~5**)



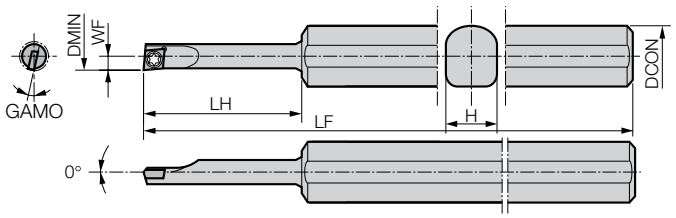


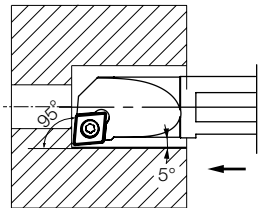
Fig.2

• Right-hand shown

• Left-hand Insert for Right-hand Toolholder, Right-hand Insert for Left-hand Toolholder

S-SCLC Steel Bar (Boring / Internal Facing)

(Max. Overhang Length **L/D = ~3**)



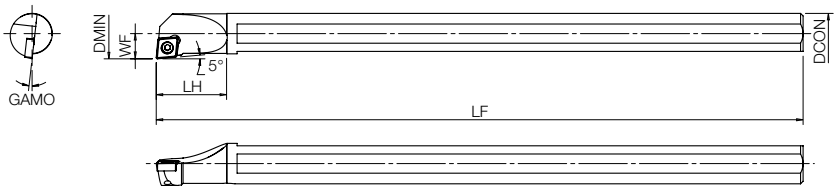


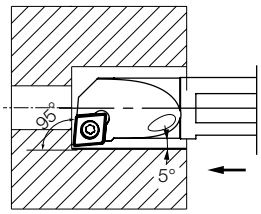
Fig.3

• Right-hand shown

• Left-hand Insert for Right-hand Toolholder, Right-hand Insert for Left-hand Toolholder

A-SCLC Steel Bar (Boring / Internal Facing)

(Max. Overhang Length **L/D = ~3**)



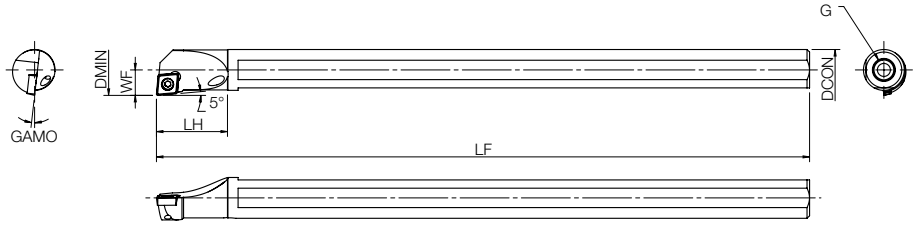


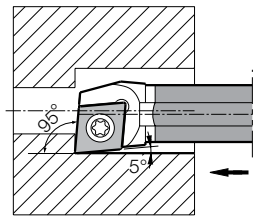
Fig.4

• Right-hand shown

• Left-hand Insert for Right-hand Toolholder, Right-hand Insert for Left-hand Toolholder

C-SCLC Carbide Shank Bar (Boring / Internal Facing)

(Max. Overhang Length **L/D = ~7**)



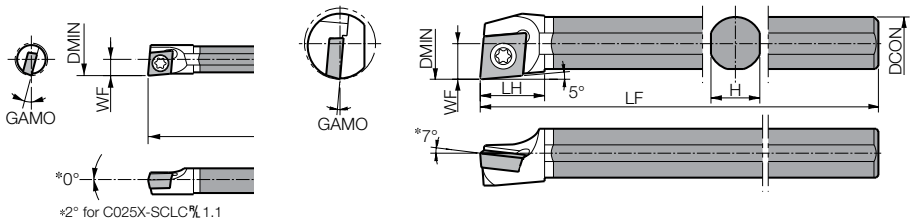


Fig.5

• Right-hand shown

• Left-hand Insert for Right-hand Toolholder, Right-hand Insert for Left-hand Toolholder

Toolholder Dimensions

	Part Number	Stock R	Stock L	Unit	Min. Bore Dia. DMIN	Dimensions DCON	H	LF	LH	WF	GAMO	G	Standard Corner-R (RE)	Coolant Hole	Drawing	Spare Parts: Clamp Screw	Spare Parts: Wrench
Excellent Bar	**S06H-SCLCR1.1E ****	●		inch	0.197	0.375	0.335	4.000	0.900	0.098	15°	-	1/64	No	Fig.2	SB-1635TR	FT-6
Excellent Bar	**A05H-SCLC□2E**	●	□		0.394	0.312	0.281	4.000	0.650	0.197	12°	-		Yes	Fig.1	SB-2545TR	FT-8
Steel	**S05K-SCLC□2**	●	●		0.394	0.312	-	5.000	0.625	0.197	12°	-	0.004	No	Fig.3	SB-2545TR	FT-8
Steel	**A05K-SCLCR2**	●			0.415	0.313	-	5.000	0.870	0.218	11°	-	1/64	Yes	Fig.4	SB-2545TR	FT-8
Steel	**A08R-SCLCR2**	●			0.600	0.500	-	8.000	0.870	0.312	6°	-	1/64	Yes			
Steel	**A10S-SCLCR2**	●			0.770	0.625	-	10.000	0.870	0.406	4°	1/8 NPT	1/64	Yes			
Carbide	**C05K-SCLCR2**	●			0.394	0.312	0.282	5.000	0.625	0.197	12°	-	0.004	No	Fig.5	SB-2545TR	FT-8

** Optional sleeve SL2.5-10 (0.625" dia.) is available. (Sleeve screw: SLS-2, sleeve wrench: LW-2)

Applicable Inserts

Application	Minute D.O.C.	Finishing	Finishing	Finishing	Finishing	Finishing-Medium	Finishing-Medium	Medium	Finishing-Medium	Finishing / Precision
Ref. Page	B53	B53	B53	B54	B54	B54	B54	B54, B55	B53	B55, B56
Insert / Toolholder	**CF** 	**PF** 	**SKS** 	**WP** (Wiper) 	**PP** 	**GK** 	**HQ** 	**Standard** 	**GQ** 	**□-F / FSF** 
...SCLC□1.1 **...SCLC□1.1E**	CCGT1109..	CCGT1109..	-	-	-	-	-	-	-	CC□T1109..
...SCLC□2 **...SCLC□2E**	-	CCGT215..	CCGT215..	CCMT215..	CCMT215..	CCMT215..	CCMT215..	CCGT215..	CCGT215..	-
Application	※Finishing	Low Feed	Low Feed / Precision	Stainless Steel	Cast Iron	Non-ferrous Metals	Non-ferrous Metals	Non-ferrous Metals	Non-ferrous Metals	Hardened Materials
Ref. Page	B57	B58, B59	B57	B55	B60	B60	B60	B60	C24	C14
Insert / Toolholder	**□-P** 	**(E/F)□-U** 	**F□-USF** 	**MQ** 	Without Chipbreaker 	**AP** 	**A3** 	**AH** 	**PCD** 	**CBN** 
...SCLC□1.1 **...SCLC□1.1E**	-	-	-	-	-	-	-	-	-	CCMW1109..
...SCLC□2 **...SCLC□2E**	-	CCGT215..	CCET215..	-	CCGW215..	CCGT215..	-	-	CCMT215.. CCGW215..	CCMW215..

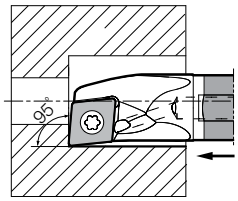
※For P chipbreaker inserts, **Left-hand** Insert for **Left-hand** Toolholder, **Right-hand Insert** for **Right-hand** Toolholder

Recommended Cutting Conditions ➡ **F116-F117**

Applicable Sleeve ➡ **F107-F110**

A-SCLP-AE Excellent Bar (Boring / Internal Facing)

(Max. Overhang Length **L/D = ~5.5**)



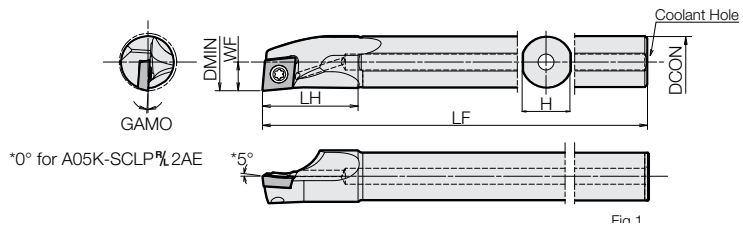


Fig.1

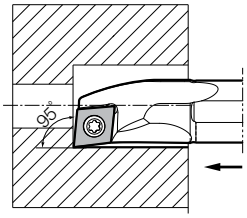
Shank Dia. DCON	Coolant Hole Dia.
Ø0.312"	Ø2.5mm
Ø0.375" Ø10mm	Ø3mm
Ø0.500" Ø12mm	Ø4mm
Ø0.625" Ø16mm	Ø5mm
Ø0.750" Ø20mm	Ø5mm
Ø1.000" Ø25mm	Ø5mm

• Right-hand shown

• Left-hand Insert for Right-hand Toolholder, Right-hand Insert for Left-hand Toolholder

S-SCLP-A Steel Bar (Boring / Internal Facing)

(Max. Overhang Length **L/D = ~4**)



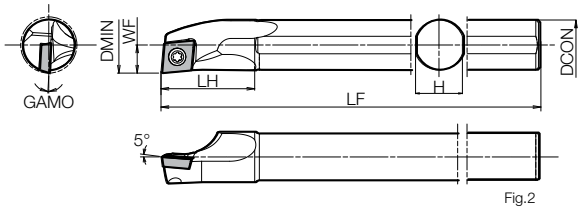


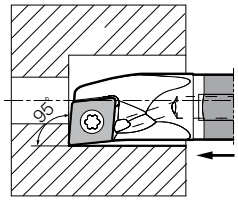
Fig.2

• Right-hand shown

• Left-hand Insert for Right-hand Toolholder, Right-hand Insert for Left-hand Toolholder

E-SCLP-A(N) Carbide Shank Bar (Boring / Internal Facing)

(Max. Overhang Length **L/D = ~7**)



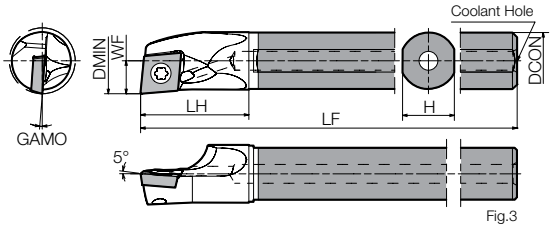


Fig.3

Shank Dia. DCON	Coolant Hole Dia.
Ø10mm	Ø3mm
Ø12mm	Ø4mm
Ø16mm	Ø4mm
Ø20mm	Ø6mm
Ø25mm	Ø6mm

• Right-hand shown

• Left-hand Insert for Right-hand Toolholder, Right-hand Insert for Left-hand Toolholder

Toolholder Dimensions

	Part Number	Stock R	Stock L	Unit	Min. Bore Dia. DMIN	Dimensions DCON	H	LF	LH	WF	GAMO	Standard Corner-R (RE)	Coolant Hole	Drawing	Spare Parts: Clamp Screw	Spare Parts: Wrench
Excellent Bar	A05K-SCLP□2AE	●	●	inch	0.413	0.312	0.273	5	0.630	0.197	10.0°	1/64	Yes	Fig.1	SB-2545TR	FT-8
	A06M-SCLP□2.5AE	●	●		0.480	0.375	0.336	6	0.787	0.236	5.0°	1/64	Yes	Fig.1	SB-3060TR	FT-10
	A08M-SCLP□2.5AE	●	●		0.580	0.500	0.461	6	0.945	0.276	4.0°					
	A10R-SCLP□3AE	●	●		0.700	0.625	0.586	8	1.181	0.354	3.5°	1/64	Yes	Fig.1	SB-4065TR	FT-15
	A12S-SCLP□3AE	●	●		0.825	0.750	0.711	10	1.417	0.413	2.0°					
	A16T-SCLP□3AE	●	●		1.200	1.000	0.961	12	1.811	0.531	0.0°					
	A10L-SCLP□08-12AE	●	●	mm	12	10	9	140	20	6	5.0°	0.4	Yes	Fig.1	SB-3060TR	FT-10
	A12M-SCLP□08-14AE	●	●		14	12	11	150	24	7	4.0°					
	A12M-SCLP□09-16AE	●	●		16	12	11	150	24	8	4.0°	0.4	Yes	Fig.1	SB-4065TR	FT-15
	A16Q-SCLP□09-18AE	●	●		18	16	15	180	30	9	3.5°					
	A20R-SCLP□09-22AE	●	●		22	20	19	200	36	11	2.0°					
	A25S-SCLP□09-27AE	●	●		27	25	24	250	46	13.5	0.0°					
Steel	S10L-SCLP□08-12A	●	●	mm	12	10	9	140	20	6	5.0°	0.4	No	Fig.2	SB-3060TR	FT-10
	S12M-SCLP□08-14A	●	●		14	12	11	150	24	7	4.0°					
	S12M-SCLP□09-16A	●	●		16	12	11	150	24	8	4.0°	0.4	No	Fig.2	SB-4065TR	FT-15
	S16Q-SCLP□09-18A	●	●		18	16	15	180	30	9	3.5°					
	S20R-SCLP□09-22A	●	●		22	20	19	200	36	11	2.0°					
	S25S-SCLP□09-27A	●	●		27	25	24	250	46	13.5	0.0°					
Carbide	E10N-SCLP□08-12AN	●	●	mm	12	10	9	160	18	6	5°	0.4	Yes	Fig.3	SB-3060TR	FT-10
	E10N-SCLP□08-12AN-2/3	●			12	10	9	105	18	6	5°					
	E10N-SCLP□08-12AN-1/2	●			12	10	9	80	18	6	5°					
	E12Q-SCLP□08-14A	●	●		14	12	11	180	23	7	4°					
	E12Q-SCLP□08-14A-2/3	●			14	12	11	120	23	7	4°					
	E12Q-SCLP□08-14A-1/2	●			14	12	11	90	23	7	4°					
	E12Q-SCLP□09-16A	●	●		16	12	11	180	23	8	5°	0.4	Yes	Fig.3	SB-4065TR	FT-15
	E12Q-SCLP□09-16A-2/3	●			16	12	11	120	23	8	5°					
	E12Q-SCLP□09-16A-1/2	●			16	12	11	90	23	8	5°					
	E16X-SCLP□09-18A	●	●		18	16	15	220	28	9	3.5°					
	E16X-SCLP□09-18A-2/3	●			18	16	15	145	28	9	3.5°					
	E16X-SCLP□09-18A-1/2	●			18	16	15	110	28	9	3.5°					
	E20S-SCLP□09-22A	●	●		22	20	19	250	32	11	2°					
	E20S-SCLP□09-22A-2/3	●			22	20	19	165	32	11	2°					
	E20S-SCLP□09-22A-1/2	●			22	20	19	125	32	11	2°					
	E25T-SCLP□09-27A	●	●		27	25	24	300	38	13.5	0°					
	E25T-SCLP□09-27A-2/3	●			27	25	24	200	38	13.5	0°					

Applicable Inserts

Application	Finishing	Finishing	Finishing-Medium	Medium	Finishing-Medium	Low Carbon Steel/ Finishing	Low Carbon Steel/ Finishing-Medium	Cast Iron	Non-ferrous Metals	Hardened Materials
Ref. Page	B61	B61	B61	B61	B61	B61	B61	B61	C25	C14
Insert / Toolholder	PP	GP	HQ	Standard	□-Y	XP	XQ	Without Chipbreaker	PCD	CBN
...SCLP□2AE...	-	-	-	CPGT215..	-	-	-	-	-	-
...SCLP□2.5AE... ...SCLP□08-...	CPMT2515..	CPMT2515..	CPMH2515..	CPMH2515..	CPMH2515..	CPMT2515..	-	CPMB2515..	CPMH2515..	CPGB2515..
...SCLP□3AE... ...SCLP□09-...	CPMT32..	CPMT32..	CPMH32..	CPMH32..	CPMH32..	CPMT32..	CPMT32..	CPMB32..	CPMH32..	CPGB32..

Recommended Cutting Conditions **F116-F117**

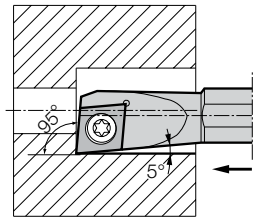
Applicable Sleeve **F108-F110**

● : Standard Item △ : Phaseout Item (will be removed from next catalog)

Contact your local Kyocera sales engineer to upgrade old products to new technology

A-SCLP-E Excellent Twin Hole Bar (Boring / Internal Facing)

(Max. Overhang Length **L/D = ~5**)



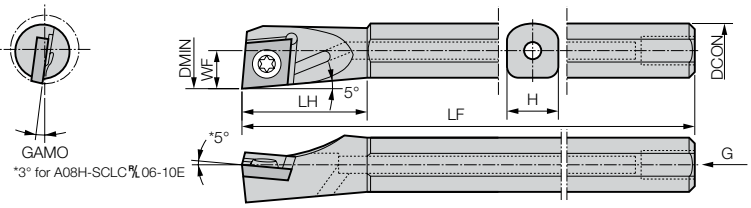


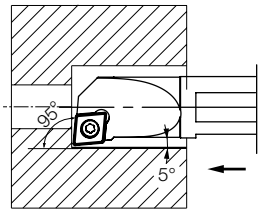
Fig.1

• Right-hand shown

• Left-hand Insert for Right-hand Toolholder, Right-hand Insert for Left-hand Toolholder

S-SCLP Steel Bar (Boring / Internal Facing)

(Max. Overhang Length **L/D = ~3**)



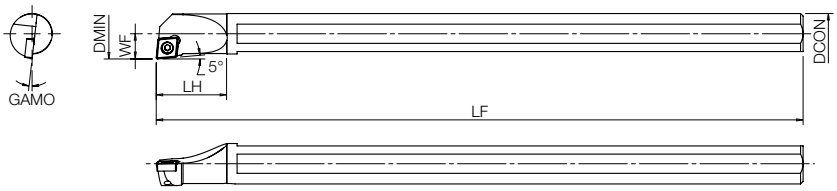


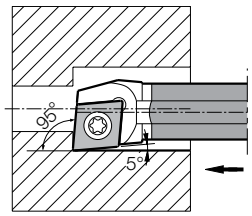
Fig.2

• Right-hand shown

• Left-hand Insert for Right-hand Toolholder, Right-hand Insert for Left-hand Toolholder

C-SCLP Carbide Shank Bar (Boring / Internal Facing)

(Max. Overhang Length **L/D = ~7**)



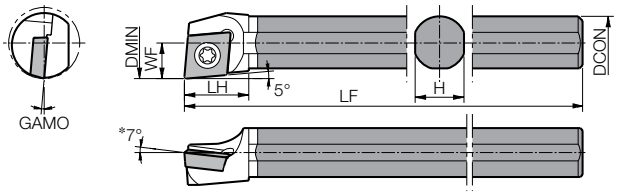


Fig.3

• Right-hand shown

• Left-hand Insert for Right-hand Toolholder, Right-hand Insert for Left-hand Toolholder

Toolholder Dimensions

	Part Number	Stock R	Stock L	Unit	Min. Bore Dia. DMIN	Dimensions DCON	H	LF	LH	WF	G	GAMO	Standard Corner-R (RE)	Coolant Hole	Drawing	Spare Parts: Clamp Screw	Spare Parts: Wrench
Excellent Bar	**A06X-SCLP**□**2.5E**	●		inch	0.472	0.375	0.336	4.75	0.900	0.236	#10-32	5°	1/64	Yes	Fig.1	SB-3STR	FT-8
	A08X-SCLP□**3E**	●			0.632	0.500	0.461	4.75	1.140	0.315	1/4-28	4°		Yes		SB-4TR	FT-15
	A10M-SCLP□**3E**	●			0.709	0.625	0.586	6.00	1.220	0.354	5/16-24	3°		Yes			
Steel	**S06M-SCLP**□**2.5**	●	●		0.472	0.375	-	6.00	1.000	0.236	-	5°	1/64	No	Fig.2	SB-3STR	FT-10
	S08M-SCLP□**3**	●	●		0.630	0.500	-	6.00	1.180	0.315	-	4°	1/64	No		SB-4TR	FT-15
	S10X-SCLP□**3**	●			0.788	0.625	-	7.00	1.380	0.394	-	3°	1/64	No			
	S12R-SCLP□**3**	●	●		0.984	0.750	-	8.00	1.560	0.492	-	0°	1/64	No			
	S16T-SCLP□**3**	●	●		1.338	1.000	-	12.00	1.750	0.669	-	0°	1/64	No			
Carbide	**C06M-SCLP**□**2.5**	●			0.472	0.375	0.334	6.00	1.000	0.236	-	5°	1/64	No	Fig.3	SB-3STR	FT-10
	C08R-SCLP□**3**	●			0.630	0.500	0.480	8.00	1.180	0.315	-	4°	1/64	No		SB-4TR	FT-15
	C10S-SCLP□**3**	●			0.788	0.625	0.584	10.00	1.380	0.394	-	3°	1/64	No			
	C12S-SCLP□**3**	●			0.984	0.750	0.710	10.00	1.560	0.492	-	0°	1/64	No			

Applicable Inserts

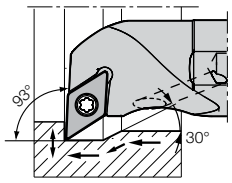
Application	Finishing	Finishing	Finishing-Medium	Medium	Finishing-Medium	Low Carbon Steel/ Finishing	Low Carbon Steel/ Finishing-Medium	Cast Iron	Non-ferrous Metals	Hardened Materials
Ref. Page	B61	B61	B61	B61	B61	B61	B61	B61	C25	C14
Insert / Toolholder	**PP**	**GP**	**HQ**	**Standard**	**□-Y**	**XP**	**XQ**	**Without Chipbreaker**	**PCD**	**CBN**
...SCLP□**2.5** **...SCLP**□**2.5E**	CPMT2515..	CPMT2515..	CPMH2515..	CPMH2515..	CPMH2515..	CPMT2515..	-	CPMB2515..	CPMH2515..	CPGB2515..
...SCLP□**3** **...SCLP**□**3E**	CPMT32..	CPMT32..	CPMH32..	CPMH32..	CPMH32..	CPMT32..	CPMT32..	CPMB32..	CPMH32..	CPGB32..

Recommended Cutting Conditions **F116-F117**

Applicable Sleeve **F108-F110**

A-SDUC-AE Excellent Bar (Copying)

(Max. Overhang Length **L/D = ~5.5**)



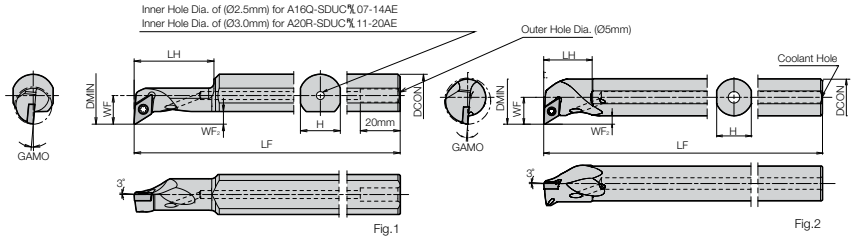


Fig.1 Fig.2

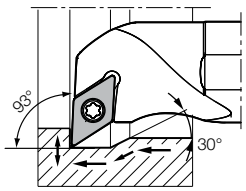
Shank Dia. DCON	Coolant Hole Dia.
Ø10mm	Ø3mm
Ø12mm	Ø4mm
Ø16mm	Ø5mm
Ø20mm	Ø5mm
Ø25mm	Ø5mm

• Right-hand shown

• Left-hand Insert for Right-hand Toolholder, Right-hand Insert for Left-hand Toolholder

S-SDUC-A Steel Bar (Copying)

(Max. Overhang Length **L/D = ~4**)



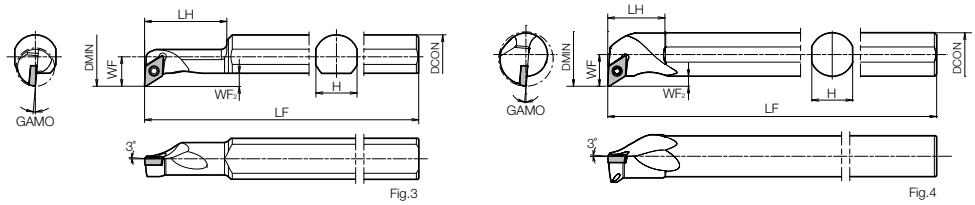


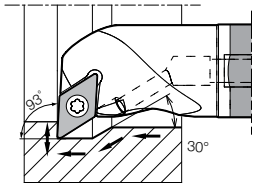
Fig.3 Fig.4

• Right-hand shown

• Left-hand Insert for Right-hand Toolholder, Right-hand Insert for Left-hand Toolholder

E-SDUC-A Carbide Shank Bar (Copying)

(Max. Overhang Length **L/D = ~7**)



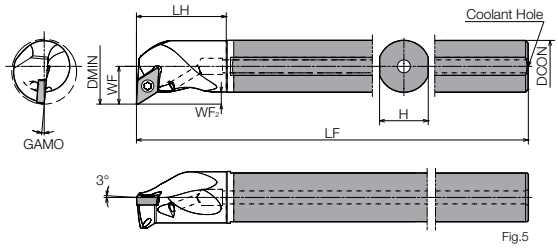


Fig.5

Shank Dia. DCON	Coolant Hole Dia.
Ø0.375" Ø10mm	Ø3mm
Ø0.500" Ø12mm	Ø4mm
Ø0.625" Ø16mm	Ø4mm
Ø0.750" Ø20mm	Ø6mm
Ø1.000" Ø25mm	Ø6mm

• Right-hand shown

• Left-hand Insert for Right-hand Toolholder, Right-hand Insert for Left-hand Toolholder

Toolholder Dimensions

	Part Number	Stock R	Stock L	Unit	Min. Bore Dia. DMIN	Dimensions DCON	H	LF	LH	WF	WF2	GAMO	Standard Corner-R (RE)	Coolant Hole	Drawing	Spare Parts: Clamp Screw	Spare Parts: Wrench
Excellent Bar	A06M-SDUC☐2AE	●	●	inch	0.551	0.375	0.336	6.000	0.748	0.341	0.130	5°	1/64	Yes	Fig.1	SB-2560TR	FT-8
	A08M-SDUC☐2AE	●	●		0.630	0.500	0.461	6.000	0.827	0.360	0.130	5°					
	A10R-SDUC☐2AE	●	●		0.787	0.625	0.586	8.000	0.827	0.459	0.130	5°					
	A12S-SDUC☐3AE	●	●		1.063	0.750	0.711	10.000	0.866	0.650	0.240	5°	1/64	Yes	Fig.1	SB-4065TR	FT-15
	A16T-SDUC☐3AE	●	●		1.300	1.000	0.961	12.000	0.945	0.748	0.240	5°					
	A10L-SDUC☐07-14AE	●	●	mm	14	10	9	140	19	8.7	3.3	5°	0.4	Yes	Fig.2	SB-2560TR	FT-8
	A16Q-SDUC☐07-14AE	●	●		14	16	15	180	28	10.8	4.4	5°	0.4	Yes	Fig.1	SB-2560TR	FT-8
	A12M-SDUC☐07-16AE	●	●		16	12	11	150	21	9.7	3.3	5°	0.4	Yes	Fig.2	SB-2560TR	FT-8
	A16Q-SDUC☐07-20AE	●	●		20	16	15	180	21	11.7	3.3	5°					
	A20R-SDUC☐11-20AE	●	●		20	20	19	200	48	15.6	6.1	5°	0.4	Yes	Fig.1	SB-4065TR	FT-15
	A16Q-SDUC☐11-23AE	●	●		23	16	15	180	21	14.5	6.1	5°	0.4	Yes	Fig.2	SB-4065TR	FT-15
	A20R-SDUC☐11-27AE	●	●		27	20	19	200	23	16.5	6.1	5°					
	A25S-SDUC☐11-32AE	●	●		32	25	24	250	24	19.0	6.1	5°					
Steel	S10L-SDUC☐07-14A	●	●	mm	14	10	9	140	19	8.7	3.3	5°	0.4	No	Fig.4	SB-2560TR	FT-8
	S16Q-SDUC☐07-14A	●	●		14	16	15	180	28	10.8	4.4	5°	0.4	No	Fig.3	SB-2560TR	FT-8
	S12M-SDUC☐07-16A	●	●		16	12	11	150	21	9.7	3.3	5°	0.4	No	Fig.4	SB-2560TR	FT-8
	S16Q-SDUC☐07-20A	●	●		20	16	15	180	21	11.7	3.3	5°					
	S20R-SDUC☐11-20A	●	●		20	20	19	200	48	15.6	6.1	5°	0.4	No	Fig.3	SB-4065TR	FT-15
	S16Q-SDUC☐11-23A	●	●		23	16	15	180	21	14.5	6.1	5°	0.4	No	Fig.4	SB-4065TR	FT-15
	S20R-SDUC☐11-27A	●	●		27	20	19	200	23	16.5	6.1	5°					
	S25S-SDUC☐11-32A	●	●		32	25	24	250	24	19.0	6.1	5°					
Carbide	E06N-SDUC☐2A	●	□	inch	0.551	0.375	0.336	6.300	0.776	0.341	0.130	5°	1/64	Yes	Fig.5	SB-2560TR	FT-8
	E06N-SDUC☐2A-2/3	□	□		0.551	0.375	0.336	4.200	0.776	0.341	0.130	5°					
	E08Q-SDUC☐2A	●	□		0.630	0.500	0.461	7.100	0.894	0.360	0.098	5°					
	E08Q-SDUC☐2A-2/3	□	□		0.630	0.500	0.461	4.800	0.894	0.360	0.098	5°					
	E10X-SDUC☐2A	●	□		0.787	0.625	0.586	8.700	1.091	0.459	0.130	5°					
	E10X-SDUC☐2A-2/3	□	□		0.787	0.625	0.586	5.800	1.091	0.459	0.130	5°					
	E10N-SDUC☐07-14A	●	●	mm	14	10	9	160	20	8.7	3.3	5°	0.4	Yes	Fig.5	SB-2560TR	FT-8
	E10N-SDUC☐07-14A-2/3	●			14	10	9	105	20	8.7	3.3	5°					
	E12Q-SDUC☐07-16A	●	●		16	12	11	180	23	9.7	3.3	5°					
	E12Q-SDUC☐07-16A-2/3	●			16	12	11	120	23	9.7	3.3	5°					
	E16X-SDUC☐07-20A	●	●		20	16	15	220	28	11.7	3.3	5°					
	E16X-SDUC☐07-20A-2/3	●			20	16	15	145	28	11.7	3.3	5°					
	E16X-SDUC☐11-23A	●	●		23	16	15	220	28	14.5	6.1	5°	0.4	Yes	Fig.5	SB-4065TR	FT-15
	E16X-SDUC☐11-23A-2/3	●			23	16	15	145	28	14.5	6.1	5°					
	E20S-SDUC☐11-27A	●	●		27	20	19	250	32	16.5	6.1	5°					
	E20S-SDUC☐11-27A-2/3	●			27	20	19	165	32	16.5	6.1	5°					
	E25T-SDUC☐11-32A	●	●		32	25	24	300	32	19.0	6.1	5°					
	E25T-SDUC☐11-32A-2/3	●			32	25	24	200	38	19.0	6.1	5°					

Applicable Inserts

Application	Minute D.O.C.	Finishing	Finishing	Finishing	Finishing-Medium	Finishing-Medium	Finishing-Roughing	Finishing / Precision	Low Feed	Low Feed / Precision
Ref. Page	B62	B62	B63	B63	B64	B64	B64	B66, B67	B68, B69	B68
Insert / Toolholder	CF	SKS	WP (Wiper)	PP	GK	HQ	Standard	☐-F / -FSF	(E/F)☐-U	F☐-USF
...-SDUC☐2AE... ...-SDUC☐07-...	DCGT215..	DCGT215..	DCMX215..	DCMT215..	DCMT215..	DCMT215..	DCGT215..	DC☐T215..	DCGT215..	DCET215..
...-SDQC☐2AE... ...-SDQC☐07-...										
...-SDZC☐07-...										
...-SDUC☐11-...	DCGT325..	DCGT325..	DCMX325..	DCMT325..	DCMT325..	DCMT325..	DCMT325.. DCGT325..	DC☐T325..	DCGT325..	DCET325..
...-SDQC☐11-...										
...-SDZC☐11-...										

Application	Low Feed	Low Carbon Steel / Finishing	Low Carbon Steel / Finishing-Medium	Stainless Steel	Cast Iron	Non-ferrous Metals	Non-ferrous Metals	Non-ferrous Metals	Non-ferrous Metals	Hardened Materials
Ref. Page	B70, B71	B65	B65	B65	B71	B71	B71	B71	C25	C15
Insert / Toolholder	(E/F)☐-J	XP	XQ	MQ	Without Chipbreaker	AP	☐-A3	AH	PCD	CBN
...-SDUC☐2AE... ...-SDUC☐07-...	DCET215..	DCMT215..	-	DCMT215..	DCGW215..	DCGT215..	-	-	DCMT215..	DCMW215..
...-SDQC☐2AE... ...-SDQC☐07-...										
...-SDZC☐07-...										
...-SDUC☐11-...	DC_T325..	DCMT325..	DCMT325..	DCMT325..	DCGW325..	DCGT325..	DCGT325..	DCGT325..	DCMT325..	DCMW325..
...-SDQC☐11-...										
...-SDZC☐11-...										

When using **WP** chipbreaker, program corrections are required. R51

※ **TPMX-WP insert will not fit in A-SDQC-AE, S-SDQC-A, and E-SDQC-A type holders.**

Recommended Cutting Conditions **F116-F117**

Applicable Sleeve **F108-F110**

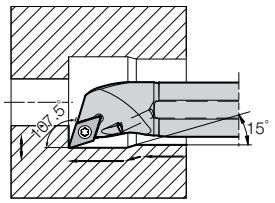
● : Standard Item ☐ : Made to Order △ : Phaseout Item (will be removed from next catalog)

Contact your local Kyocera sales engineer to upgrade old products to new technology

(Customer Service) **800.823.7284 - Option 1**
(Technical Support) **800.823.7284 - Option 2**
Visit us online at **KyoceraPrecisionTools.com**

A-SDQC-AE Excellent Bar (Copying)

(Max. Overhang Length **L/D = ~5.5**)



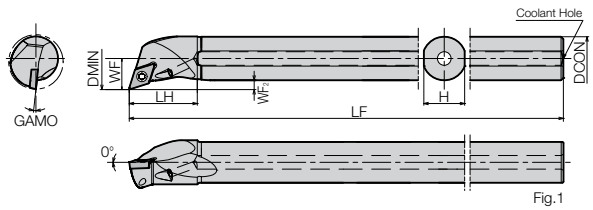


Fig.1

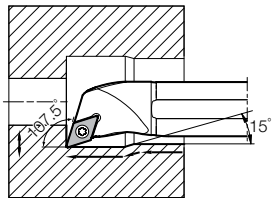
Shank Dia. DCON	Coolant Hole Dia.
Ø0.375" Ø10mm	Ø3mm
Ø0.500" Ø12mm	Ø4mm
Ø0.625" Ø16mm	Ø5mm
Ø0.750" Ø20mm	Ø5mm
Ø25mm	Ø5mm

• Right-hand shown

• Left-hand Insert for Right-hand Toolholder, Right-hand Insert for Left-hand Toolholder

S-SDQC-A Steel Bar (Copying)

(Max. Overhang Length **L/D = ~4**)



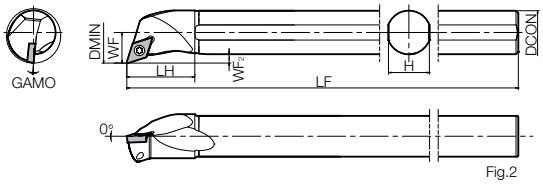


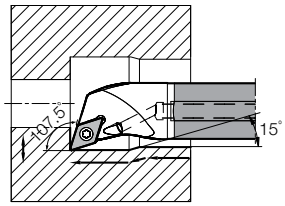
Fig.2

• Right-hand shown

• Left-hand Insert for Right-hand Toolholder, Right-hand Insert for Left-hand Toolholder

E-SDQC-A Carbide Shank Bar (Copying)

(Max. Overhang Length **L/D = ~7**)



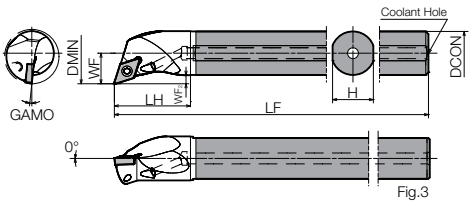


Fig.3

Shank Dia. DCON	Coolant Hole Dia.
Ø0.375" Ø10mm	Ø3mm
Ø0.500" Ø12mm	Ø4mm
Ø0.625" Ø16mm	Ø4mm
Ø20mm	Ø6mm
Ø25mm	Ø6mm

• Right-hand shown

• Left-hand Insert for Right-hand Toolholder, Right-hand Insert for Left-hand Toolholder

Toolholder Dimensions

	Part Number	Stock R	Stock L	Unit	Min. Bore Dia. DMIN	Dimensions DCON	H	LF	LH	WF	WF_2	GAMO	Standard Corner-R (RE)	Coolant Hole	Drawing	Spare Parts: Clamp Screw	Spare Parts: Wrench
Excellent Bar	A06M-SDQC□2AE	●	●	inch	0.512	0.375	0.336	6 .0	0.736	0.295	0.083	10°	1/64	Yes	Fig.1	SB-2560TR	FT-8
	A08M-SDQC□2AE	●	●		0.630	0.500	0.461	6 .0	0.866	0.364	0.102	8°					
	A10R-SDQC□2AE	●	●		0.787	0.625	0.586	8 .0	0.984	0.443	0.102	6°					
	A12S-SDQC□3AE	●	●		0.980	0.750	0.711	10 .0	1.220	0.565	0.146	5°	1/64	Yes	Fig.1	SB-4065TR	FT-15
	A10L-SDQC□07-13AE	●	●	mm	13	10	9	140	19	7.50	2.1	10°	0.4	Yes	Fig.1	SB-2560TR	FT-8
	A12M-SDQC□07-16AE	●	●		16	12	11	150	22	9.25	2.6	8°					
	A16Q-SDQC□07-20AE	●	●		20	16	15	180	25	11.30	2.6	6°					
	A20R-SDQC□11-25AE	●	●		25	20	19	200	31	14.40	3.7	5°	0.4	Yes	Fig.1	SB-4065TR	FT-15
	A25S-SDQC□11-30AE	●	●		30	25	24	250	38	16.90	3.7	4°					
Steel	S10L-SDQC□07-13A	●	●	mm	13	10	9	140	19	7.50	2.1	10°	0.4	No	Fig.2	SB-2560TR	FT-8
	S12M-SDQC□07-16A	●	●		16	12	11	150	22	9.25	2.6	8°					
	S16Q-SDQC□07-20A	●	●		20	16	15	180	25	11.30	2.6	6°					
	S20R-SDQC□11-25A	●	●		25	20	19	200	31	14.40	3.7	5°	0.4	No	Fig.2	SB-4065TR	FT-15
	S25S-SDQC□11-30A	●	●		30	25	24	250	38	16.90	3.7	4°					
Carbide	E06N-SDQC□2A	□	□	inch	0.512	0.375	0.336	6.3	0.787	0.295	0.079	10°	1/64	Yes	Fig.3	SB-2560TR	FT-8
	E06N-SDQC□2A-2/3	□	□		0.512	0.375	0.336	4.2	0.787	0.295	0.079	10°					
	E08Q-SDQC□2A	□	●		0.630	0.500	0.461	7.1	0.906	0.364	0.102	8°					
	E08Q-SDQC□2A-2/3	□	□		0.630	0.500	0.461	4.8	0.906	0.364	0.102	8°					
	E10X-SDQC□2A	□	□		0.787	0.625	0.586	8.7	1.102	0.443	0.102	6°					
	E10X-SDQC□2A-2/3	□	□		0.787	0.625	0.586	5.8	1.102	0.443	0.102	6°					
	E10N-SDQC□07-13A	●	●	mm	13	10	9	160	20	7.50	2.1	10°	0.4	Yes	Fig.3	SB-2560TR	FT-8
	E10N-SDQC□07-13A-2/3	●			13	10	9	105	20	7.50	2.1	10°					
	E12Q-SDQC□07-16A	●	●		16	12	11	180	23	9.25	2.6	8°					
	E12Q-SDQC□07-16A-2/3	●			16	12	11	120	23	9.25	2.6	8°					
	E16X-SDQC□07-20A	●	●		20	16	15	220	28	11.30	2.6	6°					
	E16X-SDQC□07-20A-2/3	●			20	16	15	145	28	11.30	2.6	6°					
	E20S-SDQC□11-25A	●	●		25	20	19	250	32	14.40	3.7	5°	0.4	Yes	Fig.3	SB-4065TR	FT-15
	E20S-SDQC□11-25A-2/3	●			25	20	19	165	32	14.40	3.7	5°					
	E25T-SDQC□11-30A	●	●		30	25	24	300	38	16.90	3.7	4°					
	E25T-SDQC□11-30A-2/3	●			30	25	24	200	38	16.90	3.7	4°					

Applicable Inserts ➔ **F55**

(Customer Service) **800.823.7284 - Option 1**
(Technical Support) **800.823.7284 - Option 2**
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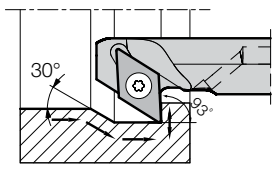
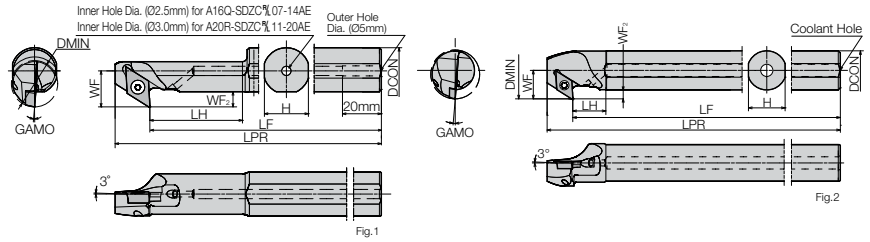
Contact your local Kyocera sales engineer to upgrade old products to new technology

A-SDZC-AE Excellent Bar (Back Boring)

(Max. Overhang Length **L/D = ~5.5**)





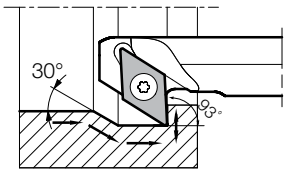
Shank Dia. DCON	Coolant Hole Dia.
Ø10mm	Ø3mm
Ø12mm	Ø4mm
Ø16mm	Ø5mm
Ø20mm	Ø5mm
Ø25mm	Ø5mm

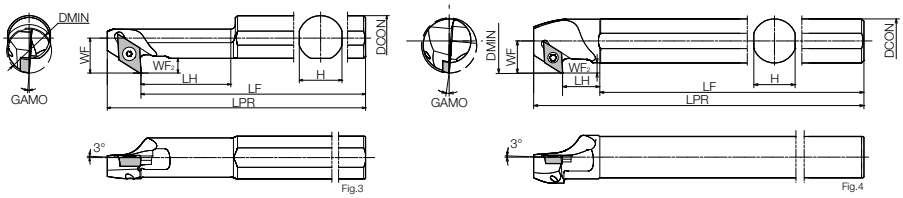
• Right-hand shown

• Right-hand Insert for Right-hand Toolholder, Left-hand Insert for Left-hand Toolholder

S-SDZC-A Steel Bar (Back Boring)

(Max. Overhang Length **L/D = ~4**)



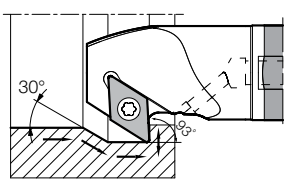


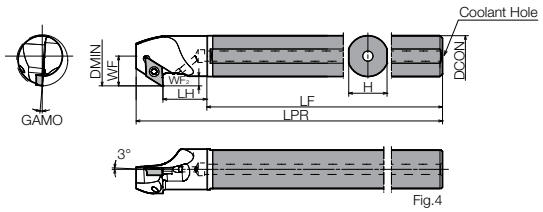
• Right-hand shown

• Right-hand Insert for Right-hand Toolholder, Left-hand Insert for Left-hand Toolholder

E-SDZC-A Carbide Shank Bar (Back Boring)

(Max. Overhang Length **L/D = ~7**)





Shank Dia. DCON	Coolant Hole Dia.
Ø10mm	Ø3mm
Ø12mm	Ø4mm
Ø16mm	Ø4mm
Ø20mm	Ø6mm

• Right-hand shown

• Right-hand Insert for Right-hand Toolholder, Left-hand Insert for Left-hand Toolholder

Toolholder Dimensions

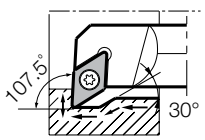
	Part Number	Stock R	Stock L	Min. Bore Dia. DMIN	Dimensions (mm) DCON	H	LPR	LF	LH	WF	WF2	GAMO	Standard Corner-R (RE)	Coolant Hole	Drawing	Spare Parts: Clamp Screw	Spare Parts: Wrench
Excellent Bar	A10L-SDZC□07-14AE	●	●	14	10	9	140	130.5	14.0	8.7	3.3	5°	0.4	Yes	Fig.2	SB-2545TR	FT-8
	A16Q-SDZC□07-14AE	●	●	14	16	15	180	170.0	30.0	10.8	4.4	5°	0.4	Yes	Fig.1	SB-2545TR	FT-8
	A12M-SDZC□07-16AE	●	●	16	12	11	150	139.5	14.0	9.7	3.3	5°	0.4	Yes	Fig.2	SB-2560TR	FT-8
	A16Q-SDZC□07-20AE	●	●	20	16	15	180	169.5	14.0	11.7	3.3	5°					
	A20R-SDZC□11-20AE	●	●	20	20	19	200	185.0	40.0	15.6	6.1	5°	0.4	Yes	Fig.1	SB-4065TR	FT-15
	A16Q-SDZC□11-23AE	●	●	23	16	15	180	165.0	15.0	14.5	6.1	5°	0.4	Yes	Fig.2	SB-4065TR	FT-15
	A20R-SDZC□11-27AE	●	●	27	20	19	200	185.0	15.0	16.5	6.1	5°					
	A25S-SDZC□11-32AE	●	●	32	25	24	250	235.0	15.0	19.0	6.1	5°					
Steel	S10L-SDZC□07-14A	●	●	14	10	9	140	130.5	14.0	8.7	3.3	5°	0.4	No	Fig.4	SB-2545TR	FT-8
	S16Q-SDZC□07-14A	●	●	14	16	15	180	170.0	30.0	10.8	4.4	5°	0.4	No	Fig.3	SB-2545TR	FT-8
	S12M-SDZC□07-16A	●	●	16	12	11	150	139.5	14.0	9.7	3.3	5°	0.4	No	Fig.4	SB-2560TR	FT-8
	S16Q-SDZC□07-20A	●	●	20	16	15	180	169.5	14.0	11.7	3.3	5°					
	S20R-SDZC□11-20A	●	●	20	20	19	200	185.0	40.0	15.6	6.1	5°	0.4	No	Fig.3	SB-4065TR	FT-15
	S16Q-SDZC□11-23A	●	●	23	16	15	180	165.0	15.0	14.5	6.1	5°	0.4	No	Fig.4	SB-4065TR	FT-15
	S20R-SDZC□11-27A	●	●	27	20	19	200	185.0	15.0	16.5	6.1	5°					
	S25S-SDZC□11-32A	●	●	32	25	24	250	235.0	15.0	19.0	6.1	5°					
Carbide	E10N-SDZC□07-14A	●		14	10	9	160	150.5	10.5	8.7	3.3	5°	0.4	Yes	Fig.5	SB-2545TR	FT-8
	E12Q-SDZC□07-16A	●		16	12	11	180	169.5	12.5	9.7	3.3	5°	0.4	Yes	Fig.5	SB-2560TR	FT-8
	E16X-SDZC□07-20A	●		20	16	15	220	209.5	17.5	11.7	3.3	5°					
	E16X-SDZC□11-23A	●		23	16	15	220	205.0	13.0	14.5	6.1	5°	0.4	Yes	Fig.5	SB-4065TR	FT-15
	E20S-SDZC□11-27A	●		27	20	19	250	235.0	17.0	16.5	6.1	5°					

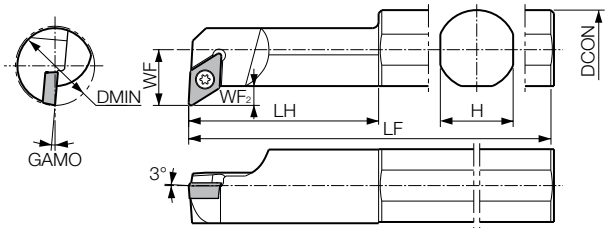
Applicable Inserts ➔ **F55**

● : Standard Item △ : Phaseout Item (will be removed from next catalog)
Contact your local Kyocera sales engineer to upgrade old products to new technology

S-SDUC Steel Bar (Copying)

(Max. Overhang Length **L/D = ~3**)





• Right-hand shown

• Left-hand Insert for Right-hand Toolholder, Right-hand Insert for Left-hand Toolholder

Toolholder Dimensions

	Part Number	Stock R	Stock L	Unit	Min. Bore Dia. DMIN	Dimensions DCON	H	LF	LH	WF	WF_2	GAMO	Standard Corner-R (RE)	Coolant Hole	Spare Parts: Clamp Screw	Spare Parts: Wrench
Steel	S08M-SDUC□2	●		inch	0.564	0.500	0.480	6.00	1.125	0.346	0.145	5°	1/64	No	SB-2560TR	FT-8
Steel	S10X-SDUC□2	●	●	inch	0.564	0.625	0.584	7.00	1.125	0.346	0.145	5°	1/64	No	SB-2560TR	FT-8
Steel	S12R-SDUC□3	●	●	inch	0.750	0.750	0.710	8.00	1.500	0.476	0.224	5°	1/32	No	SB-4085TR	FT-15
Steel	S16X-SDUC□3	●		inch	0.980	1.000	0.945	9.00	2.360	0.693	0.240	5°	1/32	No	SB-4085TR	FT-15

Applicable Inserts

Application	Minute D.O.C.	Finishing	Finishing	Finishing	Finishing-Medium	Finishing-Medium	Finishing-Roughing	Finishing / Precision	Low Feed	Low Feed / Precision
Ref. Page	B62	B62	B63	B63	B64	B64	B64	B66, B67	B68, B69	B68
Insert / Toolholder	**CF**	**SKS**	**WP** (Wiper)	**PP**	**GK**	**HQ**	**Standard**	**□-F / -FSF**	**(E/F)□-U**	**F□-USF**
...-SDUC□2	DCGT215..	DCGT215..	DCMX215..	DCMT215..	DCMT215..	DCMT215..	DCGT215..	DC□T215..	DCGT215..	DCET215..
...-SDUC□3	DCGT325..	DCGT325..	DCMX325..	DCMT325..	DCMT325..	DCMT325..	DCMT325.. DCGT325..	DC□T325..	DCGT325..	DCET325..

Application	Low Feed	Low Carbon Steel / Finishing	Low Carbon Steel / Finishing-Medium	Stainless Steel	Cast Iron	Non-ferrous Metals	Non-ferrous Metals	Non-ferrous Metals	Non-ferrous Metals	Hardened Materials
Ref. Page	B70, B71	B65	B65	B65	B71	B71	B71	B71	C25	C15
Insert / Toolholder	**(E/F)□-J**	**XP**	**XQ**	**MQ**	**Without Chipbreaker**	**AP**	**□-A3**	**AH**	**PCD**	**CBN**
...-SDUC□2	DCET215..	DCMT215..	-	DCMT215..	DCGW215..	DCGT215..	-	-	DCMT215..	DCMW215..
...-SDUC□3	DC_T325..	DCMT325..	DCMT325..	DCMT325..	DCGW325..	DCGT325..	DCGT325..	DCGT325..	DCMT325..	DCMW325..

When using **WP** chipbreaker, program corrections are required. **R51**

Recommended Cutting Conditions **F116-F117**

Applicable Sleeve **F108-F110**

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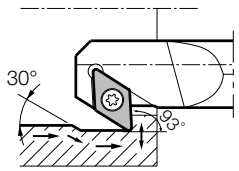
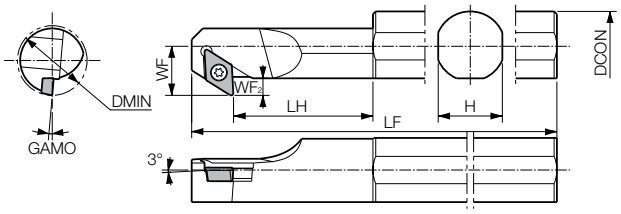
● : Standard Item △ : Phaseout Item (will be removed from next catalog)
Contact your local Kyocera sales engineer to upgrade old products to new technology

S-SDZC Steel Bar (Back Boring)

(Max. Overhang Length **L/D = ~3**)





• Right-hand shown

• Right-hand Insert for Right-hand Toolholder, Left-hand Insert for Left-hand Toolholder

Toolholder Dimensions

	Part Number	Stock R	Stock L	Unit	Min. Bore Dia. DMIN	Dimensions DCON	H	LF	LH	WF	WF_2	GAMO	Standard Corner-R (RE)	Coolant Hole	Spare Parts: Clamp Screw	Spare Parts: Wrench
Steel	**S10Q-SDZC□2**	●		inch	0.550	0.625	0.596	7.00	1.18	0.410	0.173	5°	1/64	No	SB-2560TR	FT-8
Steel	**S10X-SDZC□2**	●	●	inch	0.630	0.625	0.596	7.00	1.52	0.449	0.173	5°	1/64	No	SB-2560TR	FT-8
Steel	**S12R-SDZC□3**	●		inch	0.787	0.750	0.710	8.00	1.60	0.595	0.240	5°	1/32	No	SB-4085TR	FT-15
Steel	**S16X-SDZC□3**	●		inch	0.984	1.000	0.960	9.00	2.09	0.693	0.240	5°	1/32	No	SB-4085TR	FT-15

Applicable Inserts

Application	Minute D.O.C.	Finishing	Finishing	Finishing	Finishing-Medium	Finishing-Medium	Finishing-Roughing	Finishing / Precision	Low Feed	Low Feed / Precision
Ref. Page	B62	B62	B63	B63	B64	B64	B64	B66, B67	B68, B69	B68
Insert / Toolholder	**CF**	**SKS**	**WP** (Wiper)	**PP**	**GK**	**HQ**	**Standard**	**□-F / -FSF**	**(E/F)□-U**	**F□-USF**
...-SDZC□2	DCGT215..	DCGT215..	DCMX215..	DCMT215..	DCMT215..	DCMT215..	DCGT215..	DC□T215..	DCGT215..	DCET215..
...-SDZC□3	DCGT325..	DCGT325..	DCMX325..	DCMT325..	DCMT325..	DCMT325..	DCMT325.. DCGT325..	DC□T325..	DCGT325..	DCET325..

Application	Low Feed	Low Carbon Steel / Finishing	Low Carbon Steel / Finishing-Medium	Stainless Steel	Cast Iron	Non-ferrous Metals	Non-ferrous Metals	Non-ferrous Metals	Non-ferrous Metals	Hardened Materials
Ref. Page	B70, B71	B65	B65	B65	B71	B71	B71	B71	C25	C15
Insert / Toolholder	**(E/F)□-J**	**XP**	**XQ**	**MQ**	**Without Chipbreaker**	**AP**	**□-A3**	**AH**	**PCD**	**CBN**
...-SDZC□2	DCET215..	DCMT215..	-	DCMT215..	DCGW215..	DCGT215..	-	-	DCMT215..	DCMW215..
...-SDZC□3	DC_T325..	DCMT325..	DCMT325..	DCMT325..	DCGW325..	DCGT325..	DCGT325..	DCGT325..	DCMT325..	DCMW325..

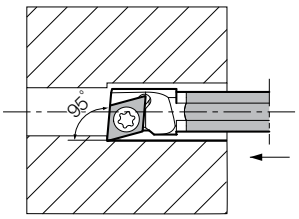
When using **WP** chipbreaker, program corrections are required. → **R51**

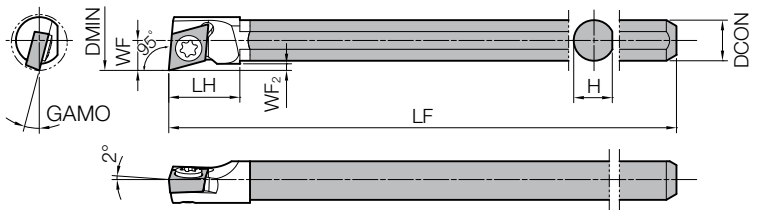
Recommended Cutting Conditions → **F116-F117**

Applicable Sleeve → **F108-F110**

C-SJLC Carbide Shank Bar (Boring / Internal Facing)

(Max. Overhang Length **L/D = ~7**)



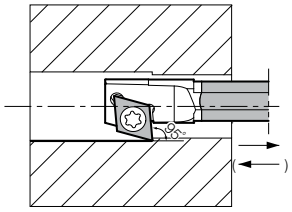


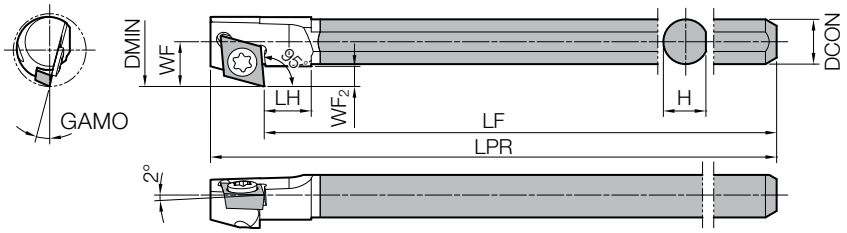
• Right-hand shown

• Left-hand Insert for Right-hand Toolholder, Right-hand Insert for Left-hand Toolholder

C-SJZC Carbide Shank Bar (Back Boring)

(Max. Overhang Length **L/D = ~7**)





• Right-hand shown

• Right-hand Insert for Right-hand Toolholder, Left-hand Insert for Left-hand Toolholder

※ When using R-hand Toolholder, Use R-hand insert for machining in this direction (→)
Use L-hand insert for machining in this direction (←)

Toolholder Dimensions

Part Number	Stock		Min. Bore Dia.	Dimensions (mm)							GAMO	Standard Corner-R (RE)	Spare Parts	
													Clamp Screw	Wrench
	R	L	DMIN	DCON	H	LPR	LF	LH	WF	WF_2				
C04X-SJLCR/L03-055	●	●	5.5	4	3.8	-	91	7	2.95	0.65	15°	0.03	SB-1635TR	FT-6
C04X-SJZCR/L03-065	●	●	6.5	4	3.8	93	88.1	4	4.00	1.80	15°	0.03		

Applicable Inserts

Application	Finishing	Finishing / Precision
Ref. Page	B73	B73
Insert / Toolholder	R/L-F 	R/L-FSF 
...-SJLCR/L03-...	JCGT1109..	JCET1109..
...-SJZCR/L03-...	JCGT1109..	JCET1109..

Recommended Cutting Conditions **F116-F117**

Applicable Sleeve **F107, F109, F110**

Features of C-SJLC

1. Well balanced design minimizing bore diameter yet maintaining a smaller insert radius.
2. High flexibility of tool pass during pecking.
3. Good surface finish at internal facing.

Features of C-SJZC

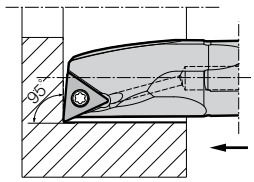
1. Back boring bars for workpieces which require high concentric circle accuracy and are unavailable for chuck change.
2. Available for back boring and pecking.
3. Large clearance between cutting edge and holder (1.8mm).

(Customer Service) **800.823.7284 - Option 1**
(Technical Support) **800.823.7284 - Option 2**
Visit us online at **KyoceraPrecisionTools.com**

● : Standard Item △ : Phaseout Item (will be removed from next catalog)
Contact your local Kyocera sales engineer to upgrade old products to new technology

A-STLC-AE Excellent Bar (Boring / Internal Facing)

(Max. Overhang Length **L/D = ~5.5**)



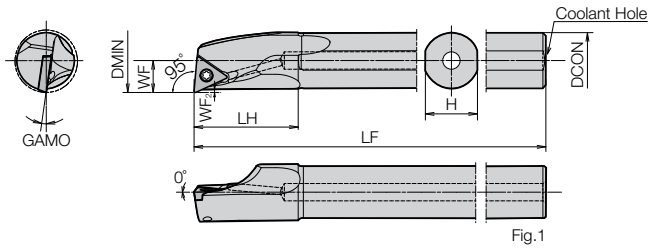


Fig.1

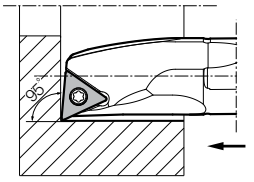
Shank Dia. DCON	Coolant Hole Dia.
Ø8mm	Ø2.5mm
Ø10mm	Ø3.0mm
Ø12mm	Ø4.0mm
Ø16mm	Ø5.0mm
Ø20mm	Ø5.0mm

• Right-hand shown

• Left-hand Insert for Right-hand Toolholder, Right-hand Insert for Left-hand Toolholder

S-STLC-A Steel Bar (Boring / Internal Facing)

(Max. Overhang Length **L/D = ~4**)



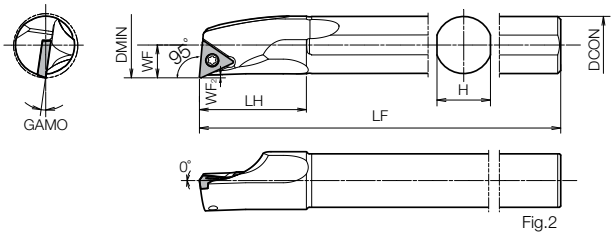


Fig.2

• Right-hand shown

• Left-hand Insert for Right-hand Toolholder, Right-hand Insert for Left-hand Toolholder

Toolholder Dimensions

	Part Number	Stock R	Stock L	Min. Bore Dia. DMIN	Dimensions (mm) DCON	H	LF	LH	WF	WF_2	GAMO	Standard Corner-R (RE)	Coolant Hole	Drawing	Spare Parts: Clamp Screw	Spare Parts: Wrench
Excellent Bar	A08X-STLC□09-10AE	●	●	10	8	7	120	16	5.0	0.5	14°	0.4	Yes	Fig.1	SB-2250TR	FT-7
	A10L-STLC□09-12AE	●	●	12	10	9	140	20	6.2	0.9	12°					
	A10L-STLC□11-12AE	●	●	12	10	9	140	20	6.2	0.9	12°	0.4	Yes	Fig.1	SB-2560TR	FT-8
	A12M-STLC□11-14AE	●	●	14	12	11	150	24	7.2	0.7	10°					
	A16Q-STLC□11-18AE	●	●	18	16	15	180	30	9.2	0.7	8°					
	A20R-STLC□11-22AE	●	●	22	20	19	200	36	11.2	0.7	6°					
Steel	S08X-STLC□09-10A	●	●	10	8	7	120	16	5.0	0.5	14°	0.4	No	Fig.2	SB-2250TR	FT-7
	S10L-STLC□09-12A	●	●	12	10	9	140	20	6.2	0.9	12°					
	S10L-STLC□11-12A	●	●	12	10	9	140	20	6.2	0.9	12°	0.4	No	Fig.2	SB-2560TR	FT-8
	S12M-STLC□11-14A	●	●	14	12	11	150	24	7.2	0.7	10°					
	S16Q-STLC□11-18A	●	●	18	16	15	180	30	9.2	0.7	8°					
	S20R-STLC□11-22A	●	●	22	20	19	200	36	11.2	0.7	6°					

Applicable Insert

Application	Finishing	Finishing-Medium
Ref. Page	B77	B77
Insert / Toolholder	**WP** (Wiper) 	**HQ** 
...-STLC□09-...	TCMX1815..	TCMT1815..
...-STLC□11-...	TCMX215..	TCMT215..

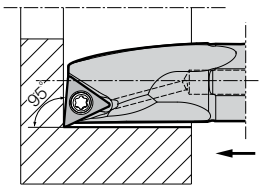
When using **WP** chipbreaker, program corrections are required. **R51**

Recommended Cutting Conditions **F116-F117**

Applicable Sleeve **F107-F110**

A/S-STLB(P)-AE Excellent Bar (Boring / Internal Facing)

(Max. Overhang Length **L/D = ~5.5**)



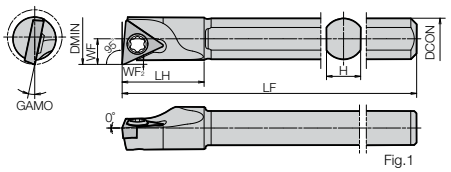


Fig.1

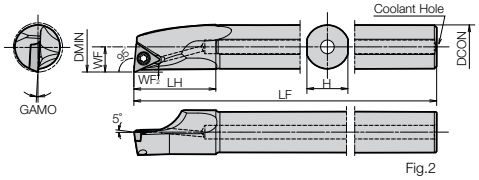


Fig.2

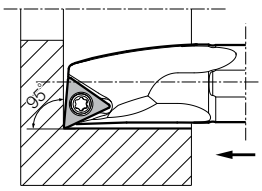
Shank Dia. DCON	Coolant Hole Dia.
Ø0.312" Ø8mm	Ø2.5mm
Ø0.375" Ø10mm	Ø3.0mm
Ø0.500" Ø12mm	Ø4.0mm
Ø0.625" Ø16mm	Ø5.0mm
Ø0.750" Ø20mm	Ø5.0mm
Ø1.000" Ø25mm	Ø5.0mm

• Right-hand shown

• Left-hand Insert for Right-hand Toolholder, Right-hand Insert for Left-hand Toolholder

S-STLB(P)-A Steel Bar (Boring / Internal Facing)

(Max. Overhang Length **L/D = ~4**)



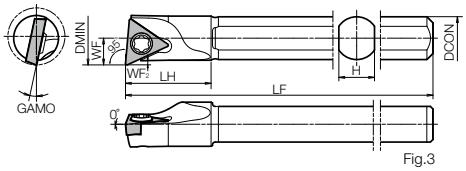


Fig.3

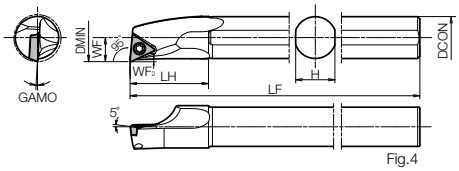


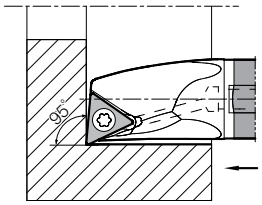
Fig.4

• Right-hand shown

• Left-hand Insert for Right-hand Toolholder, Right-hand Insert for Left-hand Toolholder

C/E-STLB(P)-A(N) Carbide Shank Bar (Boring / Internal Facing)

(Max. Overhang Length **L/D = ~7**)



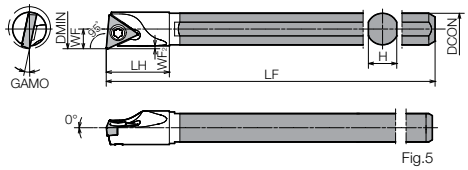


Fig.5

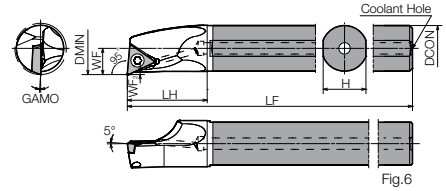


Fig.6

Shank Dia. DCON	Coolant Hole Dia.
Ø8mm	Ø3mm
Ø10mm	Ø3mm
Ø12mm	Ø4mm
Ø16mm	Ø4mm
Ø20mm	Ø6mm
Ø25mm	Ø6mm

• Right-hand shown

• Left-hand Insert for Right-hand Toolholder, Right-hand Insert for Left-hand Toolholder

Toolholder Dimensions

	Part Number	Stock R	Stock L	Unit	Min. Bore Dia. DMIN	Dimensions DCON	H	LF	LH	WF	WF_2	GAMO	Standard Corner-R (RE)	Coolant Hole	Drawing	Spare Parts: Clamp Screw	Spare Parts: Wrench
Excellent Bar	S04H-STLB□1.2AE	●	●	inch	0.312	0.250	0.211	4	0.472	0.150	0.025	12.0°	0.008	No	Fig.1	SB-2035TR	FT-6
	A05K-STLB□1.2AE	●	●		0.392	0.312	0.273	5	0.630	0.201	0.031	12.0°	0.008	Yes	Fig.2		
	A05K-STLP□1.8AE	●	●		0.392	0.312	0.273	5	0.630	0.197	0.022	10.0°	1/64	Yes	Fig.2	SB-2545TR	FT-8
	A06M-STLP□1.8AE	●	●		0.480	0.375	0.336	6	0.787	0.244	0.036	8.0°					
	A06M-STLP□2AE	●	●		0.480	0.375	0.336	6	0.787	0.236	0.030	10.0°	1/64	Yes	Fig.2	SB-3060TR	FT-10
	A08M-STLP□2AE	●	●		0.580	0.500	0.461	6	0.945	0.283	0.032	7.0°					
	A10R-STLP□2AE	●	●		0.700	0.625	0.586	8	1.181	0.362	0.036	3.5°					
	A12S-STLP□2AE	●	●		0.825	0.750	0.711	10	1.417	0.421	0.031	2°					
	A16T-STLP□3AE	●	●		1.280	1.000	0.961	12	1.811	0.539	0.031	0°	1/64	Yes	Fig.2	SB-4065TR	FT-15
	S06H-STLB□06-08AE	●	●	mm	8	6	5.0	100	12	3.8	0.5	12°	0.2	No	Fig.1	SB-2035TR	FT-6
	A08X-STLP□08-10AE	●	●		10	8	7.0	120	16	5.0	0.5	10°	0.4	Yes	Fig.2	SB-1TR	FT-6
	A08X-STLP□09-10AE	●	●		10	8	7.0	120	16	5.0	0.5	10°	0.4	Yes	Fig.2	SB-2545TR	FT-8
	A10L-STLP□09-12AE	●	●		12	10	9.0	140	20	6.2	0.9	8°					
	A10L-STLP□11-12AE	●	●		12	10	9.0	140	20	6.0	0.7	10°	0.4	Yes	Fig.2	SB-3060TR	FT-10
	A12M-STLP□11-14AE	●	●		14	12	11.0	150	24	7.2	0.8	7°					
	A12M-STLP□09-16AE	●	●		16	12	11.0	150	24	8.0	0.6	5°	0.4	Yes	Fig.2	SB-2545TR	FT-8
	A16Q-STLP□11-18AE	●	●		18	16	15.0	180	30	9.2	0.7	3.5°	0.4	Yes	Fig.2	SB-3060TR	FT-10
	A20R-STLP□11-22AE	●	●		22	20	19.0	200	36	11.2	0.7	2°					
	A20R-STLP□16-25AE	●	●		25	20	19.0	200	36	13.0	0.7	0°	0.4	Yes	Fig.2	SB-4065TR	FT-15
	A25S-STLP□16-27AE	●	●		27	25	24.0	250	46	13.7	0.7	0°					
Steel	S06H-STLB□06-08A		●	mm	8	6	5.0	100	12	3.8	0.5	12°	0.2	No	Fig.3	SB-2035TR	FT-6
	S08X-STLP□08-10A	●	●		10	8	7.0	120	16	5.0	0.5	10°	0.4	No	Fig.4	SB-1TR	FT-6
	S08X-STLP□09-10A	●	●		10	8	7.0	120	16	5.0	0.5	10°	0.4	No	Fig.4	SB-2545TR	FT-8
	S10L-STLP□09-12A	●	●		12	10	9.0	140	20	6.2	0.9	8°					
	S10L-STLP□11-12A	●	●		12	10	9.0	140	20	6.0	0.7	10°	0.4	No	Fig.4	SB-3060TR	FT-10
	S12M-STLP□11-14A	●	●		14	12	11.0	150	24	7.2	0.8	7°					
	S12M-STLP□09-16A	●	●		16	12	11.0	150	24	8.0	0.6	5°	0.4	No	Fig.4	SB-2545TR	FT-8
	S16Q-STLP□11-18A	●	●		18	16	15.0	180	30	9.2	0.7	3.5°	0.4	No	Fig.4	SB-3060TR	FT-10
	S20R-STLP□11-22A	●	●		22	20	19.0	200	36	11.2	0.7	2°					
	S25S-STLP□16-27A	●	●		27	25	24.0	250	46	13.7	0.7	0°	0.4	No	Fig.4	SB-4065TR	FT-15
Carbide	C06J-STLB□06-08AN	●	●	mm	8	6	5.4	110	10	3.8	0.5	12°	0.2	No	Fig.5	SB-2035TR	FT-6
	E08L-STLP□08-10AN	●	●		10	8	7.0	140	14	5.0	0.5	10°	0.4	Yes	Fig.6	SB-1TR	FT-6
	E08L-STLP□09-10AN	●	●		10	8	7.0	140	14	5.0	0.5	10°	0.4	Yes	Fig.6	SB-2545TR	FT-8
	E10N-STLP□09-12AN	●	●		12	10	9.0	160	18	6.2	0.9	8°					
	E10N-STLP□09-12AN-2/3	●			12	10	9.0	105	18	6.2	0.9	8°					
	E10N-STLP□09-12AN-1/2	●			12	10	9.0	80	18	6.2	0.9	8°					
	E10N-STLP□11-12AN	●	●		12	10	9.0	160	18	6.0	0.7	10°	0.4	Yes	Fig.6	SB-3060TR	FT-10
	E10N-STLP□11-12AN-2/3	●			12	10	9.0	105	18	6.0	0.7	10°					
	E10N-STLP□11-12AN-1/2	●			12	10	9.0	80	18	6.0	0.7	10°					
	E12Q-STLP□11-14A	●	●		14	12	11.0	180	23	7.2	0.8	7°					
	E12Q-STLP□11-14A-2/3	●			14	12	11.0	120	23	7.2	0.8	7°					
	E12Q-STLP□11-14A-1/2	●			14	12	11.0	90	23	7.2	0.8	7°					
	E12Q-STLP□09-16A	●	●		16	12	11.0	180	23	8.0	0.6	5°					
	E12Q-STLP□09-16A-2/3	●			16	12	11.0	120	23	8.0	0.6	5°	0.4	Yes	Fig.6	SB-2545TR	FT-8
	E12Q-STLP□09-16A-1/2	●			16	12	11.0	90	23	8.0	0.6	5°					
	E16X-STLP□11-18A	●	●		18	16	15.0	220	28	9.2	0.7	3.5°					
	E16X-STLP□11-18A-2/3	●			18	16	15.0	145	28	9.2	0.7	3.5°					
	E16X-STLP□11-18A-1/2	●			18	16	15.0	110	28	9.2	0.7	3.5°	0.4	Yes	Fig.6	SB-3060TR	FT-10
	E20S-STLP□11-22A	●	●		22	20	19.0	250	32	11.2	0.7	2°					
	E20S-STLP□11-22A-2/3	●			22	20	19.0	165	32	11.2	0.7	2°					
	E20S-STLP□11-22A-1/2	●			22	20	19.0	125	32	11.2	0.7	2°					
	E20S-STLP□16-25A	●	●		25	20	19.0	250	32	13.0	0.7	0°					
	E20S-STLP□16-25A-2/3	●			25	20	19.0	165	32	13.0	0.7	0°					
	E20S-STLP□16-25A-1/2	●			25	20	19.0	125	32	13.0	0.7	0°	0.4	Yes	Fig.6	SB-4065TR	FT-15
	E25T-STLP□16-27A	●	●		27	25	24.0	300	38	13.7	0.7	0°					
	E25T-STLP□16-27A-2/3	●			27	25	24.0	200	38	13.7	0.7	0°					

Applicable Inserts ➡ **F64**

● : Standard Item △ : Phaseout Item (will be removed from next catalog)
Contact your local Kyocera sales engineer to upgrade old products to new technology

Applicable Inserts

Application	Minute D.O.C.	Finishing	※Finishing	※Finishing	Finishing	Finishing	Finishing	Finishing-Medium	Finishing	Finishing / Precision
Ref. Page	B76, B80	B76, B80	B80	B80	B80	B81	B76	B81	B76, B82, B83	B85
Insert / Toolholder	**CF**	**PF**	**WP** (Wiper)	**-WP** (Wiper)	**PP**	**GP**	**DP**	**HQ**	****	**-FSF**
...-STLB 1.2... ...-STLB 06-...	TBGT121..	TBGT121..	-	-	-	-	TBMT121..	-	TBGT121..	-
...-STLP 08-...	TPGT1515..	-	-	-	-	-	-	-	TPGH1515..	TPET1515..
...-STLP 1.8... ...-STLP 09-...	TPGT1815..	TPGT1815..	TPMX1815..	-	TPMT1815..	TPMT1815..	-	TPMT1815..	TPGH1815..	-
...-STLP 2... ...-STLP 11-...	-	-	TPMX22..	TPMX22..	TPMT22..	TPMT22..	-	TPMT22..	TPGH22..	TPET22..
...-STLP 16-...	-	-	-	-	-	TPMT32..	-	TPMT32..	TPGH32..	-

Application	※Finishing	Medium	Low Feed / Precision	Low Carbon Steel/ Finishing	Low Carbon Steel / Finishing-Medium	Cast Iron	Non-ferrous Metals	Non-ferrous Metals	Non-ferrous Metals	Hardened Materials
Ref. Page	B85	B84	B86	B81	B81	B76, B86	B86	C26~C28	C28	C16
Insert / Toolholder	**-P**	**-H**	**F -USF**	**XP**	**XQ**	Without Chipbreaker	**AP**	**PCD**	**APD**	**CBN**
...-STLB 1.2... ...-STLB 06-...	-	-	-	-	-	TBGW121..	-	TBMT121.. TBGW121..	-	-
...-STLP 08-...	TPEH1515..	-	TPET1515..	-	-	TPGB1515..	-	TPMH1515.. TPGB1515..	-	TPGB1515..
...-STLP 1.8... ...-STLP 09-...	TPEH1815..	TPGH1815..	-	TPMT1815..	-	TPGB1815..	-	TPMH1815.. TPGB1815..	-	TPGB1815..
...-STLP 2... ...-STLP 11-...	TPEH22..	TPGH22..	TPET22..	TPMT22..	TPMT22..	TPGB22..	TPGT22..	TPMH22.. TPGB22..	TPMT22..	TPGB22..
...-STLP 16-...	-	TPGH32..	-	TPMT32..	TPMT32..	TPGB32..	-	TPMH32.. TPGB32..	-	TPGB32..

※For P chipbreaker inserts, **Left-hand** Insert for **Left-hand** Toolholder, **Right-hand Insert** for **Right-hand** Toolholder

※When using **WP** chipbreaker, program corrections are required. R51

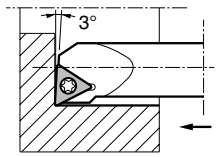
Recommended Cutting Conditions **F116-F117**

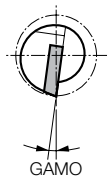
Applicable Toolholders **F63**

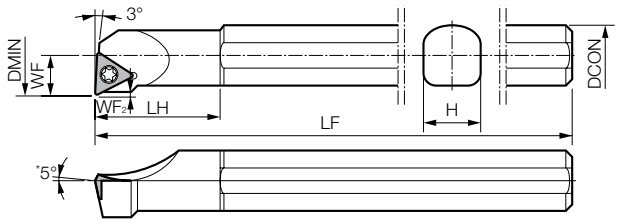
Applicable Sleeve **F107-F110**

S-STUP(B) Steel Bar (Boring)

(Max. Overhang Length **L/D = ~3**)







• Right-hand shown

• Left-hand Insert for Right-hand Toolholder, Right-hand Insert for Left-hand Toolholder

Toolholder Dimensions

	Part Number	Stock R	Stock L	Unit	Min. Bore Dia. DMIN	Dimensions DCON	H	LF	LH	WF	WF_2	GAMO	Standard Corner-R (RE)	Coolant Hole	Spare Parts: Clamp Screw	Spare Parts: Wrench
Steel	**S04H-STUBR1.2**	●	□	inch	0.312	0.250	0.224	4.00	0.50	0.148	0.023	12°	1/64	No	SB-1STR	FT-6
	S05K-STUPR1.5	●	□		0.392	0.313	0.270	5.00	0.75	0.196	0.020	13°	1/64	No	SB-1TR	FT-6
	S06M-STUPR1.8	●	●		0.472	0.375	0.356	6.00	1.01	0.236	0.015	13°	1/64	No	SB-2TR	FT-8
	S08M-STUPR1.8	●	□		0.630	0.500	0.480	6.00	1.18	0.315	0.090	10°				
	S10X-STUPR2	●	●		0.787	0.625	0.584	7.00	1.38	0.394	0.100	7°	1/64	No	SB-3TR	FT-10
	S12R-STUPR2	●	●		0.912	0.750	0.710	8.00	1.58	0.456	0.115	5°				

Applicable Inserts

Application	Minute D.O.C.	Finishing	※Finishing	※Finishing	Finishing	Finishing	Finishing	Finishing-Medium	Finishing	Finishing / Precision
Ref. Page	B76, B80	B76, B80	B80	B80	B80	B81	B76	B81	B76, B82, B83	B85
Insert / Toolholder	**CF**	**PF**	**WP** (Wiper)	**R-WP** (Wiper)	**PP**	**GP**	**DP**	**HQ**	**R**	**R-FSF**
...-STUBR1.2...	TBGT121..	TBGT121..	-	-	-	-	TBMT121..	-	TBGT121..	-
...-STUPR1.5-...	TPGT1515..	-	-	-	-	-	-	-	TPGH1515..	TPET1515..
...-STUPR1.8-...	TPGT1815..	TPGT1815..	TPMX1815..	-	TPMT1815..	TPMT1815..	-	TPMT1815..	TPGH1815..	-
...-STUPR2-...	-	-	TPMX22..	TPMX22..	TPMT22..	TPMT22..	-	TPMT22..	TPGH22..	TPET22..
Application	※Finishing	Medium	Low Feed / Precision	Low Carbon Steel/ Finishing	Low Carbon Steel / Finishing-Medium	Cast Iron	Non-ferrous Metals	Non-ferrous Metals	Non-ferrous Metals	Hardened Materials
Ref. Page	B85	B84	B86	B81	B81	B76, B86	B86	C26~C28	C28	C16
Insert / Toolholder	**R-P**	**R-H**	**FR-USF**	**XP**	**XQ**	Without Chipbreaker	**AP**	**PCD**	**APD**	**CBN**
...-STUBR1.2...	-	-	-	-	-	TBGW121..	-	TBMT121.. TBGW121..	-	-
...-STUPR1.5-...	-	-	TPET1515..	-	-	TPGB1515..	-	TPMH1515.. TPGB1515..	-	TPGB1515..
...-STUPR1.8-...	TPEH1815..	TPGH1815..	-	TPMT1815..	-	TPGB1815..	-	TPMH1815.. TPGB1815..	-	TPGB1815..
...-STUPR2-...	TPEH22..	TPGH22..	TPET22..	TPMT22..	TPMT22..	TPGB22..	TPGT22..	TPMH22.. TPGB22..	TPMT22..	TPGB22..

※For P chipbreaker inserts, **Left-hand** Insert for **Left-hand** Toolholder, **Right-hand Insert** for **Right-hand** Toolholder

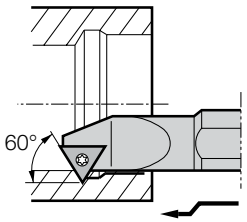
※When using **WP** chipbreaker, program corrections are required. → R51

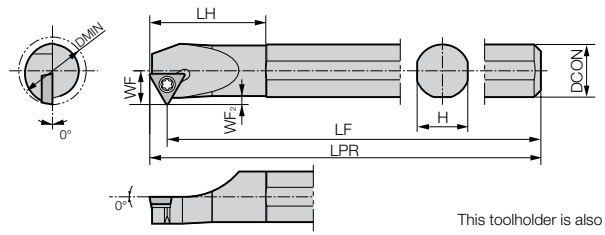
Recommended Cutting Conditions → **F116-F117**

Applicable Sleeve → **F107-F110**

S-STWP-E Excellent Bar (Copying)

(Max. Overhang Length **L/D = ~5**





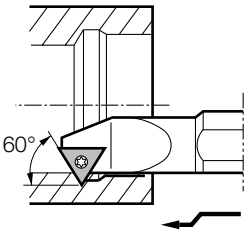
This toolholder is also available for threading. (➡ **J37**)

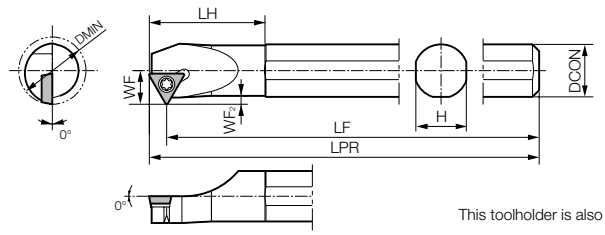
• Right-hand shown

• Left-hand Insert for Right-hand Toolholder, Right-hand Insert for Left-hand Toolholder

S-STWP Steel Bar (Copying)

(Max. Overhang Length **L/D = ~3**)



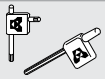


This toolholder is also available for threading. (➡ **J37**)

• Right-hand shown

• Left-hand Insert for Right-hand Toolholder.

Toolholder Dimensions

Part Number	Stock		Unit	Min. Bore Dia.	Dimensions							GAMO	Standard Corner-R (RE)	Spare Parts	
														Clamp Screw	Wrench
	R	L		DMIN	DCON	H	LPR	LF	LH	WF	WF_2				
S06M-STWP□2	●		inch	0.476	0.375	0.350	6.00	5.795	0.91	0.238	0.056	0°	1/64	SB-3STR	FT-10
S12R-STWP□2	●			0.970	0.750	0.726	8.00	7.795	1.60	0.485	0.115	0°			
S10M-STWP□11-12E	●	●	mm	12	10	9.2	150	144.5	23	6.0	1.0	0°	0.1	SB-3STR	FT-10
S12M-STWP□11-16E	●	●		16	12	11.0	150	144.5	30	8.0	1.5	0°			
S16R-STWP□11-20E	●	●		20	16	15.0	200	194.5	35	10.0	2.0	0°	0.1	SB-3TR	FT-10
S20X-STWP□11-25E	●	●		25	20	19.0	220	214.5	40	12.5	2.5	0°			
S20X-STWP□16-25E	●	●		25	20	19.0	220	212.3	40	14.0	4.0	0°	0.8	SB-4TR	FT-15
S25X-STWP□16-32E	●	●		32	25	23.0	270	262.3	42	16.5	4.0	0°			
S10M-STWP□11-12	●			12	10	9.2	150	144.5	23	6.0	1.0	0°	0.1	SB-3STR	FT-10
S12M-STWP□11-16	●			16	12	11.0	150	144.5	30	8.0	1.5	0°			
S16Q-STWP□11-20	●			20	16	15.0	180	174.5	35	10.0	2.0	0°	0.1	SB-3TR	FT-10
S20R-STWP□11-25	●			25	20	19.0	200	194.5	40	12.5	2.5	0°			

Applicable Inserts

Application	Finishing	Finishing	Finishing-Medium	Finishing	Finishing / Precision	Medium	Low Feed / Precision	Low Carbon Steel / Finishing	Low Carbon Steel / Finishing-Medium
Ref. Page	➡ B80	➡ B81	➡ B81	➡ B82, B83	➡ B85	➡ B84	➡ B86	➡ B81	➡ B81
Insert / Toolholder	PP	GP	HQ	□	□-FSF	□-H	F□-USF	XP	XQ
...-STWP□2 **...-STWP□11-12(E)**	-	-	-	TPGH215..	-	-	-	-	-
...-STWP□11-16~25(E)	TPMT22..	TPMT22..	TPMT22..	TPGH22..	TPET22..	TPGH22..	TPET22..	TPMT22..	TPMT22..
...-STWP□16-...	-	TPMT32..	TPMT32..	TPGH32..	-	TPGH32..	-	TPMT32..	TPMT32..

Application	Cast Iron	Non-ferrous Metals	Non-ferrous Metals	Non-ferrous Metals	Hardened Materials
Ref. Page	➡ B86	➡ B86	➡ C26~C28	➡ C28	➡ C16
Insert / Toolholder	Without Chipbreaker	AP	PCD	APD	CBN
...-STWP□2 **...-STWP□11-12(E)**	TPGB215..	-	-	-	-
...-STWP□11-16~25(E)	TPGB22..	TPGT22..	TPMH22.. TPGB22..	TPGB22..	TPGB22..
...-STWP□16-...	TPGB32..	-	TPMH32.. TPGB32..	-	TPGB32..

※ **TPMX-WP insert will not fit in S-STWP-E and S-STWP type holders.**

Recommended Cutting Conditions ➡ **F116-117**

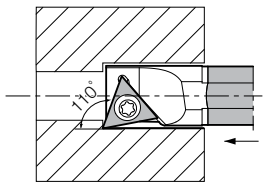
Applicable Sleeve ➡ **F108-F110**

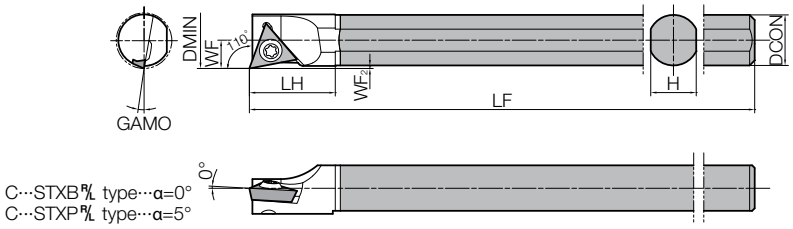
(Customer Service) **800.823.7284 - Option 1**
(Technical Support) **800.823.7284 - Option 2**
Visit us online at **KyoceraPrecisionTools.com**

● : Standard Item △ : Phaseout Item (will be removed from next catalog)
Contact your local Kyocera sales engineer to upgrade old products to new technology

C-STXP(B) Carbide Shank Bar (Boring / Internal Facing)

(Max. Overhang Length **L/D = ~7**)



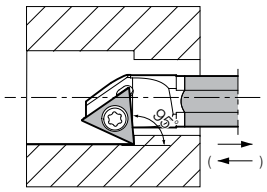


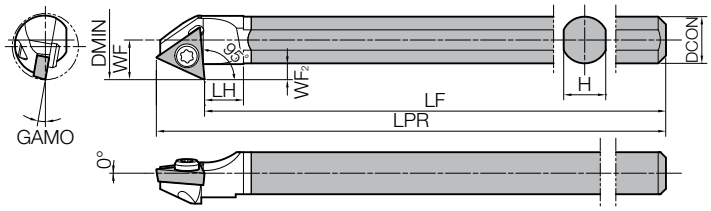
• Right-hand shown

• Left-hand Insert for Right-hand Toolholder, Right-hand Insert for Left-hand Toolholder

C-STZB Carbide Shank Bar (Back Boring)

(Max. Overhang Length **L/D = ~7**)





• Right-hand shown

• Right-hand Insert for Right-hand Toolholder, Left-hand Insert for Left-hand Toolholder

※ When using R-hand Toolholder, Use R-hand insert for machining in this direction (→)
Use L-hand insert for machining in this direction (←)

Toolholder Dimensions

Part Number	Stock		Min. Bore Dia.	Dimensions (mm)							GAMO	Standard Corner-R (RE)	Spare Parts	
													Clamp Screw	Wrench
	R	L	DMIN	DCON	H	LPR	LF	LH	WF	WF_2				
C06J-STXBR/L 06-075	●	●	7.5	6	5.4	-	110	11	3.75	0.5	10°	0.03	SB-1STR	FT-6
C08X-STXPR/L 08-09	●	●	9.0	8	7.0	-	143	14	4.60	0.5	10°	0.03	SB-1TR	
C10X-STXPR/L 09-11	●	●	11.0	10	9.0	-	164	17	5.60	0.5	10°	0.03	SB-2TR	FT-8
C06J-STZBR/L 06-085	●		8.5	6	5.4	110	104.3	5	5.10	2.0	10°	0.03	SB-1STR	FT-6

Applicable Inserts

Application	Minute ap	Finishing	Finishing	Finishing	Finishing-Medium	Finishing	Finishing / Precision	Low Feed / Precision	Low Carbon Steel / Finishing
Ref. Page	B76, B80	B80	B81	B76	B81	B76, B82, B83	B85	B86	B81
Insert / Toolholder	CF	PP	GP	DP	HQ	R/L	R/L-FSF	FR/L-USF	XP
...-STXBR/L 06-...	TBGT121..	-	-	TBMT121..	-	TBGT121..	-	-	-
...-STXPR/L 08-...	TPGT1515..	-	-	-	-	TPGH1515..	TPET1515..	TPET1515..	-
...-STXPR/L 09-...	TPGT1815..	TPMT1815..	TPMT1815..	-	TPMT1815..	TPGH1815..	-	-	TPMT1815..
...-STZBR/L 06-...	TBGT121..	-	-	TBMT121..	-	TBGT121..	-	-	-

Application	Cast Iron	Non-ferrous Metals	Hardened Materials
Ref. Page	B76, B86	C26~C28	C16
Insert / Toolholder	Without Chipbreaker	PCD	CBN
...-STXBR/L 06-...	TBGW121..	TBMT121..	-
...-STXPR/L 08-...	TPGB1515..	TPMH1515.. TPGB1515..	TPGB1515..
...-STXPR/L 09-...	TPGB1815..	TPMH1815.. TPGB1815..	TPGB1815..
...-STZBR/L 06-...	TBGW121..	TBMT121..	-

※ **TPMX-WP insert will not fit in C-STXP type holders.**

Recommended Cutting Conditions → **F116-117**

Applicable Sleeve → **F107-F110**

C...STXP(B) Type Boring Bar Cutting Conditions

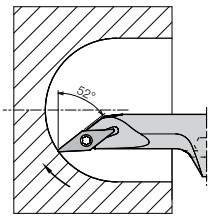
Toolholder Part Number	Insert Part Number (Grades)	Vc : sfm	D.O.C.	f (ipr)	Coolant
C06J-STXBR/L 06-075	TBGT0601003 L/R (PR930)	100~330	0.0008~0.0039	0.0008~0.0016	Yes
C08X-STXPR/L 08-09	TPGH080201 L/R (PR930)	100~330	0.0020~0.0059	0.0012~0.0031	Yes
C10X-STXPR/L 09-11	TPGH090201 L/R (PR930)	100~330	0.0020~0.0059	0.0012~0.0031	Yes

(Workpiece Material: Alloy Steel)

● : Standard Item △ : Phaseout Item (will be removed from next catalog)
Contact your local Kyocera sales engineer to upgrade old products to new technology

A-SVJP(C)(B)-AE Excellent Bar (Internal Spherical Machining / Internal Facing / Copying)

(Max. Overhang Length **L/D = ~5.5**)



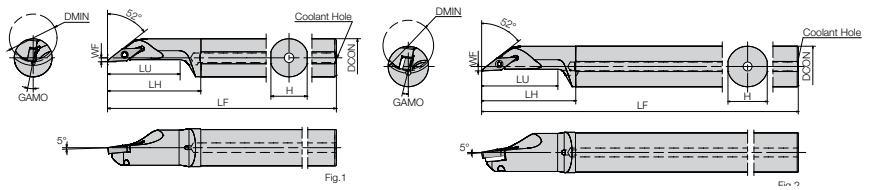


Fig.1

Shank Dia. DCON	Coolant Hole Dia.
Ø12mm	Ø4mm
Ø16mm	Ø4mm
Ø0.750" Ø20mm	Ø5mm
Ø1.000" Ø25mm	Ø5mm
Ø32mm	Ø7mm
Ø40mm	Ø9mm

Please see ➔ F67 for Cutting Instructions

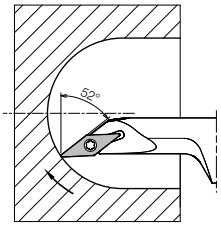
• Right-hand shown

* No shim for SVJP(C)R/L08 or SVJBR/L11.

• Left-hand Insert for Right-hand Toolholder, Right-hand Insert for Left-hand Toolholder

S-SVJP(C)(B)-A Steel Bar (Internal Spherical Machining / Internal Facing / Copying)

(Max. Overhang Length **L/D = ~4**)



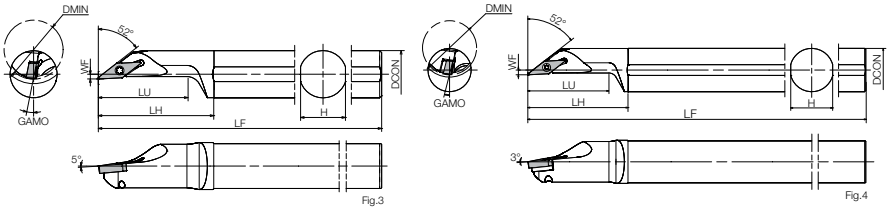


Fig.3 Fig.4

Please see ➔ F67 for Cutting Instructions

* No shim for SVJP(C)R/L08 / SVJBR/L11.

• Right-hand shown

• Left-hand Insert for Right-hand Toolholder, Right-hand Insert for Left-hand Toolholder

Toolholder Dimensions

	Part Number	Stock R	Stock L	Unit	Min. Bore Dia. DMIN	Dimensions DCON	H	LF	LU	LH	WF	GAMO	Standard Corner-R (RE)	Coolant Hole	Drawing	Spare Parts: Clamp Screw	Spare Parts: Wrench
Excellent Bar	A12S-SVJBR/L2AE	●	●	inch	0.984	0.750	0.711	10	1.476	-	0.079	5°	1/64	Yes	Fig.1	SB-2050TR	FT-6
	A16T-SVJBR/L2AE	●	●		1.180	1.000	0.961	12	1.772	-	0.138	5°					
	A12M-SVJPR/L08-16AE	●	●	mm	16	12	11	150	26	33	2.0	5°	0.2	Yes	Fig.1	SB-2050TR	FT-6
	A12M-SVJCR/L08-16AE	●	●		16	12	11	150	26	33	2.0	5°	0.4	Yes	Fig.1	SB-2050TR	FT-6
	A16Q-SVJCR/L08-20AE	●	●		20	16	15	180	36	43	2.0	5°					
	A20R-SVJBR/L11-25AE	●	●		25	20	19	200	37.5	48	2.0	5°	0.4	Yes	Fig.1	SB-2570TR	FT-8
	A25S-SVJBR/L11-30AE	●	●		30	25	24	250	45	58	3.5	5°					
	A32S-SVJBR/L16-40AE	●	●		40	32	31	250	60	74	3.5	8°	0.4	Yes	Fig.2	SB-40125TRN	FT-15
	A40T-SVJBR/L16-50AE	●	●		50	40	39	300	75	91	4.5	7°					
Steel Bar	S12M-SVJPR/L08-16A	●	●	mm	16	12	11	150	26	33	2.0	5°	0.2	No	Fig.3	SB-2050TR	FT-6
	S12M-SVJCR/L08-16A	●	●		16	12	11	150	26	33	2.0	5°	0.4	No	Fig.3	SB-2050TR	FT-6
	S16Q-SVJCR/L08-20A	●	●		20	16	15	180	36	43	2.0	5°					
	S20R-SVJBR/L11-25A	●	●		25	20	19	200	37.5	48	2.0	5°	0.4	No	Fig.3	SB-2570TR	FT-8
	S25S-SVJBR/L11-30A	●	●		30	25	24	250	45	58	3.5	5°					
	S32S-SVJBR/L16-40A	●	●		40	32	31	250	60	74	3.5	8°	0.4	No	Fig.4	SB-40125TRN	FT-15
	S40T-SVJBR/L16-50A	●	●		50	40	39	300	75	91	4.5	7°	0.4	No	Fig.4	SB-40125TRN	FT-15

Applicable Inserts

Application	Finishing	Finishing	Finishing	Finishing	Finishing-Medium	Finishing	Finishing / Precision	Low Feed / Precision	Non-ferrous Metals	Non-ferrous Metals
Ref. Page	➔ B94	➔ B89, B92	➔ B89, B92	➔ B89	➔ B89, B92	➔ B90	➔ B89, B95	➔ B96	➔ B93	➔ B93
Insert / Toolholder	CK	VF	PP	GP	HQ	R/L-F	R/L-FSF	FR/L-USF	AP	R/L-A3
...-SVJPR/L08-...	VPGT1515..	-	-	-	-	-	VPET1515..	VPET1515..	-	-
...-SVJCR/L08-...	-	VCMT1515..	VCMT1515..	-	VCMT1515..	-	-	-	-	-
...-SVJBR/L2AE ...-SVJBR/L11-...	-	VBMT22..	VBMT22..	VBMT22..	VBMT22..	VBGT22..	VBET22..	-	-	-
...-SVJBR/L16-...	-	VBMT33..	VBMT33..	VBMT33..	VBMT33..	-	-	-	VCGT33..	VCGT33..

Application	Non-ferrous Metals	Non-ferrous Metals	Hardened Materials
Ref. Page	➔ B93	➔ C28	➔ C17
Insert / Toolholder	AH	PCD	CBN
...-SVJPR/L08-...	-	-	-
...-SVJCR/L08-...	-	VCMT1515..	VCGW1515..
...-SVJBR/L2AE ...-SVJBR/L11-...	-	VBMT22..	VBGW22..
...-SVJBR/L16-...	VCGT33..	VBMT33..	VBGW33..

* Use of VBGT1103..-Y / VBGT1604..-Y with A-SVJB-AE / S-SVJB-A is not recommended.

Spare Parts (See ➔ P27 for spare parts of old products.)

Part Number	Spare Parts: Shim	Spare Parts: Shim Screw	Spare Parts: Wrench (for Shim Screw)
□32S-SVJBR/L16-40A□	SVN-32N *(SVN-32S)	SS-4N	LW-4
□40T-SVJBR/L16-50A□			

* Insert with Corner-R (RE) of 0.008" or 1/64", shim in parentheses ( ) is recommended (sold separately)

Recommended Cutting Conditions ➔ F116-F117

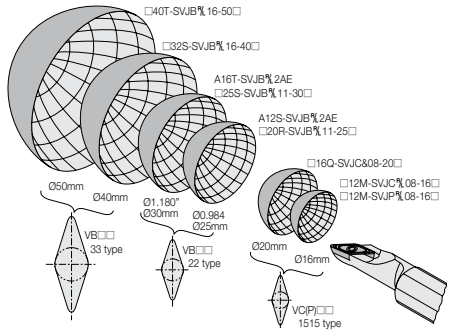
Applicable Sleeve ➔ F108-F110

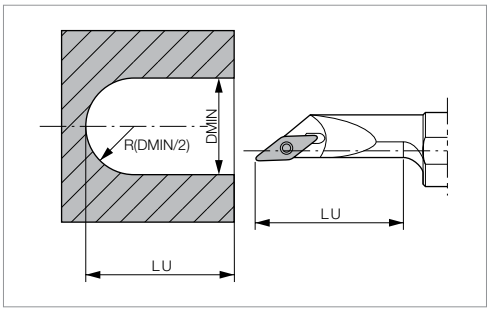
● : Standard Item △ : Phaseout Item (will be removed from next catalog)

Contact your local Kyocera sales engineer to upgrade old products to new technology

A...SVJP(C)-○, S...SVJP(C)-○ Excellent Bar (Internal Spherical Machining / Internal Facing)

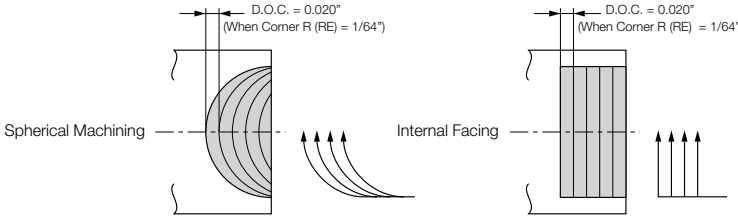
1. Application Range





2. Machining Method

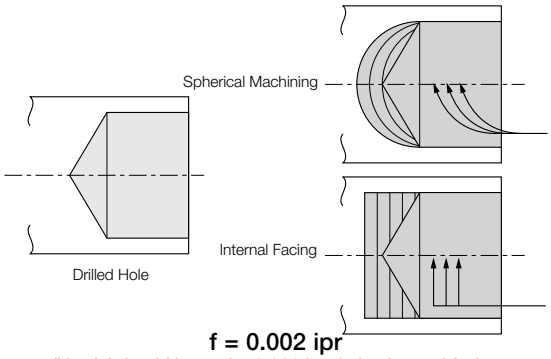
In Cases with No Existing Hole



f = 0.002 ipr

(Note) f should be under 0.002 ipr during internal facing

In Cases with Drilled Hole

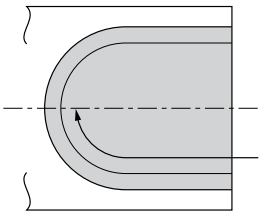


f = 0.002 ipr

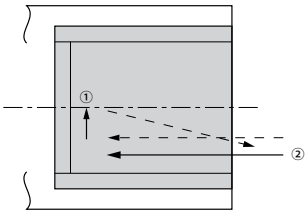
(Note) f should be under 0.002 ipr during internal facing

Finishing

Spherical Machining

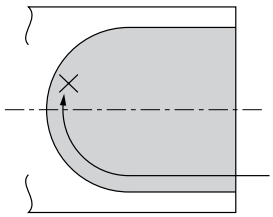


Internal Facing

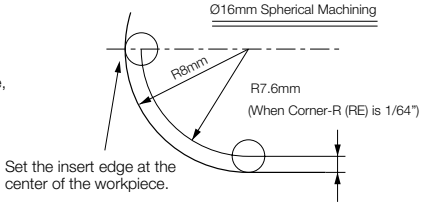


Machining Process
1. First, finish the internal face.
2. Next, finish the internal diameter.

3. Caution

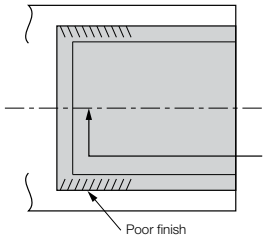


When machining past the center of the workpiece, insert breakage may occur.



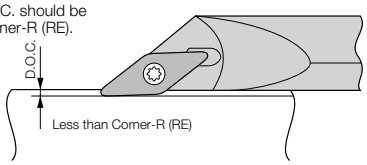
Set the insert edge at the center of the workpiece.

Adjust the machining program radius to a smaller Corner-R (RE) value.



Machining of this kind is available, but the oblique part may be scratched by chips.

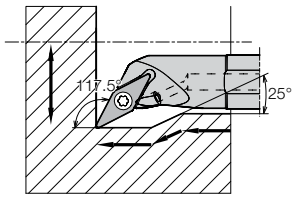
For internal profiling, D.O.C. should be less than the value of Corner-R (RE).

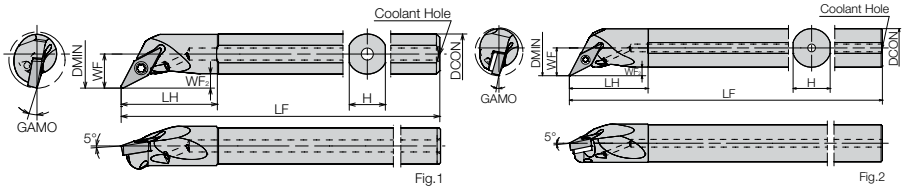


[Burrs may occur, if D.O.C. is bigger than Corner-R (RE)]

A-SVP(C)(B)-AE Excellent Bar (Copying / Undercutting)

(Max. Overhang Length **L/D = ~5.5**)





* No shim for SVPC®08 or SVPB®11.

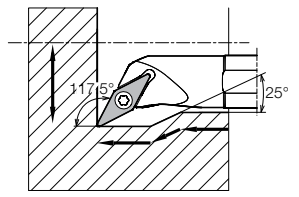
Shank Dia. DCON	Coolant Hole Dia.
Ø0.375" Ø10mm	Ø3mm
Ø0.500" Ø12mm	Ø4mm
Ø0.625" Ø16mm	Ø5mm
Ø0.750" Ø20mm	Ø5mm
Ø1.000" Ø25mm	Ø5mm
Ø32mm	Ø5mm

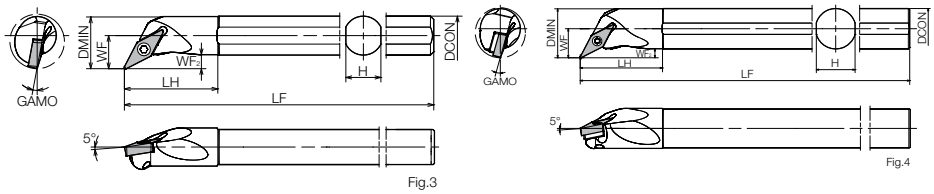
• Right-hand shown

• Left-hand Insert for Right-hand Toolholder, Right-hand Insert for Left-hand Toolholder

S-SVP(C)(B)-A Steel Bar (Copying / Undercutting)

(Max. Overhang Length **L/D = ~4**)





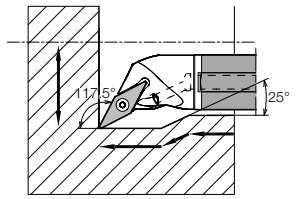
* No shim for SVPC®08 or SVPB®11.

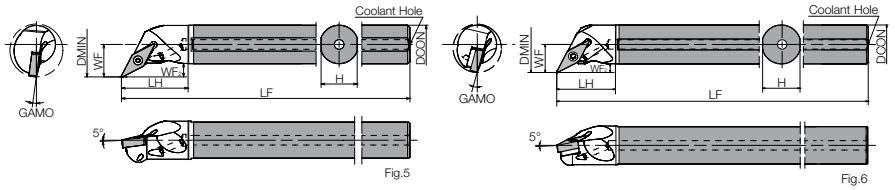
• Right-hand shown

• Left-hand Insert for Right-hand Toolholder, Right-hand Insert for Left-hand Toolholder

E-SVP(C)(B)-A Carbide Shank Bar (Copying / Undercutting)

(Max. Overhang Length **L/D = ~7**)





* No shim for SVPC®08 or SVPB®11.

Shank Dia. DCON	Coolant Hole Dia.
Ø10mm	Ø3mm
Ø12mm	Ø4mm
Ø16mm	Ø4mm
Ø20mm	Ø6mm
Ø25mm	Ø6mm

• Right-hand shown

• Left-hand Insert for Right-hand Toolholder, Right-hand Insert for Left-hand Toolholder

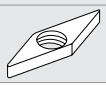
Toolholder Dimensions

	Part Number	Stock R	Stock L	Unit	Min. Bore Dia. DMIN	Dimensions DCON	H	LF	LH	WF	WF_2	GAMO	Standard Corner-R (RE)	Coolant Hole	Drawing	Spare Parts: Clamp Screw	Spare Parts: Wrench
Excellent Bar	**A06M-SVPC®1.5AE**	●	●	inch	0.630	0.375	0.336	6	0.945	0.335	0.118	8°	1/64	Yes	Fig.1	SB-2570TR	FT-8
	A08M-SVPB®2AE	●	●		0.790	0.500	0.461	6	1.142	0.433	0.177	8°					
	A10R-SVPB®2AE	●	●		0.980	0.625	0.586	8	1.378	0.531	0.197	5°					
	A12S-SVPB®2AE	●	●		1.180	0.750	0.711	10	1.575	0.610	0.197	5°					
	A16T-SVPB®3AE	●	●		1.240	1.000	0.961	12	2.008	0.709	0.197	13°	1/64	Yes	Fig.2	SB-40125TRN	FT-15
	A10L-SVPC®08-14AE	●	●	mm	14	10	9	140	24	8.5	3.0	8°	0.4	Yes	Fig.1	SB-2050TR	FT-6
	A12M-SVPB®11-18AE	●	●		18	12	11	150	29	11.0	4.5	8°	0.4	Yes	Fig.1	SB-2570TR	FT-8
	A16Q-SVPB®11-22AE	●	●		22	16	15	180	35	13.5	5.0	5°					
	A20R-SVPB®11-26AE	●	●		26	20	19	200	41	15.5	5.0	5°					
	A25S-SVPB®16-31AE	●	●		31	25	24	250	51	18.0	5.0	13°	0.4	Yes	Fig.2	SB-40125TRN	FT-15
	A32S-SVPB®16-40AE	●	●		40	32	31	250	54	23.0	6.5	9°					
Steel	**S10L-SVPC®08-14A**	●	●	mm	14	10	9	140	24	8.5	3.0	8°	0.4	No	Fig.3	SB-2050TR	FT-6
	S12M-SVPB®11-18A	●	●		18	12	11	150	29	11.0	4.5	8°	0.4	No	Fig.3	SB-2570TR	FT-8
	S16Q-SVPB®11-22A	●	●		22	16	15	180	35	13.5	5.0	5°					
	S20R-SVPB®11-26A	●	●		26	20	19	200	41	15.5	5.0	5°					
	S25S-SVPB®16-31A	●	●		31	25	24	250	51	18.0	5.0	13°	0.4	No	Fig.4	SB-40125TRN	FT-15
	S32S-SVPB®16-40A	●	●		40	32	31	250	54	23.0	6.5	9°					
Carbide	**E10N-SVPC®08-14A**	●		mm	14	10	9	160	20	8.5	3.0	8°	0.4	Yes	Fig.5	SB-2050TR	FT-6
	E12Q-SVPB®11-18A	●			18	12	11	180	23	11.0	4.5	8°	0.4	Yes	Fig.5	SB-2570TR	FT-8
	E16X-SVPB®11-22A	●			22	16	15	220	28	13.5	5.0	5°					
	E20S-SVPB®11-26A	●			26	20	19	250	32	15.5	5.0	5°					
	E25T-SVPB®16-31A	●			31	25	24	300	38	18.0	5.0	13°	0.4	Yes	Fig.6	SB-40125TRN	FT-15

(Customer Service) **800.823.7284 - Option 1**
(Technical Support) **800.823.7284 - Option 2**
Visit us online at **KyoceraPrecisionTools.com**

● : Standard Item △ : Phaseout Item (will be removed from next catalog)
Contact your local Kyocera sales engineer to upgrade old products to new technology

Spare Parts (See P27 for spare parts of old products.)

Part Number	Spare Parts		
	Shim	Shim Screw	Wrench (for Shim Screw)
			
□25□-SVPB□16-31A□	SVN-32N *(SVN-32S)	SS-4N	LW-4
□32S-SVPB□16-40A□			
A16T-SVPB□3AE			

* Insert with Corner-R (RE) of 0.008" or 1/64", shim in parentheses ( ) is recommended (sold separately)

Applicable Inserts

Application	Finishing	Finishing	Finishing	Finishing	Finishing-Medium	Finishing	Finishing / Precision	Finishing-Medium	Low Feed / Precision	Non-ferrous Metals
Ref. Page	-	B89, B92	B89, B92	B89	B89, B92	B90	B89	B90, B91	-	B93
Insert / Toolholder	CK	VF	PP	GP	HQ	□-F	□-FSF	□-Y	F□-USF	AP
...-SVPC□1.5AE ...-SVPC□08-...	-	VCMT1515..	VCMT1515..	-	VCMT1515..	-	-	-	-	-
...-SVPB□2AE... ...-SVPB□11-...	-	VBMT22..	VBMT22..	VBMT22..	VBMT22..	VBGT22..	VBET22..	VBGT22..	-	-
...-SVPB□3AE ...-SVPB□16-...	-	VBMT33..	VBMT33..	VBMT33..	VBMT33..	-	-	VBGT33..	-	VCGT33..

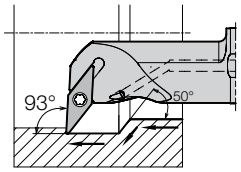
Application	Non-ferrous Metals	Non-ferrous Metals	Non-ferrous Metals	Hardened Materials
Ref. Page	B93	B93	C28	C17
Insert / Toolholder	□-A3	AH	PCD	CBN
...-SVPC□1.5AE... ...-SVPC□08-...	-	-	VCMT1515..	VCGW1515..
...-SVPB□2AE... ...-SVPB□11-...	-	-	VBMT22..	VBGW22..
...-SVPB□3AE ...-SVPB□16-...	VCGT33..	VCGT33..	VBMT33..	VBGW33..

Recommended Cutting Conditions F116-F117

Applicable Sleeve F108-F110

A-SVUC(B)-AE Excellent Bar (Copying)

(Max. Overhang Length **L/D = ~5.5**)



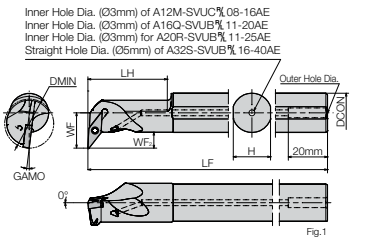


Fig.1

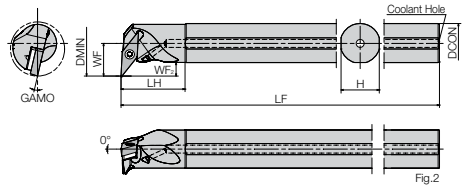


Fig.2

Shank Dia. DCON	Outer Hole Dia.	Coolant Hole Dia.
Ø0.500" Ø12mm	Ø4mm	-
Ø0.625" Ø16mm	Ø5mm	-
Ø0.750" Ø20mm	Ø5mm	-
Ø1.000" Ø25mm	-	Ø5mm
Ø32mm	-	Ø5mm

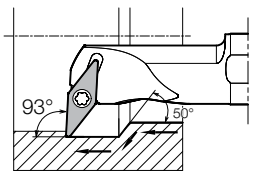
* No shim for SVUC□08 / SVUB□11.

• Right-hand shown

• Left-hand Insert for Right-hand Toolholder, Right-hand Insert for Left-hand Toolholder

S-SVUC(B)-A Steel Bar (Copying)

(Max. Overhang Length **L/D = ~4**)



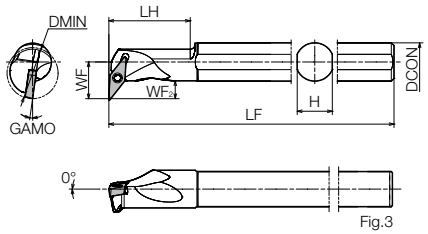


Fig.3

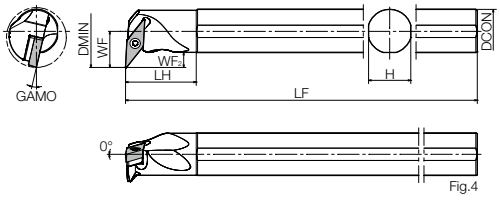


Fig.4

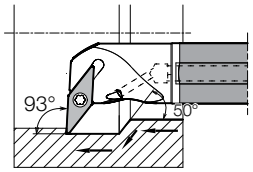
* No shim for SVUC□08 / SVUB□11.

• Right-hand shown

• Left-hand Insert for Right-hand Toolholder, Right-hand Insert for Left-hand Toolholder

E-SVUC(B)-A Carbide Shank Bar (Copying)

(Max. Overhang Length **L/D = ~7**)



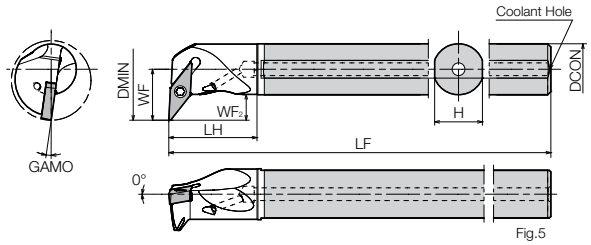


Fig.5

Shank Dia. DCON	Coolant Hole Dia.
Ø12mm	Ø4mm
Ø16mm	Ø4mm
Ø20mm	Ø6mm
Ø25mm	Ø6mm

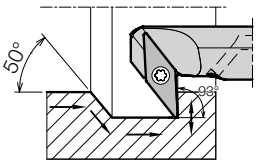
* Shim is attached only for SVUBR16

• Right-hand shown

• Left-hand Insert for Right-hand Toolholder, Right-hand Insert for Left-hand Toolholder

A-SVZC(B)-AE Excellent Bar (Back Boring)

(Max. Overhang Length **L/D = ~5.5**)



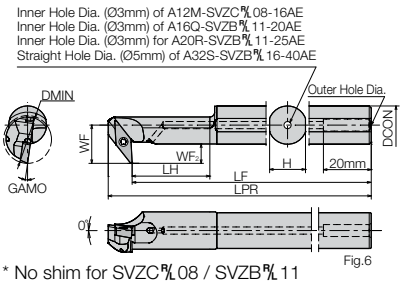


Fig.6

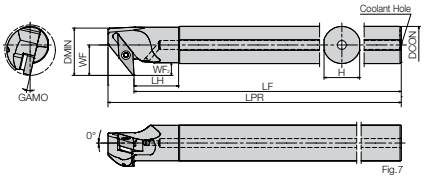


Fig.7

Shank Dia. DCON	Outer Hole Dia.	Coolant Hole Dia.
Ø12mm	Ø4mm	-
Ø16mm	Ø5mm	-
Ø20mm	Ø5mm	-
Ø25mm	-	Ø5mm
Ø32mm	-	Ø5mm

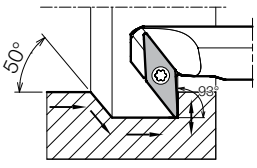
* No shim for SVZC□08 / SVZB□11

• Right-hand shown

• Right-hand Insert for Right-hand Toolholder, Left-hand Insert for Left-hand Toolholder

S-SVZC(B)-A Steel Bar (Back Boring)

(Max. Overhang Length **L/D = ~4**)



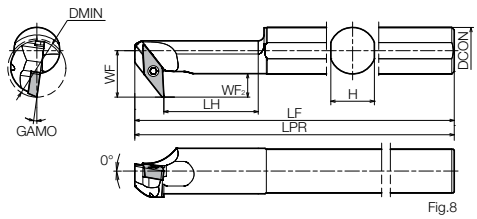


Fig.8

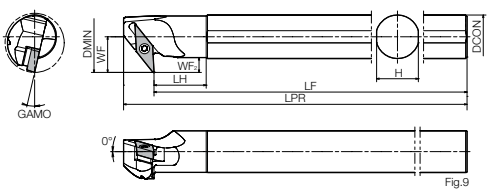


Fig.9

* No shim for SVZC□08 / SVZB□11

• Right-hand shown

• Right-hand Insert for Right-hand Toolholder, Left-hand Insert for Left-hand Toolholder

Toolholder Dimensions

	Part Number	Stock R	Stock L	Unit	Min. Bore Dia. DMIN	Dimensions DCON	H	LPR	LF	LH	WF	WF2	GAMO	Standard Corner-R (RE)	Coolant Hole	Drawing	Spare Parts: Clamp Screw	Spare Parts: Wrench
Excellent Bar	A08M-SVUC□1.5AE	●	●	inch	0.630	0.500	0.461	-	6	1.004	0.453	0.217	8°	1/64	Yes	Fig.1	SB-2050TR	FT-6
	A10R-SVUB□2AE	●	●		0.790	0.625	0.586	-	8	1.280	0.630	0.315	8°	1/64	Yes	Fig.1	SB-2570TR	FT-8
	A12S-SVUB□2AE	●	●		0.980	0.750	0.711	-	10	1.595	0.709	0.315	7°					
	A16T-SVUB□3AE	●	●		1.340	1.000	0.961	-	12	1.583	0.807	0.335	13°	1/64	Yes	Fig.2	SB-40125TRN	FT-15
	A12M-SVUC□08-16AE	●	●	mm	16	12	11	-	150	25.5	11.5	5.5	8°	0.4	Yes	Fig.1	SB-2050TR	FT-6
	A16Q-SVUB□11-20AE	●	●		20	16	15	-	180	32.5	16.0	8.0	8°	0.4	Yes	Fig.1	SB-2570TR	FT-8
	A20R-SVUB□11-25AE	●	●		25	20	19	-	200	40.5	18.0	8.0	7°					
	A25S-SVUB□16-34AE	●	●		34	25	24	-	250	40.0	20.5	8.5	13°	0.4	Yes	Fig.2	SB-40125TRN	FT-15
	A32S-SVUB□16-40AE	●	●		40	32	31	-	250	84.0	28.0	12.0	9°	0.4	Yes	Fig.1	SB-40125TRN	FT-15
Steel	S12M-SVUC□08-16A	●	●	mm	16	12	11	-	150	25.5	11.5	5.5	8°	0.4	No	Fig.3	SB-2050TR	FT-6
	S16Q-SVUB□11-20A	●	●		20	16	15	-	180	32.5	16.0	8.0	8°	0.4	No	Fig.3	SB-2570TR	FT-8
	S20R-SVUB□11-25A	●	●		25	20	19	-	200	40.5	18.0	8.0	7°					
	S25S-SVUB□16-34A	●	●		34	25	24	-	250	40.0	20.5	8.5	13°	0.4	No	Fig.4	SB-40125TRN	FT-15
	S32S-SVUB□16-40A	●	●		40	32	31	-	250	84.0	28.0	12.0	9°	0.4	No	Fig.3		
Carbide	E12Q-SVUC□08-18A	●		mm	18	12	11	-	180	23.0	11.5	5.5	8°	0.4	Yes	Fig.5	SB-2050TR	FT-6
	E16X-SVUB□11-25A	●			25	16	15	-	220	28.0	16.0	8.0	8°	0.4	Yes	Fig.5	SB-2570TR	FT-8
	E20S-SVUB□11-29A	●			29	20	19	-	250	32.0	18.0	8.0	7°					
	E25T-SVUB□16-34A	●			34	25	24	-	300	38.0	21.0	8.5	13°	0.4	Yes	Fig.5	SB-40125TRN	FT-15
Excellent Bar	A08M-SVZC□1.5AE	●	●	inch	0.630	0.500	0.461	-	6	1.004	0.453	0.217	8°	1/64	Yes	Fig.6	SB-2050TR	FT-6
	A10R-SVZB□2AE	●	●		0.790	0.625	0.586	-	8	1.280	0.630	0.315	8°	1/64	Yes	Fig.6	SB-2570TR	FT-8
	A12S-SVZB□2AE	●	●		0.980	0.750	0.711	-	10	1.595	0.709	0.315	7°					
	A16T-SVZB□3AE	●	●		1.340	1.000	0.961	-	12	1.181	0.807	0.335	13°	1/64	Yes	Fig.7	SB-40125TRN	FT-15
	A12M-SVZC□08-16AE	●	●	mm	16	12	11	150	142.5	25.5	11.5	5.5	8°	0.4	Yes	Fig.6	SB-2050TR	FT-6
	A16Q-SVZB□11-20AE	●	●		20	16	15	180	170	32.5	16.0	8.0	8°	0.4	Yes	Fig.6	SB-2570TR	FT-8
	A20R-SVZB□11-25AE	●	●		25	20	19	200	190	40.5	18.0	8.0	7°					
	A25S-SVZB□16-34AE	●	●		34	25	24	250	232.5	30.0	20.5	8.5	13°	0.4	Yes	Fig.7	SB-40125TRN	FT-15
	A32S-SVZB□16-40AE	●	●		40	32	31	250	232.5	72.5	28.0	12.0	9°	0.4	Yes	Fig.6	SB-40125TRN	FT-15
Steel	S12M-SVZC□08-16A	●	●	mm	16	12	11	150	142.5	25.5	11.5	5.5	8°	0.4	No	Fig.8	SB-2050TR	FT-6
	S16Q-SVZB□11-20A	●	●		20	16	15	180	170	32.5	16.0	8.0	8°	0.4	No	Fig.8	SB-2570TR	FT-8
	S20R-SVZB□11-25A	●	●		25	20	19	200	190	40.5	18.0	8.0	7°					
	S25S-SVZB□16-34A	●	●		34	25	24	250	232.5	30.0	20.5	8.5	13°	0.4	No	Fig.9	SB-40125TRN	FT-15
	S32S-SVZB□16-40A	●	●		40	32	31	250	235	72.5	28.0	12.0	9°	0.4	No	Fig.8	SB-40125TRN	FT-15

Applicable Inserts

Application	Finishing	Finishing	Finishing	Finishing	Finishing-Medium	Finishing	Finishing / Precision	Finishing-Medium	Low Feed / Precision	Non-ferrous Metals
Ref. Page	-	B89, B92	B89, B92	B89	B89, B92	B90	B89	B90, B91	-	B93
Insert / Toolholder	CK	VF	PP	GP	HQ	□-F	□-FSF	□-Y	F□-USF	AP
...-SVUC□1.5AE ...-SVUC□08-...	-	VCMT1515..	VCMT1515..	-	VCMT1515..	-	-	-	-	-
...-SVUB□2AE ...-SVUB□11-...	-	VBMT22..	VBMT22..	VBMT22..	VBMT22..	VBGT22..	VBET22..	VBGT22..	-	-
...-SVUB□3AE ...-SVUB□16-...	-	VBMT33..	VBMT33..	VBMT33..	VBMT33..	-	-	VBGT33..	-	VCGT33..
...-SVZC□1.5AE ...-SVZC□08-...	-	VCMT1515..	VCMT1515..	-	VCMT1515..	-	-	-	-	-
...-SVZC□2AE ...-SVZB□11-...	-	VBMT22..	VBMT22..	VBMT22..	VBMT22..	VBGT22..	VBET22..	VBGT22..	-	-
...-SVZC□3AE ...-SVZB□16-...	-	VBMT33..	VBMT33..	VBMT33..	VBMT33..	-	-	VBGT33..	-	VCGT33..

Application	Non-ferrous Metals	Non-ferrous Metals	Non-ferrous Metals	Hardened Materials
Ref. Page	B93	B93	C28	C17
Insert / Toolholder	□-A3	AH	PCD	CBN
...-SVUC□1.5AE ...-SVUC□08-...	-	-	VCMT1515..	VCGW1515..
...-SVUB□2AE ...-SVUB□11-...	-	-	VBMT22..	VBGW22..
...-SVUB□3AE ...-SVUB□16-...	VCGT33..	VCGT33..	VBMT33..	VBGW33..
...-SVZC□1.5AE ...-SVZC□08-...	-	-	VCMT1515..	VCGW1515..
...-SVZC□2AE ...-SVZB□11-...	-	-	VBMT22..	VBGW22..
...-SVZC□3AE ...-SVZB□16-...	VCGT33..	VCGT33..	VBMT33..	VBGW33..

Spare Parts (See P27 for spare parts of old products.)

Part Number	Spare Parts: Shim	Spare Parts: Shim Screw	Spare Parts: Wrench (for Shim Screw)
□25□-SVUB□16-34A□ □32S-SVUB□16-40A□ □25S-SVZB□16-34A□ □32S-SVZB□16-40A□ A16T-SVUB□3AE A16T-SVZB□3AE	SVN-32N *(SVN-32S)	SS-4N	LW-4

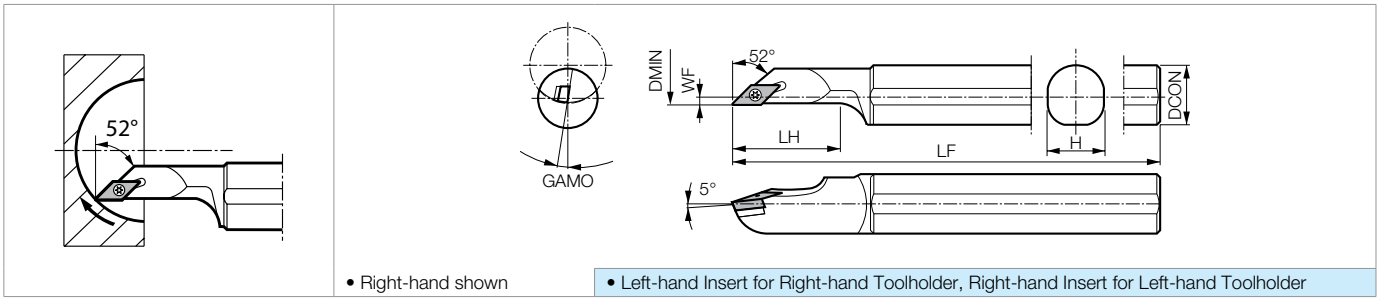
* Insert with Corner-R (RE) of 0.008" or 1/64", shim in parentheses ( ) is recommended (sold separately)

Recommended Cutting Conditions F116-F117
Applicable Sleeve F108-F110

● : Standard Item △ : Phaseout Item (will be removed from next catalog)
Contact your local Kyocera sales engineer to upgrade old products to new technology

S-SVJB-E Excellent Bar (Internal Spherical Machining / Internal Facing)

(Max. Overhang Length **L/D = ~5**)

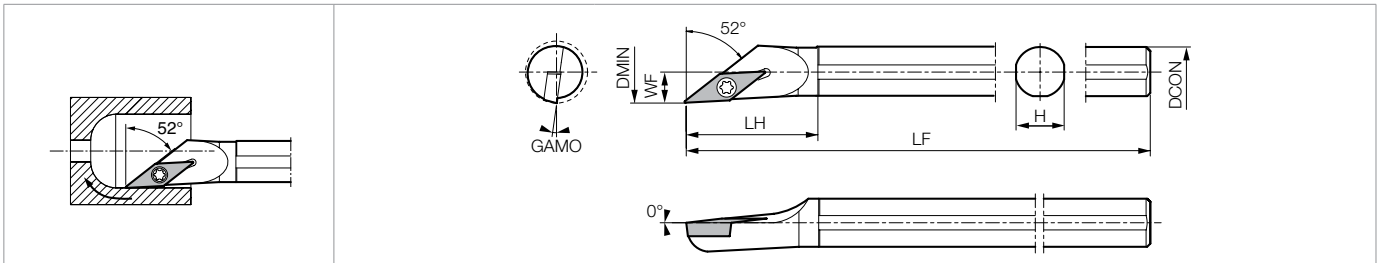


• Right-hand shown

• Left-hand Insert for Right-hand Toolholder, Right-hand Insert for Left-hand Toolholder

S-SVJB Steel Bar (Internal Spherical Machining / Internal Facing)

(Max. Overhang Length **L/D = ~3**)



• Right-hand shown

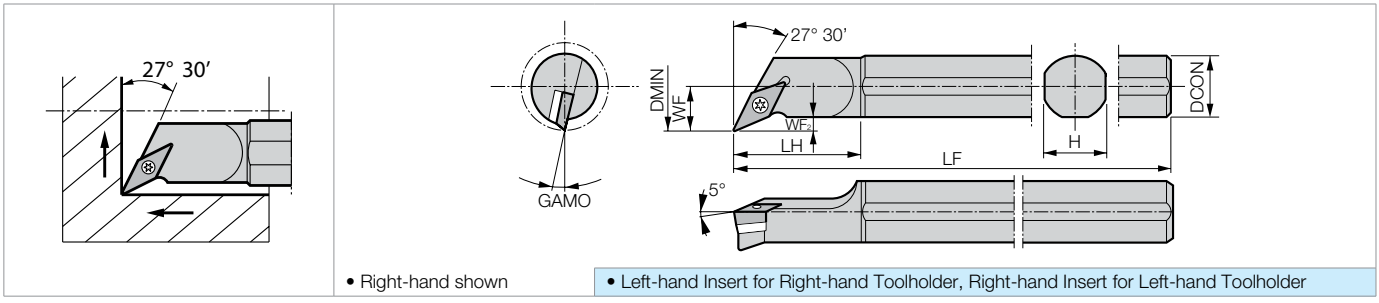
• Left-hand Insert for Right-hand Toolholder, Right-hand Insert for Left-hand Toolholder

Toolholder Dimensions

	Part Number	Stock R	Stock L	Unit	Min. Bore Dia. DMIN	Dimensions DCON	H	LF	LH	WF	GAMO	Standard Corner-R (RE)	Coolant Hole	Spare Parts: Clamp Screw	Wrench	Shim	Shim Screw	Wrench
Excellent Bar	S16S-SVJBR/L2E		●	inch	1.18	1.00	0.97	10.00	2.92	-	5°	1/64	No	SB-2570TR	FT-8	-	-	-
Excellent Bar	S20S-SVJBR/L3E	●	●		1.57	1.25	1.18	10.0	2.92	-	8°	1/32		SB-40115TR	FT-15	SVN-32	SB-2050TR	FT-6
Steel	S08M-SVJBR/L2	●	●		0.620	0.500	0.480	6.00	1.25	0.310	8°	1/64	No	SB-2570TR	FT-8	-	-	-
Steel	S10X-SVJBR/L2	●	●		0.780	0.625	0.584	7.00	1.44	0.390	8°							
Steel	S12R-SVJBR/L3	●	●		0.984	0.750	0.710	8.00	1.86	0.492	8°	1/32		SB-4085TR	FT-15	-	-	-

S-SVPB-E Excellent Bar (Copying / Undercutting)

(Max. Overhang Length **L/D = ~5**)



• Right-hand shown

• Left-hand Insert for Right-hand Toolholder, Right-hand Insert for Left-hand Toolholder

Toolholder Dimensions

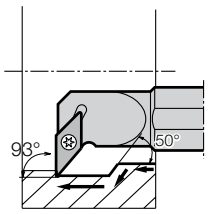
	Part Number	Stock R	Stock L	Unit	Min. Bore Dia. DMIN	Dimensions DCON	H	LF	LH	WF	WF2	GAMO	Standard Corner-R (RE)	Coolant Hole	Spare Parts: Clamp Screw	Wrench	Shim	Shim Screw	Wrench
Excellent Bar	S08M-SVPBR/L2E	●		inch	0.79	0.50	0.46	6.00	1.10	0.315	0.163	8°	1/64	No	SB-2570TR	-	-	-	-
Excellent Bar	S10Q-SVPBR/L2E	●			0.98	0.63	0.59	7.00	1.10	0.492	0.194	5°							
Excellent Bar	S16X-SVPBR/L3E	●			1.34	1.00	0.97	9.00	2.26	0.807	0.335	13°	1/32	No	SB-40115TR	FT-15	SVN-32	SB-2050TR	FT-6
Excellent Bar	S20S-SVPBR/L3E	●	●		1.57	1.25	1.18	10.0	2.17	0.866	0.256	9°							

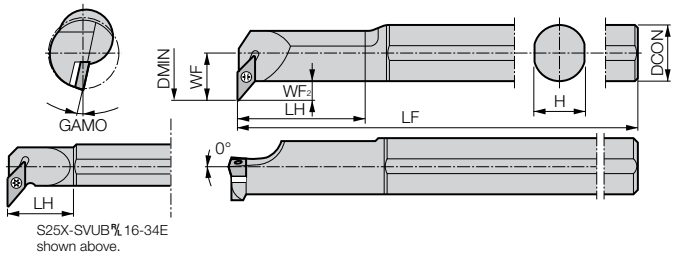
(Customer Service) **800.823.7284 - Option 1**
(Technical Support) **800.823.7284 - Option 2**
Visit us online at **KyoceraPrecisionTools.com**

● : Standard Item △ : Phaseout Item (will be removed from next catalog)
Contact your local Kyocera sales engineer to upgrade old products to new technology

S-SVUC(B)-E Excellent Bar (Copying)

(Max. Overhang Length **L/D = ~5**)





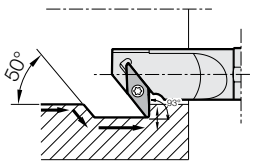
S25X-SVUBR/L16-34E shown above.

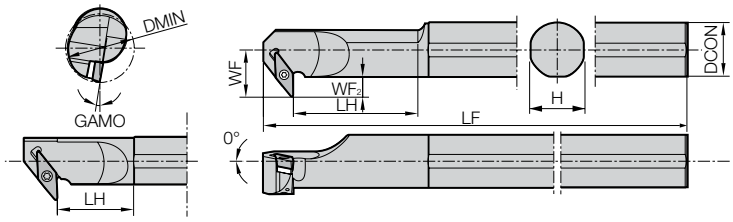
• Right-hand shown

• Left-hand Insert for Right-hand Toolholder, Right-hand Insert for Left-hand Toolholder

S-SVZB-E Excellent Bar (Back Boring)

(Max. Overhang Length **L/D = ~5**)





S25X-SVZBR/L16-34E shown above.

• Right-hand shown

• Right-hand Insert for Right-hand Toolholder, Left-hand Insert for Left-hand Toolholder

Toolholder Dimensions

	Part Number	Stock R	Stock L	Unit	Min. Bore Dia. DMIN	Dimensions DCON	H	LF	LH	WF	WF2	GAMO	Standard Corner-R (RE)	Coolant Hole	Spare Parts: Clamp Screw	Wrench	Shim	Shim Screw	Wrench
Excellent Bar	S08M-SVUCR/L1.5E	●		inch	0.63	0.50	0.46	6.00	1.10	0.433	0.217	8°	1/64	No	SB-2050TR	FT-6	-	-	-
	S10Q-SVUBR/L2E	●	●		0.79	0.63	0.59	7.00	1.28	0.610	0.315	8°	1/64	No	SB-2570TR	FT-8	-	-	-
	S12R-SVUBR/L2E	●	●		0.98	0.75	0.71	8.00	1.59	0.689	0.355	7°							
	S16X-SVUBR/L3E	●			1.34	1.00	0.97	9.00	1.97	0.689	0.195	13°	1/32	No	SB-40115TR	FT-15	SVN-32	SB-2050TR	FT-6
	S20S-SVUBR/L3E	●			1.57	1.25	1.18	10.00	3.31	1.080	0.472	9°							
	S10Q-SVZBR/L2E	●			0.79	0.63	0.59	7.00	1.50	0.610	0.315	8°	1/64	No	SB-2570TR	FT-8	-	-	-
	S12R-SVZBR/L2E	●			0.98	0.75	0.71	8.00	1.73	0.689	0.355	7°							
	S20S-SVZBR/L3E	●			1.57	1.25	1.18	10.0	2.85	1.08	0.472	9°		No	SB-40115TR	FT-15	SVN-32	SB-2050TR	FT-6

Applicable Inserts

Application	Finishing	Finishing	Finishing	Finishing-Medium	Finishing	Finishing / Precision	Finishing-Medium	Non-ferrous Metals	Non-ferrous Metals	Non-ferrous Metals	Hardened Materials
Ref. Page	B89, B92	B89, B92	B89	B89, B92	B90	B89	B90, B91	B93	B93	C28	C17
Insert / Toolholder	VF	PP	GP	HQ	R/L-F	R/L-FSF	R/L-Y	AH	R/L-A3	PCD	CBN
...-SVUCR/L1.5E	VCMT1515..	VCMT1515..	-	VCMT1515..	-	-	-	-	-	VCMT1515..	VCGW1515..
...-SVJBR/L2 ...-SVJBR/L2E ...-SVPBR/L2E ...-SVUBR/L2E ...-SVZBR/L2E	VBMT22..	VBMT22..	VBMT22..	VBMT22..	VBGT22..	VBET22..	VBGT22..	-	-	VBMT22..	VBGW22..
...-SVJBR/L3 ...-SVJBR/L3E ...-SVPBR/L3E ...-SVUBR/L3E ...-SVZBR/L3E	VBMT33..	VBMT33..	VBMT33..	VBMT33..	-	-	VBGT33..	VCGT33..	VCGT33..	VBMT33..	VBGW33..

Recommended Cutting Conditions **F116-F117**

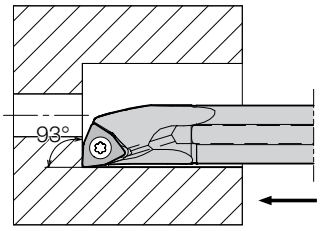
Applicable Sleeve **F106~ F108**

● : Standard Item △ : Phaseout Item (will be removed from next catalog)

Contact your local Kyocera sales engineer to upgrade old products to new technology

S/A-SWUB(P)-AE Excellent Bar (Boring)

(Max. Overhang Length **L/D = ~5.5**)



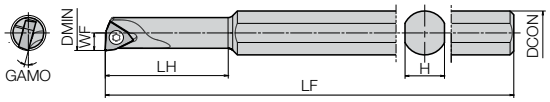
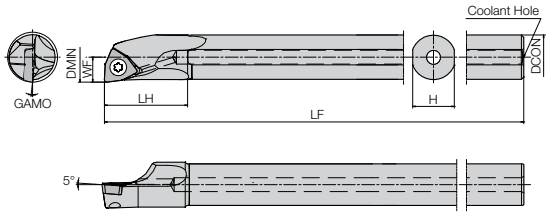


Fig.1



0° for A08X-SWUB☐08-10AE, A10L-SWUB☐08-12AE

Fig.2

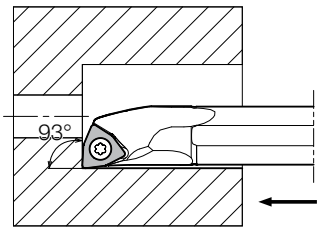
Shank Dia. DCON	Coolant Hole Dia.
Ø8mm	Ø2.5mm
Ø0.375" Ø10mm	Ø3.0mm
Ø0.500" Ø12mm	Ø4.0mm
Ø0.625" Ø16mm	Ø5.0mm
Ø0.750" Ø20mm	Ø5.0mm
Ø1.000"	Ø5.0mm

• Right-hand shown

• Left-hand Insert for Right-hand Toolholder, Right-hand Insert for Left-hand Toolholder

S-SWUB(P)-A Steel Bar (Boring)

(Max. Overhang Length **L/D = ~4**)



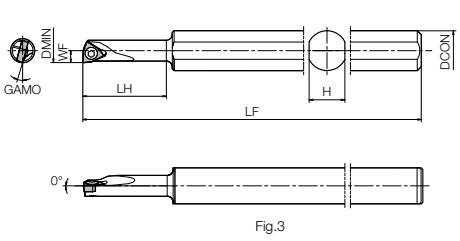
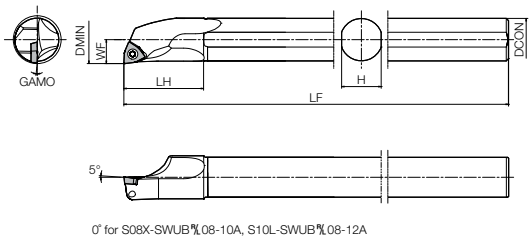


Fig.3



0° for S08X-SWUB☐08-10A, S10L-SWUB☐08-12A

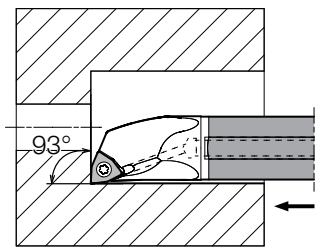
Fig.4

• Right-hand shown

• Left-hand Insert for Right-hand Toolholder, Right-hand Insert for Left-hand Toolholder

C/E-SWUB(P)-A(N) Carbide Shank Bar (Boring)

(Max. Overhang Length **L/D = ~7**)



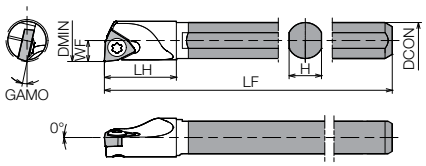
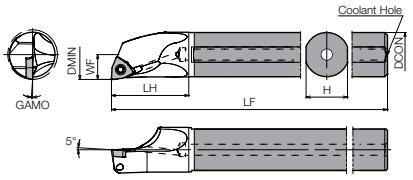


Fig.5



0° for E08L-SWUB☐08-10A, E10N-SWUB☐08-12A,
E10N-SWUB☐08-12A-2/3, E10N-SWUB☐08-12A-1/2

Fig.6

Shank Dia. DCON	Coolant Hole Dia.
Ø5mm	-
Ø6mm	-
Ø7mm	-
Ø8mm	Ø3mm
Ø10mm	Ø3mm
Ø12mm	Ø4mm
Ø16mm	Ø4mm
Ø20mm	Ø6mm

• Right-hand shown

• Left-hand Insert for Right-hand Toolholder, Right-hand Insert for Left-hand Toolholder

Toolholder Dimensions

	Part Number	Stock R	Stock L	Unit	Min. Bore Dia. DMIN	Dimensions DCON	H	LF	LH	WF	WF_2	GAMO	Standard Corner-R (RE)	Coolant Hole	Drawing	Spare Parts: Clamp Screw	Spare Parts: Wrench
Excellent Bar	S06H-SWUB□1.2AE	●	●	inch	0.240	0.375	0.336	4	0.827	0.118	-	15.0°	0.01	No	Fig.1	SB-2035TR	FT-6
	S06H-SWUB□1.5AE	●			0.312	0.375	0.336	4	1.102	0.157	-	15.0°					
	A06M-SWUB□1.5AE	●	●		0.472	0.375	0.336	6	0.787	0.236	-	10.0°	0.01	Yes	Fig.2	SB-2050TR	FT-6
	A08M-SWUP□2AE	●	●		0.630	0.500	0.461	6	0.945	0.276	-	4.0°	1/64	Yes	Fig.2	SB-2545TR	FT-8
	A10R-SWUP□3AE	●	●		0.770	0.625	0.586	8	1.181	0.354	-	3.5°	1/32	Yes	Fig.2	SB-4065TR	FT-15
	A12S-SWUP□3AE	●	●		0.930	0.750	0.711	10	1.417	0.413	-	2°					
	A16T-SWUP□3AE	●	●		1.200	1.000	0.961	12	1.811	0.531	-	0°					
	S10H-SWUB□06-06AE	●	●	mm	6	10	9	100	21	3.0	-	15.0°	0.2	No	Fig.1	SB-2035TR	FT-6
	S10H-SWUB□06-07AE	●	●		7	10	9	100	25	3.5	-	13.0°					
	S10H-SWUB□08-08AE	●	●		8	10	9	100	28	4.0	-	15.0°					
	A08X-SWUB□08-10AE	●	●		10	8	7	120	16	5.0	-	13.0°	0.2	Yes	Fig.2	SB-2050TR	FT-6
	A10L-SWUB□08-12AE	●	●		12	10	9	140	20	6.0	-	10.0°					
	A12M-SWUP□11-14AE	●	●		14	12	11	150	24	7.0	-	4.0°	0.4	Yes	Fig.2	SB-2545TR	FT-8
	A16Q-SWUP□11-18AE	●	●		18	16	15	180	30	9.0	-	1.0°					
	A16Q-SWUP□16-18AE	●	●		18	16	15	180	30	9.0	-	3.5°	0.8	Yes	Fig.2	SB-4065TR	FT-15
	A20R-SWUP□16-22AE	●	●		22	20	19	200	36	11.0	-	2.0°					
Steel	S10H-SWUB□06-06A	●	●	mm	6	10	9	100	21	3.0	-	15.0°	0.2	No	Fig.3	SB-2035TR	FT-6
	S10H-SWUB□06-07A	●	●		7	10	9	100	25	3.5	-	13.0°					
	S10H-SWUB□08-08A	●	●		8	10	9	100	28	4.0	-	15.0°					
	S08X-SWUB□08-10A	●	●		10	8	7	120	16	5.0	-	13.0°	0.2	No	Fig.4	SB-2050TR	FT-6
	S10L-SWUB□08-12A	●	●		12	10	9	140	20	6.0	-	10.0°					
	S12M-SWUP□11-14A	●	●		14	12	11	150	24	7.0	-	4.0°	0.4	No	Fig.4	SB-2545TR	FT-8
	S16Q-SWUP□11-18A		●		18	16	15	180	30	9.0	-	1.0°					
	S16Q-SWUP□16-18A	●	●		18	16	15	180	30	9.0	-	3.5°	0.8	No	Fig.4	SB-4065TR	FT-15
	S20R-SWUP□16-22A	●	●		22	20	19	200	36	11.0	-	2.0°					
Carbide	C05H-SWUB□06-06AN	●	●	mm	6	5	4.4	100	9	3.0	-	15.0°	0.2	No	Fig.5	SB-2035TR	FT-6
	C06J-SWUB□06-07AN	●	●		7	6	5.4	110	10	3.5	-	13.0°					
	C07K-SWUB□08-08AN	●	●		8	7	6.4	125	11	4.0	-	15.0°					
	E08L-SWUB□08-10AN	●	●		10	8	7	140	14	5.0	-	13.0°	0.2	Yes	Fig.6	SB-2050TR	FT-6
	E10N-SWUB□08-12AN	●	●		12	10	9	160	18	6.0	-	10.0°					
	E10N-SWUB□08-12AN-2/3	●			12	10	9	105	18	6.0	-	10.0°					
	E10N-SWUB□08-12AN-1/2	●			12	10	9	80	18	6.0	-	10.0°					
	E12Q-SWUP□11-14A	●	●		14	12	11	180	23	7.0	-	4.0°	0.4	Yes	Fig.6	SB-2545TR	FT-8
	E12Q-SWUP□11-14A-2/3	●			14	12	11	120	23	7.0	-	4.0°					
	E12Q-SWUP□11-14A-1/2	●			14	12	11	90	23	7.0	-	4.0°					
	E16X-SWUP□11-18A	●	●		18	16	15	220	28	9.0	-	1.0°					
	E16X-SWUP□11-18A-2/3	●			18	16	15	145	28	9.0	-	1.0°					
	E16X-SWUP□11-18A-1/2	●			18	16	15	110	28	9.0	-	1.0°					
	E16X-SWUP□16-18A	●	●		18	16	15	220	28	9.0	-	3.5°	0.8	Yes	Fig.6	SB-4065TR	FT-15
	E16X-SWUP□16-18A-2/3	●			18	16	15	145	28	9.0	-	3.5°					
	E16X-SWUP□16-18A-1/2	●			18	16	15	110	28	9.0	-	3.5°					
	E20S-SWUP□16-22A	●	●		22	20	19	250	32	11.0	-	2.0°					
	E20S-SWUP□16-22A-2/3	●			22	20	19	165	32	11.0	-	2.0°					
	E20S-SWUP□16-22A-1/2	●			22	20	19	125	32	11.0	-	2.0°					

Applicable Inserts

Application	Minute D.O.C.	Finishing	Finishing	Finishing	Finishing-Medium	Finishing	Finishing	Cast Iron	Non-ferrous Metals	Hardened Materials
Ref. Page	B97	B97	B99	B97	B99	B97, B98	B98	B98, B99	C29	C18
Insert / Toolholder	CF	□-PF	GP	□-DP	HQ	□-F	□-P	Without Chipbreaker	PCD	CBN
...-SWUB□1.2AE... ...-SWUB□06-...	WBGT121..	WBGT121..	-	WBMT121..	-	WB□T121..	-	WBGW121..	WBMT121..	WBGW121..
...-SWUB□1.5AE... ...-SWUB□08-...	-	WBGT1515..	-	WBMT1515..	-	WB□T1515..	WBET1515..	WBGW1515..	WBMT1515..	WBGW1515..
...-SWUP□2AE... ...-SWUP□11-...	-	-	WPMT215..	-	WPMT215..	-	-	WPGW215..	WPMT215..	-
...-SWUP□3AE... ...-SWUP□16-...	-	-	WPMT32..	-	WPMT32..	-	-	WPGW32..	-	-

Recommended Cutting Conditions ➡ **F116-F117**

Applicable Sleeve ➡ **F107-F110**

● : Standard Item △ : Phaseout Item (will be removed from next catalog)

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(Technical Support) **800.823.7284 - Option 2**

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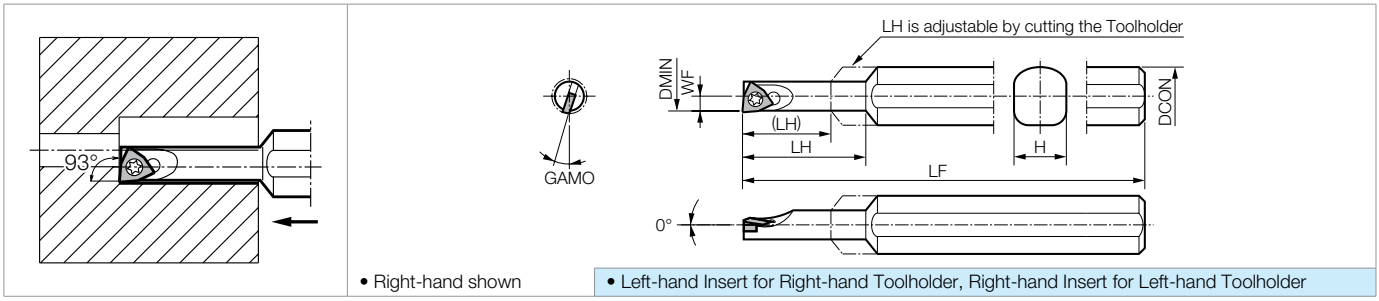
S-SWUB Steel Bar (Boring / Internal Facing)

(Max. Overhang Length **L/D = ~3**)



• Right-hand shown

• Left-hand Insert for Right-hand Toolholder, Right-hand Insert for Left-hand Toolholder

Toolholder Dimensions

	Part Number	Stock R	Stock L	Unit	Min. Bore Dia. DMIN	Dimensions DCON	H	LF	LH	WF	GAMO	Standard Corner-R (RE)	Coolant Hole	Spare Parts: Clamp Screw	Spare Parts: Wrench
Steel	**S06H-SWUBR/L1.2**	●	●	inch	0.240	0.375	0.356	4.00	0.825	0.115	15°	0.004	No	SB-2040TR	FT-6
Steel	**S06X-SWUBR/L1.5**	●		inch	0.312	0.375	0.356	4.33	1.102	0.156	15°	1/64	No	SB-2050TR	FT-6

Applicable Inserts

Application	Minute D.O.C.	Finishing	Finishing	Finishing	Finishing	Cast Iron	Non-ferrous Metals	Hardened Materials
Ref. Page	B97	B97	B97	B97, B98	B98	B98, B99	C29	C18
Insert / Toolholder	CF	R/L-PF	R/L-DP	R/L-F	R/L-P	Without Chipbreaker	PCD	CBN
...-SWUBR/L1.2	WBGT121..	WBGT121..	WBMT121..	WB□T121..	-	WBGW121..	WBMT121..	WBGW121..
...-SWUBR/L1.5	-	WBGT1515..	WBMT1515..	WB□T1515..	WBET1515..	WBGW1515..	WBMT1515..	WBGW1515..

Recommended Cutting Conditions → **F116-F117**

Applicable Sleeve → **F107-F110**

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(Technical Support) **800.823.7284 - Option 2**
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● : Standard Item △ : Phaseout Item (will be removed from next catalog)
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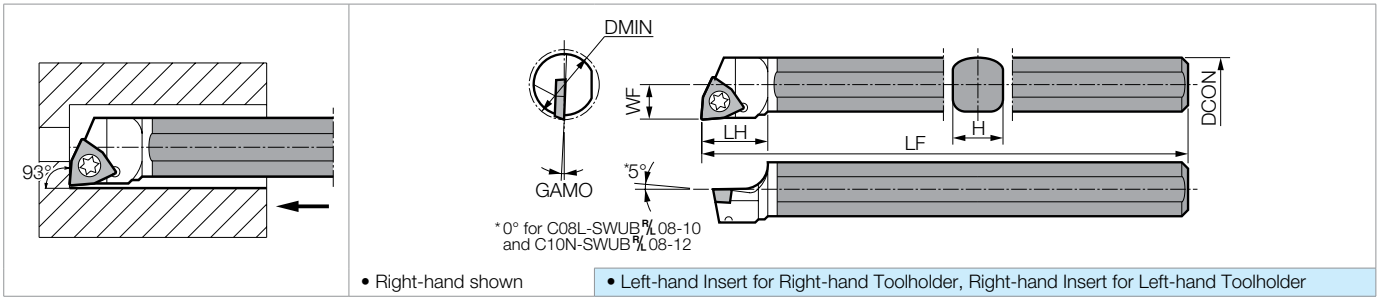
C-SWUB Carbide Shank Bar (Boring)

(Max. Overhang Length **L/D = ~7**)



• Right-hand shown

• Left-hand Insert for Right-hand Toolholder, Right-hand Insert for Left-hand Toolholder

Toolholder Dimensions

	Part Number	Stock R	Stock L	Unit	Min. Bore Dia. DMIN	Dimensions DCON	H	LF	LH	WF	GAMO	Standard Corner-R (RE)	Coolant Hole	Spare Parts: Clamp Screw	Spare Parts: Wrench
Carbide	**C0325K-SWUB□1.2**	●	●	inch	0.240	0.203	0.180	5.00	0.50	0.118	15°	1/64	No	SB-2040TR	FT-6
	C045K-SWUB□1.5	●	●		0.312	0.281	0.252	5.00	0.55	0.157	15°	1/64		SB-2050TR	FT-6

Applicable Inserts

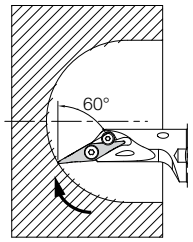
Application	Minute D.O.C.	Finishing	Finishing	Finishing	Finishing	Cast Iron	Non-ferrous Metals	Hardened Materials
Ref. Page	B97	B97	B97	B97, B98	B98	B98, B99	C29	C18
Insert / Toolholder	CF	□-PF	□-DP	□-F	□-P	Without Chipbreaker	PCD	CBN
...-SWUB□1.2	WBGT121..	WBGT121..	WBMT121..	WB□T121..	-	WBGW121..	WBMT121..	WBGW121..
...-SWUB□1.5	-	WBGT1515..	WBMT1515..	WB□T1515..	WBET1515..	WBGW1515..	WBMT1515..	WBGW1515..

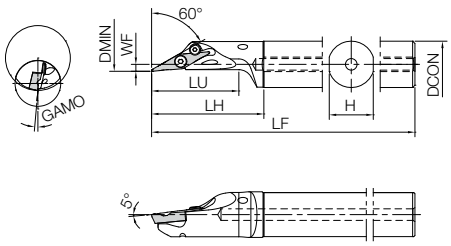
Recommended Cutting Conditions **F116-F117**

Applicable Sleeve **F107-F110**

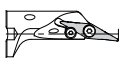
A-SZJB-AE Excellent Bar (Internal Spherical Machining / Internal Facing / Copying) NEW

(Max. Overhang Length **L/D = ~5.5**)

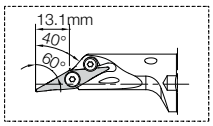




For ZBMT13T304R-GF -15D, the right-hand holder (R) is applicable.



Left-hand (L) shown above



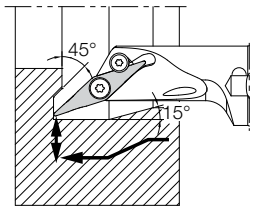
Shank Diameter	Coolant Hole Diameter
ø20mm	ø5mm
ø25mm	
ø32mm	

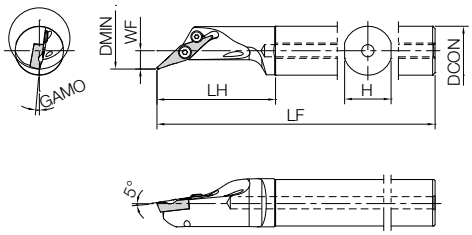
• Right-hand shown

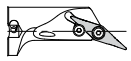
• When using ZBMT13T304R-GF-15D, use a Right-hand holder only

A-SZXB-AE Excellent Bar (Internal Facing / Copying / Undercutting) NEW

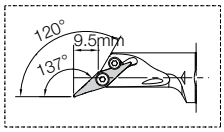
(Max. Overhang Length **L/D = ~5.5**)







Left-hand (L) shown above

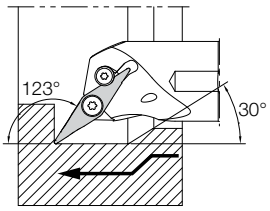


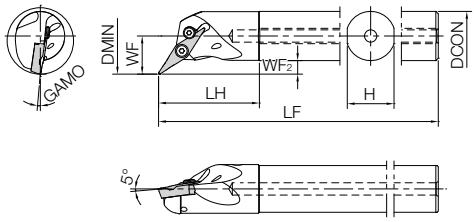
Shank Diameter	Coolant Hole Diameter
ø20mm	ø5mm
ø25mm	
ø32mm	

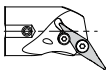
• Right-hand shown

A-SZQB-AE Excellent Bar (Copying / Undercutting) NEW

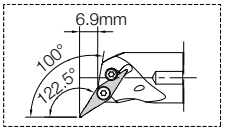
(Max. Overhang Length **L/D = ~5.5**)







Left-hand (L) shown above

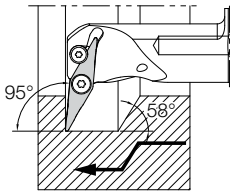


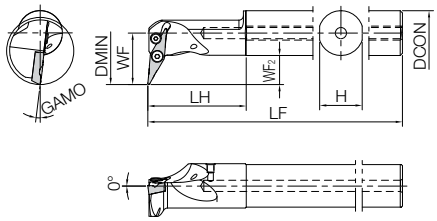
Shank Diameter	Coolant Hole Diameter
ø20mm	ø5mm
ø25mm	
ø32mm	

• Right-hand shown

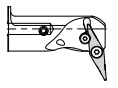
A-SZLB-AE Excellent Bar (Copying) NEW

(Max. Overhang Length **L/D = ~5.5**)





For ZBMT13T304R-GF -15D, the left hand holder (L) is applicable



Left-hand (L) shown above

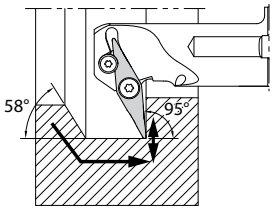
Shank Diameter	Coolant Hole Diameter
ø20mm	ø5mm
ø25mm	
ø32mm	

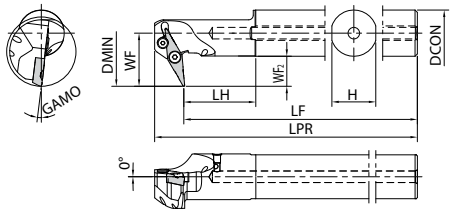
• Right-hand shown

• When using ZBMT13T304R-GF-15D, use a Left-hand holder only

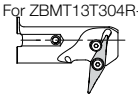
A-SZZB-AE Excellent Bar (Back Boring) NEW

(Max. Overhang Length **L/D = ~5.5**)

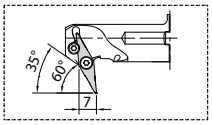




For ZBMT13T304R-GF -15D, the right hand holder (R) is applicable .



Left-hand (L) is the above shape



Shank Diameter	Coolant Hole Diameter
ø20mm	ø5mm
ø25mm	
ø32mm	

• Right-hand shown

• When using ZBMT13T304R-GF-15D, use a Right-hand holder only

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● : Standard Item △ : Phaseout Item (will be removed from next catalog)
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Toolholder Dimensions

	Part Number	Stock R	Stock L	Min. Bore Dia. DMIN	Dimensions (mm) DCON	H	LPR	LF	LU	LH	WF	WF_2	GAMO	Standard Corner-R (RE)	Coolant Hole	Spare Parts: Clamp Screw	Spare Parts: Wrench	Spare Parts: Plug
																		
Excellent Bar	A20R-SZJB□13-28AE	●	●	28	20	19		200	37.5	48	3.0	-	5°	0.4	Yes	SB-3079TR	FT-8	HS3X3
	A25S-SZJB□13-30AE	●	●	30	25	24	-	250	47	58	3.5	-				Recommended tightening torque 1.2 Nm		
	A32S-SZJB□13-40AE	●	●	40	32	31		250	61.5	72	3.5	-						HS4X4
	A20R-SZXB□13-25AE	●	●	25	20	19		200	37.5	48	7.5	-	5°	0.4	Yes	SB-3079TR	FT-8	HS3X3
	A25S-SZXB□13-30AE	●	●	30	25	24	-	250	45.2	58	7	-				Recommended tightening torque 1.2 Nm		
	A32S-SZXB□13-40AE	●	●	40	32	31		250	60.2	74	7	-						HS4X4
	A20R-SZQB□13-27AE	●	●	27	20	19		200	-	41	15.5	5.5	5°	0.4	Yes	SB-3079TR	FT-8	HS3X3
	A25S-SZQB□13-32AE	●	●	32	25	24	-	250	-	51	18	5.5				Recommended tightening torque 1.2 Nm		
	A32S-SZQB□13-40AE	●	●	40	32	31		250	-	54	22.5	6.5						HS4X4
	A20R-SZLB□13-30AE	●	●	30	20	19		200	-	42	23	13	7°	0.4	Yes	SB-3079TR	FT-8	HS3X3
	A25S-SZLB□13-34AE	●	●	34	25	24	-	250	-	64	25.5	13				Recommended tightening torque 1.2 Nm		
	A32S-SZLB□13-40AE	●	●	40	32	31		250	-	86	29	13						HS4X4
	A20R-SZZB□13-30AE	●	●	30	20	19	200	187	-	42	23	13	7°	0.4	Yes	SB-3079TR	FT-8	HS3X3
	A25S-SZZB□13-34AE	●	●	34	25	24	250	237	-	58	25.5	13				Recommended tightening torque 1.2 Nm		
	A32S-SZZB□13-40AE	●	●	40	32	31	250	237	-	74	29	13						HS4X4

Minimum bore dia. shown is when installing inserts with the standard corner-R (RE)
When machining with an insert other than the standard corner-R (RE), check for interference.

Applicable Inserts

Application	25° Tip Angle	15° Tip Angle
Ref. Page	B101	B101
Insert / Toolholder	GF 	GF-15D 
A...-SZJB□... A...-SZXB□... A...-SZQB□... A...-SZLB□... A...-SZZB□...	ZBMT13T3	ZBMT13T3

Recommended Cutting Conditions ➡ **B101**

When mounting the insert (Tightening torque: 1.2 Nm)

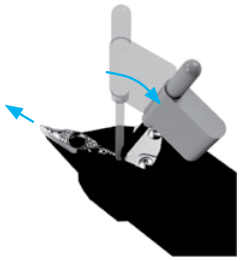


1. Tighten the main screw with the insert pressed against the contact surface with fingertips.



2. Tighten the side screw to complete the installation.

When removing the insert



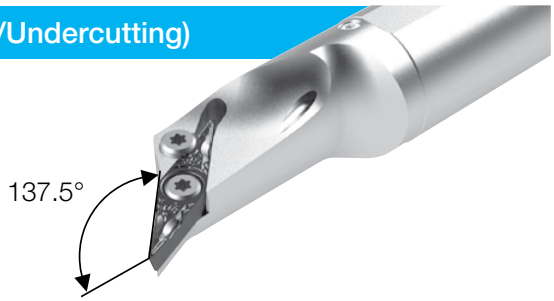
Remove the two screws and put the wrench into the gap at the back end of the insert. It can be easily removed by pushing out the insert as shown above.

Unique Cutting Angle A-SZXB-AE (Internal Facing/Copying/Undercutting)

Features

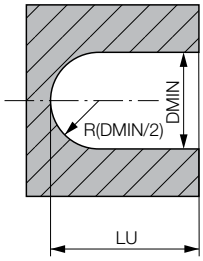
· Chatter-resistant shape
The insert is placed near the center of the shank to ensure the thickness of the lower jaw of the insert.

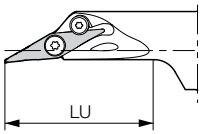
· User-friendly design
The holder width (WF + Neck radius) is small, and it is easy to apply to the narrow gap of the workpiece (Minimum cutting dia. DMIN: Determined by R near the holder edge).



A...SZJB-AE

Application Range

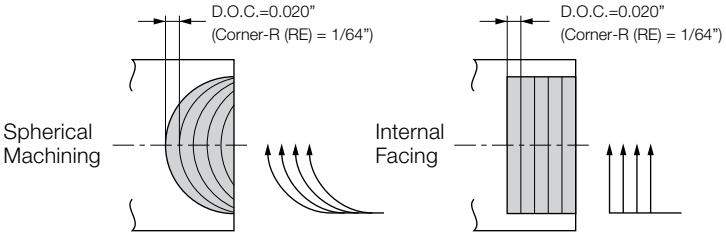




DMIN : Ø28mm - Ø40mm

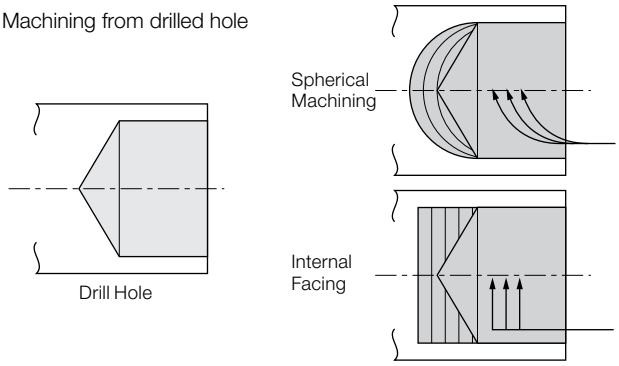
Applications

Without pre-drilled hole



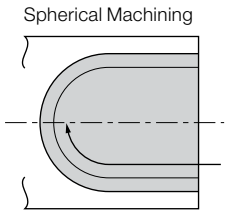
* f should be 0.002 ipr or less during internal facing.

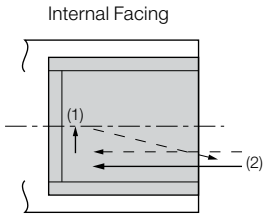
Machining from drilled hole



* f should be 0.002 ipr or less during internal facing.

Finishing





Machining Process

1.Finish the internal face first.

2.Next, finish the internal surface.

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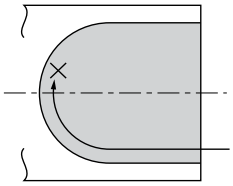
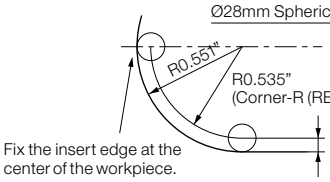
A...SZJB-AE

Caution

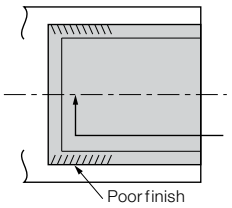


Internal spherical machining and internal facing
(Especially internal spherical machining)
When machining past the center of the workpiece,
insert may break.



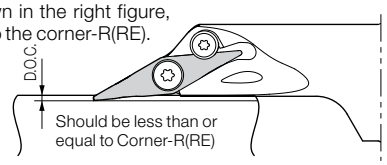
Fix the insert edge at the center of the workpiece.

Adjust the machining program to radius minus the value of corner-R(RE).



This type of machining is possible,
but the chips might scratch the surface.

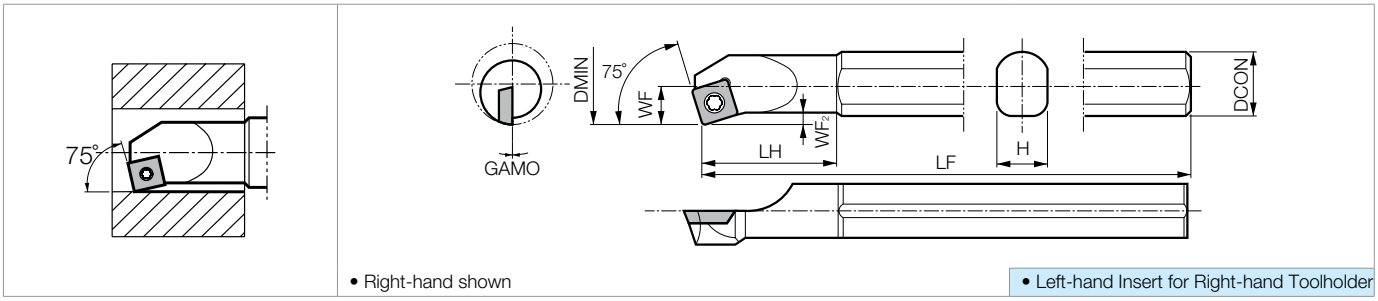
When internal copying as shown in the right figure,
keep D.O.C. less than or equal to the corner-R(RE).



[Burrs may occur, if D.O.C. is Corner-R(RE) and more]

S-SSKP (Boring)

(Max. Overhang Length **L/D = ~3**)



• Right-hand shown

• Left-hand Insert for Right-hand Toolholder

Toolholder Dimensions

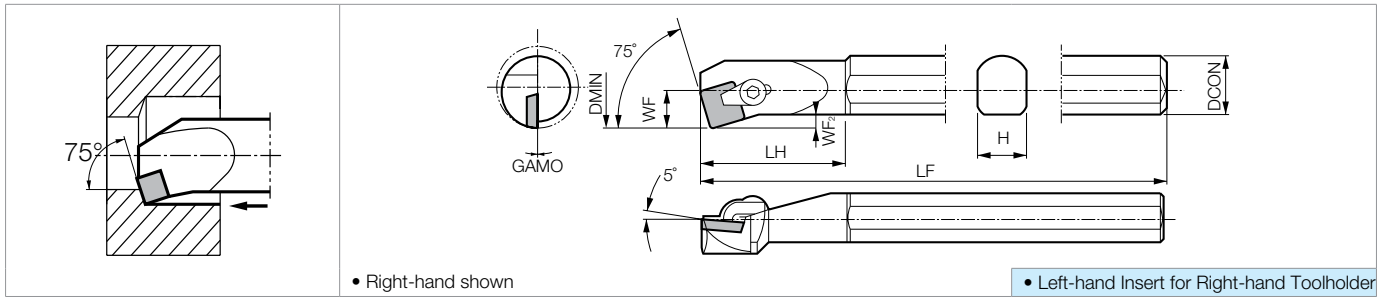
Part Number	Stock	Unit	Min. Bore Dia.	Dimensions						GAMO	Standard Corner-R (RE)	Spare Parts	
												Clamp Screw	Wrench
			DMIN	DCON	H	LF	LH	WF	WF_2				
S16Q-SSKPR09-20	●	mm	20	16	14	180	30	10.0	2.0	-3°	0.8	SB-4TR	FT-15

Applicable Inserts

Application	Finishing
Ref. Page	B75
Insert / Toolholder	L
...-SSKP℀09...	SPGH32..

S-CSKP (Boring)

(Max. Overhang Length **L/D = ~3**)



• Right-hand shown

• Left-hand Insert for Right-hand Toolholder

Toolholder Dimensions

Part Number	Stock	Unit	Min. Bore Dia.	Dimensions						GAMO	Standard Corner-R (RE)	Spare Parts		
												Clamp Set	Wrench	
			DMIN	DCON	H	LF	LH	WF	WF_2					
S16N-CSKPR09-20	●	mm	20	16	14	160	40	10.0	2.0	0°	0.8	CPS-2	FH-2.5	-
S20Q-CSKPR09-27	●		27	20	18	180	45	13.5	3.5	0°				
S25X-CSKPR12-34	●		34	25	23	220	60	17.0	4.5	0°	0.8	CPS-3	-	LW-3

Applicable Inserts

Application	Medium	Medium	Finishing-Medium	Cast Iron	Cast Iron	Non-ferrous Metals
Ref. Page	B75	B75	B75	B75	B115	C29
Insert / Toolholder	G	Standard	℀	Without Chipbreaker	Ceramic	PCD
...-CSKPR09...	SPMR32..	SPMR32..	SPGR32..	SPM32.. SPG32..	SPG32..	-
...-CSKPR12...	SPMR42..	SPMR42..	SPGR42..	SPM42.. SPG42..	SPG42..	SPG42..

Recommended Cutting Conditions **F116-F117**

Applicable Sleeves **F109-F110**

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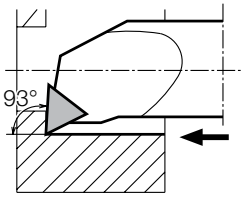
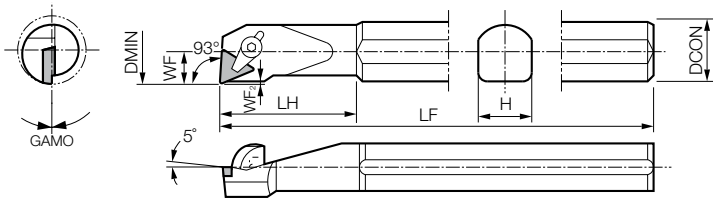
S-CTUP Steel Bar (Boring)

(Max. Overhang Length **L/D = ~3**)





• Right-hand shown

• Left-hand Insert for Right-hand Toolholder, Right-hand Insert for Left-hand Toolholder

Toolholder Dimensions

Part Number	Stock		Unit	Min. Bore Dia.	Dimensions						GAMO	Standard Corner-R (RE)	Spare Parts					
													Clamp Set		Wrench		Shim	Shim Screw
	R	L		DMIN	DCON	H	LF	LH	WF	WF_2								
S10X-CTUP☐2	●	□	inch	0.625	0.625	0.584	7.00	1.25	0.313	0.03	0°	1/64	-	CPS-2S	FT-15	-	-	-
S12X-CTUP☐2	●	□		1.060	0.750	0.710	7.00	1.50	0.520	0.05	0°	1/64	-	CPS-2	-	LW-2.5		
S16R-CTUP☐3	●	□		1.350	1.000	0.910	8.00	2.10	0.669	0.04	0°	1/32	-	CPS-3	-	LW-3	-	-
S12L-CTUP☐09-16	●		mm	16	12	11	140	32	8.0	0.5	0°	0.4	CPS-1	-	FH-2	-	-	-
S16N-CTUP☐11-20	●	●		20	16	14	160	30	10.0	0.5	0°	0.4	-	CPS-2	FH-2.5	-	-	-
S20Q-CTUP☐11-27	●	●		27	20	18	180	40	13.5	1.3	0°							
S25X-CTUP☐16-34	●	●		34	25	23	220	60	17.0	1.0	0°	0.8	-	CPS-3	-	LW-3	-	-
S32S-CTUP☐16-43	●	●		43	32	30	250	70	21.5	1.0	0°	0.8	-	CPS-3	-	LW-3	KPT-32	SP3X10
S40X-CTUP☐16-50	●	●		50	40	37	315	80	25.0	1.0	0°							

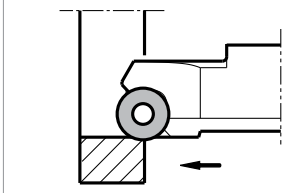
Applicable Inserts

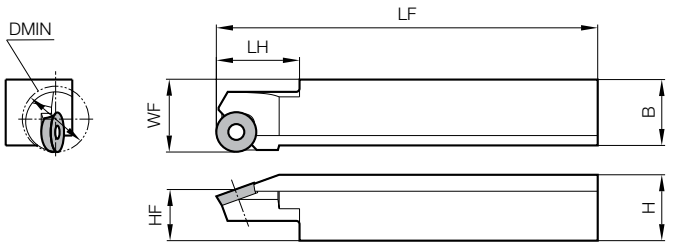
Application	Finishing	Finishing-Medium	Medium	Medium	Finishing	Finishing-Medium	Cast Iron	Cast Iron	Non-ferrous Metals	Hardened Materials
Ref. Page	B87	B87	B87	B87	B87	B88	B88	B115	C29	C18
Insert / Toolholder	GP	HQ	G	Standard	☐-F	☐-□	Without Chipbreaker	Ceramic	PCD	CBN
...-CTUPR09-...	-	-	TPMR1815..	-	TPGR1815..	-	TPG1815..	-	-	-
...-CTUP☐2 ...-CTUP☐11-...	TPMR22..	TPMR22..	TPMR22..	TPMR22..	-	TPGR22..	TPM22.. TPG22..	TPG22..	TPG22..	TPG22..
...-CTUP☐3 ...-CTUP☐16-...	TPMR32..	TPMR32..	TPMR32..	TPMR32..	-	TPGR32..	TPM32.. TPG32..	TPG32..	TPG32..	TPG32..

Recommended Cutting Conditions **F116-F117**

Applicable Sleeves **F108-F110**

SRCP-B (Boring)



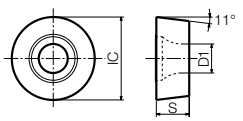


• Right-hand shown

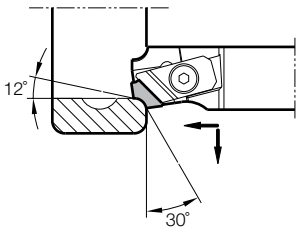
Toolholder Dimensions

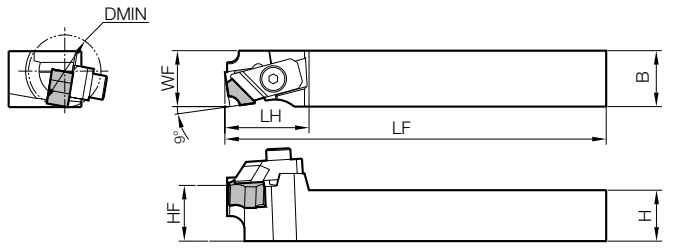
Part Number		Stock		Min. Bore Dia.	Dimensions (mm)						Spare Parts			Applicable Inserts → B105
											Clamp Screw	Wrench		
		R	L	DMIN	H	HF	B	LF	LH	WF				
SRCP□	2020B-12-A20	●	●	20	20	15.5	20	125	25	22	SB-4TR	FT-15	-	RPMT42M0-BB
	2525B-16-A32	●		32	25	20.0	25	150	31	27	SB-5090TR	-	LTW-20	RPMT1604M0-BB

Applicable Inserts

Insert			Part Number		Dimensions (mm)		
					IC	S	D1
			RPMT	1203M0-BB	12.0	3.18	4.4
				1604M0-BB	16.0	4.76	5.5

CBSN-B (Internal Corner Filleting)





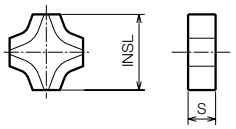
• Right-hand shown

Toolholder Dimensions

Part Number		Stock		Min. Bore Dia.	Dimensions (mm)						Spare Parts		Applicable Inserts → B105
											Clamp Set	Wrench	
		R	L	DMIN	H	HF	B	LF	LH	WF			
CBSN□	2020B-12-A20	●		20	20	21	20	125	32	20	CP-RC□	LW-5	SNMF1204○○-21
	2525B-12-A20	●		20	25	26	25	150	32	25			

· Clamp Set: CP-RCR for Right-hand Toolholder, and CP-RCL for Left-hand Toolholder.

Applicable Inserts

Insert				Part Number		Dimensions (mm)			
						INSL	S	CDX	RE
				SNMF	120406-21	12.70	4.76	1.5	0.6
					120410-21			3.0	1.0
					120416-21			3.1	1.6
					120421-21			3.2	2.1
					120426-21			3.3	2.6

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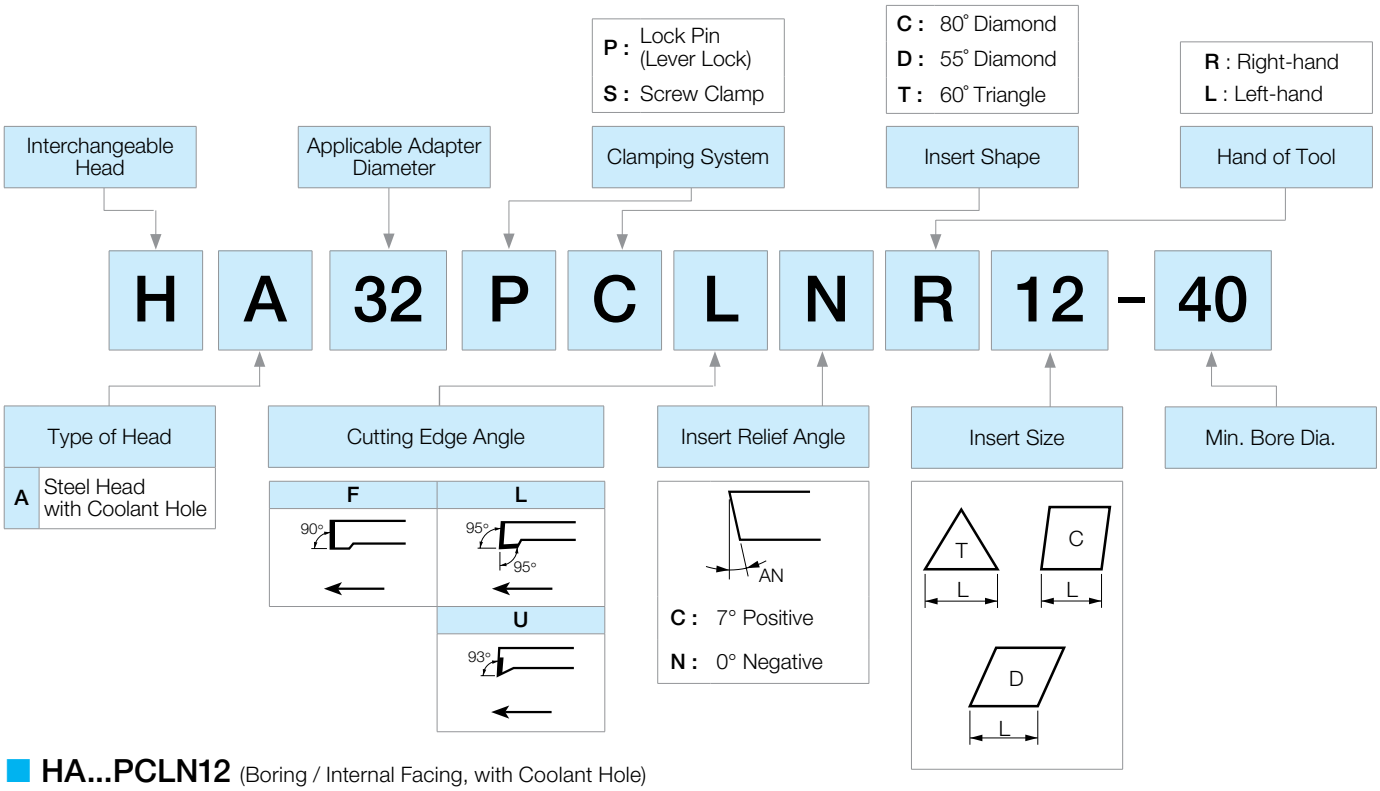
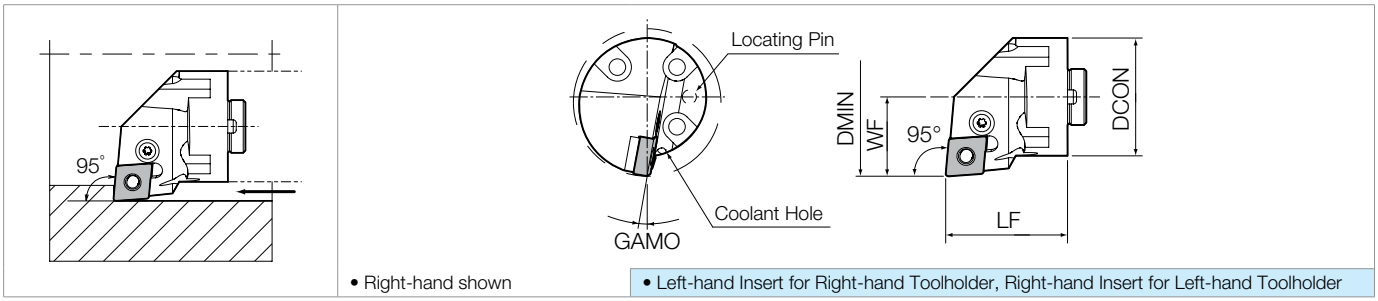
Identification System for Interchangeable Heads



HA...PCLN12 (Boring / Internal Facing, with Coolant Hole)



• Right-hand shown

• Left-hand Insert for Right-hand Toolholder, Right-hand Insert for Left-hand Toolholder

Toolholder Dimensions

Part Number	Stock		Min. Bore Dia.	Dimensions (mm)			GAMO	Standard Corner-R(RE)	Spare Parts						Applicable Boring Adapter ➡ F90
	R	L	DMIN	DCON	LF	WF			Lever	Lock Screw	Shim	Shim Pin	*Punch	Wrench	
HA32PCLNR/L12-40	●	●	40	32	41	22	10°	0.8	LL-2K	LS-2P	LC-4K	LSP-3K	*PC-2K	DTPM-15	AD32U
HA40PCLNR/L12-50	●	●	50	40	41	27	10°								AD40V
HA50PCLNR/L12-63	●	●	63	50	41	35	10°								AD50W

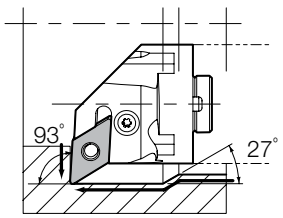
* Punch (*PC-2K): Not included. Purchase separately.

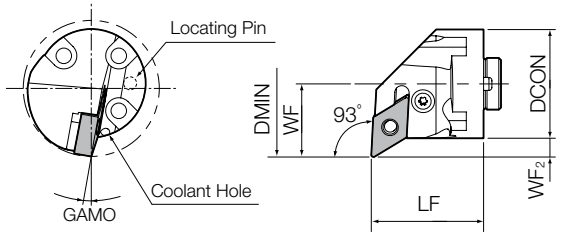
Applicable Inserts

Toolholder Part Number	Insert Part Number		Ref. to Page			
			Cermet / Coated Carbide / Carbide	Ceramic	PCD	CBN
HA32PCLNR/L12-40	CN□A CN□G CN□M	43..	➡ B16~B22	➡ B108	➡ C23	➡ C6, C7
HA40PCLNR/L12-50						
HA50PCLNR/L12-63						

Recommended Cutting Conditions ➡ F116-F117

HA...PDUN15 (Copying, with Coolant Hole)





• Right-hand shown

• Left-hand Insert for Right-hand Toolholder, Right-hand Insert for Left-hand Toolholder

Toolholder Dimensions

Part Number	Stock		Min. Bore Dia.	Dimensions (mm)				GAMO	Standard Corner-R (RE)	Spare Parts						Applicable Boring Adapter ➡ F90
	R	L	DMIN	DCON	LF	WF	WF2			Lever	Lock Screw	Shim	Shim Pin	*Punch	Wrench	
HA32PDUN□15-43	●	●	43	32	41	25	9	12°	0.8	LL-3K	LS-3P	LD-4K43 (LD-4K)	LSP-3K	*PC-2K	DTPM-15	AD32U
HA40PDUN□15-50	●	●	50	40	41	27	7	10°								AD40V
HA50PDUN□15-63	●	●	63	50	41	35	10	10°								AD50W

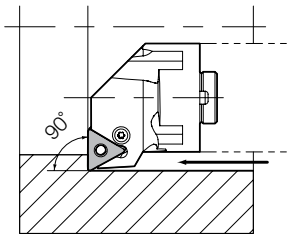
* Punch (*PC-2K): Not included. Purchase separately.
* Shim:LD-4K43 is attached to Toolholder. When using DN□□1506 Insert, purchase LD-4K separately.

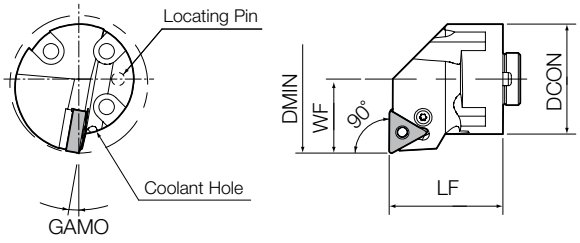
Applicable Inserts

Toolholder Part Number	Insert Part Number				Ref. to Page			
	Shim: LD-4K43		Shim: LD-4K		Cermet / Coated Carbide / Carbide	Ceramic	PCD	CBN
HA32PDUN□15-43 HA40PDUN□15-50 HA50PDUN□15-63	DN□A DN□G DN□M	43..	DN□A DN□G DN□M	44..	➡ B23~B30	➡ B109	➡ C23	➡ C8, C9

Recommended Cutting Conditions ➡ F116-F117

HA...PTFN16 (Internal, with Coolant Hole)





• Right-hand shown

• Left-hand Insert for Right-hand Toolholder, Right-hand Insert for Left-hand Toolholder

Toolholder Dimensions

Part Number	Stock		Min. Bore Dia.	Dimensions (mm)			GAMO	Standard Corner-R (RE)	Spare Parts						Applicable Boring Adapter ➡ F90
	R	L	DMIN	DCON	LF	WF			Lever	Lock Screw	Shim	Shim Pin	*Punch	Wrench	
HA32PTFN□16-40	●	●	40	32	41	22	10°	0.8	LL-1K	LS-1P	LT-3K	LSP-2K	*PC-2K	DTPM-15	AD32U
HA40PTFN□16-50	●	●	50	40	41	27	10°								AD40V
HA50PTFN□16-63	●	●	63	50	41	35	8°								AD50W

* Punch (*PC-2K): Not included. Purchase separately.

Applicable Inserts

Toolholder Part Number	Insert Part Number		Ref. to Page			
			Cermet / Coated Carbide / Carbide	Ceramic	PCD	CBN
HA32PTFN□16-40 HA40PTFN□16-50 HA50PTFN□16-63	TN□A TN□G TN□M	33..	➡ B36~B43	➡ B113	➡ C23	➡ C11

Reference

Wrenches (LTP-10, LTP-15) are Torx Plus.
The size of Torx Plus is engraved on the long shaft.

Wrench Part Number	LTP-10	LTP-15
Engraved Size	10IP	15IP

Recommended Cutting Conditions
➡ F116-F117

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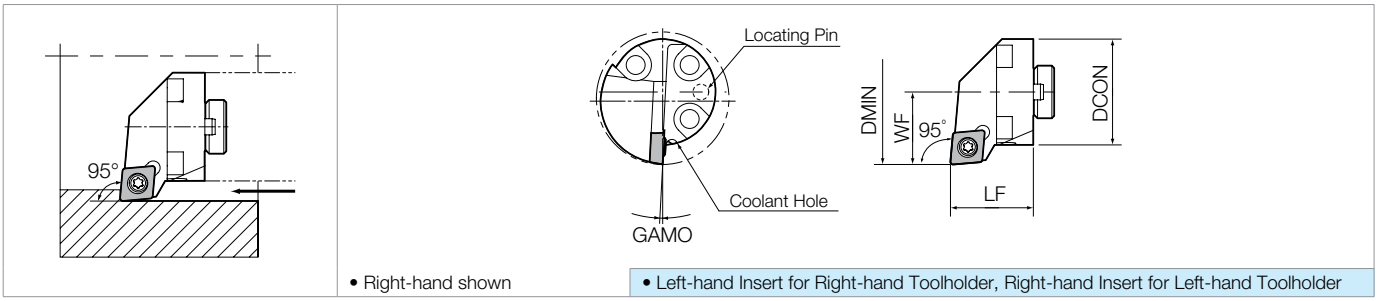
HA...SCLC09 (Boring / Internal Facing, with Coolant Hole)



• Right-hand shown

• Left-hand Insert for Right-hand Toolholder, Right-hand Insert for Left-hand Toolholder

Toolholder Dimensions

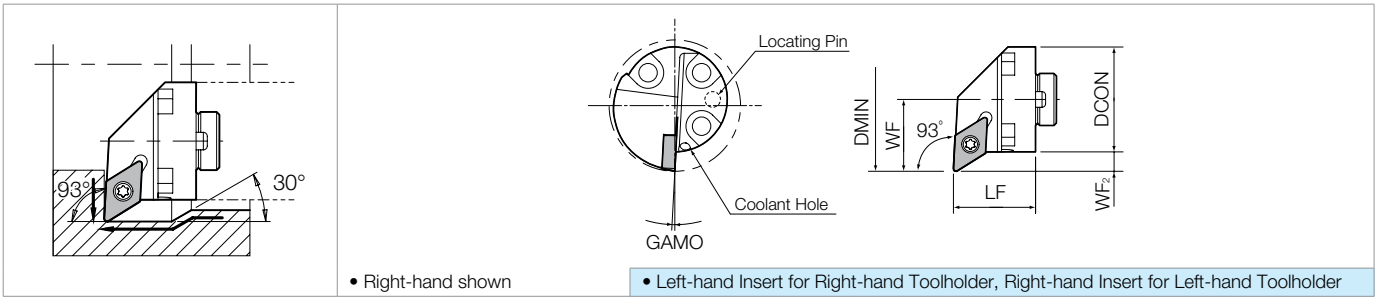
Part Number	Stock		Min. Bore Dia.	Dimensions (mm)			GAMO	Standard Corner-R (RE)	Spare Parts		Applicable Boring Adapter ➡ F90	Applicable Inserts
	R	L	DMIN	DCON	LF	WF			Clamp Screw	Wrench		
HA32SCLCR/L09-40	●	●	40	32	25	22	3°	0.8	SB-3580TR	FT-15	AD32U	CC..325..

Applicable Inserts

Insert Part Number	Ref. to Page		
	Cermet / Coated Carbide / Carbide	PCD	CBN
CC..325..	➡ B53~B55, B57~B60	➡ C24	➡ C14

Recommended Cutting Conditions ➡ F116-F117

HA...SDUC11 (Copying, with Coolant Hole)



• Right-hand shown

• Left-hand Insert for Right-hand Toolholder, Right-hand Insert for Left-hand Toolholder

Toolholder Dimensions

Part Number	Stock		Min. Bore Dia.	Dimensions (mm)				GAMO	Standard Corner-R (RE)	Spare Parts		Applicable Boring Adapter ➡ F90	Applicable Inserts
	R	L	DMIN	DCON	LF	WF	WF2			Clamp Screw	Wrench		
HA32SDUCR/L11-40	●	●	40	32	25	22	6	3°	0.8	SB-3580TR	FT-15	AD32U	DC..325..

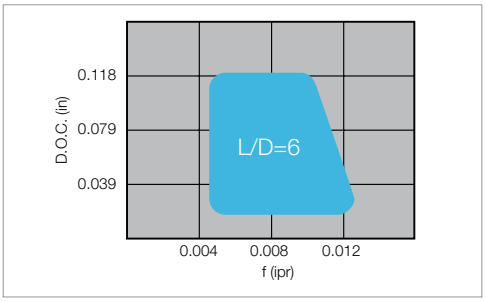
Applicable Inserts

Insert Part Number	Ref. to Page		
	Cermet / Coated Carbide / Carbide	PCD	CBN
DC..325..	➡ B62~B71	➡ C25	➡ C15

Recommended Cutting Conditions ➡ F116-F117

Possible Machining Area (Guide-Line for Overhang Length of AD Bars)

(4140 Vc = 500sfm D.O.C. = 0.020~0.118" f = 0.004 ~0.012ipr TNMG332)



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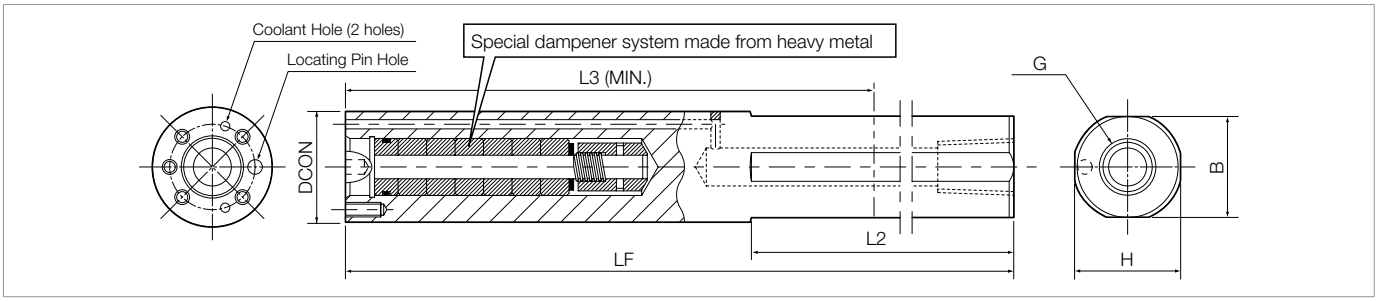
Boring Adapter (with Coolant Hole / Anti-Vibration Dampener System)



Toolholder Dimensions

Part Number	Stock	Dimensions (mm)							Spare Parts		
									Clamp Bolt		Wrench (Sold Separately)
		DCON	H	B	LF	L2	L3 (MIN)	G			
AD 32U	●	32	31	29	310	200	200	Rp3/8	HH5X20 (3 pcs)	HH5X30 (1 pcs)	LW-4
AD 40V	●	40	39	37	360	248	228	Rp3/8			
AD 50W	●	50	47	47	410	280	276	Rp3/8	HH6X20 (3 pcs)	HH6X30 (1 pcs)	LW-5

Note) L3 (MIN.) dimension indicates the minimum length in case of the back end of boring adapter is cut for use.
Do not shorten it to less than L3 (MIN.).

Combinations of Boring Adapter and Interchangeable Head

Interchangeable Head Part Number	Boring Adapter			
	Base Part Number	Clamp Bolt		Wrench
HA32 PCLN□12-40	AD32U	HH5X20	HH5X30	LW-4
PDUN□15-43				
PTFN□16-40				
SCLC□09-40		HH5X20		
SDUC□11-40				
HA40 PCLN□12-50	AD40V	HH5X20	HH5X30	
PDUN□15-50				
PTFN□16-50				
HA50 PCLN□12-63	AD50W	HH6X20	HH6X30	LW-5
PDUN□15-63				
PTFN□16-63				

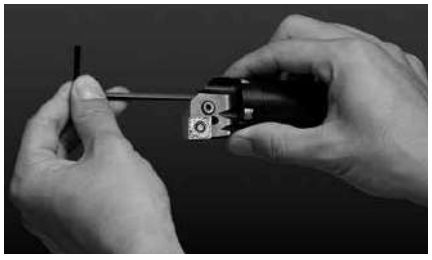
How to Exchange Heads



1. Remove the boring head.



2. Align the boring head with the installing position.



3. Tighten three screws to clamp the boring head.

   For lever lock type Interchangeable head, use 2 short bolts for upper clamping hole and 1 long bolt for lower clamping hole.
   HA32 SCLC□09-40 and
   HA32 SDUC□11-40
   use HH5 X 20 for all 3 bolts.

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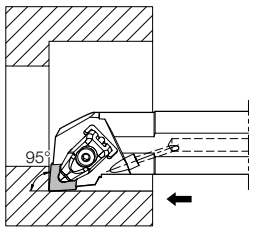
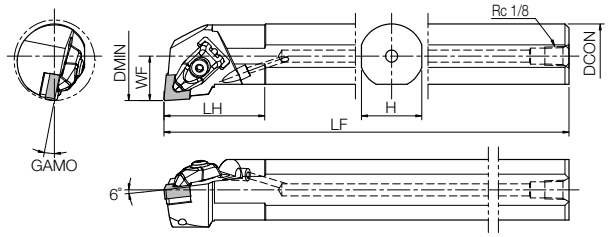
A-DCLN (Boring / Internal Facing)

(Max. Overhang Length **L/D = ~3**)





• Right-hand shown

• Left-hand Insert for Right-hand Toolholder, Right-hand Insert for Left-hand Toolholder

Toolholder Dimensions

Part Number	Stock		Unit	Min. Bore Dia.	Dimensions						GAMO	Standard Corner-R (RE)	Spare Parts							
													Clamp	Screw	Spring	Shim	Shim Screw	Nozzle	Wrench	Wrench (Sold Separately)
	R	L		DMIN	DCON	H	LF	LH	WF											
A16T-DCLNR4	●		inch	1.25	1.00	0.905	12.0	1.575	0.640	12°	1/32		CP-3D	CS-3D	SP-3D	DC-42	SB-4085TR	DN10	LW-3	FT-15
A20T-DCLNR4	●			1.50	1.25	1.181	12.0	1.614	0.765	11°										
A24T-DCLNR4	●			1.75	1.50	1.374	12.0	2.362	0.905	13°										
A25R-DCLN□12-32	●	●	mm	32	25	23	200	42	17	11°	0.8		CP-3D	CS-3D	SP-3D	DC-42	SB-4085TR	DN10	LW-3	FT-15
A32S-DCLN□12-40	●	●		40	32	30	250	50	22	11°										
A40T-DCLN□12-50	●	●		50	40	37	300	60	27	11°	0.8		CP-3D	CS-3D	SP-3D	DC-42	SB-4085TR	DN20	LW-3	FT-15

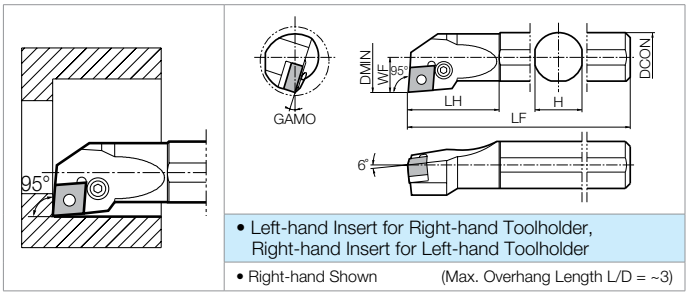
*When using inserts whose corner-R (RE) is greater than 1.60mm, it will be necessary additional modifications of the shim in order to prevent workpiece and shim from interfering each other.
*Not applicable to high-pressure coolant.

Applicable Inserts

Application	Finishing	Finishing-Medium	Finishing	Finishing	Finishing-Medium	Finishing-Medium	Finishing-Medium	Finishing-Medium	Medium-Roughing	Medium-Roughing
Ref. Page	B16	B16	B16	B16	B16	B16	B17	B17	B17	B17
Insert / Toolholder	**WF** (Wiper)	**WE** (Wiper)	**PP**	**GP**	**PQ**	**HQ**	**CQ**	**CJ**	**GS**	**PG**
...-DCLN□4-... **...-DCLN□12-...**	CNMG43..	CNMG43..	CNMG43..	CNMG43..	CNMG43..	CNMG43..	CNMG43..	CNMG43..	CNMG43..	CNMG43..
Application	Medium-Roughing	Medium-Roughing / High Feed Rate	Roughing	Roughing	Single Sided / Roughing / High Feed	Medium	Low Carbon Steel / Small D.O.C.	Low Carbon Steel / Finishing	Low Carbon Steel / Medium	Low Carbon Steel / Roughing
Ref. Page	B17	B18	B18	B18	B19	B22	B19	B19	B19	B19
Insert / Toolholder	**PS**	**PT**	**Standard**	**PH**	**PX**	**□**	**XF**	**XP**	**XQ**	**XS**
...-DCLN□4-... **...-DCLN□12-...**	CNMG43..	CNMG43..	CNMG43..	CNMG43..	CNMM43..	CNGG43..	CNMG43..	CNMG43..	CNMG43..	CNMG43..
Application	Stainless Steel / Finishing	Stainless Steel / Medium-Roughing	Stainless Steel / Medium-Roughing	Cast Iron	Cast Iron	Cast Iron	Cast Iron	Cast Iron	Cast Iron	Cast Iron
Ref. Page	B20	B20	B20	B21	B21	B21	B21	B21	B21	B21
Insert / Toolholder	**MQ**	**MS**	**MU**	**KQ**	**KG**	**KH**	**C**	**ZS**	**GC**	**Without Chipbreaker**
...-DCLN□4-... **...-DCLN□12-...**	CNMG43..	CNMG43..	CNMG43..	CNMG43..	CNMG43..	CNMG43..	CNMG43..	CNMG43..	CNMG43..	CNMA43.. CNGA43..
Application	Cast Iron	Non-ferrous Metals	Non-ferrous Metals	Non-ferrous Metals	Heat-Resistant Alloys	Heat-Resistant Alloys	Hard Materials			
Ref. Page	B108	B22	B22	C23	B20	B20	C6, C7			
Insert / Toolholder	**Ceramic**	**□-A3**	**AH**	**PCD**	**SQ**	**SG**	**CBN**			
...-DCLN□4-... **...-DCLN□12-...**	CNMA43.. CNGA43..	CNGG43..	CNMG43.. CNGG43..	CNMM43..	CNMG43..	CNMG43..	CNGA43..			

Recommended Cutting Conditions ➡ **F116-F117**

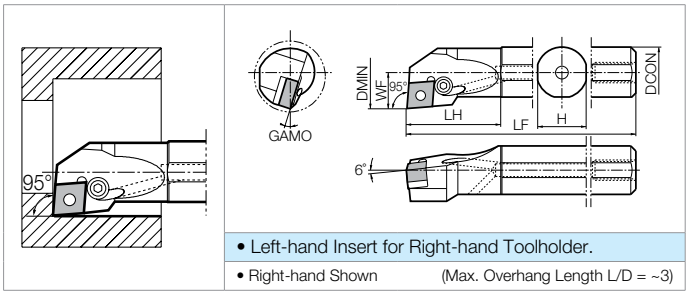
S-PCLN○○ (Boring / Internal Facing)



• Left-hand Insert for Right-hand Toolholder, Right-hand Insert for Left-hand Toolholder

• Right-hand Shown (Max. Overhang Length L/D = ~3)

A-PCLN Twin-Hole Bar (Boring / Internal Facing, with Coolant Hole)



• Left-hand Insert for Right-hand Toolholder.

• Right-hand Shown (Max. Overhang Length L/D = ~3)

Toolholder Dimensions

Part Number	Stock R	Stock L	Unit	Min. Bore Dia. DMIN	Dimensions DCON	H	LF	LH	WF	GAMO	Standard Corner-R (RE)	Spare Parts: Lever	Lock Screw	Shim	Shim Pin	Punch	Wrench
																	
S16M-PCLN□09-20	●	●	mm	20	16	15	150	34	11.0	16°	0.8	LL-03SN	LS-03SN	-	P-03S	-	FH-2.5
S20Q-PCLN□09-27	●	●	mm	27	20	19	180	37	14.2	17°	0.8	LL-1N	LS-1SN	LC-32N	LSP-1	PC-1	FH-2.5
S25R-PCLN□09-32	●	●	mm	32	25	24	200	42	15.7	15°							
S20S-PCLN□4	●		inch	1.55	1.25	1.17	10.00	2.00	0.75	10°	1/32	LL-2N	LS-2N	LC-42N□	LSP-2	PC-2	LW-3
S24T-PCLN□4	●		inch	2.02	1.50	1.42	12.00	2.50	1.00								
S25R-PCLN□12-32	●	●	mm	32	25	24	200	42	16.3	16°	0.8	LL-2N	LS-2N	LC-42N□	LSP-2	PC-2	LW-3
S32S-PCLN□12-40	●	●	mm	40	32	30	250	50	21.0	10°							
S40T-PCLN□12-50	●	●	mm	50	40	37	300	60	25.0	10°							
A10M-PCLN□3	●	●	inch	0.79	0.63	0.59	6.00	1.34	-	16°	1/32	LL-03SN	LS-03SN	-	P-03S	-	FH-2.5
A12Q-PCLN□3	●	●	inch	1.06	0.75	0.71	7.00	1.46	-	17°	1/32	LL-1N	LS-1SN	LC-32N	LSP-1	PC-1	FH-2.5
A16Q-PCLN□3	●	●	inch	1.26	1.00	0.97	7.00	1.65	-	15°							
A16M-PCLN□09-20	●		mm	20	16	15	150	34	11.0	16°	0.8	LL-03SN	LS-03SN	-	P-03S	-	FH-2.5
A20Q-PCLN□09-27	●		mm	27	20	19	180	37	14.2	17°	0.8	LL-1N	LS-1SN	LC-32N	LSP-1	PC-1	FH-2.5
A25R-PCLN□09-32	●		mm	32	25	24	200	42	15.7	15°							

· LC-42NR for Right-hand Toolholder, LC-42NL for Left-hand Toolholder.

Applicable Inserts

Application	Finishing	Finishing-Medium	Finishing	Finishing	Finishing-Medium	Finishing-Medium	Finishing-Medium	Finishing-Medium	Medium-Roughing	Medium-Roughing
Ref. Page	B16	B16	B16	B16	B16	B16	B17	B17	B17	B17
Insert / Toolholder	**WF** (Wiper)	**WE** (Wiper)	**PP**	**GP**	**PQ**	**HQ**	**CQ**	**CJ**	**GS**	**PG**
...-PCLN□3 ...-PCLN□09-...	-	-	-	CNMG33..	-	CNMG33..	-	-	CNMG33..	-
...-PCLN□4-... ...-PCLN□12-...	CNMG43..	CNMG43..	CNMG43..	CNMG43..	CNMG43..	CNMG43..	CNMG43..	CNMG43..	CNMG43..	CNMG43..
Application	Medium-Roughing	Medium-Roughing / High Feed Rate	Roughing	Roughing	Single Sided / Roughing / High Feed	Finishing	Medium	Low Carbon Steel / Small D.O.C.	Low Carbon Steel / Finishing	Low Carbon Steel / Medium
Ref. Page	B17	B18	B18	B18	B19	B22	B22	B19	B19	B19
Insert / Toolholder	**PS**	**PT**	**PH**	**Standard**	**PX**	**□-S**	**□**	**XF**	**XP**	**XQ**
...-PCLN□3 ...-PCLN□09-...	-	-	-	-	-	CNGG33..	CNGG33..	-	-	-
...-PCLN□4-... ...-PCLN□12-...	CNMG43..	CNMG43..	CNMG43..	CNMG43..	CNMM43..	-	CNGG43..	CNMG43..	CNMG43..	CNMG43..
Application	Low Carbon Steel / Roughing	Stainless Steel / Finishing	Stainless Steel / Medium-Roughing	Stainless Steel / Medium-Roughing	Cast Iron	Cast Iron	Cast Iron	Cast Iron	Cast Iron	Cast Iron
Ref. Page	B19	B20	B20	B20	B21	B21	B21	B21	B21	B21
Insert / Toolholder	**XS**	**MQ**	**MS**	**MU**	**KQ**	**KG**	**KH**	**C**	**ZS**	**GC**
...-PCLN□3 ...-PCLN□09-...	-	-	-	-	-	-	-	-	-	-
...-PCLN□4-... ...-PCLN□12-...	CNMG43..	CNMG43..	CNMG43..	CNMG43..	CNMG43..	CNMG43..	CNMG43..	CNMG43..	CNMG43..	CNMG43..
Application	Cast Iron	Cast Iron	Non-ferrous Metals	Non-ferrous Metals	Non-ferrous Metals	Heat-Resistant Alloys	Hard Materials			
Ref. Page	B21	B108	B22	B22	C23	B20	C6, C7			
Insert / Toolholder	**Without Chipbreaker**	**Ceramic**	**□-A3**	**AH**	**PCD**	**SQ**	**CBN**			
...-PCLN□3 ...-PCLN□09-...	-	-	-	-	-	-	-			
...-PCLN□4-... ...-PCLN□12-...	CNMA43.. CNGA43..	CNMA43.. CNGA43..	CNGG43..	CNMG43.. CNGG43..	CNMM43..	CNMG43..	CNGA43..			

Applicable Coolant Sleeve / Joint

Toolholder Part Number	Applicable Coolant Sleeve	Applicable Coolant Joint
A16M-PCLN□09-20	SHC1640-70, SHC1650-95	SJS-8
A20Q-PCLN□09-27	SHC2040-70, SHC2050-95	
A25R-PCLN□09-32	SHC2540-70, SHC2550-95	

Recommended Cutting Conditions → **F116-F117**

· For Coolant Sleeve, Coolant Joint, ref. to page → **F109-F110**

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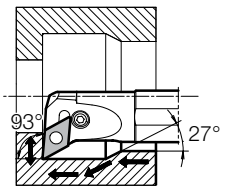
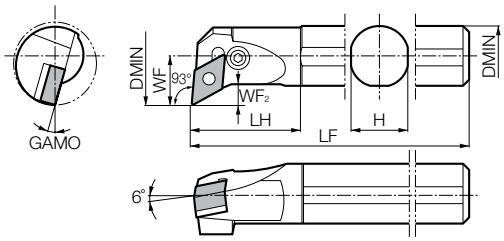
S-PDUN3/11 (Copying)

(Max. Overhang Length **L/D = ~3**)



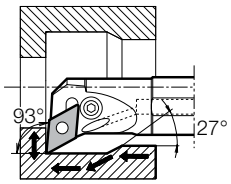


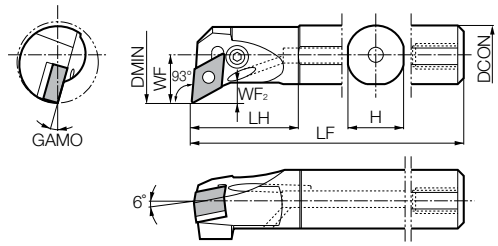
• Right-hand shown

• Left-hand Insert for Right-hand Toolholder, Right-hand Insert for Left-hand Toolholder

A-PDUN3/11 Twin-Hole Bar (Copying, with Coolant Hole)

(Max. Overhang Length **L/D = ~3**)





• Right-hand shown

• Left-hand Insert for Right-hand Toolholder.

※ When using R-hand Toolholder, Use R-hand insert for machining in this direction (→)
Use L-hand insert for machining in this direction (←)

Toolholder Dimensions

Part Number	Stock		Unit	Min. Bore Dia.	Dimensions						GAMO	Standard Corner-R (RE)	Spare Parts					
	R	L		DMIN	DCON	H	LF	LH	WF	WF2			Lever	Lock Screw	Shim	Shim Pin	Punch	Wrench
A12Q-PDUNR/L3	●	●	inch	1.06	0.75	0.71	7.00	1.37	-	-	17°	1/32	LL-1D	LS-1S	LD-32	LSP-1	PC-1	FH-2.5
A16R-PDUNR/L3	●	●		1.26	1.00	0.97	8.00	1.37	-	-	15°							
A20S-PDUNR/L3	●	●		1.57	1.25	1.18	10.00	1.37	-	-	12°							
S20Q-PDUNR/L11-27	●	●	mm	27	20	19	180	35	16	7.6	17°	0.4	LL-1DN	LS-1SN	LD-32N	LSP-1	PC-1	FH-2.5
S25R-PDUNR/L11-32	●	●		32	25	24	200	40	17	7.6	15°							
S32S-PDUNR/L11-40	●	●		40	32	31	250	45	22	8.5	12°							
A20Q-PDUNR/L11-27	●			27	20	19	180	35	16	7.6	17°	0.4	LL-1DN	LS-1SN	LD-32N	LSP-1	PC-1	FH-2.5
A25R-PDUNR/L11-32	●			32	25	24	200	40	17	7.6	15°							
A32S-PDUNR/L11-40	●			40	32	31	250	45	22	8.5	12°							

Applicable Inserts

Application	Finishing	Finishing-Medium	Medium-Roughing	Finishing	Medium
Ref. Page	B23	B24	B24	B30	B30
Insert / Toolholder	**GP**	**HQ**	**GS**	**R/L-S**	**R/L**
...-PDUNR/L3 **...-PDUNR/L11-...**	DNMG33..	DNMG33..	DNMG33..	DNGG33..	DNGG33..

Recommended Cutting Conditions **F116-F117**

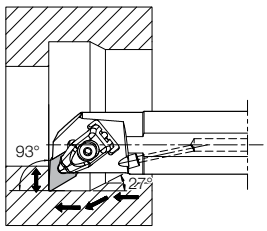
Applicable Coolant Sleeve / Joint

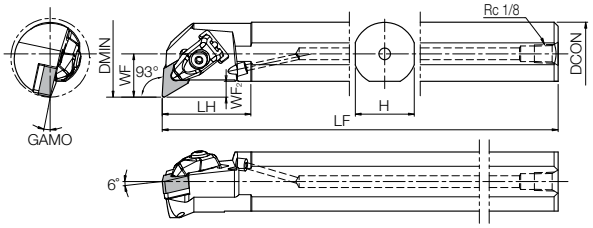
Toolholder Part Number	Applicable Coolant Sleeve	Applicable Coolant Joint
A20Q-PDUNR11-27	SHC2040-70, SHC2050-95	SJS-8
A25R-PDUNR11-32	SHC2540-70, SHC2550-95	
A32S-PDUNR11-40	-	

· For Coolant Sleeve, Coolant Joint, ref. to page **F109-F110**

A-DDUN (Boring / Copying with Coolant)

(Max. Overhang Length **L/D = ~3**)





• Right-hand shown

• Left-hand Insert for Right-hand Toolholder, Right-hand Insert for Left-hand Toolholder

Toolholder Dimensions

Part Number	Stock R	Stock L	Unit	Min. Bore Dia. DMIN	Dimensions DCON	H	LF	LH	WF	WF_2	GAMO	Standard Corner-R (RE)	Spare Parts: Clamp	Screw	Spring	Shim	Shim Screw	Nozzle	Wrench	Wrench (sold separately)
																				
A16T-DDUN□4	●		inch	1.500	1.000	0.905	12	1.575	0.750	0.297	15°	1/32	CP-3D	CS-3D	SP-3D	DD-42 *DD-42-16	SB-4085TR	DN10	LW-3	FT-15
A20T-DDUN□4	●		inch	1.750	1.250	1.181	12	1.772	0.905	0.299	13°	1/32	CP-3D	CS-3D	SP-3D	DD-42 *DD-42-16	SB-4085TR	DN10	LW-3	FT-15
A32S-DDUN□15-40	●	●	mm	40	32	30	250	45	22	8.0	12°	0.8	CP-3D	CS-3D	SP-3D	DD-42 *DD-42-16	SB-4085TR	DN10	LW-3	FT-15
A40T-DDUN□15-50	●	●	mm	50	40	37	300	55	27	8.5	12°	0.8	CP-3D	CS-3D	SP-3D	DD-42 *DD-42-16	SB-4085TR	DN10	LW-3	FT-15
A50U-DDUN□15-63	●	●	mm	63	50	47	350	65	35	10.5	12°	0.8	CP-3D	CS-3D	SP-3D	DD-42 *DD-42-16	SB-4085TR	DN20	LW-3	FT-15

When using inserts whose corner-R(RE) is greater than 1.60mm, please purchase a shim (DD-42-16) with * mark and use it in order to prevent workpiece and shim from interfering each other.
*Not applicable to high-pressure coolant.

Applicable Inserts

Application	*Finishing	Finishing	Finishing-Medium	Finishing-Medium	Finishing-Medium	Medium-Roughing	Medium-Roughing	Medium-Roughing	Medium-Roughing / High Feed Rate	Roughing
Ref. Page	B23	B23	B23	B24	B24	B24	B25	B25	B25	B26
Insert / Toolholder	**WF** (Wiper)	**PP**	**PQ**	**CQ**	**CJ**	**GS**	**PG**	**PS**	**PT**	**Standard**
...-DDUN□4 ...-DDUN□15-... ...-PD□N□15-...	DNMX43..	DNMG43..	DNMG43..	DNMG43..	DNMG43..	DNMG43..	DNMG43..	DNMG43..	DNMG43..	DNMG43..

Application	Roughing	Single Sided Roughing High Feed Rate	Medium	Soft Steel / Finishing	Soft Steel / Medium	Soft Steel / Roughing	Stainless Steel / Finishing	Stainless Steel / Medium-Roughing	Stainless Steel / Medium-Roughing	Stainless Steel / Medium-Roughing
Ref. Page	B26	B26	B30	B26	B26	B26	B27	B28	B28	B27
Insert / Toolholder	**PH**	**PX**	**□**	**XP**	**XQ**	**XS**	**MQ**	**MS**	**MU**	**TK**
...-DDUN□4 ...-DDUN□15-... ...-PD□N□15-...	DNMG43..	DNMM43..	DNGG43..	DNMG43..	DNMG43..	DNMG43..	DNMG43..	DNMG43..	DNMG43..	DNMG43..

Application	Cast Iron	Cast Iron	Cast Iron	Cast Iron	Cast Iron	Cast Iron	Cast Iron	Non-ferrous Metals	Non-ferrous Metals	Non-ferrous Metals
Ref. Page	B29	B29	B29	B29	B29	B29	B109	B30	B30	C23
Insert / Toolholder	**KQ**	**KG**	**KH**	**C**	**ZS**	**GC**	**Ceramic**	**□-A3**	**AH**	**PCD**
...-DDUN□4 ...-DDUN□15-... ...-PD□N□15-...	DNMG43..	DNMG43..	DNMG43..	DNMG43..	DNMG43..	DNMG43..	DNGA43..	DNMG43..	DNMG43.. DNGG43..	DNMM43..

Application	Heat-resistant Alloys	Heat-resistant Alloys	Hard Materials
Ref. Page	B28	B28	C8, C9
Insert / Toolholder	**SQ**	**SG**	**CBN**
...-DDUN□4 ...-DDUN□15-... ...-PD□N□15-...	DNMG43..	DNMG43..	DNGA43..

* When using WF chipbreaker (wiper insert), tool edge offset or program corrections are required. See R50
• WF chipbreaker cannot be used for S-PDQN15 type holders.

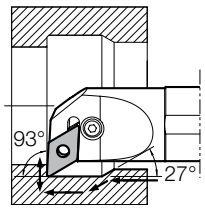
Recommended Cutting Conditions **F116-F117**

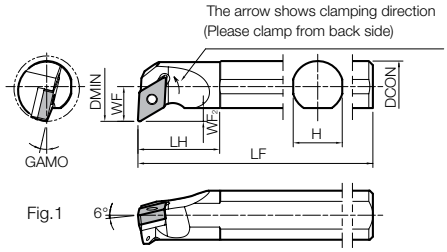
(Customer Service) **800.823.7284 - Option 1**
(Technical Support) **800.823.7284 - Option 2**
Visit us online at **KyoceraPrecisionTools.com**

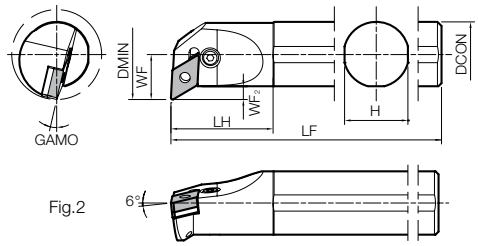
● : Standard Item △ : Phaseout Item (will be removed from next catalog)
Contact your local Kyocera sales engineer to upgrade old products to new technology

S-PDUN15 (Copying)

(Max. Overhang Length **L/D = ~3**)





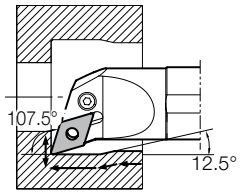


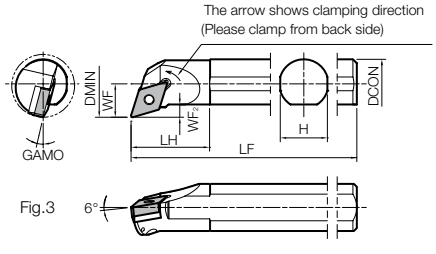
• Right-hand shown

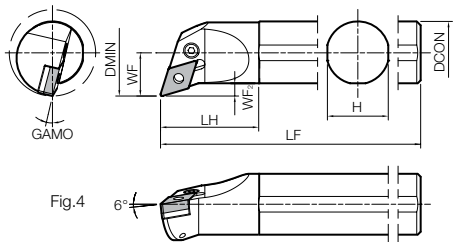
• Left-hand Insert for Right-hand Toolholder, Right-hand Insert for Left-hand Toolholder

S-PDQN15 (Copying)

(Max. Overhang Length **L/D = ~3**)





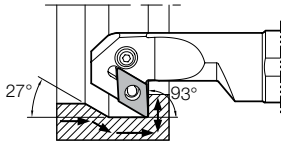


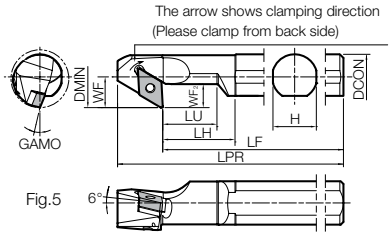
• Right-hand shown

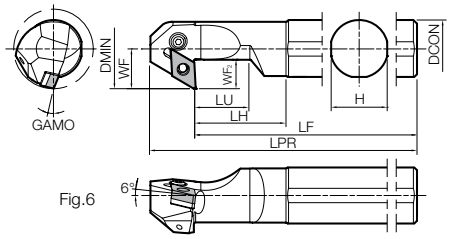
• Left-hand Insert for Right-hand Toolholder, Right-hand Insert for Left-hand Toolholder

S-PDZN15 (Back Boring)

(Max. Overhang Length **L/D = ~3**)







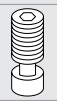
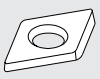
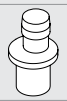
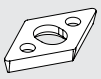
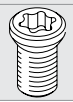
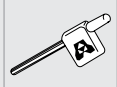
• Right-hand shown

• Right-hand Insert for Right-hand Toolholder, Left-hand Insert for Left-hand Toolholder.

Toolholder Dimensions

Part Number	Stock		Min. Bore Dia.	Dimensions (mm)								GAMO	Standard Corner-R (RE)	Drawing	Applicable Inserts → F94	
	R	L	DMIN	DCON	H	LPR	LF	LH	LU	WF	WF_2					
S25R-PDUN□15-32	●	●	32	25	24	-	200	40	-	17	6.5	13°	0.8	Fig.1	DN□A DN□G DN□M DNMX	43..
S32S-PDUN□15-44	●	●	44	32	31	-	250	50	-	22	6.5	13°	0.8	Fig.2		
S40T-PDUN□15-54	●	●	54	40	39	-	300	65	-	27	7.5	12°				
S25R-PDQN□15-32	●	●	32	25	24	-	200	40	-	17	6.5	13°	0.8	Fig.3	DN□A DN□G DN□M	43..
S32S-PDQN□15-44	●	●	44	32	31	-	250	50	-	22	6.5	13°	0.8	Fig.4		
S40T-PDQN□15-54	●	●	54	40	39	-	300	65	-	27	7.5	12°				
S25R-PDZN□15-32	●	●	32	25	24	225	200	40	30	17	13	13°	0.8	Fig.5	DN□A DN□G DN□M DNMX	43..
S32S-PDZN□15-44	●	●	44	32	31	275	250	50	30	22	16	13°	0.8	Fig.6		
S40T-PDZN□15-54	●	●	54	40	39	325	300	65	50	27	16	12°				

Spare Parts

Toolholder Part Number	Spare Parts									
	Lever	Lock Screw	Shim	Shim Pin	Punch	Wrench	Lock Pin	Shim	Shim Screw	Wrench (for Shim Screw)
										
S25R - PD□N□15-32	-	-	-	-	-	LW-3	PP-4	PD-42	SB-2050TR	FT-6
S32S - PD□N□15-44	LL-3N	LS-2N	LD-42 *LD-42-20	LSP-2	PC-2	LW-3	-	-	-	-
S40T - PD□N□15-54										

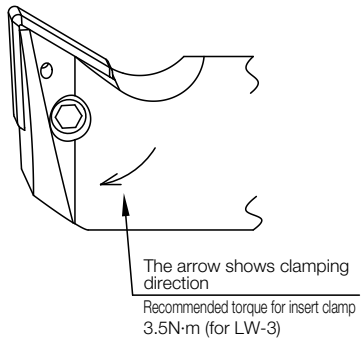
· Shim When using inserts whose corner-R (RE) = 1.60mm or larger for S25R-PD□N□15-32, use shim modified by additional processing to prevent interference between workpiece and shim. When using inserts whose corner-R (RE) = 1.60mm or larger for S32S-PD□N□15-44 and S40T-PD□N□15-54, purchase and use shim with * mark separately to prevent interference between workpiece and shim.

● : Standard Item △ : Phaseout Item (will be removed from next catalog)

Contact your local Kyocera sales engineer to upgrade old products to new technology

How to Change S25R-PD□N□15-32 Inserts

· Please replace S25R-PD□N□15-32 insert from the back side

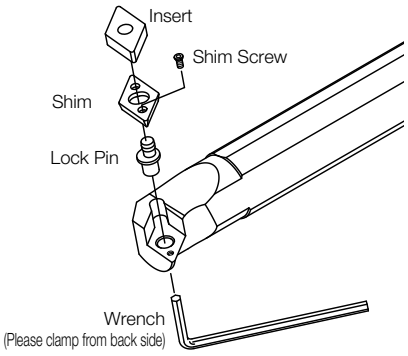


Recommended torque for insert clamp
3.5N·m (for LW-3)

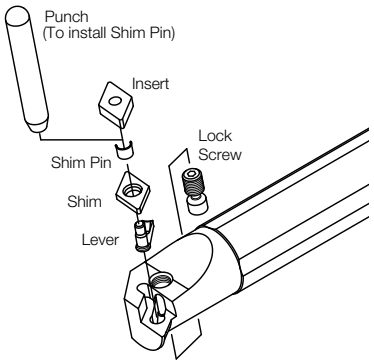
Back side of toolholder

How to Assemble Spare Parts

· S25R-PD□N□15-32 (Pin Lock)

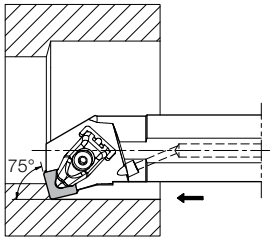


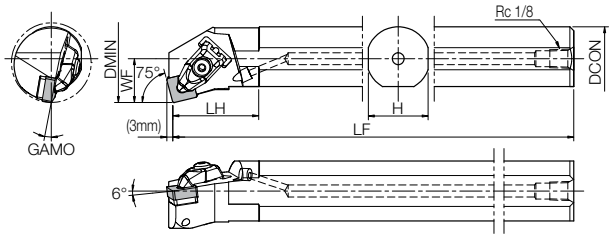
· S32S-PD□N□15-44 (Lever Lock)
· S40T-PD□N□15-54 (Lever Lock)



A-DSKN (Boring / with Coolant)

(Max. Overhang Length **L/D = ~3**)





• Right-hand shown

• Left-hand Insert for Right-hand Toolholder, Right-hand Insert for Left-hand Toolholder

Toolholder Dimensions

Part Number	Stock		Min. Bore Dia.	Dimensions (mm)					GAMO	Standard Corner-R (RE)	Spare Parts							
											Clamp	Screw	Spring	Shim	Shim Screw	Nozzle	Wrench	Wrench (sold separately)
	R	L	DMIN	DCON	H	LF	LH	WF										
A25R-DSKNR/L12-32	●	●	32	25	23	200	43	17	11°	0.8	CP-3D	CS-3D	SP-3D	DS-42	SB-4085TR	DN10	LW-3	FT-15
A32S-DSKNR/L12-40	●	●	40	32	30	250	43	22	11°									
A40T-DSKNR/L12-50	●	●	50	40	37	300	53	27	11°	0.8	CP-3D	CS-3D	SP-3D	DS-42	SB-4085TR	DN20	LW-3	FT-15

*Not applicable to high-pressure coolant.

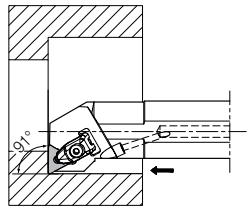
Applicable Inserts

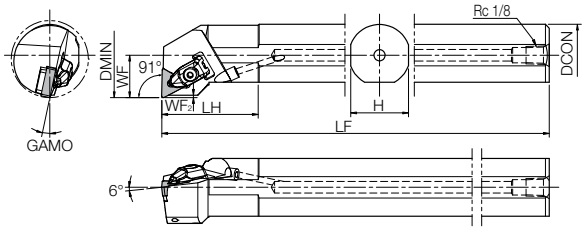
Application	Finishing-Medium	Medium-Roughing	Medium-Roughing	Medium-Roughing	Medium-Roughing / High Feed Rate	Roughing	Roughing	Single Sided / Roughing / High Feed Rate
Ref. Page	B32	B32	B32	B32	B32	B32	B33	B33
Insert / Toolholder	**PQ** 	**PG** 	**PS** 	**HS** 	**PT** 	**Standard** 	**PH** 	**PX** 
...DSKNR/L12...	SNMG43..	SNMG43..	SNMG43..	SNMG43..	SNMG43..	SNMG43..	SNMG43..	SNMM43..
Application	Finishing-Roughing	Medium-Roughing / Low Cutting Force	Low Carbon Steel / Finishing	Low Carbon Steel / Medium	Low Carbon Steel / Roughing	Stainless Steel / Finishing	Stainless Steel / Medium-Roughing	Cast Iron
Ref. Page	B35	B35	B33	B33	B33	B34	B34	B34
Insert / Toolholder	**R/L-□** 	**R/L-25R** 	**XP** 	**XQ** 	**XS** 	**MQ** 	**MS** 	**C** 
...DSKNR/L12...	SNGG43..	SNGG43..	SNMG43..	SNMG43..	SNMG43..	SNMG43..	SNMG43..	SNMG43..
Application	Cast Iron	Cast Iron	Cast Iron	Cast Iron	Cast Iron	Cast Iron	Heat-resistant Alloys	Hardened Materials
Ref. Page	B34	B34	B34	B34	B35	B111	B34	C10
Insert / Toolholder	**KH** 	**KG** 	**ZS** 	**GC** 	Without Chipbreaker 	**Ceramic** 	**SG** 	**CBN** 
...DSKNR/L12...	SNMG43..	SNMG43..	SNMG43..	SNMG43..	SN□A43..	SN□A43..	SNMG43..	SNGA43..

Recommended Cutting Conditions **F116-F117**

A-DTFN (Boring / with Coolant)

(Max. Overhang Length **L/D = ~3**)





• Right-hand shown

• Left-hand Insert for Right-hand Toolholder, Right-hand Insert for Left-hand Toolholder

Toolholder Dimensions

Part Number	Stock		Min. Bore Dia.	Dimensions (mm)						GAMO	Standard Corner-R (RE)	Spare Parts							
												Clamp	Screw	Spring	Shim	Shim Screw	Nozzle	Wrench	Wrench (sold separately)
	R	L	DMIN	DCON	H	LF	LH	WF	WF_2										
A25R-DTFN□16-32	●	●	32	25	23	200	42	17	0.8	12°	0.8	CP-2D	CS-2D	SP-3D	DT-32	SB-3080TR	DN10	LW-2.5	FT-10
A32S-DTFN□16-40	●	●	40	32	30	250	50	22	1.2	12°									
A40T-DTFN□22-50	●	●	50	40	37	300	60	27	1.5	12°	0.8	CP-3D	CS-3D	SP-3D	DT-42	SB-4085TR	DN20	LW-3	FT-15

*Not applicable to high-pressure coolant.

Applicable Inserts

Application	*Finishing	Finishing	Finishing	Finishing-Medium	Finishing-Medium	Finishing-Medium	Medium-Roughing	Medium-Roughing	Medium-Roughing	Medium-Roughing
Ref. Page	B36	B36	B36	B36	B36	B36	B36	B36	B37	B37
Insert / Toolholder	WF (Wiper)	PP	GP	PQ	HQ	CQ	GS	PG	PS	HS
...-DTFN□16-...	TNMX33..	TNMG33..	TNMG33..	TNMG33..	TNMG33..	TNMG33..	TNMG33..	TNMG33..	TNMG33..	TNMG33..
...-DTFN□22-...	-	-	-	-	-	TNMG43..	-	-	TNMG43..	TNMG43..

Application	Single Sided Roughing High Feed Rate	Single Sided Roughing High Feed Rate	Roughing	Finishing	Medium-Roughing	Low Carbon Steel / Finishing	Low Carbon Steel / Medium	Low Carbon Steel / Roughing	Stainless Steel / Finishing	Stainless Steel / Medium-Roughing
Ref. Page	B37	B37	B37	B42	B42, B43	B38	B38	B38	B39	B39
Insert / Toolholder	PT	GT	Standard	□-S	□-□	XP	XQ	XS	MQ	MS
...-DTFN□16-...	TNMG33..	TNMG33..	TNMG33..	TNGG33..	TNGG33..	TNMG33..	TNMG33..	TNMG33..	TNMG33..	TNMG33..
...-DTFN□22-...	-	-	TNMG43..	-	TNGG43..	-	-	-	-	-

Application	Stainless Steel / Medium-Roughing	Stainless Steel / Medium-Roughing	Cast Iron	Cast Iron	Cast Iron	Cast Iron	Cast Iron	Cast Iron	Cast Iron	Cast Iron
Ref. Page	B39	B39	B40	B40	B40	B40	B40	B40	B40	B113
Insert / Toolholder	MU	□-ST	KQ	KG	KH	C	ZS	GC	Without Chipbreaker	Ceramic
...-DTFN□16-...	TNMG33..	TNMG33..	TNMG33..	TNMG33..	TNMG33..	TNMG33..	TNMG33..	TNMG33..	TNMG33.. TNGA33..	TNMG33..
...-DTFN□22-...	-	-	-	-	-	-	-	-	-	-

Application	Non-ferrous Metals	Non-ferrous Metals	Non-ferrous Metals	Heat-resistant Alloys	Hard Materials
Ref. Page	B41	B41	C23	B39	C11
Insert / Toolholder	□-A3	AH	PCD	SG	CBN
...-DTFN□16-...	TNGG33..	TN_G33..	TNMM33..	TNMG33..	TNGA33..
...-DTFN□22-...	-	-	-	-	-

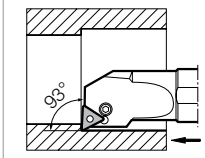
* When using WF chipbreaker (wiper insert), tool edge offset or program corrections are required. See R50

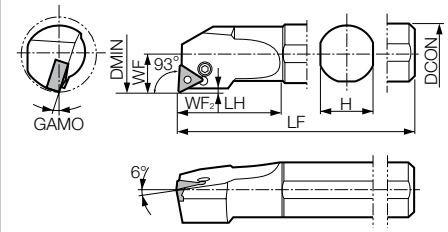
Recommended Cutting Conditions F116-F117

(Customer Service) 800.823.7284 - Option 1
(Technical Support) 800.823.7284 - Option 2
Visit us online at KyoceraPrecisionTools.com

● : Standard Item △ : Phaseout Item (will be removed from next catalog)
Contact your local Kyocera sales engineer to upgrade old products to new technology

S-PTUN11/16 (Boring)

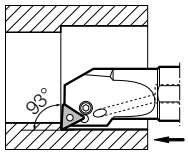


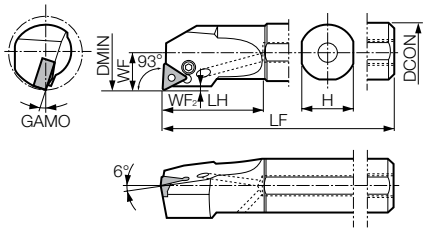


• Left-hand Insert for Right-hand Toolholder, Right-hand Insert for Left-hand Toolholder

• Right-hand Shown (Max. Overhang Length L/D = ~3)

A-PTUN11 Twin-Hole Bar (Internal, with Coolant Hole)





• Left-hand Insert for Right-hand Toolholder.

• Right-hand Shown (Max. Overhang Length L/D = ~3)

Toolholder Dimensions

Part Number	Stock		Min. Bore Dia.	Dimensions (mm)						GAMO	Standard Corner-R (RE)	Spare Parts					
												Lever	Lock Screw	Shim	Shim Pin	Punch	Wrench
	R	L	DMIN	DCON	H	LF	LH	WF	WF_2								
S16M-PTUN□11-20	●	●	20	16	15	150	34	11.0	0.3	18°	0.8	LL-03TN	LS-03SN	-	P-03S	-	FH-2.5
S20Q-PTUN□11-25	●	●	25	20	19	180	37	13.2	0.2	17°							
S25R-PTUN□11-32	●	●	32	25	24	200	42	15.7	0.3	16°							
S16M-PTUN□16-20	●	●	20	16	15	150	34	11.0	1.3	18°	0.8	LL-03SN	LS-03SN	-	P-03S	-	FH-2.5
S20Q-PTUN□16-25	●	●	25	20	19	180	37	13.2	1.3	17°							
S25R-PTUN□16-30	●	●	30	25	24	200	42	15.5	1.3	13°							
S32S-PTUN□16-40	●	●	40	32	30	250	50	22.0	0.7	13°	0.8	LL-1N	LS-1N	LT-32N *LT-32N-20	LSP-1	PC-1	FH-2.5
S40T-PTUN□16-50	●	●	50	40	37	300	60	27.0	0.6	11°							
A16M-PTUN□11-20	●		20	16	15	150	34	11.0	0.3	18°	0.8	LL-03TN	LS-03SN	-	P-03S	-	FH-2.5
A20Q-PTUN□11-25	●		25	20	19	180	37	13.2	0.2	17°							
A25R-PTUN□11-32	●		32	25	24	200	42	15.7	0.3	16°							

· When using inserts whose corner-R(RE) = 1.6mm or larger, purchase and use shim with * mark separately to prevent interference between workpiece and shim.

Applicable Inserts

Application	Finishing	Finishing	Finishing-Medium	Finishing-Medium	Finishing-Medium	Medium-Roughing	Medium-Roughing	Medium-Roughing	Medium-Roughing	Single Sided Roughing High Feed Rate
Ref. Page	B36	B36	B36	B36	B36	B36	B36	B37	B37	B37
Insert / Toolholder	PP	GP	PQ	HQ	CQ	GS	PG	PS	HS	PT
...-PTUN□11-...	-	TNMG23..	-	TNMG23..	-	TNMG23..	-	-	-	-
...-PTUN□16-...	TNMG33..	TNMG33..	TNMG33..	TNMG33..	TNMG33..	TNMG33..	TNMG33..	TNMG33..	TNMG33..	TNMG33..
Application	Single Sided Roughing High Feed Rate	Roughing	Finishing	Medium-Roughing	Low Carbon Steel / Finishing	Low Carbon Steel / Medium	Low Carbon Steel / Roughing	Stainless Steel / Finishing	Stainless Steel / Medium-Roughing	Stainless Steel / Medium-Roughing
Ref. Page	B37	B37	B42	B42, B43	B38	B38	B38	B39	B39	B39
Insert / Toolholder	GT	Standard	□-S	□-□	XP	XQ	XS	MQ	MS	MU
...-PTUN□11-...	-	-	TNGG23..	TNGG23..	-	-	-	-	-	-
...-PTUN□16-...	TNMG33..	TNMG33..	TNGG33..	TNGG33..	TNMG33..	TNMG33..	TNMG33..	TNMG33..	TNMG33..	TNMG33..
Application	Stainless Steel / Medium-Roughing	Cast Iron	Cast Iron	Cast Iron	Cast Iron	Cast Iron	Cast Iron	Cast Iron	Cast Iron	Non-ferrous Metals
Ref. Page	B39	B40	B40	B40	B40	B40	B40	B40	B113	B41
Insert / Toolholder	□-ST	KQ	KG	KH	C	ZS	GC	Without Chipbreaker	Ceramic	AH
...-PTUN□11-...	-	-	-	-	-	-	-	-	-	-
...-PTUN□16-...	TNMG33..	TNMG33..	TNMG33..	TNMG33..	TNMG33..	TNMG33..	TNMG33..	TNMG33.. TNGA33..	TNGA33..	TN_G33..
Application	Non-ferrous Metals	Non-ferrous Metals	Hard Materials							
Ref. Page	B41	C23	C11							
Insert / Toolholder	□-A3	PCD	CBN							
...-PTUN□11-...	-	-	-							
...-PTUN□16-...	TNGG33..	TNMM33..	TNGA33..							

Recommended Cutting Conditions ➡ **F116-F117**

Applicable Coolant Sleeve / Joint

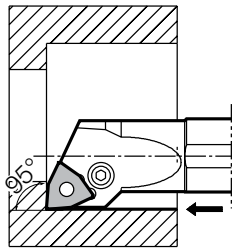
Toolholder Part Number	Applicable Coolant Sleeve	Applicable Coolant Joint
A16M-PTUN□11-20	SHC1640-70, SHC1650-95	SJS-8
A20Q-PTUN□11-25	SHC2040-70, SHC2050-95	
A25R-PTUN□11-32	SHC2540-70, SHC2550-95	

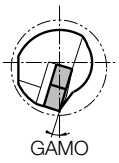
· For Coolant Sleeve, Coolant Joint, ref. to page ➡ **F109~F110**

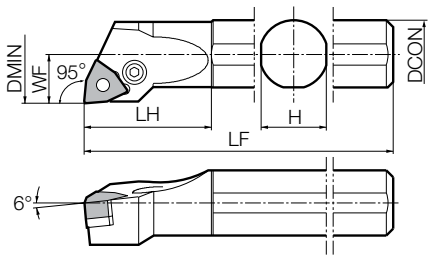
● : Standard Item △ : Phaseout Item (will be removed from next catalog)
Contact your local Kyocera sales engineer to upgrade old products to new technology

S-PWLN06 (Boring / Internal Facing)

(Max. Overhang Length **L/D = ~3**)





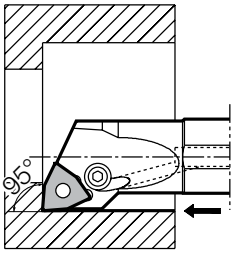


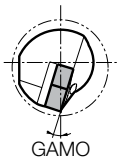
• Right-hand shown

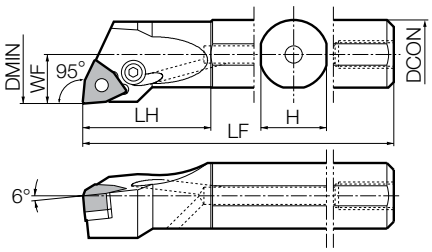
• Left-hand Insert for Right-hand Toolholder, Right-hand Insert for Left-hand Toolholder

A-PWLN06 Twin-Hole Bar (Boring / Internal Facing, with Coolant Hole)

(Max. Overhang Length **L/D = ~3**)



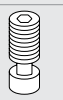
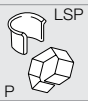




• Right-hand shown

• Left-hand Insert for Right-hand Toolholder.

Toolholder Dimensions

Part Number	Stock		Min. Bore Dia.	Dimensions (mm)					GAMO	Standard Corner-R (RE)	Spare Parts					
											Lever	Lock Screw	Shim	Shim Pin	Punch	Wrench
	R	L	DMIN	DCON	H	LF	LH	WF								
S16M-PWLN□06-20	●	●	20	16	15	150	34	11.0	16°	0.8	LL-03SN	LS-03SN	-	P-03S	-	FH-2.5
S20Q-PWLN□06-27	●	●	27	20	19	180	37	14.2	17°	0.8	LL-1N	LS-1SN	LW-32N	LSP-1	PC-1	FH-2.5
S25R-PWLN□06-32	●	●	32	25	24	200	42	15.7	15°							
A16M-PWLN□06-20	●		20	16	15	150	34	11.0	16°	0.8	LL-03SN	LS-03SN	-	P-03S	-	FH-2.5
A20Q-PWLN□06-27	●	△	27	20	19	180	37	14.2	17°	0.8	LL-1N	LS-1SN	LW-32N	LSP-1	PC-1	FH-2.5
A25R-PWLN□06-32	●	●	32	25	24	200	42	15.7	15°							

Applicable Inserts

Application	Finishing	Finishing-Medium	Medium-Roughing	Finishing	Medium
Ref. Page	B46	B46	B47	B49	B49
Insert / Toolholder	GP 	HQ 	GS 	□-S 	□ 
...-PWLN□06-...	WNMG33..	WNMG33..	WNMG33..	WNGG33..	WNGG33..

Recommended Cutting Conditions → **F116-F117**

Applicable Coolant Sleeve / Joint

Toolholder Part Number	Applicable Coolant Sleeve	Applicable Coolant Joint
A16M-PWLNR06-20	SHC1640-70, SHC1650-95	SJS-8
A20M-PWLNR06-27	SHC2040-70, SHC2050-95	
A25R-PWLNR06-32	SHC2540-70, SHC2550-95	

· For Coolant Sleeve, Coolant Joint, ref. to page → **F109~F110**

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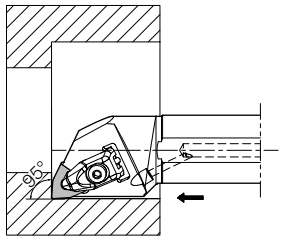
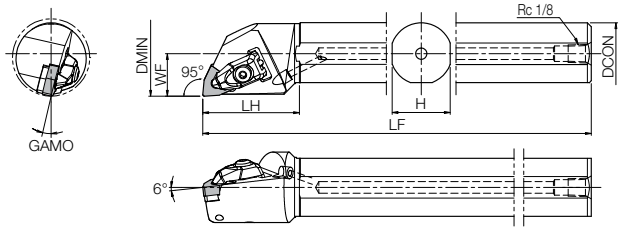
● : Standard Item △ : Phaseout Item (will be removed from next catalog)
Contact your local Kyocera sales engineer to upgrade old products to new technology

A-DWLN (Boring / Internal Facing / with Coolant)

(Max. Overhang Length **L/D = ~3**)





• Right-hand shown

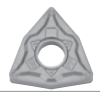
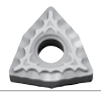
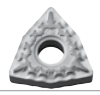
• Left-hand Insert for Right-hand Toolholder, Right-hand Insert for Left-hand Toolholder

Toolholder Dimensions

Part Number	Stock R	Stock L	Unit	Min. Bore Dia. DMIN	Dimensions DCON	H	LF	LH	WF	WF_2	GAMO	Standard Corner-R (RE)	Spare Parts: Clamp	Screw	Spring	Shim	Shim Screw	Nozzle	Wrench	Wrench (sold separately)
																				
A16T-DWLN□**4**	●		inch	1.250	1.000	0.905	12	1.575	0.64	-	12°	1/32	CP-3D	CS-3D	SP-3D	DW-42	SB-4085TR	DN10	LW-3	FT-15
A20T-DWLN□**4**	●			1.500	1.250	1.181	12	1.614	0.765	-	11°									
A24T-DWLN□**4**	●			1.750	1.500	1.374	12	2.362	0.905	-	13°									
A25R-DWLN□**08-32**	●	●	mm	32	25	23	200	50	17	-	13°	0.8	CP-3D	CS-3D	SP-3D	DW-42	SB-4085TR	DN10	LW-3	FT-15
A32S-DWLN□**08-40**	●	●		40	32	30	250	50	22	-	13°									
A40T-DWLN□**08-50**	●	●		50	40	37	300	60	27	-	13°	0.8	CP-3D	CS-3D	SP-3D	DW-42	SB-4085TR	DN20	LW-3	FT-15

*Not applicable to high-pressure coolant.

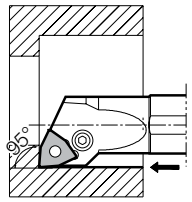
Applicable Inserts

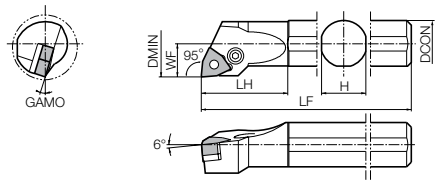
Application	Finishing	Finishing-Medium	Finishing	Finishing-Medium	Finishing-Medium	Finishing-Medium	Medium-Roughing	Medium-Roughing	Medium-Roughing	Medium-Roughing / High Feed Rate	Roughing
Ref. Page	B46	B46	B46	B46	B47	B47	B47	B47	B47	B47	B47
Insert / Toolholder	**WF (Wiper)**	**WE (Wiper)**	**PP**	**PQ**	**CQ**	**CJ**	**GS**	**PG**	**PS**	**PT**	**Standard**
											
...-DWLN□**4** **...-DWLN**□**08 -...**	WNMG43..	WNMG43..	WNMG43..	WNMG43..	WNMG43..	WNMG43..	WNMG43..	WNMG43..	WNMG43..	WNMG43..	WNMG43..
Application	Low Carbon Steel / Finishing	Low Carbon Steel / Medium	Low Carbon Steel / Roughing	Stainless Steel / Finishing	Stainless Steel / Medium-Roughing	Stainless Steel / Medium-Roughing	Cast Iron	Cast Iron	Cast Iron	Cast Iron	Cast Iron
Ref. Page	B48	B48	B48	B48	B48	B48	B49	B49	B49	B49	B49
Insert / Toolholder	**XP**	**XQ**	**XS**	**MQ**	**MS**	**MU**	**C(GC)**	**KQ**	**KG**	**KH**	**ZS**
											
...-DWLN□**4** **...-DWLN**□**08 -...**	WNMG43..	WNMG43..	WNMG43..	WNMG43..	WNMG43..	WNMG43..	WNMG43..	WNMG43..	WNMG43..	WNMG43..	WNMG43..
Application	Non-ferrous Metals	Non-ferrous Metals	Heat-resistant Alloys	Hard Materials							
Ref. Page	B49	C23	B48	C13							
Insert / Toolholder	**AH**	**PCD**	**SG**	**CBN**							
											
...-DWLN□**4** **...-DWLN**□**08 -...**	WNGG43..	WNMM43..	WNMG43..	WNGA43..							

Recommended Cutting Conditions ➡ **F116-F117**

S-PWLN08 (Boring / Internal Facing)

(Max. Overhang Length **L/D = ~3**)





• Right-hand shown

• Left-hand Insert for Right-hand Toolholder, Right-hand Insert for Left-hand Toolholder

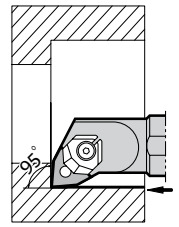
Toolholder Dimensions

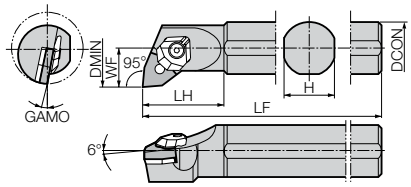
Part Number	Stock		Min. Bore Dia.	Dimensions (mm)					GAMO	Standard Corner-R (RE)	Spare Parts					
											Lever	Lock Screw	Shim	Shim Pin	Punch	Wrench
	R	L	DMIN	DCON	H	LF	LH	WF								
S32S-PWLNR/L08-40	●	●	40	32	30	250	50	22	10°	0.8	LL-2N	LS-2N	LW-42NR/L	LSP-2	PC-2	LW-3
S40T-PWLNR/L08-50	●	●	50	40	37	300	60	27	10°							

· Shim: LW-42NR for Right-hand Toolholder, LW-42NL for Left-hand Toolholder.

S-WWLN08-E Excellent Bar (Boring / Internal Facing)

(Max. Overhang Length **L/D = ~5**)

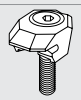
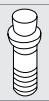




• Right-hand shown

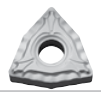
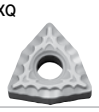
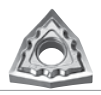
• Left-hand Insert for Right-hand Toolholder, Right-hand Insert for Left-hand Toolholder

Toolholder Dimensions

Part Number	Stock		Min. Bore Dia.	Dimensions (mm)					GAMO	Standard Corner-R (RE)	Spare Parts				
											Clamp Set	Wrench	Shim	Shim Pin	Wrench
	R	L	DMIN	DCON	H	LF	LH	WF							
S25S-WWLNR/L08-28E	●	●	28	25	24	250	36	14	13°	1.2	WCS-8	LW-3	WWP-42 *WWP -42-16	WP5X11	LW-2
S25S-WWLNR/L08-34E	●	●	34	25	24	250	40	17	11°						
S32S-WWLNR/L08-40E	●	●	40	32	30	250	50	20	10°						

· When using inserts whose corner-R(RE) = 1.60mm or larger, purchase and use shim with * mark separately to prevent interference between workpiece and shim.

Applicable Inserts

Application	Finishing	Finishing-Medium	Finishing	Finishing-Medium	Finishing-Medium	Finishing-Medium	Medium-Roughing	Medium-Roughing	Medium-Roughing	Medium-Roughing / High Feed Rate	Roughing
Ref. Page	B46	B46	B46	B46	B47	B47	B47	B47	B47	B47	B47
Insert / Toolholder	WF (Wiper)	WE (Wiper)	PP	PQ	CQ	CJ	GS	PG	PS	PT	Standard
											
...-PWLNR/L08-... ...-WWLNR/L08-...	WNMG43..	WNMG43..	WNMG43..	WNMG43..	WNMG43..	WNMG43..	WNMG43..	WNMG43..	WNMG43..	WNMG43..	WNMG43..
Application	Low Carbon Steel / Finishing	Low Carbon Steel / Medium	Low Carbon Steel / Roughing	Stainless Steel / Finishing	Stainless Steel / Medium-Roughing	Stainless Steel / Medium-Roughing	Cast Iron	Cast Iron	Cast Iron	Cast Iron	Cast Iron
Ref. Page	B48	B48	B48	B48	B48	B48	B49	B49	B49	B49	B49
Insert / Toolholder	XP	XQ	XS	MQ	MS	MU	C(GC)	KQ	KG	KH	ZS
											
...-PWLNR/L08-... ...-WWLNR/L08-...	WNMG43..	WNMG43..	WNMG43..	WNMG43..	WNMG43..	WNMG43..	WNMG43..	WNMG43..	WNMG43..	WNMG43..	WNMG43..
Application	Non-ferrous Metals	Non-ferrous Metals	Heat-resistant Alloys	Hard Materials							
Ref. Page	B49	C23	B48	C13							
Insert / Toolholder	AH	PCD	SG	CBN							
											
...-PWLNR/L08-... ...-WWLNR/L08-...	WNGG43..	WNMM43..	WNMG43..	WNGA43..							

· In wedge lock, use of ceramic insert other than silicon nitride insert is not recommended due to strong restraint force.

Recommended Cutting Conditions ➔ **F116-F117**

(Customer Service) **800.823.7284 - Option 1**
(Technical Support) **800.823.7284 - Option 2**
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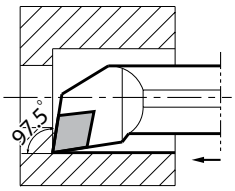
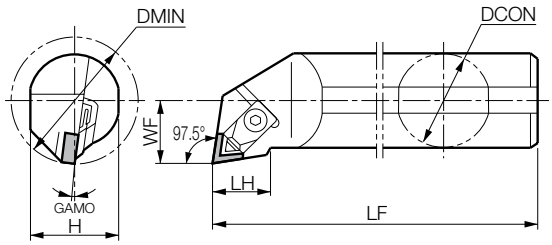
● : Standard Item △ : Phaseout Item (will be removed from next catalog)
Contact your local Kyocera sales engineer to upgrade old products to new technology

S-CELN (Boring / Internal Facing)

(Max. Overhang Length **L/D = ~3**)





• Right-hand shown

Applicable Inserts

Cast Iron / Hardened Materials
B109
Ceramic

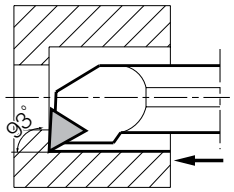
ENG45..

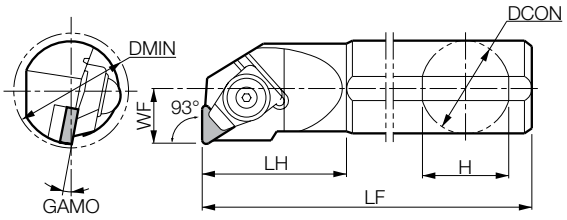
Toolholder Dimensions

Part Number	Stock		Min. Bore Dia.	Dimensions (mm)					GAMO	Standard Corner-R (RE)	Spare Parts				
	R	L	DMIN	DCON	H	LF	LH	WF			Chipbreaker	Clamp Set	Wrench	Shim	Shim Screw
															
S40T-CELNR13-50	●		50	40	37	300	32	27	12°	0.8	CB-16	CE-010	LW-4	SP-341P	M3X8

Recommended Cutting Conditions **F116-F117**

S-CTUN-A (Boring)





• Right-hand shown

Applicable Inserts

Hardened Materials / Cast Iron	Hardened Materials / Cast Iron
C19	B113
CBN (KBN900)	Ceramic
	
TNM22..	TNG22..

Toolholder Dimensions

Part Number	Stock		Unit	Min. Bore Dia.	Dimensions (mm)					GAMO	Standard Corner-R (RE)	Spare Parts			
	R	L		DMIN	DCON	H	LF	LH	WF			Clamp Set	Wrench	Shim	Shim Screw
															
S25X-CTUNR/L11-30A	●		mm	30	25	24	220	40	15	10°	0.8	CE-360S	LW-4	SP-210A	BH3X6

Recommended Cutting Conditions **F116-F117**

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(Technical Support) **800.823.7284 - Option 2**
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● : Standard Item △ : Phaseout Item (will be removed from next catalog)
Contact your local Kyocera sales engineer to upgrade old products to new technology

Recommended Cutting Conditions (VNB-S)

Workpiece Material	Recommended Insert Grades (Cutting Speed Vc: sfm)						VNB01-S VNB015-S		VNB02-S ~ VNB04-S		Notes
	MEGA COAT	PVD	Carbide	CBN	PCD		D.O.C. (inch), f (ipr)				
	PR1225	PR930	KW10	KBN510	KPD001	KPD010	D.O.C.	f	D.O.C.	f	
Carbon Steel / Alloy Steel	★ 100~390	☆ 100~330					~0.0039	~0.0004	~0.0079	~0.0012	Wet
Stainless Steel	★ 100~300	☆ 100~260					~0.0039	~0.0004	~0.0079	~0.0008	

★ : 1st Recommendation
☆ : 2nd Recommendation

Recommended Cutting Conditions (VNB / VNB-NB / VNBT)

Workpiece Material	Recommended Insert Grades (Cutting Speed Vc: sfm)						VNB02		VNB03		VNB004 VNBT04		VNB05 VNB06 VNB07 VNBT05		Notes
	MEGA COAT	PVD	Carbide	CBN	PCD		D.O.C. (inch), f (ipr)								
	PR1225	PR930	KW10	KBN510	KPD001	KPD010	D.O.C.	f	D.O.C.	f	D.O.C.	f	D.O.C.	f	
Carbon Steel / Alloy Steel	★ 100~390	☆ 100~330					~0.0118	~0.0012	~0.0157	~0.0016	~0.0177	~0.0028	~0.0197	~0.0039	
Stainless Steel	★ 100~330	☆ 100~260					~0.0118	~0.0008	~0.0157	~0.0012	~0.0177	~0.0020	~0.0197	~0.0028	Wet
Non-ferrous Metals			☆ ~330		★ ~980	☆ ~980	~0.0118	~0.0020	~0.0157	~0.0024	~0.0177	~0.0039	~0.0197	~0.0059	

★ : 1st Recommendation
☆ : 2nd Recommendation

Recommended Cutting Conditions (VNBX-S)

Workpiece Material	Recommended Insert Grades (Cutting Speed Vc: sfm)							VNBX01-S VNBX015-S		VNBX02-S ~ VNBX04-S		Notes
	PVD Coated Carbide			Carbide	CBN	PCD		D.O.C. (inch), f (ipr)				
	PR630	PR915	PR930	KW10	KBN510	KPD001	KPD010	D.O.C.	f	D.O.C.	f	
Carbon Steel / Alloy Steel			★ 100~330					~0.0039	~0.0004	~0.0079	~0.0012	Wet
Stainless Steel			★ 100~260					~0.0039	~0.0004	~0.0079	~0.0008	

★ : 1st Recommendation

EZH Sleeves EZ Bar Sleeves (Listed by Sleeve Shank Dia.)

Sleeve Part Number				Applicable EZ Bar				
EZH-CT Adjustable Overhang Length with Coolant Hole	EZH-HP Adjustable Overhang Length	EZH-ST	Sleeve Shank Dia. DCON (mm)	EZB	EZBF / EZBT / EZVB EZBP / EZBC EZG / EZFG / EZT	EZ Bar PLUS	Shank Dia. DCON (mm)	Applicable Machine Manufacturer
-	-	EZH 01712ST-80	12	EZBR ...017...	-	-	1.7	(General Purpose)
		02012ST-80		EZB✱ ...020...	EZBPR ...020-...		2	
		02512ST-80		EZB✱ ...025...	EZ_ _ ...025-...		2.5	
		03012ST-80		EZB✱ ...030...	EZ_ _ ...030-...		3	
		03512ST-80		EZB✱ ...035...	EZ_ _ ...035-...		3.5	
		04012ST-80		EZB✱ ...040...	EZ_ _ ...040-...		4	
		05012ST-80		EZB✱ ...050...	EZ_ _ ...050-...		5	
		06012ST-80		EZB✱ ...060...	EZ_ _ ...060-...		6	
		07012ST-80		EZBR ...070...	EZ_ _ ...070-...		7	
-	EZH 01716HP-100	EZH 01716ST-100	16	EZBR ...017...	-	-	1.7	(General Purpose)
	02016HP-100	02016ST-100		EZB✱ ...020...	EZBPR ...020-...		2	
	02516HP-100	02516ST-100		EZB✱ ...025...	EZ_ _ ...025-...		2.5	
	03016HP-100	03016ST-100		EZB✱ ...030...	EZ_ _ ...030-...		3	
	03516HP-100	03516ST-100		EZB✱ ...035...	EZ_ _ ...035-...		3.5	
	04016HP-100	04016ST-100		EZB✱ ...040...	EZ_ _ ...040-...		4	
	04516HP-100	-		EZB✱ ...045...	-	_045X- ...-050EZP	4.5	
	05016HP-100	05016ST-100		EZB✱ ...050...	EZ_ _ ...050-...	_050X- ...-060EZP	5	
	06016HP-100	06016ST-100		EZB✱ ...060...	EZ_ _ ...060-...	_060X- ...-070EZP	6	
	07016HP-100	07016ST-100		EZBR ...070...	EZ_ _ ...070-...	_070X- ...-080EZP	7	
	-	08016ST-100		EZB✱ ...080...	-	_080X- ...-100EZP	8	
EZH 01719CT-120	EZH 01719HP-120	EZH 01719ST-120	0.750"	EZBR ...017...	-	-	1.7	Citizen Machinery
02019CT-120	02019HP-120	02019ST-120		EZB✱ ...020...	EZBPR ...020-...		2	
02519CT-120	02519HP-120	02519ST-120		EZB✱ ...025...	EZ_ _ ...025-...		2.5	
03019CT-120	03019HP-120	03019ST-120		EZB✱ ...030...	EZ_ _ ...030-...		3	
03519CT-120	03519HP-120	03519ST-120		EZB✱ ...035...	EZ_ _ ...035-...		3.5	
04019CT-120	04019HP-120	04019ST-120		EZB✱ ...040...	EZ_ _ ...040-...		4	
04519CT-120	04519HP-120	-		EZB✱ ...045...	-	_045X- ...-050EZP	4.5	
05019CT-120	05019HP-120	05019ST-120		EZB✱ ...050...	EZ_ _ ...050-...	_050X- ...-060EZP	5	
06019CT-120	06019HP-120	06019ST-120		EZB✱ ...060...	EZ_ _ ...060-...	_060X- ...-070EZP	6	
07019CT-120	07019HP-120	07019ST-120		EZBR ...070...	EZ_ _ ...070-...	_070X- ...-080EZP	7	
08019CT-120	08019HP-120	08019ST-120		EZB✱ ...080...	-	_080X- ...-100EZP	8	
EZH 01720CT-120	EZH 01720HP-120	EZH 01720ST-120	20	EZBR ...017...	-	-	1.7	Amada Machine Tools Eguro Tsugami Citizen Machinery (General Purpose)
02020CT-120	02020HP-120	02020ST-120		EZB✱ ...020...	EZBPR ...020-...		2	
02520CT-120	02520HP-120	02520ST-120		EZB✱ ...025...	EZ_ _ ...025-...		2.5	
03020CT-120	03020HP-120	03020ST-120		EZB✱ ...030...	EZ_ _ ...030-...		3	
03520CT-120	03520HP-120	03520ST-120		EZB✱ ...035...	EZ_ _ ...035-...		3.5	
04020CT-120	04020HP-120	04020ST-120		EZB✱ ...040...	EZ_ _ ...040-...		4	
04520CT-120	04520HP-120	-		EZB✱ ...045...	-	_045X- ...-050EZP	4.5	
05020CT-120	05020HP-120	05020ST-120		EZB✱ ...050...	EZ_ _ ...050-...	_050X- ...-060EZP	5	
06020CT-120	06020HP-120	06020ST-120		EZB✱ ...060...	EZ_ _ ...060-...	_060X- ...-070EZP	6	
07020CT-120	07020HP-120	07020ST-120		EZBR ...070...	EZ_ _ ...070-...	_070X- ...-080EZP	7	
08020CT-120	08020HP-120	08020ST-120		EZB✱ ...080...	-	_080X- ...-100EZP	8	
EZH 01722CT-135	EZH 01722HP-135	EZH 01722ST-135	22	EZBR ...017...	-	-	1.7	Star Micronics Nomura DS Tsugami
02022CT-135	02022HP-135	02022ST-135		EZB✱ ...020...	EZBPR ...020-...		2	
02522CT-135	02522HP-135	02522ST-135		EZB✱ ...025...	EZ_ _ ...025-...		2.5	
03022CT-135	03022HP-135	03022ST-135		EZB✱ ...030...	EZ_ _ ...030-...		3	
03522CT-135	03522HP-135	03522ST-135		EZB✱ ...035...	EZ_ _ ...035-...		3.5	
04022CT-135	04022HP-135	04022ST-135		EZB✱ ...040...	EZ_ _ ...040-...		4	
04522CT-135	04522HP-135	-		EZB✱ ...045...	-	_045X- ...-050EZP	4.5	
05022CT-135	05022HP-135	05022ST-135		EZB✱ ...050...	EZ_ _ ...050-...	_050X- ...-060EZP	5	
06022CT-135	06022HP-135	06022ST-135		EZB✱ ...060...	EZ_ _ ...060-...	_060X- ...-070EZP	6	
07022CT-135	07022HP-135	07022ST-135		EZBR ...070...	EZ_ _ ...070-...	_070X- ...-080EZP	7	
08022CT-135	08022HP-135	08022ST-135		EZB✱ ...080...	-	_080X- ...-100EZP	8	
EZH 01725.0CT-135	EZH 01725.0HP-135	EZH 01725.0ST-135	25	EZBR ...017...	-	-	1.7	Amada Machine Tools Eguro Tsugami Citizen Machinery (General Purpose)
02025.0CT-135	02025.0HP-135	02025.0ST-135		EZB✱ ...020...	EZBPR ...020-...		2	
02525.0CT-135	02525.0HP-135	02525.0ST-135		EZB✱ ...025...	EZ_ _ ...025-...		2.5	
03025.0CT-135	03025.0HP-135	03025.0ST-135		EZB✱ ...030...	EZ_ _ ...030-...		3	
03525.0CT-135	03525.0HP-135	03525.0ST-135		EZB✱ ...035...	EZ_ _ ...035-...		3.5	
04025.0CT-135	04025.0HP-135	04025.0ST-135		EZB✱ ...040...	EZ_ _ ...040-...		4	
04525.0CT-135	04525.0HP-135	-		EZB✱ ...045...	-	_045X- ...-050EZP	4.5	
05025.0CT-135	05025.0HP-135	05025.0ST-135		EZB✱ ...050...	EZ_ _ ...050-...	_050X- ...-060EZP	5	
06025.0CT-135	06025.0HP-135	06025.0ST-135		EZB✱ ...060...	EZ_ _ ...060-...	_060X- ...-070EZP	6	
07025.0CT-135	07025.0HP-135	07025.0ST-135		EZBR ...070...	EZ_ _ ...070-...	_070X- ...-080EZP	7	
08025.OCT-135	08025.0HP-135	08025.0ST-135		EZB✱ ...080...	-	_080X- ...-100EZP	8	
EZH 01725.4CT-120	EZH 01725.4HP-120	EZH 01725.4ST-120	1.000"	EZBR ...017...	-	-	1.7	Citizen Machinery
02025.4CT-120	02025.4HP-120	02025.4ST-120		EZB✱ ...020...	EZBPR ...020-...		2	
02525.4CT-120	02525.4HP-120	02525.4ST-120		EZB✱ ...025...	EZ_ _ ...025-...		2.5	
03025.4CT-120	03025.4HP-120	03025.4ST-120		EZB✱ ...030...	EZ_ _ ...030-...		3	
03525.4CT-120	03525.4HP-120	03525.4ST-120		EZB✱ ...035...	EZ_ _ ...035-...		3.5	
04025.4CT-120	04025.4HP-120	04025.4ST-120		EZB✱ ...040...	EZ_ _ ...040-...		4	
04525.4CT-120	04525.4HP-120	-		EZB✱ ...045...	-	_045X- ...-050EZP	4.5	
05025.4CT-120	05025.4HP-120	05025.4ST-120		EZB✱ ...050...	EZ_ _ ...050-...	_050X- ...-060EZP	5	
06025.4CT-120	06025.4HP-120	06025.4ST-120		EZB✱ ...060...	EZ_ _ ...060-...	_060X- ...-070EZP	6	
07025.4CT-120	07025.4HP-120	07025.4ST-120		EZBR ...070...	EZ_ _ ...070-...	_070X- ...-080EZP	7	
08025.4CT-120	08025.4HP-120	08025.4ST-120		EZB✱ ...080...	-	_080X- ...-100EZP	8	

- Choose sleeves (DCB) to meet with DCON dimension of bar.
- Adjustment Pin cannot be installed to EZH-ST sleeves. To adjust overhang of the bar, please use EZH-CT/HP sleeves.
- Machine manufacturers in random order.

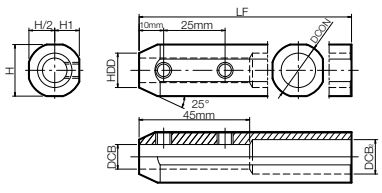
EZH Sleeves and Applicable Inserts / Toolholders (Listed by Sleeve Shank Dia.)

Shank Size (Hole Dia. : mm)		017 (1.7mm)	020 (2.0mm)	025 (2.5mm)	03 (3.0mm)	035 (3.5mm)
EZH-CT Sleeve Part Number (Internal Coolant) EZH-HP Sleeve Part Number (Adjustable Overhang Length)		EZH 01716HP-100	EZH 02016HP-100	EZH 02516HP-100	EZH 03016HP-100	EZH 03516HP-100
		01719CT/HP-120	02019CT/HP-120	02519CT/HP-120	03019CT/HP-120	03519CT/HP-120
		01720CT/HP-120	02020CT/HP-120	02520CT/HP-120	03020CT/HP-120	03520CT/HP-120
		01722CT/HP-135	02022CT/HP-135	02522CT/HP-135	03022CT/HP-135	03522CT/HP-135
		01725.0CT/HP-135	02025.0CT/HP-135	02525.0CT/HP-135	03025.0CT/HP-135	03525.0CT/HP-135
		01725.4CT/HP-120	02025.4CT/HP-120	02525.4CT/HP-120	03025.4CT/HP-120	03525.4CT/HP-120
EZH-ST Sleeve Part Number		EZH 01712ST-80	EZH 02012ST-80	EZH 02512ST-80	EZH 03012ST-80	EZH 03512ST-80
		01716ST-100	02016ST-100	02516ST-100	03016ST-100	03516ST-100
		01719ST-120	02019ST-120	02519ST-120	03019ST-120	03519ST-120
		01720ST-120	02020ST-120	02520ST-120	03020ST-120	03520ST-120
		01722ST-135	02022ST-135	02522ST-135	03022ST-135	03522ST-135
		01725.0ST-135	02025.0ST-135	02525.0ST-135	03025.0ST-135	03525.0ST-135
		01725.4ST-120	02025.4ST-120	02525.4ST-120	03025.4ST-120	03525.4ST-120
EZ Bar			EZB✱ 020020HP-	EZB✱ 025025HP-	EZB✱ 030030HP-	EZB✱ 035035HP-
	Boring Bar	EZBR 020017ST-	EZBR 025020ST-	EZBR 030025ST-	EZBR 035030ST-	EZBR 040035ST-
		EZBR 020017-...NB	EZBR 025020-...NB	EZBR 030025-...NB	EZBR ...030-...NB	EZBR 040035-...NB
					EZVBR 035030-	
					EZBFR 030030-	
	Internal Grooving				EZGR 030030-	
	Face Grooving					
	Internal Threading			EZTR 030025-	EZTR 035030-	EZTR 040035-
EZ Bar - Plus						

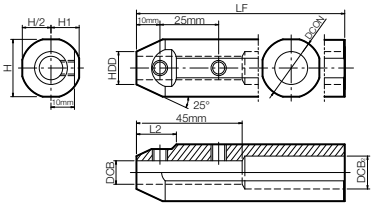
Shank Size (Hole Dia. : mm)		04 (4.0mm)	045 (4.5mm)	05 (5.0mm)	06 (6.0mm)	07 (7.0mm)	08 (8.0mm)
EZH-CT Sleeve Part Number (Internal Coolant) EZH-HP Sleeve Part Number (Adjustable Overhang Length)		EZH 04016HP-100	EZH 04516HP-100	EZH 05016HP-100	EZH 06016HP-100	EZH 07016HP-100	
		04019CT/HP-120	04519CT/HP-120	05019CT/HP-120	06019CT/HP-120	07019CT/HP-120	EZH 08019CT/HP-120
		04020CT/HP-120	04520CT/HP-120	05020CT/HP-120	06020CT/HP-120	07020CT/HP-120	08020CT/HP120
		04022CT/HP-135	04522CT/HP-135	05022CT/HP-135	06022CT/HP-135	07022CT/HP-135	08022CT/HP-135
		04025.0CT/HP-135	04525.0CT/HP-135	05025.0CT/HP-135	06025.0CT/HP-135	07025.0CT/HP-135	08025.0CT/HP-135
		04025.4CT/HP-120	04525.4CT/HP-120	05025.4CT/HP-120	06025.4CT/HP-120	07025.4CT/HP-120	08025.4CT/HP-120
EZH-ST Sleeve Part Number		EZH 04012ST-80		EZH 05012ST-80	EZH 06012ST-80	EZH 07012ST-80	
		04016ST-100		05016ST-100	06016ST-100	07016ST-100	EZH 08016ST-100
		04019ST-120		05019ST-120	06019ST-120	07019ST-120	08019ST-120
		04020ST-120		05020ST-120	06020ST-120	07020ST-120	08020ST-120
		04022ST-135		05022ST-135	06022ST-135	07022ST-135	08022ST-135
		04025.0ST-135		05025.0ST-135	06025.0ST-135	07025.0ST-135	08025.0ST-135
		04025.4ST-120		05025.4ST-120	06025.4ST-120	07025.4ST-120	08025.4ST-120
EZ Bar		EZB✱ 040040HP-		EZB✱ 050050HP-	EZB✱ 060060HP-		
	Boring Bar	EZBR 045040ST-		EZBR 055050ST-	EZBR 065060ST-	EZBR 075070ST-	
		EZBR ...040-...NB		EZBR ...050-...NB	EZBR ...060-...NB	EZBR ...070-...NB	
		EZVBR 045040-		EZVBR 055050-	EZVBR 065060-		
		EZBTR 040040-		EZBTR 050050-			
		EZBFR 040040-		EZBFR 050050-	EZBFR 060060-		
	Internal Grooving	EZG✱ 040040-		EZG✱ 050050-	EZG✱ 060060-	EZG✱ ...070-...	
	Face Grooving	EZFG✱ 050040-		EZFG✱ 060050-		EZFG✱ 080070-	
	Internal Threading	EZTR 050040-		EZTR 060050-	EZTR 070060-	EZTR 080070-	
EZ Bar - Plus			S/C045X-SCLCR03-050EZP	S/C050X-SWUBR03-060EZP	S/C060X-SCLCR04-070EZP	S/C070X-SCLCR04-080EZP	S/C080X-SCLCR06-100EZP
						S/C070X-STLBR06-080EZP	S/C080X-STLBR09-100EZP
				S/C050X-SWUBR06-060EZP	S/C060X-SWUBR06-070EZP	S/C070X-SWUBR08-080EZP	
Boring Bar		C04-...		C05-...	C06-...	C07-...	C/E08-...
					S06-...		A/S08-...

Note 1) When attaching Double-sided Micro Bars to EZH-CT/HP Sleeve (Adjustable overhang length), detach Adjustable Pin.
Overhang length of bar is not adjustable.

SHA Sleeves (Applicable Toolholders ➡ F104)



(Toolholder installation side) **Fig.1**



(Toolholder installation side) **Fig.2**

Part Number	Stock	Dimensions (mm)								Drawing	Spare Parts		Applicable Machine Manufacturer
		DCB	DCON	HDD	DCB_2	H	H1	LF	L2		Screw	Wrench	
SHA 0820-120	□	8	20.00	14	12	19.0	9.25	120	-	Fig.1	HS6X4P	LW-3	Amada Machine Tools Eguro Tsugami Citizen Machinery
1020-120	●	10	20.00	14	12	19.0	9.25	120	-	Fig.1			
SHA 0825.0-135	●	8	25.00	14	14	24.0	11.5	135	17	Fig.2			
1025.0-135	●	10	25.00	14	14	24.0	11.5	135	17	Fig.2			
1225.0-135	●	12	25.00	16	14	24.0	11.5	135	17	Fig.2			
SHA 0819-120	□	8	19.05	14	12	18.0	8.75	120	-	Fig.1	HS6X4P	LW-3	Citizen Machinery
1019-120	□	10	19.05	14	12	18.0	8.75	120	-	Fig.1			
SHA 0820-120	□	8	20.00	14	12	19.0	9.25	120	-	Fig.1			
1020-120	●	10	20.00	14	12	19.0	9.25	120	-	Fig.1			
SHA 0825.4-120	●	8	25.40	14	14	24.4	12.0	120	17	Fig.2			
1025.4-120	●	10	25.40	14	14	24.4	12.0	120	17	Fig.2			
1225.4-120	●	12	25.40	16	14	24.4	12.0	120	17	Fig.2			
SHA 0822-125	●	8	22.00	14	14	21.0	10.0	125	-	Fig.1	HS6X4P	LW-3	Star Micronics Nomura DS
1022-125	●	10	22.00	14	14	21.0	10.0	125	-	Fig.1			
1222-125	□	12	22.00	16	14	21.0	10.0	125	-	Fig.1			
SHA 0823-120	□	8	23.00	14	14	22.0	10.5	120	16	Fig.2	HS6X4P	LW-3	Nomura DS
1023-120	□	10	23.00	14	14	22.0	10.5	120	16	Fig.2			
1223-120	□	12	23.00	16	14	22.0	10.5	120	16	Fig.2			

※ : Length of DCB…45mm (All SHA sleeves) • Choose sleeves (DCB) to meet with DCON dimension of toolholder. • Machine manufacturers are in random order.

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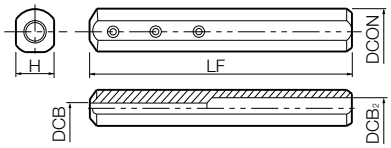
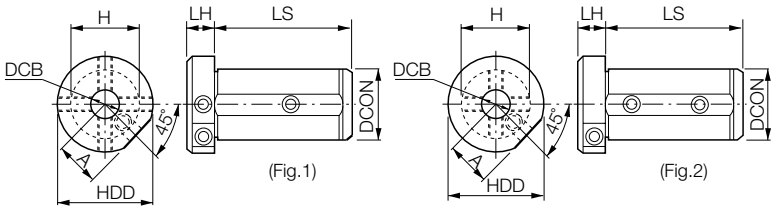
Sleeves for Boring Bars

Shape	Part Number	Stock	Unit	Dimensions DCON	DCB	DCB_2	H	LF	Spare Parts Screw	Wrench
 (Toolholder installation side)	SH 0416-100	●	mm	16	4	5	14	100	HS4X4	LW-2
	0516-100	●		16	5	6	14	100		
	0616-100	●		16	6	7	14	100		
	0716-100	●		16	7	8	14	100		
	SH 0820-120	●		20	8	9	18	120	HS4X4	LW-2
	1020-120	●		20	10	11	18	120		
	1225-150	●		25	12	13	23	150	HS5X5	LW-2.5
	1632-180	●		32	16	18	30	180	HS5X5	LW-2.5
	2032-180	●		32	20	22	30	180		
	SL -1	●	inch	0.625	0.203	0.250	0.292	4.00	SLS-1	LW-2
	-2	●		0.625	0.281	0.312	0.292	4.00	SLS-2	
	-2.5-10	●		0.625	0.156	0.197	0.292	4.00	SLS-1	

Coolant Sleeve Dimensions



(Fig.1) (Fig.2)

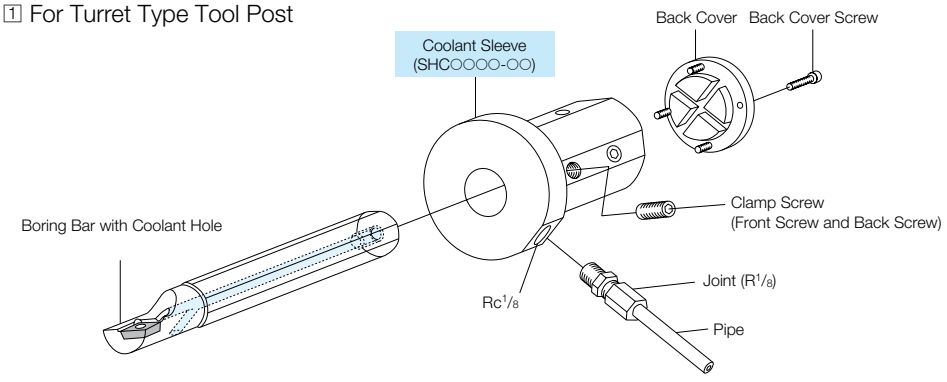
Accessories
- Back Cover / SHL-4···SHC○○40-70
  SHL-5···SHC○○50-95
- Back Cover Screw
- Shank Clamp Screw

(Note) To stabilize the Toolholder and to prevent coolant leaks, tighten all 4 screws of coolant sleeve securely.

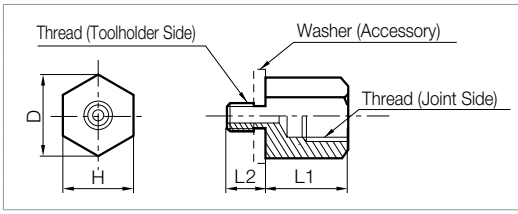
Part Number	Stock	Dimensions (mm) DCON	HDD	DCB	LS	LH	H	A	Drawing	Spare Parts Front Screw	Wrench	Back Screw	Wrench	Back Cover	Back Cover Screw	Wrench
SHC 0840-70	●	40	56	8	70	16	38	27.0	Fig.1	HS6X22	LW-3	HS6X14	LW-3	SHL-4	HH3X6	LW-2.5
1040-70	●	40	56	10	70	16	38	27.0								
1240-70	●	40	56	12	70	16	38	27.0	Fig.2	HS10X10	LW-5	HS10X10	LW-5	SHL-4	HH3X6	LW-2.5
1640-70	●	40	56	16	70	16	38	27.0								
2040-70	●	40	56	20	70	16	38	27.0	Fig.1	HS10X10	LW-5	HS6X6	LW-3	SHL-4	HH3X6	LW-2.5
2540-70	●	40	56	25	70	16	38	27.0								
SHC 0850-95	●	50	65	8	95	16	47	30.5	Fig.1	HS6X22	LW-3	HS6X14	LW-3	SHL-5	HH3X12	LW-2.5
1050-95	●	50	65	10	95	16	47	30.5								
1250-95	●	50	65	12	95	16	47	30.5	Fig.2	HS10X10	LW-5	HS10X10	LW-5	SHL-5	HH3X12	LW-2.5
1650-95	●	50	65	16	95	16	47	30.5								
2050-95	●	50	65	20	95	16	47	30.5								
2550-95	●	50	65	25	95	16	47	30.5								

How to Install

1 For Turret Type Tool Post

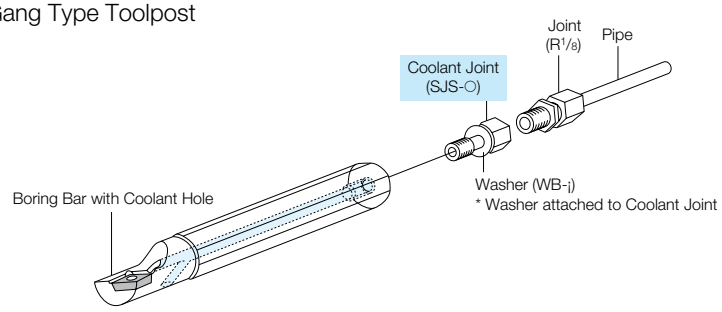


Coolant Joint Dimensions *This Coolant Joint is not applicable for Dynamic Bar



Part Number	Stock	Dimensions (mm)				Thread (Toolholder Side)	Thread (Joint Side)	Spare Parts Washer
		D	L1	L2	H			
SJS-5	●	15	15	7	13	M5XP0.8	Rc1/8 (PT1/8)	WB-5
SJS-6	●	15	15	9	13	M6XP1.0		WB-6
SJS-8	●	15	15	13	13	M8XP1.25		WB-8

2 For Gang Type Toolpost



List of Toolholders and Applicable Joints

Toolholder Part Number	Applicable Coolant Joint
A08-----OOE	SJS-5
A10-----OOE	
A12-----OOE	SJS-6
A16-----OOE	SJS-8
A20-----OOE	
A25-----OOE	
E08-----OO	SJS-5
E10-----OO	
E12-----OO	SJS-6
E16-----OO	SJS-8
E20-----OO	

* This Coolant Joint is not applicable for Dynamic Bar

SHA / SH / SHC Sleeves and Applicable Toolholders (Listed by Shank Dia.)

Shank Size (Hole Dia. : mm)	04 (4mm)	05 (5mm)	06 (6mm)	07 (7mm)	08 (8mm)	10 (10mm)	12 (12mm)	16 (16mm)	20 (20mm)	25 (25mm)
SHA / SH / SHC Sleeve Part Numbers	SH0416-100	SH0516-100	SH0616-100	SH0716-100	SH0820-120	SH1020-120	SH1225-150	SH1632-180	SH2032-180	
					SHA0819-120	SHA1019-120				
					SHA0820-120	SHA1020-120				
					SHA0822-125	SHA1022-125	SHA1222-125			
					SHA0823-120	SHA1023-120	SHA1223-120			
					SHA0825.0-135	SHA1025.0-135	SHA1225.0-135			
					SHA0825.4-120	SHA1025.4-120	SHA1225.4-120			
					SHC0840-70	SHC1040-70	SHC1240-70	SHC1640-70	SHC2040-70	SHC2540-70
					SHC0850-95	SHC1050-95	SHC1250-95	SHC1650-95	SHC2050-95	SHC2550-95
Boring Bars Part Numbers					A08-····	A10-····	A12-····	A16-····	A20-····	A25-····
	C04-····	C05-····	C06-····	C07-····	C08-····	C10-····	C12-····	C16-····	C20-····	C25-····
					E08-····	E10-····	E12-····	E16-····	E20-····	E25-····
			S06-····		S08-····	S10-····	S12-····	S16-····	S20-····	S25-····
Internal Grooving Toolholder Part Numbers					SIGER0808A-EH	SIGER1010B-EH	SIGER1412C-EH	SIGER1616C-EH	SIGER2020D-EH	SIGER2525E-EH
						SIGER1210B-EH	SIGER1612C-EH			KIGBAR3525-16
					SIGER0808A-WH	SIGER1010B-WH	SIGER1412C-WH	KIGMR2016B-3V	KIGMR2520B-3V	KIGMR3225B-4V
						SIGER1210B-WH	SIGER1612C-WH			KITGR3525T-16
					SIGER1008B-WH-90	SIGER1210B-WH-90	SIGER1412C-WH-90			
							GIVR1412-1SE	GIVR1216-1SS	GIVR1420-1S	GIVR2025-1B
							GIVR1612-1AE	GIVR2016-1BE	GIVR1620-1A	GIVR2025-2B
								GIVR2016-2BE	GIVR2520-1CE	GIVR3225-1CE
								GIVR1616-1AW	GIVR2720-2CE	GIVR3225-2CE
									GIVR2020-1BW	GIVR2525-1CW
									GIVR2020-2BW	GIVR2525-2CW
Internal Threading Toolholder Part Numbers							SINR0612S-06E	SINR0816S-08E	SINR2420S-16	CINR3025S-16
								SINR1216S-11E	SINR2420S-22	CINR3025S-22
								SINR1516S-11		
								SINR1616S-16		
								SINR2016S-16		

* For SHA sleeves, please ref. to page **F108**
For SH / SL / SHC sleeves, please ref. to page **F109**

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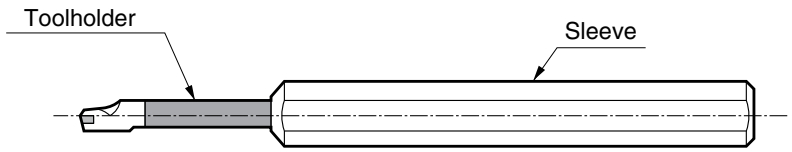
C...-AS (Assembly List)

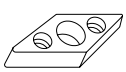
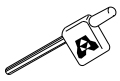


Assembly configuration

Assembly (Discontinued Part Number)	Toolholder (Discontinued Part Number)	Alternative Toolholder (Dynamic Bar)	Sleeve Part Number	Notes
C04G-SCLCR03-05-AS	C04G-SCLCR03-05	C04G-SCLCR03-05AN	SH0416-100	-
SCLCL03-05-AS	SCLCL03-05	SCLCL03-05AN		
C05H-SCLCR03-06-AS	C05H-SCLCR03-06	C05H-SCLCR03-06AN	SH0516-100	
SCLCL03-06-AS	SCLCL03-06	SCLCL03-06AN		
C05H-SWUBR06-06-AS	C05H-SWUBR06-06	C05H-SWUBR06-06AN	SH0516-100	
SWUBL06-06-AS	SWUBL06-06	SWUBL06-06AN		
C06J-SCLCR04-07-AS	C06J-SCLCR04-07	C06J-SCLCR04-07AN	SH0616-100	
SCLCL04-07-AS	SCLCL04-07	SCLCL04-07AN		
C06J-SWUBR06-07-AS	C06J-SWUBR06-07	C06J-SWUBR06-07AN	SH0616-100	
SWUBL06-07-AS	SWUBL06-07	SWUBL06-07AN		
C07K-SCLCR04-08-AS	C07K-SCLCR04-08	C07K-SCLCR04-08AN	SH0716-100	
SCLCL04-08-AS	SCLCL04-08	SCLCL04-08AN		
C07K-SWUBR08-08-AS	C07K-SWUBR08-08	C07K-SWUBR08-08AN	SH0716-100	
SWUBL08-08-AS	SWUBL08-08	SWUBL08-08AN		
C08L-STUPR08-10-AS	C08L-STUPR08-10	E08L-STLPR08-10AN	SH0820-120	Difference of Alternative Toolholder No Coolant Hole → With Coolant Hole Front Cutting Edge Angle 3° → 5°
C10N-STUPR09-12-AS	C10N-STUPR09-12	E10N-STLPR09-12AN	SH1020-120	
C10N-STUPR11-12-AS	C10N-STUPR11-12	E10N-STLPR11-12AN		
C12Q-STUPR09-16-AS	C12Q-STUPR09-16	E12Q-STLPR09-16A	SH1225-150	
C12Q-STUPR11-14-AS	C12Q-STUPR11-14	E12Q-STLPR11-14A		
C12Q-STUPR11-16-AS	C12Q-STUPR11-16			
C16X-STUPR11-18-AS	C16X-STUPR11-18	E16X-STLPR11-18A	SH1632-180	
C16X-STUPR11-20-AS	C16X-STUPR11-20			
C20S-STUPR11-25-AS	C20S-STUPR11-25	E20S-STLPR11-22A	SH2032-180	
C20S-STUPR16-25-AS	C20S-STUPR16-25	E20S-STLPR16-25A		

* "AS" indicates an assembly of toolholder and sleeve.
You can purchase the toolholder and sleeve and assemble them to make the corresponding assembly part.

Former Parts List (Boring Bar)

Part Number (Previous Part Number)	Spare Parts				
	Clamp Screw	Wrench	Shim	Shim Screw	Wrench
					
S32S-SVJBR16-40E	SB-40115TR	FT-15	SVN-32	SB-2050TR	FT-6
S40T-SVJBR16-50E					
S25X-SVPBR16-34E					
S32S-SVPBR16-40E					
S25X-SVUBR16-34E					
S32S-SVUBR16-40E					
S25X-SVZBR16-34E					
S32S-SVZBR16-40E					

· **S32S-SVJBR16-40E** and **S40T-SVJBR16-50E** have been replaced by **A32S-SVJBR16-40AE** and **A40T-SVJBR16-50AE** respectively. Ref. page **F68**
· **S25X-SVPBR16-34E** and **S32S-SVPBR16-40E** have been replaced by **A25S-SVPBR16-31AE** and **A32S-SVPBR16-40AE** respectively. Ref. page **F70**
· **S25X-SVUBR16-34E** and **S32S-SVUBR16-40E** have been replaced by **A25S-SVUBR16-34AE** and **A32S-SVUBR16-40AE** respectively. Ref. page **F73**
· **S25X-SVZBR16-34E** and **S32S-SVZBR16-40E** have been replaced by **A25S-SVZBR16-34AE** and **A32S-SVZBR16-40AE** respectively. Ref. page **F73**

Alternative Toolholder Reference Table for Boring Bar

Boring Bar (Discontinued Part Number)				Alternative Toolholder					
				Dynamic Bar (1st Recommendation)			Dynamic Bar (2nd Recommendation)		
Shank type	Insert Shape	Coolant Hole	Part Number	Coolant Hole	Part Number	Ref. to Page	Coolant Hole	Part Number	Ref. to Page
Excellent Bar	CC..	No	S08X-SCLC□06-10E	Yes	A08X-SCLC□06-10AE	F47	No	S08X-SCLC□06-10A	F47
			S10H-SCLC□03-05E	No	S10H-SCLC□03-05AE		-	-	-
			S10H-SCLC□03-06E		S10H-SCLC□03-06AE				
			S10J-SCLC□04-07E		S10H-SCLC□04-07AE				
			S10J-SCLC□04-08E		S10H-SCLC□04-08AE				
		Yes	A08H-SCLC□06-10E	Yes	A08X-SCLC□06-10AE		No	S08X-SCLC□06-10A	F47
	CP..	No	S10M-SCLP□08-12E	Yes	A10L-SCLP□08-12AE	F51	No	S10L-SCLP□08-12A	F51
			S12M-SCLP□08-14E		A12M-SCLP□08-14AE			S12M-SCLP□08-14A	
			S12M-SCLP□09-16E		A12M-SCLP□09-16AE			S12M-SCLP□09-16A	
			S16Q-SCLP□09-18E		A16Q-SCLP□09-18AE			S16Q-SCLP□09-18A	
			S16R-SCLP□09-20E						
			S20X-SCLP□09-25E		A20R-SCLP□09-22AE			S20R-SCLP□09-22A	
		Yes	A10X-SCLP□08-12E	Yes	A10L-SCLP□08-12AE	F51	No	S10L-SCLP□08-12A	F51
			A12X-SCLP□08-14E		A12M-SCLP□08-14AE			S12M-SCLP□08-14A	
			A12X-SCLP□09-16E		A12M-SCLP□09-16AE			S12M-SCLP□09-16A	
			A16M-SCLP□09-18E		A16Q-SCLP□09-18AE			S16Q-SCLP□09-18A	
			A16M-SCLP□09-20E						
			A20Q-SCLP□09-25E		A20R-SCLP□09-22AE			S20R-SCLP□09-22A	
	DC..	No	S10M-SDUC□07-14E	Yes	A10L-SDUC□07-14AE	F55	No	S10L-SDUC□07-14A	F55
			S12M-SDUC□07-16E		A12M-SDUC□07-16AE			S12M-SDUC□07-16A	
			S16Q-SDUC□07-20E		A16Q-SDUC□07-20AE			S16Q-SDUC□07-20A	
			S16Q-SDUC□11-25E		A16Q-SDUC□11-23AE			S16Q-SDUC□11-23A	
			S20Q-SDUC□11-32E		A20R-SDUC□11-27AE			S20R-SDUC□11-27A	
		No	S10M-SDZC□07-14E	Yes	A10L-SDZC□07-14AE	F57	No	S10L-SDZC□07-14A	F57
			S12M-SDZC□07-16E		A12M-SDZC□07-16AE			S12M-SDZC□07-16A	
			S16Q-SDZC□07-20E		A16Q-SDZC□07-20AE			S16Q-SDZC□07-20A	
			S16Q-SDZC□11-25E		A16Q-SDZC□11-23AE			S16Q-SDZC□11-23A	
			S20Q-SDZC□11-32E		A20R-SDZC□11-27AE			S20R-SDZC□11-27A	
	TB..	No	S06H-STUB□06-08E	No	S06H-STLB□06-08AE	F63	No	S06H-STLB□06-08A	F63
	TP..	No	S08K-STUP□08-10E	Yes	A08X-STLP□08-10AE	F63	No	S08X-STLP□08-10A	F63
			S10M-STUP□09-12E		A10L-STLP□09-12AE			S10L-STLP□09-12A	
			S10M-STUP□11-12E		A10L-STLP□11-12AE			S10L-STLP□11-12A	
			S12M-STUP□09-16E		A12M-STLP□09-16AE			S12M-STLP□09-16A	
			S12M-STUP□11-14E		A12M-STLP□11-14AE			S12M-STLP□11-14A	
			S12M-STUP□11-16E						
			S16R-STUP□11-18E		A16Q-STLP□11-18AE			S16Q-STLP□11-18A	
			S16R-STUP□11-20E						
			S20X-STUP□11-25E		A20R-STLP□11-22AE			S20R-STLP□11-22A	
			S20X-STUP□16-25E		A20R-STLP□16-25AE		-	-	-
			S25X-STUP□16-32E		A25S-STLP□16-27AE		No	S25S-STLP□16-27A	F63
		Yes	A08H-STUP□08-10E	Yes	A08X-STLP□08-10AE	F63	No	S08X-STLP□08-10A	F63
			A10X-STUP□09-12E		A10L-STLP□09-12AE			S10L-STLP□09-12A	
			A10X-STUP□11-12E		A10L-STLP□11-12AE			S10L-STLP□11-12A	
			A12X-STUPR09-16E		A12M-STLPR09-16AE			S12M-STLPR09-16A	
			A12X-STUP□11-14E		A12M-STLP□11-14AE			S12M-STLP□11-14A	
			A12X-STUPR11-16E		A12M-STLPR11-14AE			S12M-STLPR11-14A	
			A16M-STUP□11-18E		A16Q-STLP□11-18AE			S16Q-STLP□11-18A	
			A16M-STUP□11-20E						
			A20Q-STUP□11-25E		A20R-STLP□11-22AE			S20R-STLP□11-22A	
			A20Q-STUP□16-25E		A20R-STLP□16-25AE		-	-	-
			A25R-STUP□16-32E		A25S-STLP□16-27AE		No	S25S-STLP□16-27A	F63
	VB..	No	S20R-SVJB□11-25E	Yes	A20R-SVJB□11-25AE	F68	No	S20R-SVJB□11-25A	F68
			S25S-SVJB□11-30E		A25S-SVJB□11-30AE			S25S-SVJB□11-30A	
			S32S-SVJB□16-40EN		A32S-SVJB□16-40AE			S32S-SVJB□16-40A	
			S40T-SVJB□16-50EN		A40T-SVJB□16-50AE			S40T-SVJB□16-50A	

Note) The corresponding replacements may be different from the conventional parts in minimum machining diameter or applicable insert size.
Make sure of their specifications by referring to the catalog or other documents.

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Alternative Toolholder Reference Table for Boring Bar

Boring Bar (Discontinued Part Number)				Alternative Toolholder					
				Dynamic Bar (1st Recommendation)			Dynamic Bar (2nd Recommendation)		
Shank type	Insert Shape	Coolant Hole	Part Number	Coolant Hole	Part Number	Ref. to Page	Coolant Hole	Part Number	Ref. to Page
Excellent Bar	VB..	No	S12M-SVPB□11-20E	Yes	A12M-SVPB□11-18AE	F70	No	S12M-SVPB□11-18A	F70
			S16Q-SVPB□11-25E		A16Q-SVPB□11-22AE			S16Q-SVPB□11-22A	
			S25X-SVPB□16-34EN		A25S-SVPB□16-31AE			S25S-SVPB□16-31A	
			S32S-SVPB□16-40EN		A32S-SVPB□16-40AE			S32S-SVPB□16-40A	
		No	S16Q-SVUB□11-20E	Yes	A16Q-SVUB□11-20AE	F73	No	S16Q-SVUB□11-20A	F73
			S20R-SVUB□11-25E		A20R-SVUB□11-25AE			S20R-SVUB□11-25A	
			S25X-SVUB□16-34EN		A25S-SVUB□16-34AE			S25S-SVUB□16-34A	
			S32S-SVUB□16-40EN		A32S-SVUB□16-40AE			S32S-SVUB□16-40A	
		No	S16Q-SVZB□11-20E	Yes	A16Q-SVZB□11-20AE	F73	No	S16Q-SVZB□11-20A	F73
			S20R-SVZB□11-25E		A20R-SVZB□11-25AE			S20R-SVZB□11-25A	
			S25X-SVZB□16-34EN		A25S-SVZB□16-34AE			S25S-SVZB□16-34A	
			S32S-SVZB□16-40EN		A32S-SVZB□16-40AE			S32S-SVZB□16-40A	
	VC..	No	S12M-SVJC□08-16E	Yes	A12M-SVJC□08-16AE	F68	No	S12M-SVJC□08-16A	F68
			S16Q-SVJC□08-20E		A16Q-SVJC□08-20AE			S16Q-SVJC□08-20A	
		No	S10M-SVPC□08-16E	Yes	A10L-SVPC□08-14AE	F70	No	S10L-SVPC□08-14A	F70
		No	S12M-SVUC□08-16E	Yes	A12M-SVUC□08-16AE	F73	No	S12M-SVUC□08-16A	F73
		No	S12M-SVZC□08-16E	Yes	A12M-SVZC□08-16AE	F73	No	S12M-SVZC□08-16A	F73
	VP..	No	S12M-SVJP□08-16E	Yes	A12M-SVJP□08-16AE	F68	No	S12M-SVJP□08-16A	F68
	WB..	No	S08K-SWUB□08-10E	Yes	A08X-SWUB□08-10AE	F77	No	S08X-SWUB□08-10A	F77
			S10M-SWUB□08-12E		A10L-SWUB□08-12AE			S10L-SWUB□08-12A	
			S10H-SWUB□06-06E	No	S10H-SWUB□06-06AE			S10H-SWUB□06-06A	
			S10H-SWUB□06-07E		S10H-SWUB□06-07AE			S10H-SWUB□06-07A	
			S10J-SWUB□08-08E		S10H-SWUB□08-08AE			S10H-SWUB□08-08A	
	WP..	No	S12M-SWUP□11-14E	Yes	A12M-SWUP□11-14AE	F77	No	S12M-SWUP□11-14A	F77
			S12M-SWUP□11-16E						
			S16N-SWUP□11-18E		A16Q-SWUP□11-18AE			S16Q-SWUP□11-18A	
			S16Q-SWUP□16-20E		A16Q-SWUP□16-18AE			S16Q-SWUP□16-18A	
			S20R-SWUP□16-25E		A20R-SWUP□16-22AE			S20R-SWUP□16-22A	
Steel Bar	CC..	No	S08X-SCLC□06-10	No	S08X-SCLC□06-10A	F47	-	-	-
	CP..	No	S10M-SCLP□08-12	No	S10L-SCLP□08-12A	F51	-	-	-
			S12M-SCLP□08-14		S12M-SCLP□08-14A				
			S12M-SCLP□09-16		S12M-SCLP□09-16A				
			S16N-SCLP□09-18		S16Q-SCLP□09-18A				
			S16Q-SCLP□09-20						
			S20R-SCLP□09-25		S20R-SCLP□09-22A				
			S25S-SCLP□09-30		S25S-SCLP□09-27A				
	DC..	No	S16Q-SDUC□07-14	No	S16Q-SDUC□07-14A	F55	-	-	-
			S16Q-SDUC□07-16						
			S20R-SDUC□11-20		S20R-SDUC□11-20A				
			S25X-SDUC□11-25		S16Q-SDUC□11-23A		No	S25S-SDUC□11-32A	F55
		No	S16Q-SDZC□07-14	No	S16Q-SDZC□07-14A	F57	-	-	-
			S16Q-SDZC□07-16						
			S20R-SDZC□11-20		S20R-SDZC□11-20A				
			S25X-SDZC□11-25		S16Q-SDZC□11-23A		No	S25S-SDZC□11-32A	F57
	TB..	No	S06H-STUB□06-08	No	S06H-STLB□06-08A	F63	-	-	-
	TP..	No	S08K-STUP□08-10	No	S08X-STLP□08-10A	F63	-	-	-
			S10M-STUP□09-12		S10L-STLP□09-12A				
			S12M-STUP□09-16		S12M-STLP□09-16A				
			S16Q-STUP□11-20		S16Q-STLP□11-18A				
			S20R-STUP□11-25		S20R-STLP□11-22A				
			S25X-STUP□16-32		S25S-STLP□16-27A				
	WB..	No	S10H-SWUB□06-06	No	S10H-SWUB□06-06A	F77	-	-	-
			S10H-SWUB□06-06-15						
			S10H-SWUB□06-07		S10H-SWUB□06-07A				
			S10J-SWUB□08-08		S10H-SWUB□08-08A				
			S10J-SWUB□08-08-20						

Note) The corresponding replacements may be different from the conventional parts in minimum machining diameter or applicable insert size.
Make sure of their specifications by referring to the catalog or other documents.

Alternative Toolholder Reference Table for Boring Bar

Boring Bar (Discontinued Part Number)				Alternative Toolholder					
				Dynamic Bar (1st Recommendation)			Dynamic Bar (2nd Recommendation)		
Shank type	Insert Shape	Coolant Hole	Part Number	Coolant Hole	Part Number	Ref. to Page	Coolant Hole	Part Number	Ref. to Page
Carbide Shank Boring Bar	CC..	No	C04G-SCLC□03-05 (A)	No	C04G-SCLC□03-05AN	F47	-	-	-
			C05H-SCLC□03-06 (A)		C05H-SCLC□03-06AN				
			C06J-SCLC□04-07 (A)		C06J-SCLC□04-07AN				
			C07K-SCLC□04-08 (A)		C07K-SCLC□04-08AN				
			C08L-SCLC□06-10	Yes	E08L-SCLC□06-10AN				
		Yes	E08L-SCLC□06-10 (A)						
			E08L-SCLCR06-10A-2/3		E08L-SCLCR06-10AN2/3				
			E10N-SCLC□06-12A		E10N-SCLC□06-12AN	F47	-	-	-
			E10N-SCLCR06-12A-2/3		E10N-SCLCR06-12AN2/3				
	CP..	No	C10N-SCLP□08-12	Yes	E10N-SCLP□08-12AN	F51	-	-	-
			C10N-SCLPR08-12-1/2		E10N-SCLPR08-12AN1/2				
			C10N-SCLPR08-12-2/3		E10N-SCLPR08-12AN2/3				
			C12Q-SCLP□09-16		E12Q-SCLP□09-16A				
			C12Q-SCLPR09-16-1/2		E12Q-SCLPR09-16A-1/2				
			C12Q-SCLPR09-16-2/3		E12Q-SCLPR09-16A-2/3				
			C16X-SCLP□09-20		E16X-SCLP□09-18A				
			C16X-SCLPR09-20-1/2		E16X-SCLPR09-18A-1/2				
			C16X-SCLPR09-20-2/3		E16X-SCLPR09-18A-2/3				
			C20S-SCLP□09-25		E20S-SCLP□09-22A				
			C20S-SCLPR09-25-1/2		E20S-SCLPR09-22A-1/2				
			C20S-SCLPR09-25-2/3		E20S-SCLPR09-22A-2/3				
		Yes	E10N-SCLP□08-12 (A)	Yes	E10N-SCLP□08-12AN	F51	-	-	-
			E10N-SCLPR08-12A-1/2		E10N-SCLPR08-12AN1/2				
			E10N-SCLPR08-12A-2/3		E10N-SCLPR08-12AN2/3				
			E12Q-SCLP□09-16		E12Q-SCLP□09-16A				
			E16X-SCLP□09-20		E16X-SCLP□09-18A				
			E20S-SCLP□09-25		E20S-SCLP□09-22A				
	DC..	No	C10N-SDUC□07-14	Yes	E10N-SDUC□07-14A	F55	-	-	-
			C12Q-SDUC□07-16		E12Q-SDUC□07-16A				
			C12Q-SDUC□11-20						
			C16X-SDUC□11-25		E16X-SDUC□11-23A				
			C20S-SDUC□11-32		E20S-SDUC□11-27A				
	TB..	No	C06J-STLB□06-08A	No	C06J-STLB□06-08AN	F63	-	-	-
			C10L-STUB□06-08		C06J-STLB□06-08AN				
	TP..	Yes	E08L-STLP□08-10A	Yes	E08L-STLP□08-10AN	F63	-	-	-
			E08L-STLP□09-10A		E08L-STLP□09-10AN				
			E10N-STLP□09-12A		E10N-STLP□09-12AN				
			E10N-STLPR09-12A-1/2		E10N-STLPR09-12AN1/2				
			E10N-STLPR09-12A-2/3		E10N-STLPR09-12AN2/3				
			E10N-STLP□11-12A		E10N-STLP□11-12AN				
			E10N-STLPR11-12A-1/2		E10N-STLPR11-12AN1/2				
			E10N-STLPR11-12A-2/3		E10N-STLPR11-12AN2/3				
		No	C08L-STUP□08-10	Yes	E08L-STLP□08-10AN	F63	-	-	-
			C10N-STUP□09-12		E10N-STLP□09-12AN				
			C10N-STUPR09-12-1/2		E10N-STLPR09-12AN-1/2				
			C10N-STUPR09-12-2/3		E10N-STLPR09-12AN-2/3				
			C10N-STUP□11-12		E10N-STLP□11-12AN				
			C10N-STUPR11-12-1/2		E10N-STLPR11-12AN-1/2				
			C10N-STUPR11-12-2/3		E10N-STLPR11-12AN-2/3				
			C12Q-STUP□09-16		E12Q-STLP□09-16A				
			C12Q-STUPR09-16-1/2		E12Q-STLPR09-16A-1/2				
			C12Q-STUPR09-16-2/3		E12Q-STLPR09-16A-2/3				
			C12Q-STUP□11-14		E12Q-STLP□11-14A				
			C12Q-STUPR11-14-1/2		E12Q-STLPR11-14A-1/2				
			C12Q-STUPR11-14-2/3		E12Q-STLPR11-14A-2/3				
			C12Q-STUP□11-16		E12Q-STLP□11-14A				
			C12Q-STUPR11-16-1/2		E12Q-STLPR11-14A-1/2				
			C12Q-STUPR11-16-2/3		E12Q-STLPR11-14A-2/3				

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Alternative Toolholder Reference Table for Boring Bar

Boring Bar (Discontinued Part Number)				Alternative Toolholder					
				Dynamic Bar (1st Recommendation)			Dynamic Bar (2nd Recommendation)		
Shank type	Insert Shape	Coolant Hole	Part Number	Coolant Hole	Part Number	Ref. to Page	Coolant Hole	Part Number	Ref. to Page
Carbide Shank Boring Bar	TP..	No	C16X-STUP□11-18	Yes	E16X-STLP□11-18A	F63	-	-	-
			C16X-STUPR11-18-1/2		E16X-STLPR11-18A-1/2				
			C16X-STUPR11-18-2/3		E16X-STLPR11-18A-2/3				
			C16X-STUP□11-20		E16X-STLP□11-18A				
			C16X-STUPR11-20-1/2		E16X-STLPR11-18A-1/2				
			C16X-STUPR11-20-2/3		E16X-STLPR11-18A-2/3				
			C20S-STUP□11-25		E20S-STLP□11-22A				
			C20S-STUPR11-25-1/2		E20S-STLPR11-22A-1/2				
			C20S-STUPR11-25-2/3		E20S-STLPR11-22A-2/3				
			C20S-STUP□16-25		E20S-STLP□16-25A				
			C20S-STUPR16-25-1/2		E20S-STLPR16-25A-1/2				
			C20S-STUPR16-25-2/3		E20S-STLPR16-25A-2/3				
		Yes	E08L-STUP□08-10	Yes	E08L-STLP□08-10AN	F63	-	-	-
			E10N-STUP□09-12		E10N-STLP□09-12AN				
			E10N-STUP□11-12		E10N-STLP□11-12AN				
			E12Q-STUP□09-16		E12Q-STLP□09-16A				
			E12Q-STUP□11-14		E12Q-STLP□11-14A				
			E12Q-STUP□11-16						
			E16X-STUP□11-18		E16X-STLP□11-18A				
			E16X-STUP□11-20						
			E20S-STUPR11-25		E20S-STLPR11-22A				
			E20S-STUPR16-25		E20S-STLPR16-25A				
	WB..	No	C05H-SWUB□06-06	No	C05H-SWUB□06-06AN	F77	-	-	-
			C06J-SWUB□06-07		C06J-SWUB□06-07AN				
			C07K-SWUB□08-08		C07K-SWUB□08-08AN				
			C08L-SWUB□08-10	Yes	E08L-SWUB□08-10AN				
			C10N-SWUB□08-12		E10N-SWUB□08-12AN				
			C10N-SWUBR08-12-1/2		E10N-SWUBR08-12AN1/2				
			C10N-SWUBR08-12-2/3		E10N-SWUBR08-12AN2/3				
		Yes	E08L-SWUB□08-10A		E08L-SWUB□08-10AN				
			E10N-SWUB□08-12A		E10N-SWUB□08-12AN				
			E10N-SWUBR08-12A-1/2		E10N-SWUBR08-12AN1/2				
			E10N-SWUBR08-12A-2/3		E10N-SWUBR08-12AN2/3				
	WP..	No	C12Q-SWUP□11-14	Yes	E12Q-SWUP□11-14A	F77	-	-	-
			C12Q-SWUPR11-14-1/2		E12Q-SWUPR11-14A-1/2				
			C12Q-SWUPR11-14-2/3		E12Q-SWUPR11-14A-2/3				
			C12Q-SWUP□11-16		E12Q-SWUP□11-14A				
			C12Q-SWUPR11-16-1/2		E12Q-SWUPR11-14A-1/2				
			C12Q-SWUPR11-16-2/3		E12Q-SWUPR11-14A-2/3				
			C16X-SWUP□11-18		E16X-SWUP□11-18A				
			C16X-SWUPR11-18-1/2		E16X-SWUPR11-18A-1/2				
			C16X-SWUPR11-18-2/3		E16X-SWUPR11-18A-2/3				
			C16X-SWUP□16-20		E16X-SWUP□16-18A				
			C16X-SWUPR16-20-1/2		E16X-SWUPR16-18A-1/2				
			C16X-SWUPR16-20-2/3		E16X-SWUPR16-18A-2/3				
			C20S-SWUP□16-25		E20S-SWUP□16-22A				
			C20S-SWUPR16-25-1/2		E20S-SWUPR16-22A-1/2				
			C20S-SWUPR16-25-2/3		E20S-SWUPR16-22A-2/3				

Note) The corresponding replacements may be different from the conventional parts in minimum machining diameter or applicable insert size.
Make sure of their specifications by referring to the catalog or other documents.

Recommended Cutting Conditions - Boring (Positive Insert)

[D.O.C. Indicates Radius]

ISO Classification	Workpiece Material	Hardness	Cutting Range	Application	Recommended Chipbreaker	Recommended Insert Grade	Corner-R (RE)	Lower Limit - **Recommendation** - Upper Limit		
								Vc (sfm)	D.O.C. (inch)	Feed Rate f (ipr)
P	Low-carbon Steel Low-carbon Alloy	HB ≦ 300	Finishing (Solid Bar)	Continuous	EZB-F EZB-H	PR1225	0.002	100 - **230** - 360	0.0020 - **0.0039** - 0.0079	0.0004 - **0.0016** - 0.0028
				Interrupted			0.006	100 - **200** - 300	0.0020 - **0.0039** - 0.0079	0.0012 - **0.0028** - 0.0039
			Finishing	Continuous	F	PR1725	0.004	130 - **260** - 390	0.0020 - **0.0031** - 0.0039	0.0012 - **0.0020** - 0.0028
				Interrupted			0.008	130 - **230** - 330	0.0020 - **0.0039** - 0.0059	0.0012 - **0.0028** - 0.0039
			Finishing-Medium	Continuous	CF	PR1725	0.004	130 - **260** - 390	0.0020 - **0.0059** - 0.0098	0.0012 - **0.0020** - 0.0028
				Interrupted			0.008	130 - **230** - 330	0.0020 - **0.0059** - 0.0098	0.0012 - **0.0028** - 0.0039
	Medium-carbon Steel Medium-carbon Alloy	HB ≦ 300	Finishing (Solid Bar)	Continuous	EZB-F EZB-H	PR1225	0.002	100 - **230** - 360	0.0020 - **0.0039** - 0.0079	0.0004 - **0.0016** - 0.0028
				Interrupted			0.006	100 - **200** - 300	0.0020 - **0.0039** - 0.0079	0.0012 - **0.0028** - 0.0039
			Finishing	Continuous	F	PR1725	0.004	130 - **260** - 390	0.0020 - **0.0031** - 0.0039	0.0012 - **0.0020** - 0.0028
				Interrupted			0.008	130 - **230** - 390	0.0020 - **0.0039** - 0.0059	0.0012 - **0.0028** - 0.0039
			Finishing-Medium	Continuous	CF	PR1725	0.004	130 - **260** - 390	0.0020 - **0.0059** - 0.0098	0.0012 - **0.0020** - 0.0028
				Interrupted			0.008	130 - **230** - 330	0.0020 - **0.0059** - 0.0098	0.0012 - **0.0028** - 0.0039
	High-carbon Alloy	HB ≦ 280	Finishing (Solid Bar)	Continuous	EZB-F EZB-H	PR1225	0.002	100 - **230** - 360	0.0020 - **0.0039** - 0.0079	0.0004 - **0.0016** - 0.0028
				Interrupted			0.006	100 - **200** - 300	0.0020 - **0.0039** - 0.0079	0.0012 - **0.0028** - 0.0039
			Finishing	Continuous	F	PR1725	0.004	130 - **260** - 390	0.0020 - **0.0031** - 0.0039	0.0012 - **0.0020** - 0.0028
				Interrupted			0.008	130 - **230** - 330	0.0020 - **0.0039** - 0.0059	0.0012 - **0.0028** - 0.0039
			Finishing-Medium	Continuous	CF	PR1725	0.004	130 - **260** - 390	0.0020 - **0.0059** - 0.0098	0.0012 - **0.0020** - 0.0028
				Interrupted			0.008	130 - **230** - 330	0.0020 - **0.0059** - 0.0098	0.0012 - **0.0028** - 0.0039
M	Stainless Steel	HB ≦ 220	Finishing (Solid Bar)	Continuous	EZB-F EZB-H	PR1225	0.002	100 - **200** - 260	0.0020 - **0.0039** - 0.0079	0.0004 - **0.0012** - 0.0020
				Interrupted			0.006	100 - **200** - 260	0.0020 - **0.0039** - 0.0079	0.0008 - **0.0020** - 0.0028
			Finishing	Continuous	F	PR1225 PR1535	0.004	100 - **200** - 260	0.0020 - **0.0031** - 0.0039	0.0012 - **0.0020** - 0.0028
				Interrupted			0.008	100 - **200** - 260	0.0020 - **0.0039** - 0.0059	0.0012 - **0.0028** - 0.0039
			Finishing-Medium	Continuous	CF	PR1225 PR1535	0.004	100 - **200** - 260	0.0020 - **0.0059** - 0.0098	0.0012 - **0.0020** - 0.0028
				Interrupted			0.008	100 - **200** - 260	0.0020 - **0.0059** - 0.0098	0.0012 - **0.0028** - 0.0039
	Stainless Steel	HB ≦ 300	Finishing (Solid Bar)	Continuous	EZB-F EZB-H	PR1225	0.002	100 - **200** - 260	0.0020 - **0.0039** - 0.0079	0.0004 - **0.0012** - 0.0020
				Interrupted			0.006	100 - **200** - 260	0.0020 - **0.0039** - 0.0079	0.0008 - **0.0020** - 0.0028
			Finishing	Continuous	F	PR1225 PR1535	0.004	100 - **200** - 260	0.0020 - **0.0031** - 0.0039	0.0012 - **0.0020** - 0.0028
				Interrupted			0.008	100 - **200** - 260	0.0020 - **0.0039** - 0.0059	0.0012 - **0.0028** - 0.0039
			Finishing-Medium	Continuous	CF	PR1225 PR1535	0.004	100 - **200** - 260	0.0020 - **0.0059** - 0.0098	0.0012 - **0.0020** - 0.0028
				Interrupted			0.008	100 - **200** - 260	0.0020 - **0.0059** - 0.0098	0.0012 - **0.0028** - 0.0039
K	Gray Cast Iron	HB ≦ 250	Finishing (Solid Bar)	Continuous	(VNB) (VNB-NB)	KW10	0.001	100 - **200** - 330	0.0020 - **0.0031** - 0.0039	0.0012 - **0.0020** - 0.0028
				Interrupted			0.008	100 - **200** - 330	0.0020 - **0.0039** - 0.0059	0.0012 - **0.0028** - 0.0039
			Finishing	Continuous	F	KW10	0.004	100 - **200** - 330	0.0020 - **0.0031** - 0.0039	0.0012 - **0.0020** - 0.0028
				Interrupted			0.008	100 - **200** - 260	0.0020 - **0.0039** - 0.0059	0.0012 - **0.0028** - 0.0039
			Finishing-Medium	Continuous	Without Chipbreaker	KW10	0.008	100 - **200** - 330	0.0039 - **0.0079** - 0.0118	0.0012 - **0.0020** - 0.0028
				Interrupted			1/64	100 - **200** - 260	0.0039 - **0.0079** - 0.0118	0.0012 - **0.0028** - 0.0039
	Nodular Cast Iron	HB ≦ 270	Finishing (Solid Type)	Continuous	(VNB) (VNB-NB)	KW10	0.001	100 - **200** - 260	0.0020 - **0.0031** - 0.0039	0.0012 - **0.0020** - 0.0028
				Interrupted			0.008	100 - **200** - 260	0.0020 - **0.0039** - 0.0059	0.0012 - **0.0028** - 0.0039
			Finishing	Continuous	F, U	KW10	0.004	100 - **200** - 260	0.0020 - **0.0031** - 0.0039	0.0012 - **0.0020** - 0.0028
				Interrupted			0.008	100 - **200** - 260	0.0020 - **0.0039** - 0.0059	0.0012 - **0.0028** - 0.0039
			Finishing-Medium	Continuous	Without Chipbreaker	KW10	0.008	100 - **200** - 330	0.0039 - **0.0079** - 0.0118	0.0012 - **0.0020** - 0.0028
				Interrupted			1/64	100 - **200** - 260	0.0039 - **0.0079** - 0.0118	0.0012 - **0.0028** - 0.0039
N	Non-ferrous Metals Copper Alloy Aluminum Aluminum Alloy	HB ≦ 100	High Speed Finishing (Surface Finish Oriented)	Continuous	Without Chipbreaker	KPD001	0.002	490 - **660** - 980	0.0020 - **0.0039** - 0.0118	0.0020 - **0.0039** - 0.0059
			Finishing (Long Tool Life)	Continuous	F, U	PDL025	0.004	330 - **490** - 660	0.0020 - **0.0118** - 0.0197	0.0012 - **0.0039** - 0.0079
				Interrupted			0.008	330 - **490** - 660	0.0020 - **0.0118** - 0.0197	0.0012 - **0.0039** - 0.0079
			Finishing	Continuous	F, U	KW10	0.004	330 - **490** - 660	0.0020 - **0.0118** - 0.0197	0.0012 - **0.0039** - 0.0079
				Interrupted			0.008	330 - **490** - 660	0.0020 - **0.0118** - 0.0197	0.0012 - **0.0039** - 0.0079
S	Titanium Alloy	HB ≦ 400	Precision Finishing (Surface Finish Oriented)	Continuous	Without Chipbreaker	KPD001	0.004	330 - **390** - 490	0.0020 - **0.0039** - 0.0118	0.0012 - **0.0028** - 0.0039
				Interrupted			0.008	230 - **330** - 390	0.0020 - **0.0039** - 0.0118	0.0012 - **0.0028** - 0.0039
			Finishing	Continuous	F, U	KW10	0.004	70 - **130** - 200	0.0020 - **0.0079** - 0.0197	0.0012 - **0.0039** - 0.0079
				Interrupted			0.008	70 - **130** - 200	0.0020 - **0.0079** - 0.0197	0.0012 - **0.0039** - 0.0079
	Heat-resistant Alloys	HB ≦ 350	Finishing (Solid Bar)	Continuous	(VNB)	KW10	0.008	30 - **100** - 160	0.0020 - **0.0039** - 0.0118	0.0012 - **0.0020** - 0.0039
				Interrupted			0.008	30 - **100** - 160	0.0020 - **0.0039** - 0.0118	0.0012 - **0.0020** - 0.0031
			Finishing	Continuous	F, U	KW10	0.008	30 - **100** - 160	0.0020 - **0.0079** - 0.0157	0.0012 - **0.0020** - 0.0039
				Interrupted			0.008	30 - **100** - 160	0.0020 - **0.0079** - 0.0157	0.0012 - **0.0020** - 0.0039
H	Hardened Steel Hardened Materials	40 ~ 50 HRC	Finishing	Continuous	(VNB)	PR930	0.008	100 - **160** - 230	0.0020 - **0.0039** - 0.0157	0.0004 - **0.0008** - 0.0020
				Interrupted			0.008	100 - **160** - 230	0.0020 - **0.0039** - 0.0079	0.0004 - **0.0008** - 0.0012
		45 ~ 68 HRC	Finishing	Continuous	ME MES	KBN05M	0.008	200 - **330** - 460	0.0020 - **0.0039** - 0.0079	0.0008 - **0.0020** - 0.0039
				Interrupted			1/64	200 - **260** - 390	0.0020 - **0.0039** - 0.0079	0.0008 - **0.0020** - 0.0039

Recommended Cutting Conditions - Boring (Positive Insert)

[D.O.C. Indicates Radius]

ISO Classification	Workpiece Material	Hardness	Cutting Range	Application	Recommended Chipbreaker	Recommended Grade	Corner-R (RE)	Lower Limit - **Recommendation** - Upper Limit		
								Vc (sfm)	D.O.C. (inch)	Feed Rate f (ipr)
P	Low-carbon Steel Low-carbon Alloy	HB ≦ 300	Precision Finishing	Continuous	F, U	TN620	0.004	820 - **980** - 1150	0.002 - **0.012** - 0.020	0.001 - **0.004** - 0.006
				Interruption		PR1725	0.008	390 - **560** - 720	0.002 - **0.012** - 0.020	0.001 - **0.004** - 0.006
			Finishing	Continuous	XP	PV710	1/64	660 - **820** - 980	0.008 - **0.020** - 0.039	0.002 - **0.004** - 0.008
				Interruption		CA525	1/64	490 - **660** - 820	0.008 - **0.020** - 0.039	0.002 - **0.004** - 0.008
			Finishing-Medium	Continuous	XQ	PV710	1/64	490 - **660** - 820	0.020 - **0.039** - 0.079	0.004 - **0.006** - 0.010
				Interruption		CA525	1/64	330 - **490** - 660	0.020 - **0.039** - 0.059	0.004 - **0.006** - 0.008
			Medium	Continuous	Standard	PV720	1/32	330 - **490** - 660	0.039 - **0.059** - 0.098	0.004 - **0.006** - 0.012
				Interruption		CA525	1/32	260 - **390** - 490	0.039 - **0.059** - 0.079	0.004 - **0.006** - 0.008
	Medium-carbon Steel Medium-carbon Alloy	HB ≦ 300	Precision Finishing	Continuous	F, U	TN620	0.008	490 - **660** - 820	0.002 - **0.012** - 0.020	0.001 - **0.004** - 0.006
				Interruption		PR1725	1/64	390 - **460** - 560	0.002 - **0.012** - 0.020	0.001 - **0.004** - 0.006
			Finishing	Continuous	PP	PV710	1/64	490 - **660** - 820	0.008 - **0.020** - 0.039	0.002 - **0.004** - 0.008
				Interruption		CA525	1/64	390 - **590** - 660	0.008 - **0.020** - 0.039	0.002 - **0.004** - 0.008
			Finishing-Medium	Continuous	HQ	PV710	1/64	390 - **590** - 720	0.020 - **0.039** - 0.079	0.004 - **0.006** - 0.010
				Interruption		CA525	1/64	330 - **490** - 660	0.020 - **0.039** - 0.059	0.004 - **0.006** - 0.008
			Medium	Continuous	Standard	PV720	1/32	330 - **490** - 660	0.039 - **0.059** - 0.098	0.004 - **0.006** - 0.012
				Interruption		CA525	1/32	260 - **390** - 490	0.039 - **0.059** - 0.079	0.004 - **0.006** - 0.008
	High-carbon Alloy	HB ≦ 280	Precision Finishing	Continuous	F, U	TN620	0.008	390 - **490** - 590	0.002 - **0.012** - 0.020	0.001 - **0.004** - 0.006
				Interruption		PR1725	1/64	360 - **430** - 520	0.002 - **0.012** - 0.020	0.001 - **0.004** - 0.006
			Finishing	Continuous	PP	PV710	1/64	390 - **490** - 590	0.008 - **0.020** - 0.039	0.002 - **0.004** - 0.008
				Interruption		CA525	1/64	330 - **390** - 490	0.008 - **0.020** - 0.039	0.002 - **0.004** - 0.008
			Finishing-Medium	Continuous	HQ	PV710	1/64	390 - **490** - 590	0.020 - **0.039** - 0.079	0.004 - **0.006** - 0.010
				Interruption		CA525	1/64	330 - **390** - 490	0.020 - **0.039** - 0.059	0.004 - **0.006** - 0.008
			Medium	Continuous	Standard	CA515	1/32	330 - **390** - 490	0.039 - **0.059** - 0.098	0.004 - **0.006** - 0.012
				Interruption		CA525	1/32	260 - **330** - 390	0.039 - **0.059** - 0.079	0.004 - **0.006** - 0.008
M	Stainless Steel	HB ≦ 220	Finishing	Continuous	MQ	CA6525	1/64	390 - **490** - 590	0.008 - **0.020** - 0.031	0.002 - **0.003** - 0.004
				Interruption		PR1535	1/32	330 - **390** - 490	0.008 - **0.020** - 0.031	0.002 - **0.003** - 0.004
			Medium	Continuous	Standard	CA6525	1/64	390 - **490** - 590	0.020 - **0.039** - 0.059	0.002 - **0.004** - 0.008
				Interruption		PR1535	1/32	330 - **390** - 490	0.020 - **0.039** - 0.059	0.002 - **0.004** - 0.008
	Stainless Steel	HB ≦ 300	Finishing	Continuous	MQ	CA6525	1/64	260 - **330** - 390	0.008 - **0.028** - 0.039	0.002 - **0.004** - 0.006
				Interruption		PR1535	1/32	200 - **260** - 330	0.008 - **0.028** - 0.039	0.002 - **0.004** - 0.006
			Medium	Continuous	Standard	CA6525	1/64	260 - **330** - 390	0.020 - **0.039** - 0.059	0.002 - **0.004** - 0.008
				Interruption		PR1535	1/32	200 - **260** - 330	0.020 - **0.039** - 0.059	0.002 - **0.004** - 0.008
K	Gray Cast Iron	HB ≦ 250	High Speed Machining	Continuous	Without Chipbreaker	KBN475	1/64	1310 - **1640** - 1970	0.002 - **0.008** - 0.020	0.002 - **0.004** - 0.006
				Interruption		PT600M	1/32	660 - **820** - 1150	0.008 - **0.020** - 0.039	0.002 - **0.004** - 0.006
			Finishing (Gloss Oriented)	Continuous	Standard	PV7005	1/32	660 - **820** - 980	0.008 - **0.020** - 0.039	0.002 - **0.004** - 0.008
				Interruption		TN620	1/32	390 - **590** - 750	0.008 - **0.020** - 0.039	0.002 - **0.004** - 0.008
			Finishing	Continuous	Standard	CA310	1/64	490 - **590** - 660	0.008 - **0.020** - 0.039	0.002 - **0.004** - 0.008
				Interruption		CA315	1/32	330 - **490** - 590	0.008 - **0.020** - 0.039	0.002 - **0.004** - 0.008
			Medium	Continuous	Standard	CA310	1/32	330 - **490** - 660	0.020 - **0.039** - 0.079	0.004 - **0.006** - 0.008
				Interruption		CA315	1/32	260 - **390** - 490	0.020 - **0.039** - 0.079	0.002 - **0.004** - 0.006
	Nodular Cast Iron	HB ≦ 270	High Speed Machining	Continuous	Without Chipbreaker	KBN60M	1/64	660 - **980** - 1310	0.002 - **0.008** - 0.020	0.001 - **0.002** - 0.004
				Interruption		PT600M	1/32	490 - **660** - 820	0.008 - **0.020** - 0.039	0.002 - **0.004** - 0.006
			Finishing (Gloss Oriented)	Continuous	Standard	PV7005	1/32	490 - **660** - 820	0.008 - **0.020** - 0.039	0.002 - **0.004** - 0.008
				Interruption		TN620	1/32	390 - **490** - 660	0.008 - **0.020** - 0.039	0.002 - **0.004** - 0.008
			Finishing	Continuous	Standard	CA310	1/64	390 - **490** - 590	0.008 - **0.020** - 0.039	0.002 - **0.004** - 0.008
				Interruption		CA315	1/32	330 - **390** - 490	0.008 - **0.020** - 0.039	0.002 - **0.004** - 0.008
			Medium	Continuous	Standard	CA315	1/32	330 - **390** - 490	0.020 - **0.039** - 0.079	0.002 - **0.004** - 0.008
				Interruption		CA320	1/32	260 - **330** - 390	0.020 - **0.039** - 0.079	0.002 - **0.004** - 0.006
N	Non-ferrous Metals Copper Alloy Aluminum Aluminum Alloys	HB ≦ 100	High Speed Machining (Surface Finish Oriented)	Continuous	Without Chipbreaker	KPD001	0.008	660 - **1310** - 3280	0.002 - **0.004** - 0.012	0.002 - **0.004** - 0.006
			Finishing (Long Tool Life)	Continuous	F, U	PDL025	1/64	330 - **660** - 1310	0.002 - **0.020** - 0.039	0.001 - **0.004** - 0.008
				Interruption			1/64	330 - **660** - 1310	0.002 - **0.020** - 0.039	0.001 - **0.004** - 0.008
			Finishing	Continuous	F, U	KW10	1/64	330 - **660** - 1310	0.002 - **0.020** - 0.039	0.001 - **0.004** - 0.008
				Interruption			1/64	330 - **660** - 1310	0.002 - **0.020** - 0.039	0.001 - **0.004** - 0.008
S	Titanium Alloy	HB ≦ 400	Precision Finishing (Surface Finish Oriented)	Continuous	Without Chipbreaker	KPD001	0.008	330 - **390** - 490	0.002 - **0.004** - 0.012	0.001 - **0.003** - 0.004
				Interruption			1/64	230 - **330** - 390	0.002 - **0.004** - 0.012	0.001 - **0.003** - 0.004
			Finishing	Continuous	F, U	KW10	0.008	100 - **160** - 230	0.002 - **0.020** - 0.039	0.001 - **0.004** - 0.008
				Interruption			1/64	100 - **160** - 230	0.002 - **0.020** - 0.039	0.001 - **0.004** - 0.008
	Heat-resistant Alloys	HB ≦ 350	Finishing	Continuous	F, U	KW10	1/64	30 - **100** - 160	0.002 - **0.020** - 0.039	0.001 - **0.004** - 0.008
				Interruption			1/64	30 - **100** - 160	0.002 - **0.020** - 0.039	0.001 - **0.004** - 0.008
			Finishing	Continuous	MQ	PR1310	1/64	130 - **200** - 260	0.004 - **0.012** - 0.020	0.001 - **0.002** - 0.004
				Interruption			1/32	130 - **200** - 260	0.004 - **0.012** - 0.020	0.001 - **0.002** - 0.004
H	Hardened Steel Hardened Materials	40~50 HRC	Finishing	Continuous	HQ Standard	CA515	1/32	200 - **260** - 330	0.002 - **0.012** - 0.020	0.002 - **0.003** - 0.004
				Interruption			1/32	100 - **160** - 230	0.002 - **0.012** - 0.020	0.002 - **0.003** - 0.004
		45~68 HRC	Finishing	Continuous	ME MET	KBN05M	1/64	330 - **460** - 590	0.004 - **0.008** - 0.012	0.001 - **0.003** - 0.004
				Interruption			1/32	300 - **390** - 520	0.004 - **0.008** - 0.012	0.001 - **0.003** - 0.004
			Medium	Continuous	Without Chipbreaker (Negative)	KBN900	1/32	200 - **260** - 330	0.012 - **0.028** - 0.039	0.001 - **0.004** - 0.006

GROOVING

G1 - G150

EXTERNAL GROOVING		G2 - G61
SUMMARY OF EXTERNAL GROOVING		G2
KGBA / KGBAS / KGBA-JCT		G12
KGBF-F / S...KGBF / KGBFS / KGBF-JCT / KGBF-JCTM		G14
KTGF-F / KTGF / S...KTGF		G20
KGD / KGD-JCT / KGD-JCTM	Integral Type for Small Parts	G28
KGD / KGD-JCT	Integral Type	G34
KGD-S	0° SwitchBlade Type	G38
KGDS-S	90° SwitchBlade Type	G40
KKC	Cera-Notch Grooving System	G47
KGM	Small Parts	G52
KGM-T		G53
KGMM / KGMS		G54
KGMU		G55
KGH / KGHS		G56
KGA		G57
EGT / KDB		G58
KGMW	For Aluminum Wheel	G60

INTERNAL GROOVING		G61 - G91
SUMMARY OF INTERNAL GROOVING		G61
EZG	EZ Bar	G63
VNG	Swiss IQ Bar	G65
SIGC		G69
SIGE-EH / SIGE-WH / SIGE-WH-90		G73
SI-GIV / GIV / GIV-E / GIV-W		G78
KIGBA		G80
KGDI		G83
KIGH		G86
KIGM-8 / KIGMU-8		G87
KGIA		G88
KIGM-V		G89
A-KKC	Cera-Notch Grooving System	G91

FACE GROOVING		G92 - G144
SUMMARY OF FACE GROOVING		G92
EZFG	EZ Bar	G96
VNFG	Swiss IQ Bar	G98
TWFG / TWFGT	Micro Twin Bars	G100
KGDF	0° SwitchBlade Type	G106
KGDF-Z	Integral Type	G116
KGDF	90° SwitchBlade Type	G117
GFVS-AA / GFVT-AA		G130
GFV		G132
GFVS / GFVT		G134
KKCE	Cera-Notch Grooving System	G139
KFMS / KFMS-8		G140
KFTB-S		G143
GIFV	Round Shank Type	G144

TECHNICAL INFORMATION		G145 - G156
RECOMMENDED CUTTING CONDITIONS		G145
GUIDE FOR GROOVING		G154

KGD Grooving (External Grooving & Traversing) G23~G45

· Integral Type

Type	KGD
Edge Width	0.079" ~ 0.315" (2.00mm ~ 8.00mm)
Grooving Depth	0.236" ~ 1.181" (6.00mm ~ 30.00mm)
Ref. Page	G34

· Integral Type (Jet Coolant-Through)

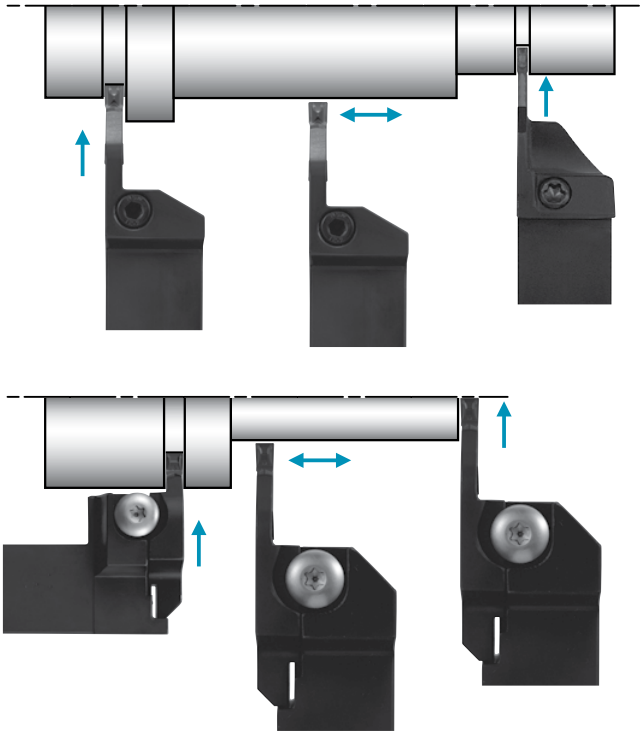
Type	KGD-JCT
Edge Width	0.118" ~ 0.157" (3.00mm ~ 5.00mm)
Grooving Depth	0.787" ~ 1.000" (6.00mm ~ 25.00mm)
Ref. Page	G36

· Integral Type (Small Parts)

Type	KGD
Edge Width	0.079" ~ 0.157" (2.00mm ~ 4.00mm)
Grooving Depth	0.394" ~ 0.827" (10.00mm ~ 21.00mm)
Ref. Page	G28

· Integral Type (Small Parts, Jet Coolant-Through)

Type	KGD-JCTM
Edge Width	0.079" ~ 0.157" (2.00mm ~ 4.00mm)
Grooving Depth	0.472" ~ 0.630" 12.00mm ~ 16.00mm
Ref. Page	G30



· SwitchBlade 90°

Type	*KGDS-S
Edge Width	0.079" ~ 0.197" (2.00mm ~ 5.00mm)
Grooving Depth	0.394" ~ 0.984" (10.00mm ~ 25.00mm)
Ref. Page	G40

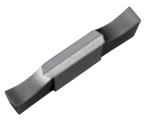
* The SwitchBlade Type toolholders can accept all the blades if their hand is matching.

· SwitchBlade 0°

Type	*KGD-S
Edge Width	0.079" ~ 0.197" (2.00mm ~ 5.00mm)
Grooving Depth	0.394" ~ 0.984" (10.00mm ~ 25.00mm)
Ref. Page	G38

* The SwitchBlade Type toolholders can accept all the blades if their hand is matching.

GS Low Cutting Force



GL Low Feed



GM General Purpose



PH High Feed Rate



CM Copying



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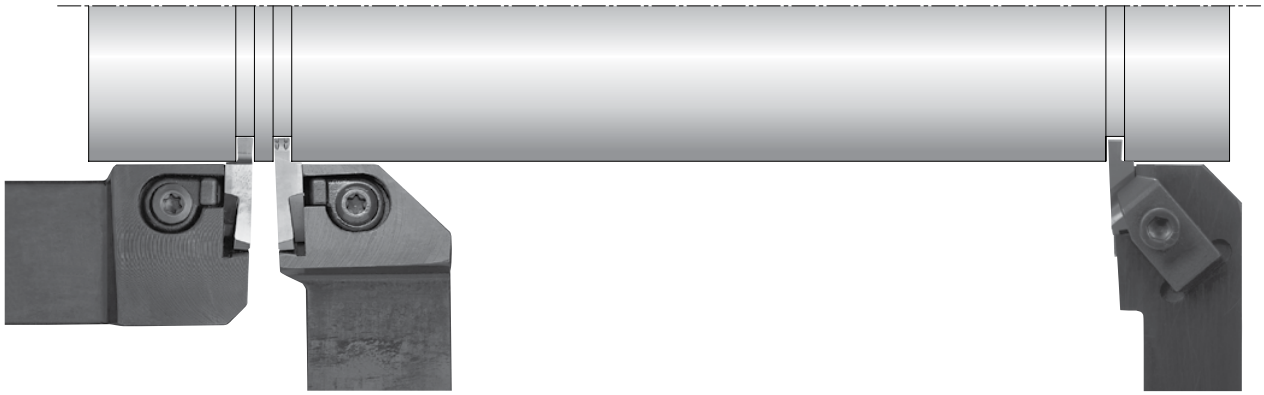
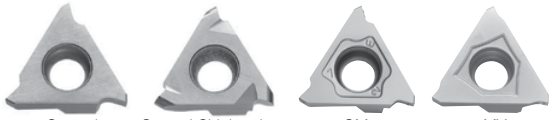
External Grooving (G6~G22, G50, G51)

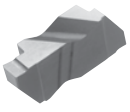
Shallow Grooving [Grooving Depth : ~0.197" (5mm)]



Type	KGBAS	KGBA	KGBA-JCT
Edge Width	0.031" ~ 0.189" (0.33mm ~ 4.80mm)	0.031" ~ 0.189" (0.33mm ~ 4.80mm)	0.031" ~ 0.189" (0.33mm ~ 4.80mm)
Grooving Depth	0.032" ~ 0.197" (0.80mm ~ 5.00mm)	0.032" ~ 0.197" (0.80mm ~ 5.00mm)	0.032" ~ 0.197" (0.80mm ~ 5.00mm)
Ref. Page	G12	G12	G13

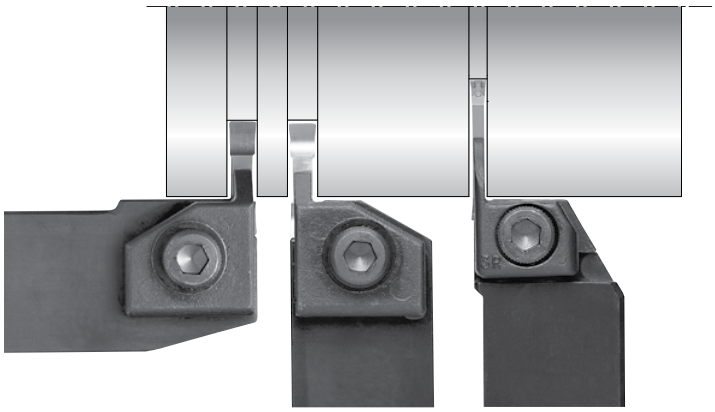
KKC
0.031" ~ 0.250"
0.050" ~ 0.250"
G47



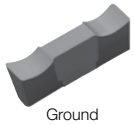


Edge Shape	General (Square)	Full-R (Round)	GM Chipbreaker	MY Chipbreaker
				

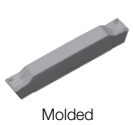
Deep Grooving [Grooving Depth : ~0.984" (25mm)]



Type	KGHS	KGH	KGA
Edge Width	0.157" ~ 0.315" (4.00mm ~ 8.00mm)	0.157" ~ 0.472" (4.00mm ~ 12.00mm)	0.118" ~ 0.197" (3.00mm ~ 5.00mm)
Grooving Depth	0.512" (13.00mm)	0.512" ~ 0.669" (13.00mm ~ 17.00mm)	0.787" ~ 0.984" (20.00mm ~ 25.00mm)
Ref. Page	G56	G56	G57



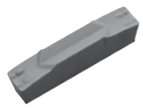




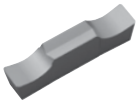
KGM Grooving (External Grooving & Traversing) (G42~G49)

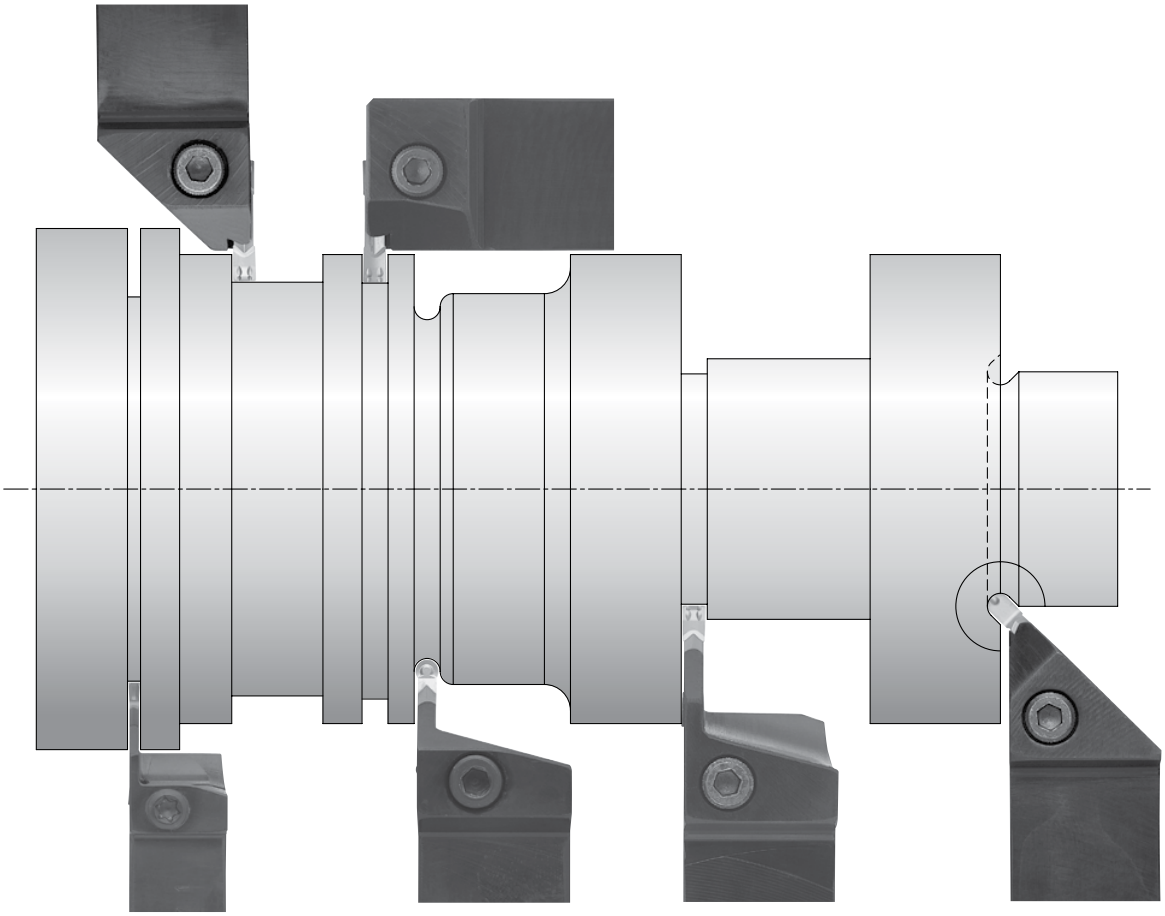
Type	KGMM
Edge Width	0.118" ~ 0.197" (3.00mm ~ 5.00mm)
Grooving Depth	0.189" (4.80mm)
Ref. Page	G54

KGMS
0.118" ~ 0.197" (3.00mm ~ 5.00mm)
0.189" (4.80mm)
G54


Molded Chipbreaker


Molded Chipbreaker Full-R


Ground Chipbreaker

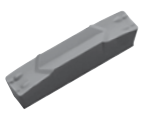


Type	KGM
Edge Width	0.079" ~ 0.118" (1.50mm ~ 4.00mm)
Grooving Depth	0.394" ~ 0.492" (10.00mm ~ 16.00mm)
Ref. Page	G52

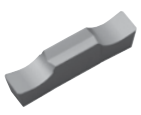
KGM
0.118" ~ 0.157" (3.00mm ~ 8.00mm)
0.354" (9.00mm ~ 25.00mm)
G52

KGM-T
0.079" ~ 0.236" (2.00mm ~ 6.00mm)
0.669" ~ 1.181" (17.00mm ~ 30.00mm)
G53

KGMU
0.118" ~ 0.197" (3.00mm ~ 5.00mm)
0.138" ~ 0.177" (3.50mm ~ 4.50mm)
G55


Molded Chipbreaker


Molded Chipbreaker Full-R


Ground Chipbreaker


Deep Grooving / Cut-off


Molded Chipbreaker Full-R

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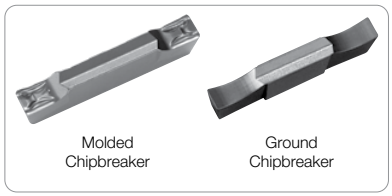
External Grooving of Precision Parts (G17~G19, G20, G21, G28, G48)

For Small Parts Machining

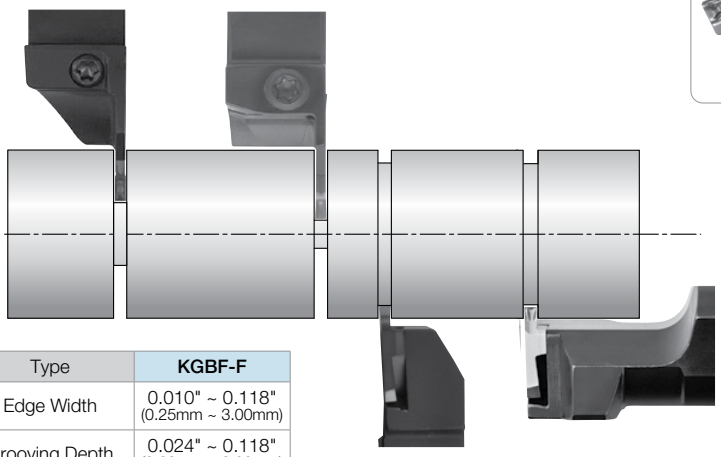
Type	KGD
Edge Width	0.079" ~ 0.157" (2.00mm ~ 4.00mm)
Grooving Depth	0.394" ~ 0.827" (10.00mm ~ 21.00mm)
Ref. Page	G28

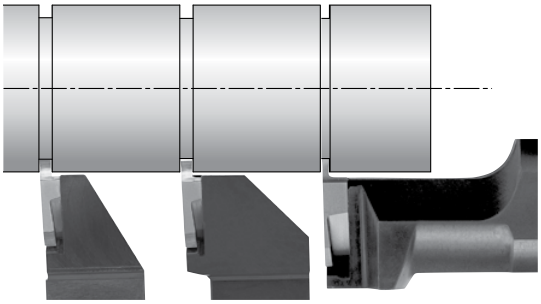
Type	KGD-JCTM
Edge Width	0.079" ~ 0.157" (2.00mm ~ 4.00mm)
Grooving Depth	0.472" ~ 0.630" 12.00mm ~ 16.00mm
Ref. Page	G30

Type	KGM
Edge Width	0.079" ~ 0.118" (1.50mm ~ 4.00mm)
Grooving Depth	0.394" ~ 0.492" (10.00mm ~ 16.00mm)
Ref. Page	G52



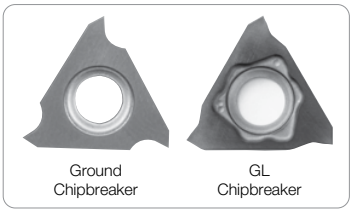
Molded Chipbreaker | Ground Chipbreaker





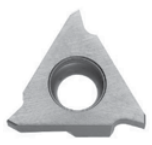
Type	KGBF-F
Edge Width	0.010" ~ 0.118" (0.25mm ~ 3.00mm)
Grooving Depth	0.024" ~ 0.118" (0.60mm ~ 3.00mm)
Ref. Page	G17

Type	KGBFS	KGBF-JCTM	S-KGBF
Edge Width	0.010" ~ 0.118" (0.25mm ~ 3.00mm)	0.010" ~ 0.118" (0.25mm ~ 3.00mm)	0.010" ~ 0.118" (0.25mm ~ 3.00mm)
Grooving Depth	0.024" ~ 0.118" (0.60mm ~ 3.00mm)	0.024" ~ 0.118" (0.60mm ~ 3.00mm)	0.024" ~ 0.118" (0.60mm ~ 3.00mm)
Ref. Page	G18	G19	G17



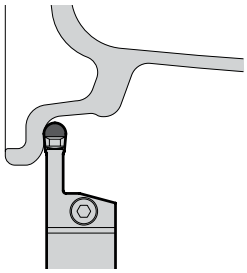
Ground Chipbreaker | GL Chipbreaker

Type	KTGF-F	KTGF	S-KTGF
Edge Width	0.013" ~ 0.098" (0.33mm ~ 2.50mm)		0.013" ~ 0.098" (0.33mm ~ 2.50mm)
Grooving Depth	0.032" ~ 0.098" (0.80mm ~ 2.50mm)		0.032" ~ 0.098" (0.80mm ~ 2.50mm)
Ref. Page	G20		G21



Ground Chipbreaker

For Aluminum Wheel External Grooving (External / Facing / Copying) (G48)



Type	KGMW
Edge Width	0.236" ~ 0.315" (6.00mm ~ 8.00mm)
Grooving Depth	0.984" (25.00mm)
Ref. Page	G60



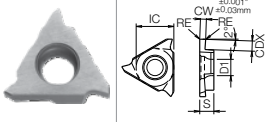
1-edge PCD

GBA Inserts (Inch)

(in)

Part Number	IC	S	D1
GBA32_	0.375	0.125	0.173
GBA43_	0.500	0.187	0.217
GBA43□480	0.500	0.197	0.217

P	Carbon Steel / Alloy Steel	●	◕	**Classification of Usage** ◕ : Light Interruption / 1st Choice ◔ : Light Interruption / 2nd Choice ● : Continuous / 1st Choice ○ : Continuous / 2nd Choice
M	Stainless Steel		●	
K	Cast Iron			
N	Non-ferrous Metals			
S	Titanium Alloy		●	
H	Hard materials (≤40HRC)		●	
	Hard materials (≥40HRC)			

Insert (Right-handed Insert Shown)	Part Number	Previous Part Number	Unit	Dimensions (in) CW	CDX	RE	MEGACOAT Cermet PV7040 R	PV7040 L	MEGA COAT PR1215 R	PR1215 L	Applicable Toolholders	Ref. Page for Toolholder
	GBA32□ 031N	-	inch	0.031	0.079	0.002	●	●	●	●	KGBA□…-3 KGBA□…-16 (JCT) KGBAS□…-3 KGBAS□…-16 KIGBA□…-3 (Internal) KIGBA□…-16 (Internal)	G12 G13 G80 (Internal)
	041N	-		0.041	0.079	0.002	●	●		●		
	047N	-		0.047	0.079	0.008	●	●	●			
	058N	-		0.058	0.079	0.008	●	●		●		
	062N	-		0.062	0.079	0.008	●	●	●			
	078N	-		0.078	0.098	0.008	●	●	●	●		
	094N	-		0.094	0.098	0.008	●	●	●	●		
	GBA43□ 031N ※1	-	inch	0.031	0.079	0.002			●	●	KGBA□…-4-15 KGBA□…22-15 (JCT) KGBAS□…-4-15 KGBAS□…22-15 KIGBA□…-4 (Internal) KIGBA□…22 (Internal)	
						0.008	●	●				
	047N	-		0.047	0.079	0.008	●	●	●			
	062N	-		0.062	0.138	0.008	●	●	●	●		
	072N	-		0.072	0.138	0.008		●	●	●		
	078N	-		0.078	0.138	0.008	●	●	●	●		
	088N	-		0.088	0.138	0.008	●	●	●	●		
	094N	-		0.094	0.157	0.012	●	●	●	●	KGBA□…4-25 KGBA□…22-25 (JCT) KGBA□…22-25T5 KGBAS□…4-25 KGBAS□…22-25 KGBAS□…22-25T5 KIGBA□…-4 (Internal) KIGBA□…22 (Internal)	
	097N	-		0.097	0.157	0.012	●	●		●		
	105N	-		0.105	0.157	0.012	●	●	●	●		
	109N	-		0.109	0.157	0.012			●	●		
	110N	-		0.110	0.157	0.012	●	●	●	●		
	125N	-		0.125	0.157	0.012	●	●	●	●		
	141N	-		0.141	0.197	0.012			●	●	KGBA□…-4-35 KGBA□…22-35 (JCT) KGBAS□…-4-35 KGBAS□…22-35 KIGBA□…-4 (Internal) KIGBA□…22 (Internal)	
	142N	-		0.142	0.197	0.012		●	●	●		
	156N	-		0.156	0.197	0.016	●	●	●	●		
	172N	-		0.172	0.197	0.016			●	●		
	178N	-		0.178	0.197	0.016	●	●	●	●		
	188N	-		0.188	0.197	0.016				●		

- Dimension **CDX** shows available grooving depth

※1 : Corner Radius (RE) for GBA43□031N is different based on the grade

Recommended Cutting Conditions ➡ **G145**

Inserts are sold in 5 piece boxes.

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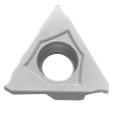
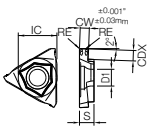
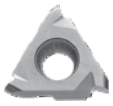
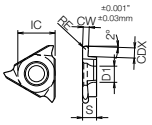
● : Standard Item △ : Phaseout Item (will be removed from next catalog)
Contact your local Kyocera sales engineer to upgrade old products to new technology

GBA Inserts (Inch)

Part Number	IC	S	D1
	(in)		
GBA32_	0.375	0.125	0.173
GBA43_	0.500	0.187	0.217
GBA43R/L480	0.500	0.197	0.217

P	Carbon Steel / Alloy Steel	●	◐
M	Stainless Steel		●
K	Cast Iron		
N	Non-ferrous Metals		
S	Titanium Alloy		●
H	Hard materials (≤40HRC)		●
	Hard materials (≥40HRC)		

Classification of Usage
◐ : Light Interruption / 1st Choice
◔ : Light Interruption / 2nd Choice
● : Continuous / 1st Choice
○ : Continuous / 2nd Choice

Insert (Right-handed Insert Shown)	Part Number	Previous Part Number	Unit	Dimensions (in) CW	CDX	RE	MEGACOAT Cermet PV7040 R	PV7040 L	MEGA COAT PR1215 R	PR1215 L	Applicable Toolholders	Ref. Page for Toolholder
 Molded Chipbreaker  MY Chipbreaker 	GBA43R/L 078MYN	-	inch	0.078	0.138	0.008				●	KGBAR/L…-4-15 KGBAR/L…22-15 (JCT) KGBASR/L…-4-15 KGBASR/L…22-15 KIGBAR/L…-4 (Internal) KIGBAR/L…22 (Internal)	
	094MYN	-		0.094	0.157	0.012			●	●	KGBAR/L…4-25 KGBAR/L…22-25 (JCT) KGBAR/L…22-25T5 KGBASR/L…4-25 KGBASR/L…22-25 KGBASR/L…22-25T5 KIGBAR/L…-4 (Internal) KIGBAR/L…22 (Internal)	
	125MYN	-		0.125	0.157	0.012				●		
	156MYN	-		0.156	0.197	0.016			●	●	KGBAR/L…-4-35 KGBAR/L…22-35 (JCT) KGBASR/L…-4-35 KGBASR/L…22-35 KIGBAR/L…-4 (Internal) KIGBAR/L…22 (Internal)	
 Full-R (Round) 	GBA32R 031R	-	inch	0.062	0.079	0.031			●		KGBAR/L…-3 KGBAR/L…-16 (JCT) KGBASR/L…-3 KGBASR/L…-16 KIGBAR/L…-3 (Internal) KIGBAR/L…-16 (Internal)	G12 G13 G80 (Internal)
	047R	-		0.094	0.098	0.047			●			
	GBA43R/L 031R	-		0.062	0.138	0.031			●	●	KGBAR/L…-4-15 KGBAR/L…22-15 (JCT) KGBASR/L…-4-15 KGBASR/L…22-15 KIGBAR/L…-4 (Internal) KIGBAR/L…22 (Internal)	
	047R	-		0.094	0.157	0.047				●	KGBAR/L…4-25 KGBAR/L…22-25 (JCT) KGBAR/L…22-25T5 KGBASR/L…4-25 KGBASR/L…22-25 KGBASR/L…22-25T5 KIGBAR/L…-4 (Internal) KIGBAR/L…22 (Internal)	
	062R	-		0.125	0.157	0.062			●	●		
	078R	-		0.156	0.197	0.078			●	●	KGBAR/L…-4-35 KGBAR/L…22-35 (JCT) KGBASR/L…-4-35 KGBASR/L…22-35 KIGBAR/L…-4 (Internal) KIGBAR/L…22 (Internal)	
	094R	-		0.188	0.197	0.094			●	●		

• Dimension **CDX** shows available grooving depth

Recommended Cutting Conditions ➔ **G145**

Inserts are sold in 5 piece boxes.

● : Standard Item △ : Phaseout Item (will be removed from next catalog)
Contact your local Kyocera sales engineer to upgrade old products to new technology

(Customer Service) **800.823.7284 - Option 1**
(Technical Support) **800.823.7284 - Option 2**
Visit us online at **KyoceraPrecisionTools.com**

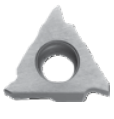
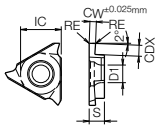
GBA Inserts (Metric)

(mm)

Part Number	IC	S	D1
GBA32_	9.525	3.18	4.4
GBA43_	12.700	4.76	5.5
GBA43R/L480	12.700	5.00	5.5

		MEGACOAT Cermet	Cermet			MEGACOAT NANO	MEGACOAT	PVD Coated Carbide				Carbide	
		PV7040	TC40		TN90	PR1625	PR1215	PR1115	PR905	PR930		KW10	
		R L	R	L	R L	R	L	R L	R	L	R	L	R L
P	Carbon Steel / Alloy Steel	●				◕	●	◔			◔		
M	Stainless Steel					◕	●	◔			◔		
K	Cast Iron						◕			◔			◔
N	Non-ferrous Metals												◕
S	Titanium Alloy												◕
H	Hard materials (≤40HRC)						●	○			○		
	Hard materials (≥40HRC)												

Classification of Usage
● : Light Interruption / 1st Choice
◔ : Light Interruption / 2nd Choice
● : Continuous / 1st Choice
○ : Continuous / 2nd Choice

Insert (Right-handed Insert Shown)	Part Number	CW	CDX	RE	Applicable Toolholders	Ref. Page for Toolholder
 	GBA32R/L 033-005 ※1	0.33	0.8	0.05	KGBAR/L…-3 KGBAR/L…-16 (JCT) KGBASR/L…-3 KGBASR/L…-16 KIGBAR/L…-3 (Internal) KIGBAR/L…-16 (Internal)	
	050-005 ※2※3	0.50	1.0	0.05		
		0.50	1.2	0.05		
	075-005	0.75	2.0	0.05		
	095-005	0.95	2.0	0.05		
	100-005	1.00	2.0	0.05		
	110-005	1.10	2.0	0.05		
	120-005	1.20	2.0	0.05		
	125-020	1.25	2.0	0.20		
	130-020	1.30	2.0	0.20		
	140-020	1.40	2.5	0.20		
	145-020 ※3	1.45	2.0	0.20		
		1.45	2.5	0.20		
	150-020 ※3	1.50	2.0	0.20		
		1.50	2.5	0.20		
	160-020	1.60	2.5	0.20		
	170-020	1.70	2.5	0.20		
	175-020 ※3	1.75	2.0	0.20		
		1.75	2.5	0.20		
	200-020	2.00	2.5	0.20		
	225-020	2.25	2.5	0.20		
	250-020	2.50	2.5	0.20		
	300-020	3.00	2.5	0.20		
	GBA43R/L 125-010	1.25	2.0	0.10		
	125-020	1.25	2.0	0.20		
	140-020	1.40	3.5	0.20		
	145-020 ※3	1.45	2.0	0.20		
		1.45	3.5	0.20		
	150-010	1.50	3.5	0.10	KGBAR/L…-4-15 KGBAR/L…22-15 (JCT) KGBASR/L…-4-15 KGBASR/L…22-15 KIGBAR/L…-4 (Internal) KIGBAR/L…22 (Internal)	G12 G13 G80 (Internal)
	150-020	1.50	3.5	0.20		
	170-020	1.70	3.5	0.20		
	175-020	1.75	3.5	0.20		
	185-020	1.85	3.5	0.20		
	195-020	1.95	3.5	0.20		
	200-010	2.00	3.5	0.10		
	200-020	2.00	3.5	0.20		
	225-020	2.25	3.5	0.20		
	230-020	2.30	3.5	0.20		
	250-010	2.50	5.0	0.10	★1	
	250-030 ※3	2.50	4.0	0.30	★2	
		2.50	5.0	0.30	★1	
	265-030 ※3	2.65	4.0	0.30	★2	
		2.65	5.0	0.30	★1	
	280-030 ※3	2.80	4.0	0.30	★2	
		2.80	5.0	0.30	★1	
	300-010	3.00	5.0	0.10		
	300-030 ※3	3.00	4.0	0.30	★2	
		3.00	5.0	0.30	★1	
	325-030	3.25	5.0	0.30	★2	
	330-030 ※3	3.30	4.0	0.30		
		3.30	5.0	0.30	★1	
	GBA43R/L 350-010	3.50	5.0	0.10		
	350-030	3.50	5.0	0.30	KGBAR/L…-4-35 KGBAR/L…22-35 (JCT) KGBASR/L…-4-35 KGBASR/L…22-35 KIGBAR/L…-4 (Internal) KIGBAR/L…22 (Internal)	
	400-010	4.00	5.0	0.10		
	400-040	4.00	5.0	0.40		
	430-040	4.30	5.0	0.40		
	450-040	4.50	5.0	0.40		
	480-040	4.80	5.0	0.40		

※1 : The edge width tolerance of GBA32R/L 033-005 : $0.33^{+0.02}_{-0.03}$
※2 : The edge width tolerance of GBA32R/L 050-005 : $0.50^{+0.05}_{-0.00}$
※3 : Available grooving depth is different based on grade

• Dimension **CDX** shows available grooving depth

Recommended Cutting Conditions ➔ **G145**

Inserts are sold in 10 piece boxes.

★1: KGBAR/L…4-25, KGBAR/L…22-25 (JCT), KGBAR/L…22-25T5, KGBASR/L…22-25T5, KIGBAR/L…4, KIGBAR/L…22
★2: KGBAR/L…4-25, KGBAR/L…22-25 (JCT), KGBAR/L…22-25T5, KGBASR/L…4-25, KGBASR/L…22-25, KGBASR/L…22-25T5, KIGBAR/L…4, KIGBAR/L…22

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● : Standard Item △ : Phaseout Item (will be removed from next catalog)
Contact your local Kyocera sales engineer to upgrade old products to new technology

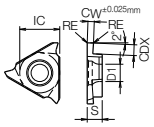
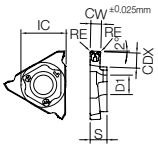
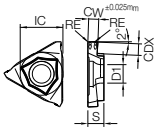
GBA Inserts (Metric)

(mm)

Part Number	IC	S	D1
GBA32_	9.525	3.18	4.4
GBA43_	12.70	4.76	5.5
GBA43R/L480	12.70	5.00	5.5

P	Carbon Steel / Alloy Steel	●	○	◕	●	◔	◔
M	Stainless Steel			◕	●	◔	◔
K	Cast Iron						
N	Non-ferrous Metals						
S	Titanium Alloy						
H	Hard materials (≤40HRC)				●	○	○
	Hard materials (≥40HRC)						

Classification of Usage
◕ : Light Interruption / 1st Choice
◔ : Light Interruption / 2nd Choice
● : Continuous / 1st Choice
○ : Continuous / 2nd Choice

Insert (Right-handed Insert Shown)	Part Number	Dimensions (mm) CW	CDX	RE	Cermet TN620 R	TN620 L	TN6020 R	TN6020 L	MEGACOAT NANO PR1625 R	PR1625 L	MEGACOAT PR1215 R	PR1215 L	PVD Coated Carbide PR1115 R	PR1115 L	PR930 R	PR930 L	Applicable Toolholders	Ref. Page for Toolholder
 Sharp Edge		GBA32R/L 050-005F *	0.50	1.0	0.05	●	●										KGBAR/L…-3 KGBAR/L…-16 KGBASR/L…-3 KGBASR/L…-16 KIGBAR/L…-3 (Internal) KIGBAR/L…-16 (Internal)	
		075-005F	0.75	2.0	0.05	●	●											
		095-005F	0.95	2.0	0.05	●	●											
		100-005F	1.00	2.0	0.05	●	●											
		125-020F	1.25	2.0	0.2	●	●											
		145-020F	1.45	2.0	0.2	●	●											
		150-020F	1.50	2.0	0.2	●	●											
		175-020F	1.75	2.0	0.2	●	●											
		200-020F	2.00	2.5	0.2	●	●											
		250-020F	2.50	2.5	0.2	●	●											
		GBA43R/L 125-020F	1.25	2.0	0.2	●	●										KGBAR/L…-4-15 KGBAR/L…22-15 (JCT) KGBASR/L…-4-15 KGBASR/L…22-15 KIGBAR/L…-4 (Internal) KIGBAR/L…22 (Internal)	
		145-020F	1.45	2.0	0.2	●	●											
		150-020F	1.50	3.5	0.2	●	●											
		175-020F	1.75	3.5	0.2	●	●											
		185-020F	1.85	3.5	0.2	●	●											
		200-020F	2.00	3.5	0.2	●	●											
		230-020F	2.30	3.5	0.2	●	●											
		250-030F	2.50	4.0	0.3	●	●										★2	
		265-030F	2.65	4.0	0.3	●	●											
		280-030F	2.80	4.0	0.3	●	●											
		300-030F	3.00	4.0	0.3	●	●											
		330-030F	3.30	4.0	0.3	●	●											
		350-030F	3.50	5.0	0.3	●	●										KGBAR/L…-4-35 KGBAR/L…22-35 (JCT) KGBASR/L…-4-35 KGBASR/L…22-35 KIGBAR/L…-4 (Internal) KIGBAR/L…22 (Internal)	
		400-040F	4.00	5.0	0.4	●	●											
		430-040F	4.30	5.0	0.4	●												
		450-040F	4.50	5.0	0.4	●												
		480-040F	4.80	5.0	0.4	●												
Molded Chipbreaker GM Chipbreaker		GBA43R/L 140-010GM	1.40	3.5	0.10	●	●			●	●	●	●					G12 G13 G80 (Internal)
		150-020GM	1.50	3.5	0.20	●	●			●	●	●	●				KGBAR/L…-4-15 KGBAR/L…22-15 (JCT) KGBASR/L…-4-15 KGBASR/L…22-15 KIGBAR/L…-4 (Internal) KIGBAR/L…22 (Internal)	
		175-020GM	1.75	3.5	0.20	●	●			●	●	●	●					
		185-020GM	1.85	3.5	0.20	●	●			●	●	●	●					
		200-020GM	2.00	3.5	0.20	●	●			●	●	●	●					
		230-020GM	2.30	3.5	0.20	●	●			●	●	●	●					
		250-030GM	2.50	5.0	0.30	●	●			●	●	●	●				KGBAR/L…22-25 (JCT) KGBAR/L…22-25T5 KGBASR/L…22-25T5 KIGBAR/L…-4 (Internal) KIGBAR/L…22 (Internal)	
		265-030GM	2.65	5.0	0.30	●	●			●	●	●	●					
		300-030GM	3.00	5.0	0.30	●	●			●	●	●	●					
		330-030GM	3.30	5.0	0.30	●	●			●	●	●	●					
		350-030GM	3.50	5.0	0.30	●	●			●	●	●	●				KGBAR/L…-4-35 KGBAR/L…22-35 (JCT) KGBASR/L…-4-35 KGBASR/L…22-35 KIGBAR/L…-4 (Internal) KIGBAR/L…22 (Internal)	
		400-040GM	4.00	5.0	0.40	●	●			●	●	●	●					
Molded Chipbreaker MY Chipbreaker		GBA43R/L 175-020MY	1.75	3.5	0.20			●	●			△	△			△	△	KGBAR/L…-4-15 KGBAR/L…22-15 (JCT) KGBASR/L…-4-15 KGBASR/L…22-15 KIGBAR/L…-4 (Internal) KIGBAR/L…22 (Internal)	
		185-020MY	1.85	3.5	0.20			●	●			△	△			△	△	
		200-020MY	2.00	3.5	0.20			●	●			△	△	△		△	△	
		230-020MY	2.30	3.5	0.20			●	●			△	△			△	△	
		250-030MY ※3	2.50	4.0	0.30			●										★2
			2.50	5.0	0.30							△	△			△	△	★1
		265-030MY ※3	2.65	4.0	0.30			●	●									★2
			2.65	5.0	0.30							△	△			△		★1
		300-030MY ※3	3.00	4.0	0.30			●	●									★2
			3.00	5.0	0.30							△	△			△	△	★1
		330-030MY ※3	3.30	4.0	0.30			●										★2
			3.30	5.0	0.30							△	△			△		★1
		350-030MY	3.50	5.0	0.30			●	●			△	△			△	△	KGBAR/L…-4-35 KGBAR/L…22-35 (JCT) KGBASR/L…-4-35 KGBASR/L…22-35 KIGBAR/L…-4 (Internal) KIGBAR/L…22 (Internal)
		400-040MY	4.00	5.0	0.40			●	●			△	△			△	△	

• Dimension **CDX** shows available grooving depth
* Edge width tolerance of GBA32R/L050-005F is 0.50mm +0.25mm/-0

Recommended Cutting Conditions G145

※3 : Available grooving depth is different based on grade

★1: KGBAR/L…4-25, KGBAR/L…22-25 (JCT), KGBAR/L…22-25T5, KGBASR/L…22-25T5, KIGBAR/L…4, KIGBAR/L…22

★2: KGBAR/L…4-25, KGBAR/L…22-25 (JCT), KGBAR/L…22-25T5, KGBASR/L…4-25, KGBASR/L…22-25, KGBASR/L…22-25T5, KIGBAR/L…4, KIGBAR/L…22

Rake Angle (α) after Installment of GBA-GM

α (°)	Insert Part Number
10°	GBA43R/L150-020GM
15°	GBA43R/L175-020GM ~ GBA43R/L265-030GM
12°	GBA43R/L300-030GM ~ GBA43R/L400-040GM

Rake Angle (α) after Installment of GBA-MY

α (°)	Insert Part Number
15°	GBA43R/L175-020MY ~ GBA43R/L350-030MY
14°	GBA43R/L400-040MY

Inserts are sold in 10 piece boxes.

● : Standard Item △ : Phaseout Item (will be removed from next catalog)
Contact your local Kyocera sales engineer to upgrade old products to new technology

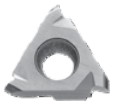
GBA Inserts (Metric)

(mm)

Part Number	IC	S	D1
GBA32_	9.525	3.18	4.4
GBA43_	12.700	4.76	5.5
GBA43R/L480	12.700	5.00	5.5

		PV7040	TN620	TN90	PR1625	PR1215	PR1115	PR905	PR930	KW10
P	Carbon Steel / Alloy Steel	●	○		◕	●	◔		◔	
M	Stainless Steel				◕	●	◔		◔	
K	Cast Iron							◔		◔
N	Non-ferrous Metals									◕
S	Titanium Alloy									◕
H	Hard materials (≤40HRC)					●	○		○	
	Hard materials (≥40HRC)									

Classification of Usage
◕ : Light Interruption / 1st Choice
◔ : Light Interruption / 2nd Choice
● : Continuous / 1st Choice
○ : Continuous / 2nd Choice

Insert (Right-handed Insert Shown)	Part Number	CW	CDX	RE	*MC PV7040 R	*MC PV7040 L	Cermet TN620 R	Cermet TN620 L	Cermet TN90 R	Cermet TN90 L	MEGA COAT NANO PR1625 R	MEGA COAT NANO PR1625 L	MEGA COAT PR1215 R	MEGA COAT PR1215 L	PVD Coated Carbide PR1115 R	PVD Coated Carbide PR1115 L	PVD Coated Carbide PR905 R	PVD Coated Carbide PR905 L	PVD Coated Carbide PR930 R	PVD Coated Carbide PR930 L	Carbide KW10 R	Carbide KW10 L	Applicable Toolholders	Ref. Page for Toolholder
 RF : Sharp Edge	GBA32R 200-100R	2.00	2.5	1.00							●		●		△								KGBA□...-3 KGBA□...-16 (JCT) KGBAS□...-3 KGBAS□...-16 KIGBA□...-3 (Internal) KIGBA□...-16 (Internal)	G12 G13 G80 (Internal)
	300-150R	3.00	2.5	1.50							●		●		△									
	GBA43R/L 100-050R	1.00	2.0	0.50	●	●					●	●	●	●		△			●				KGBA□...-4-15 KGBA□...22-15 (JCT) KGBAS□...-4-15 KGBAS□...22-15 KIGBA□...-4 (Internal) KIGBA□...22 (Internal)	
	150-075R	1.50	3.5	0.75	●	●			●		●	●	●	●	△	△	△		●			●		
	200-100R	2.00	3.5	1.00	●	●					●	●	●	●	△		●	●	●					
	250-125R	2.50	4.0	1.25							●	●	●	●	△								★1	
	300-150R	3.00	4.0	1.50					●	●	●	●	●	●			●	●	●	●	●	●		
	400-200R	4.00	5.0	2.00							●	●	●	●									KGBA□...-4-35 KGBA□...22-35 (JCT) KGBAS□...-4-35 KGBAS□...22-35 KIGBA□...-4 (Internal) KIGBA□...22 (Internal)	
	GBA43R/L 100-050RF	1.00	2.0	0.50			●	●															KGBA□...-4-15 KGBA□...22-15 (JCT) KGBAS□...-4-15 KGBAS□...22-15 KIGBA□...-4 (Internal) KIGBA□...22 (Internal)	
	150-075RF	1.50	3.5	0.75			●	●																
	200-100RF	2.00	3.5	1.00			●	●																
	250-125RF	2.50	4.0	1.25			●	●															★1	
	300-150RF	3.00	4.0	1.50			●	●															KGBA□...-4-35 KGBA□...22-35 (JCT) KGBAS□...-4-35 KGBAS□...22-35 KIGBA□...-4 (Internal) KIGBA□...22 (Internal)	
	400-200RF	4.00	5.0	2.00			●																	

Full-R (Round)

- Dimension **CDX** shows available grooving depth

*MC stands for MEGACOAT Cermet.

Recommended Cutting Conditions G145

★1: KGBA□...4-25, KGBA□...22-25 (JCT), KGBA□...22-25T5, KGBAS□...4-25, KGBAS□...22-25, KGBAS□...22-25T5, KIGBA□...4, KIGBA□...22

Rake Angle (α) after Installment of GBA

GBA32□○○○-○○○		GBA43□○○○-○○○		GBA43□○○○-○○○R (Full-R)		
α (°)	Insert Grade	α (°)	Insert Grade	α (°)	Insert Grade	Full-R
10°	TN90,PV7040,PR930 PR1115,PR1215,PR1625, PR905 KPD001,KPD010	0°	KBN510, KBN525	10°	TN90,PV7040,PR930 PR1115,PR1215,PR905	050R~150R
		10°	TC40,TN90,PV7040,PR930 PR1115,PR1215,PR1625, PR905 KPD001, KPD010	14°	TN90,PV7040,PR930 PR1115,PR1215,PR905	200R
20°	KW10	20°	KW10	14°	KW10	050R~200R

GBA inserts can be used in KGB / KGBS toolholders as well.

For GM Chipbreaker and MY Chipbreaker, see page G9

Inserts are sold in 10 piece boxes.

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● : Standard Item △ : Phaseout Item (will be removed from next catalog)
Contact your local Kyocera sales engineer to upgrade old products to new technology

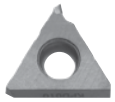
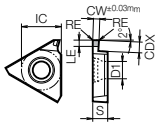
GBA Inserts (Metric)

(mm)

Part Number	IC	S	D1
GBA32_	9.525	3.18	4.4
GBA43_	12.700	4.76	5.5
GBA43R/L480	12.700	5.00	5.5

P	Carbon Steel / Alloy Steel				
M	Stainless Steel				
K	Cast Iron			●	
N	Non-ferrous Metals			●	
S	Titanium Alloy				
H	Hard materials (≤40HRC)				
	Hard materials (≥40HRC)	○	●		

Classification of Usage
❶ : Light Interruption / 1st Choice
◔ : Light Interruption / 2nd Choice
● : Continuous / 1st Choice
○ : Continuous / 2nd Choice

Insert (Right-handed Insert Shown)	Part Number	Dimensions (mm) CW	CDX	RE	CBN KBN510 R	KBN510 L	KBN525 R	KBN525 L	PCD KPD001 R	KPD001 L	KPD010 R	KPD010 L	Applicable Toolholders	Ref. Page for Toolholder
 1-Edge	GBA32R 125-010	1.25	2.0	0.1							●		KGBAR/L…-3 KGBAR/L…-16 (JCT) KGBASR/L…-3 KGBASR/L…-16 KIGBAR/L…-3 (Internal) KIGBAR/L…-16 (Internal)	G12 G13 G80 (Internal)
	150-010	1.50	2.0	0.1					●		●			
 GBA32 LE=1.7mm GBA43 LE=1.9mm	GBA43R/L 125-010	1.25	2.0	0.1							●	●	KGBAR/L…-4-15 KGBAR/L…22-15 (JCT) KGBASR/L…-4-15 KGBASR/L…22-15 KIGBAR/L…-4 (Internal) KIGBAR/L…22 (Internal)	
	125-020	1.25	2.0	0.2	●			●						
	150-010	1.50	3.5	0.1					●	●	●	●		
	150-020	1.50	3.5	0.2	●	●	●							
	200-010	2.00	3.5	0.1					●	●	●	●		
	200-020	2.00	3.5	0.2	●	●	●	●						
	250-010	2.50	4.0	0.1					●	●	●	●		
	300-010	3.00	4.0	0.1					●	●	●		★1	
	300-020	3.00	4.0	0.2			●							

• Dimension **CDX** shows available grooving depth

Recommended Cutting Conditions ➡ **G145**

★1: KGBAR/L…4-25, KGBAR/L…22-25 (JCT), KGBAR/L…22-25T5, KGBASR/L…4-25, KGBASR/L…22-25, KGBASR/L…22-25T5, KIGBAR/L…4, KIGBAR/L…22

Rake Angle (α) after Installment of GBA

GBA32R/L○○○-○○○ α (°)	Insert Grade	GBA43R/L○○○-○○○ α (°)	Insert Grade	GBA43R/L○○○-○○○R (Full-R) α (°)	Insert Grade	Full-R
10°	TN90,PV7040,PR930 PR1115,PR1215,PR1625, PR905 KPD001,KPD010	0°	KBN510, KBN525	10°	TN90,PV7040,PR930 PR1115,PR1215,PR905	050R~150R
		10°	TC40,TN90,PV7040,PR930 PR1115,PR1215,PR1625, PR905 KPD001, KPD010	14°	TN90,PV7040,PR930 PR1115,PR1215,PR905	200R
20°	KW10	20°	KW10	14°	KW10	050R~200R

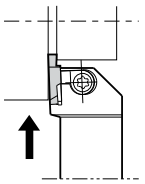
GBA inserts can be used in KGB / KGBS toolholders as well.

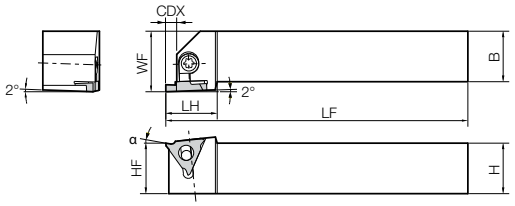
For GM Chipbreaker and MY Chipbreaker, see page ➡ G9

CBN & PCD Inserts are sold in 1 piece boxes.

● : Standard Item △ : Phaseout Item (will be removed from next catalog)
Contact your local Kyocera sales engineer to upgrade old products to new technology

KGBA





• Right-hand shown

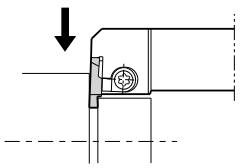
• Right-hand Insert for Right-hand Toolholder, Left-hand Insert for Left-hand Toolholder

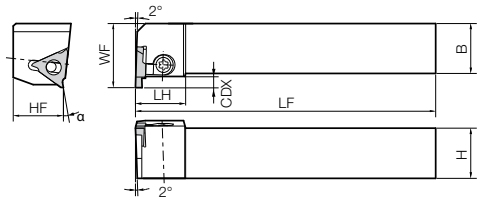
Alternative Toolholder Reference Table

KGBA ←	(KGB)
KGBA R/L…22-15	KGB R/L…22-15
KGBA R/L…22-25	KGB R/L…22-25
KGBA R/L…22-35	KGB R/L…22-35
KGBA R/L…22-25T5	KGB R/L…22-25 (Available grooving depth has a limit)

· Short shank type is not available for KGB / KGBS.

KGBAS





• Right-hand shown

• Left-hand Insert for Right-hand Toolholder, Right-hand Insert for Left-hand Toolholder

Alternative Toolholder Reference Table

KGBAS ←	(KGBS)
KGBAS R/L…22-15	KGBS R/L…22-15
KGBAS R/L…22-25	KGBS R/L…22-25
KGBAS R/L…22-35	KGBS R/L…22-35
KGBAS R/L…22-25T5	KGBS R/L…22-25 (Available grooving depth has a limit)

Toolholder Dimensions

Part Number		Stock R	Stock L	Unit	Dimensions H	HF	B	LF	LH	WF	CDX	Spare Parts: Clamp Set	Spare Parts: Wrench	Applicable Insert (G6~G11)
KGBA R/L	12-3	●	●	inch	0.750	0.750	0.750	5.000	0.945	1.000	0.098	LGBA-16R/LS	FT-15	GBA32R/L...
	16-3	●	●		1.000	1.000	1.000	6.000	0.945	1.250	0.098			
	12-4-15	●	●		0.750	0.750	0.750	5.000	1.004	1.000	0.157	LGBA-22R/LS	FT-15	GBA43R/L...
	16-4-15	●	●		1.000	1.000	1.000	6.000	1.004	1.250	0.157			
	12-4-25	●	●		0.750	0.750	0.750	5.000	1.004	1.000	0.177			
	16-4-25	●	●		1.000	1.000	1.000	6.000	1.004	1.250	0.177			
	12-4-35	●	●		0.750	0.750	0.750	5.000	1.004	1.000	0.217			
	16-4-35	●	●		1.000	1.000	1.000	6.000	1.004	1.250	0.217			
KGBA R/L	2020K-16	●	●	mm	20	20	20	125	24.0	25	2.5	LGBA-16R/LS	FT-15	GBA32R/L...
	2525M-16	●	●		25	25	25	150	24.0	30	2.5			
	2020K22-15	●	●		20	20	20	125	25.5	25	4.0	LGBA-22R/LS	FT-15	GBA43R/L...
	2525M22-15	●	●		25	25	25	150	25.5	30	4.0			
	2020K22-25	●	●		20	20	20	125	25.5	25	4.5			
	2525M22-25	●	●		25	25	25	150	25.5	30	4.5			
	2020K22-25T5	●	●		20	20	20	125	25.5	25	5.5			
	2525M22-25T5	●	●		25	25	25	150	25.5	30	5.5			
	2020K22-35	●	●		20	20	20	125	25.5	25	5.5			
	2525M22-35	●	●		25	25	25	150	25.5	30	5.5			
	2020H22-15*	●			20	20	20	100	25.5	25	4.0			
	2020H22-25*	●			20	20	20	100	25.5	25	4.5			
	2020H22-35*	●			20	20	20	100	25.5	25	5.5			
KGBASR	12-3	●		inch	0.750	0.750	0.750	5.000	0.984	0.984	0.098	LGBA-16LS	FT-15	GBA32L...
	16-3	●			1.000	1.000	1.000	6.000	0.984	1.181	0.098			
	12-4-15	●			0.750	0.750	0.750	5.000	0.984	1.062	0.157	LGBA-22LS	FT-15	GBA43L...
	16-4-15	●			1.000	1.000	1.000	6.000	0.984	1.260	0.157			
	12-4-25	●			0.750	0.750	0.750	5.000	0.984	1.062	0.177			
	16-4-25	●			1.000	1.000	1.000	6.000	0.984	1.250	0.177			
	12-4-35	●			0.750	0.750	0.750	5.000	0.984	1.062	0.217			
	16-4-35	●			1.000	1.000	1.000	6.000	0.984	1.260	0.217			
KGBAS R/L	2020K-16	●	●	mm	20	20	20	125	25	25	2.5	LGBA-16R/LS	FT-15	GBA32R/L...
	2525M-16	●	●		25	25	25	150	25	30	2.5	LGBA-22R/LS	FT-15	GBA43R/L...
	2020K22-15	●	●		20	20	20	125	25	27	4.0			
	2525M22-15	●	●		25	25	25	150	25	32	4.0			
	2020K22-25	●	●		20	20	20	125	25	27	4.5			
	2525M22-25	●	●		25	25	25	150	25	32	4.5			
	2020K22-25T5	●	●		20	20	20	125	25	27	5.5			
	2525M22-25T5	●	●		25	25	25	150	25	32	5.5			
	2020K22-35	●	●		20	20	20	125	25	27	5.5			
	2525M22-35	●	●		25	25	25	150	25	32	5.5			

• Dimension **CDX** shows the distance from the toolholder to the cutting edge. Reference dimension **CDX** in applicable insert table for actual grooving depth. * mark indicates short shank type

• Clamp Set : KGBA R/L…LGBA-○○RS for Right-hand Toolholder, and LGBA-○○LS for Left-hand Toolholder.
KGBAS R/L…LGBA-○○LS for Right-hand Toolholder, and LGBA-○○RS for Left-hand Toolholder.

External Grooving Toolholders KGBA Short Shank Types Are Available

For NC lathe and HSK tooling, KGBAR2020K-○○ (Overall length 125mm) short shank type KGBAR2020H22-○○ (Overall length 100mm) is available., meaning it is no longer necessary for users to cut-down the shank.

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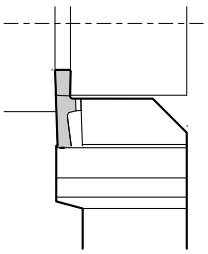
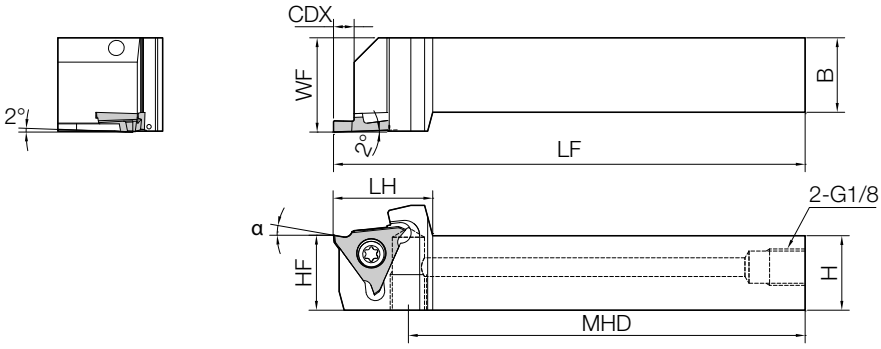
KGBA-JCT (Jet Coolant-through) NEW





• Right-hand shown

• Right-hand Insert for Right-hand Toolholder

Toolholder Dimensions

Pressure Resistance: up to 4,350 psi

Part Number		Stock		Unit	Dimensions (mm)								Spare Parts				Applicable Insert ➡ G6~G11
													Clamp Screw	Wrench		Plug	
		R	L		H	HF	B	LF	LH	WF	CDX*1	MHD					
KGBA□	2020K-16JCT	●	●	mm	20	20	20	125	24.0	25	2.5	107.5	SB-4085TR	FT-15	-	HSG1/8x8.0	GBA32□...
	2525K-16JCT	●	●		25	25	25			30							
	2020K22-15JCT	●	●		20	20	20		26.5	25	4	105	SB-5085TR	-	LTW-20		GBA43□...
	2525K22-15JCT	●	●		25	25	25			30							
	2020K22-25JCT	●	●		20	20	20			25	5.5						
	2525K22-25JCT	●	●		25	25	25			30							
	2020K22-35JCT	●	●		20	20	20			25							
	2525K22-35JCT	●	●		25	25	25			30							

*1 Dimension **CDX** shows the distance from the toolholder to the cutting edge. Reference dimension **CDX** in applicable insert table for actual grooving depth.

• KGBA-JCT Toolholder is Screw Clamp Type

Coolant Connections and Pipe Parts ➡ **H14-H15**
Recommended Cutting Conditions ➡ **G145**

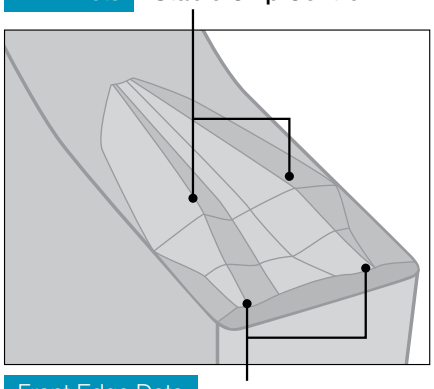
GBF

High Precision Grooving with Insert Width Tolerance of ± 0.02mm
High Efficiency MEGACOAT Coating Technology for Long Tool Life

1 Stable Chip Control with GL Chipbreaker

GL Chipbreaker for stable chip control in both grooving and traversing operations
(Traversing is not recommended for GBF32R075-005GL)

Twin Dots **Stable Chip Control**



Front Edge Dots

Chips are short, curled and break evenly in low feed machining. Prevents chip clogging.

Chip Control Comparison (Internal Evaluation)

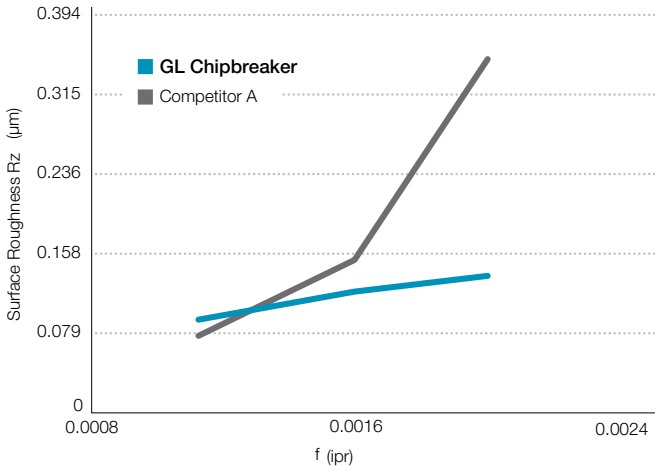
	GL Chipbreaker	Competitor A
Grooving f = 0.0020 ipr d = 0.059"		
Turning f = 0.0016 ipr D.O.C. = 0.008"		

Cutting Conditions : Vc = 260 sfm, Edge Width 0.039"
Workpiece Material : 304

2 Good Surface Finish

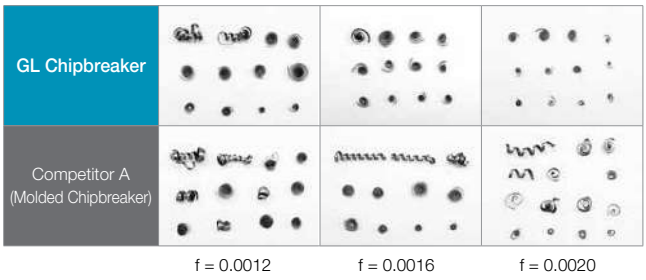
GL Chipbreaker stable chip control at high feed rates,
Good surface finish of side wall.

Surface Roughness Comparison (Internal Evaluation)



Cutting Conditions : Vc = 260 sfm, d = 0.059", f = 0.001~0.002 ipr, Edge Width 0.039"
Workpiece Material : Chromium Steel

Chip Control Comparison (Internal Evaluation)



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NEW ITEMS!

KGBF-JCTM NEW

Direct from Turret High-Pressure Coolant-Through Cut-Off Holders

Supports Internal Coolant with or without Piping Systems

Internal Coolant without Piping

*When the tool turret supports direct coolant

Coolant is supplied directly from the tool turret into the holder without the need to install piping

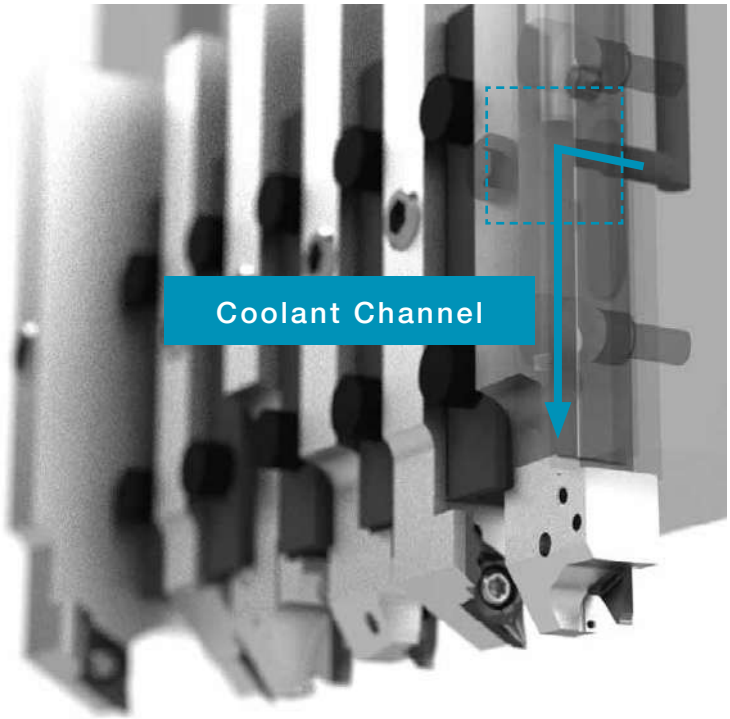
Applicable to Wide Range of Machines

The tool turret is optional. Please contact our company sales representative for details.

CITIZEN MACHINERY CO., LTD. (L20, D25, M32)
STAR MICRONICS CO., LTD. (SB-R series, SR series, SV series)
TSUGAMI CORPORATION (S205/206-Ⅱ □16 type, S205A/206A-Ⅱ □16 type)

(Random order)
Based on Kyocera Survey in January 2021

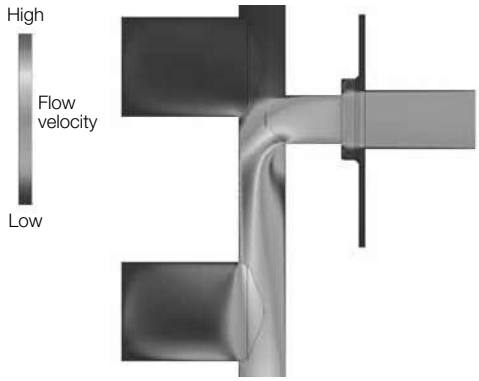
Compatible with various machine including the above.Toolholders can be customized as well.



Optimized Coolant Supply

Supply hole designed to reduce energy loss based on extensive flow analysis

Analysis Image (Internal Evaluation)

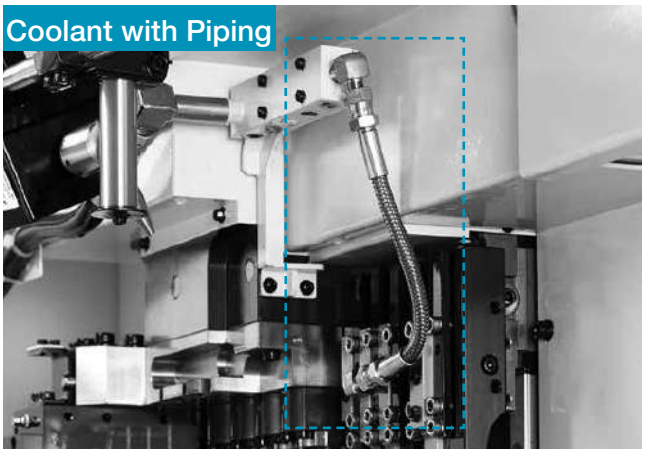


Internal Coolant with Piping

*Piping parts: See pages **H18** and **H19**

Compatible with internal coolant on any machine with standard piping parts

Commercial piping parts are available when using at normal pressure



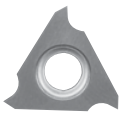
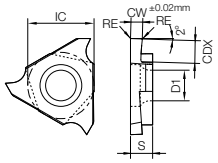
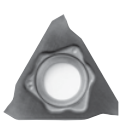
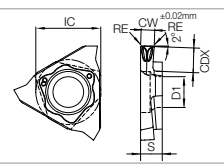
GBF / GBF-GL

P	Carbon Steel / Alloy Steel	● ◔
M	Stainless Steel	◔ ●
K	Cast Iron	●
N	Non-ferrous Metals	●
S	Titanium Alloy	●
H	Hard materials (≤40HRC)	
	Hard materials (≥40HRC)	

Classification of Usage
● : Light Interruption / 1st Choice
◔ : Light Interruption / 2nd Choice
● : Continuous / 1st Choice
○ : Continuous / 2nd Choice

(mm)

Part Number	IC	S	D1
GBF32_	9.525	3.18	4.4

Insert (Right-handed Insert Shown)	Part Number		Dimensions (mm) CW	CDX	RE	MEGA COAT PR1215 R	MEGA COAT PR1215 L	MEGACOAT NANO PR1535 R	MEGACOAT NANO PR1535 L	Carbide GW15 R	Carbide GW15 L	Applicable Toolholders	Ref. Page for Toolholder
 	GBF32R/L	025-000F	0.25	0.6	0.00	●	●	●	●	●	●	KGBFR/L...16F S...KGBFR/L16 KGBFSR/L...16 KGBFR/L...-16FJCT(M)	G17 G18 G19
		025-005			0.05	●	●	●	●	●	●		
		030-000F	0.30	0.8	0.00	●	●	●	●	●	●		
		030-005			0.05	●	●	●	●	●	●		
		033-000F *1	0.33		0.00	●	●	●	●	●	●		
		033-005 *1			0.05	●	●	●	●	●	●		
		043-000F *2	0.43	1.0	0.00	●	●	●	●	●	●		
		043-005 *2			0.05	●	●	●	●	●	●		
		050-000F	0.50	1.2	0.00	●	●	●	●	●	●		
		050-005			0.05	●	●	●	●	●	●		
		053-000F *3	0.53		0.00	●	●	●	●	●	●		
		053-005 *3			0.05	●	●	●	●	●	●		
		065-000F	0.65		0.00	●	●	●	●	●	●		
		065-005			0.05	●	●	●	●	●	●		
		075-000F	0.75	2.0	0.00	●	●	●	●	●	●		
		075-005			0.05	●	●	●	●	●	●		
		080-000F	0.80		0.00	●	●	●	●	●	●		
		080-005			0.05	●	●	●	●	●	●		
		095-000F	0.95		0.00	●	●	●	●	●	●		
		095-005			0.05	●	●	●	●	●	●		
		100-000F	1.00		0.00	●	●	●	●	●	●		
		100-005			0.05	●	●	●	●	●	●		
		110-000F	1.10		0.00	●	●	●	●	●	●		
		110-005			0.05	●	●	●	●	●	●		
		120-000F	1.20		0.00	●	●	●	●	●	●		
		120-005			0.05	●	●	●	●	●	●		
		125-000F	1.25		0.00	●	●	●	●	●	●		
		125-005			0.05	●	●	●	●	●	●		
		125-010			0.1	●	●	●	●	●	●		
		130-000F	1.30		0.00	●	●	●	●	●	●		
		130-005			0.05	●	●	●	●	●	●		
		130-010			0.1	●	●	●	●	●	●		
		140-000F	1.40	2.7	0.00	●	●	●	●	●	●		
		140-005			0.05	●	●	●	●	●	●		
		140-010			0.1	●	●	●	●	●	●		
		145-000F	1.45		0.00	●	●	●	●	●	●		
		145-005			0.05	●	●	●	●	●	●		
		145-010			0.1	●	●	●	●	●	●		
		150-000F	1.50		0.00	●	●	●	●	●	●		
		150-005			0.05	●	●	●	●	●	●		
		150-010			0.1	●	●	●	●	●	●		
		165-000F	1.65		0.00	●	●	●	●	●	●		
		165-005			0.05	●	●	●	●	●	●		
		165-010			0.1	●	●	●	●	●	●		
		170-000F	1.70	3.0	0.00	●	●	●	●	●	●		
		170-005			0.05	●	●	●	●	●	●		
		170-010			0.1	●	●	●	●	●	●		
		175-000F	1.75		0.00	●	●	●	●	●	●		
		175-005			0.05	●	●	●	●	●	●		
		175-010			0.1	●	●	●	●	●	●		
		200-000F	2.00		0.00	●	●	●	●	●	●		
		200-005			0.05	●	●	●	●	●	●		
		200-010			0.1	●	●	●	●	●	●		
		225-005	2.25		0.05	●	●	●	●	●	●		
		225-010			0.1	●	●	●	●	●	●		
		250-005	2.50		0.05	●	●	●	●	●	●		
		250-010			0.1	●	●	●	●	●	●		
		300-005	3.00		0.05	●	●	●	●	●	●		
		300-010			0.1	●	●	●	●	●	●		
 	GBF32R	075-005GL	0.75	2.0	0.05	●		●					
		095-005GL	0.95	2.0	0.05	●		●					
		100-005GL	1.00	2.0	0.05	●		●					
		150-010GL	1.50	2.7	0.10	●		●					
		200-010GL	2.00	3.0	0.10	●		●					
		300-010GL	3.00	3.0	0.10	●		●					

Maximum Cutting Diameter See Page G18

※1 : The edge width (**CW**) tolerance of GBF32R/L 033-005 : 0.33 $^{+0.015mm}_{-0.025mm}$
※2 : The edge width (**CW**) tolerance of GBF32R/L 043-005 : 0.43 $^{+0.015mm}_{-0.025mm}$
※2 : The edge width (**CW**) tolerance of GBF32R/L 053-005 : 0.53 $^{+0.015mm}_{-0.025mm}$

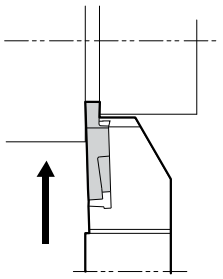
Recommended Cutting Conditions G146

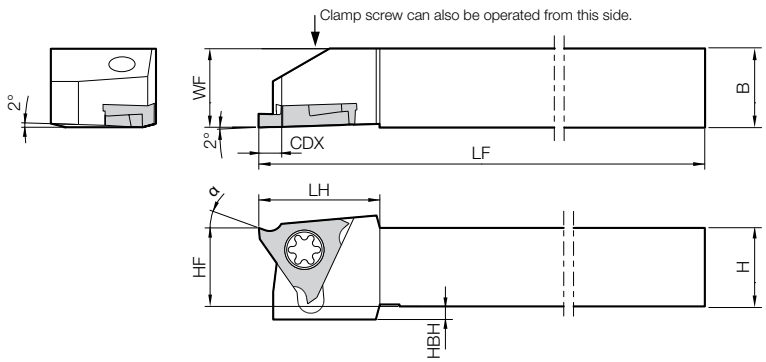
Inserts are sold in 10 piece boxes.

(Customer Service) 800.823.7284 - Option 1
(Technical Support) 800.823.7284 - Option 2
Visit us online at KyoceraPrecisionTools.com

● : Standard Item △ : Phaseout Item (will be removed from next catalog)
Contact your local Kyocera sales engineer to upgrade old products to new technology

KGBF-F (Without Offset)





• Right-hand shown

• Right-hand Insert for Right-hand Toolholder, Left-hand Insert for Left-hand Toolholder

Toolholder Dimensions

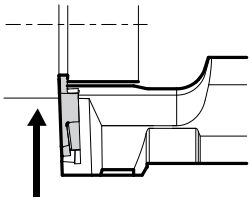
Part Number		Stock R	Stock L	Unit	Dimensions (mm) H=HF	HBH	B=WF	LF	LH	CDX*1	Spare Parts: Clamp Screw	Spare Parts: Wrench	Applicable Inserts
KGBF□	1010JX-16F	●	●	mm	10	4	10	120	18.5	3	SB-4070TRW	FT-8	GBF32□...
	1212JX-16F	●	●		12	2	12						
	1616JX-16F	●	●		16	-	16						
	2020JX-16F	●	●		20	-	20						

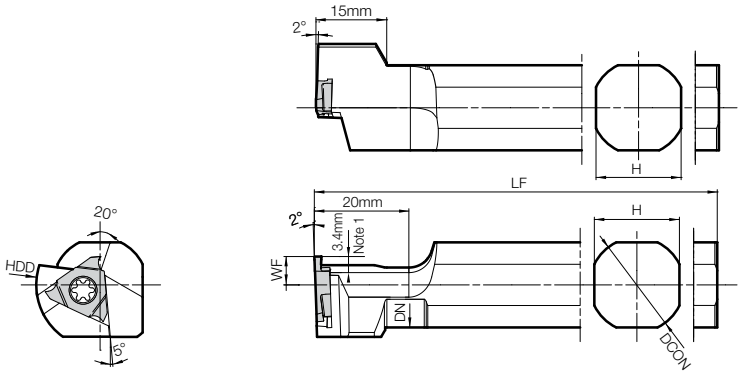
*1 Dimension **CDX** shows the distance from the toolholder to the cutting edge. Reference dimension **CDX** in applicable insert table for actual grooving depth.

Maximum Cutting Diameter See Page **G18**

Recommended Cutting Conditions **G146**

S...KGBF (Sleeve Holder)





• Left-hand shown

• Right-hand Insert for Left-hand Toolholder

Toolholder Dimensions

Part Number	Stock R	Stock L	Unit	Dimensions (mm) DCON	LF	WF	DN	HDD	H	Spare Parts: Clamp Screw	Spare Parts: Wrench	Applicable Inserts
S16F-KGBFL16		●	mm	16	85	6	15	27	15	SB-4070TRW	FT-8	GBF32□...
S19G-KGBFL16		●		19.05	90		18		17			
S19K-KGBFL16		●			120							
S20G-KGBFL16		●		20	90		19		18			
S20K-KGBFL16		●			120							
S22K-KGBFL16		●		22			21		20			
S25.0H-KGBFL16		●		25	100	10	24	32	23			
S25K-KGBFL16		●		25.4	120							

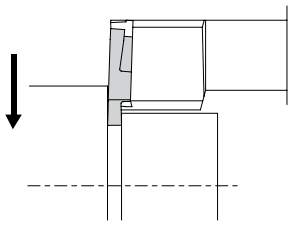
Note 1) Dimension shown is the available grooving depth of the insert (**CDX**)

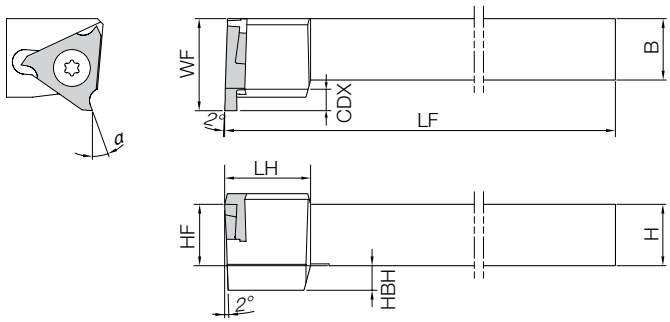
Maximum Cutting Diameter See Page **G18**

Recommended Cutting Conditions **G146**

● : Standard Item △ : Phaseout Item (will be removed from next catalog)
Contact your local Kyocera sales engineer to upgrade old products to new technology

KGBFS (90° Type)





• Right-hand shown

• Left-hand Insert for Right-hand Toolholder, Right-hand Insert for Left-hand Toolholder

Toolholder Dimensions

Part Number	Stock R	Stock L	Unit	Dimensions (mm) H=HF	HBH	B	LF	LH	WF	CDX*1	Rake Angle α	Spare Parts: Clamp Screw	Spare Parts: Wrench	Applicable Inserts
KGBFS**R/L** **1010JX-16**	●	●	mm	10	4	10	120	14	15	3	20°	SB-4070TRW	FT-8	GBF32**R/L**...
1212JX-16	●	●		12	2	12			16					
1616JX-16	●	●		16	-	16			20					

*1 Dimension **CDX** shows the distance from the toolholder to the cutting edge. Reference dimension **CDX** in applicable insert table for actual grooving depth.

Recommended Cutting Conditions **G146**

Compatibility & Precautions

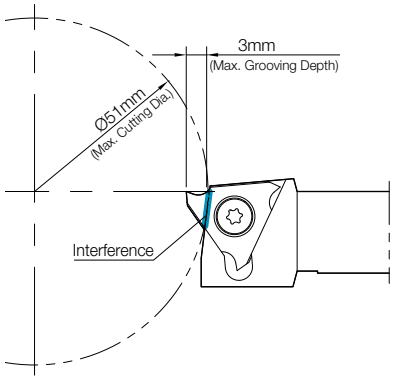
GBF and GBA Compatibility

1 GBF will fit KGBA / KGBAS toolholders
Caution: The maximum groove depth for KGBA / KGBAS toolholders is 2.5 mm

2 GBA inserts will also fit KGBF-F toolholders
Caution: The rake angle after installation in the toolholder is 11°

Maximum Machining Diameter for KGBF-F toolholder with GBF Insert

3 mm groove depth is available on workpiece diameters up to Ø51mm
2.7 mm groove depth is available on workpiece diameters up to Ø100mm,
2.5 mm groove depth is available on workpiece diameters up to Ø200mm
The workpiece will interfere with the holder at maximum cutting diameters or larger.



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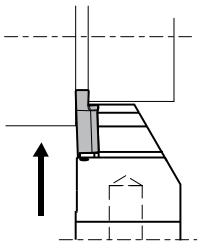
(Technical Support) **800.823.7284 - Option 2**
Visit us online at **KyoceraPrecisionTools.com**

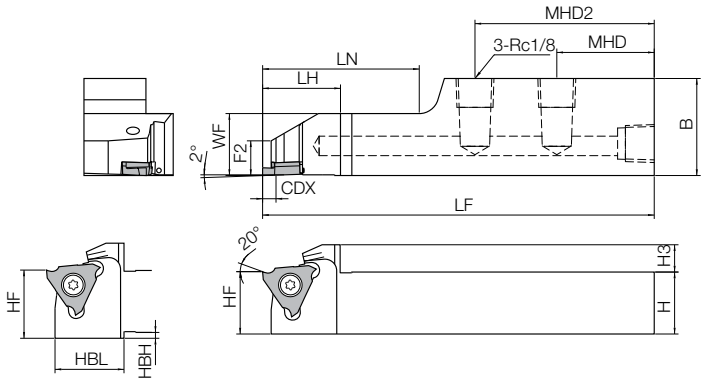
● : Standard Item △ : Phaseout Item (will be removed from next catalog)
Contact your local Kyocera sales engineer to upgrade old products to new technology

NEW ITEMS!

KGBF-JCT (Jet Coolant-through)

KGBF-JCT holders are being phased out. Switch to new KGBF-JCTM style below.





• Right-hand shown

• Right-hand Insert for Right-hand Toolholder

Toolholder Dimensions

Pressure Resistance: up to 2,175 psi

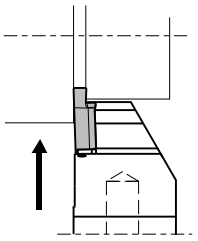
Part Number	Stock R	Stock L	Unit	Dimensions (mm) H=HF	HBH	B	LF	HBL	LH	LN	WF	CDX*1	MHD	MHD2	Spare Parts: Clamp Screw	Wrench	Plug	Applicable Inserts
KGBFR 1220H-16FJCT	△		mm	12	1.5	20	100	20	20	28	12	3	35	-	SB-4070TRW	FT-8	GP-1	GBF32R/L...
1625H-16FJCT	△			16	-	25	100	-	20	40	16	3	25	46				
2025H-16FJCT	△			20	-	25	100	-	20	40	20	3	25	46				

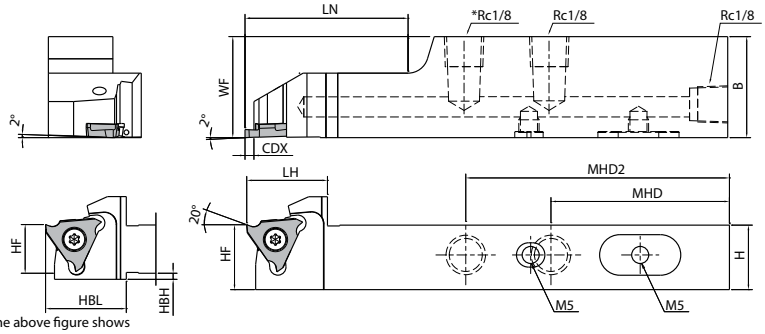
*1 Dimension **CDX** shows the distance from the toolholder to the cutting edge. Reference dimension **CDX** in applicable insert table for actual grooving depth.

Coolant Connections and Pipe Parts **H14-H15**

Recommended Cutting Conditions **G146**

KGBF-JCTM (Direct from Turret Jet Coolant-Through) NEW





The above figure shows KGBFR 5.72... and KGBFR 1218JX...

• Right-hand shown

• Right-hand Insert for Right-hand Toolholder

Toolholder Dimensions

Pressure Resistance: up to 2,175 psi

Part Number	Stock R	Stock L	Unit	Dimensions (mm) H=HF	HBH	B	LF	HBL	LH	LN	WF	CDX*1	MHD	MHD2	Spare Parts: Clamp Screw	Wrench	Plug 1	Plug 2	Applicable Inserts
KGBFR 5.72-16FJCTM	●		inch	0.500	0.059	0.709	4.750	0.785	0.785	1.110	0.500	0.118	2.125	-	SB-4070TRW	FT-8	GP-1	HS5X4LP	GBF32R/L...
82.5-16FJCTM	●			0.625	-	1.000	4.750	-	0.785		0.625	0.118	1.730	2.560	SB-4070TRW	FT-8	GP-1	-	
KGBFR 1218JX-16FJCTM	●		mm	12	1.5	18	120	20	20	28	12	3	54	-	SB-4070TRW	FT-8	GP-1	HS5X4LP	
1625JX-16FJCTM	●			16	-	25		-		40	16		44	65					
2025JX-16FJCTM	●			20							20							-	

*1 Dimension **CDX** shows the distance from the toolholder to the cutting edge. Reference dimension **CDX** in applicable insert table for actual grooving depth.

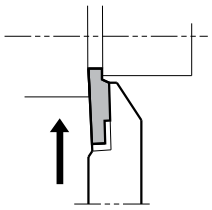
Coolant Connections and Pipe Parts **H18-H19**

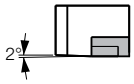
Recommended Cutting Conditions **G146**

● : Standard Item △ : Phaseout Item (will be removed from next catalog)
Contact your local Kyocera sales engineer to upgrade old products to new technology

KTGF-F (Without Offset)

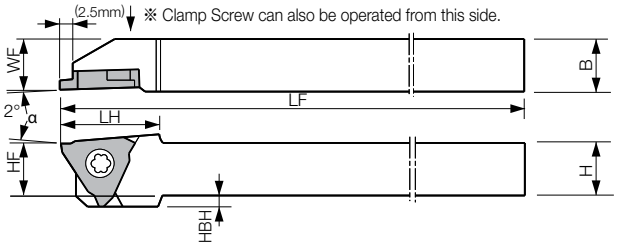
KTGF holders are being phased out.
Switch to KGBF style ➔ G17~G19





α (°)	Insert Grade
20°	PR1115, PR1215 PR930, KW10
11°	KPD001
6°	TC40

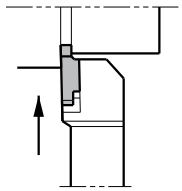
• Right-hand shown

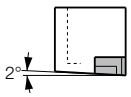


• Right-hand Insert for Right-hand Toolholder, Left-hand Insert for Left-hand Toolholder

KTGF (With Offset)

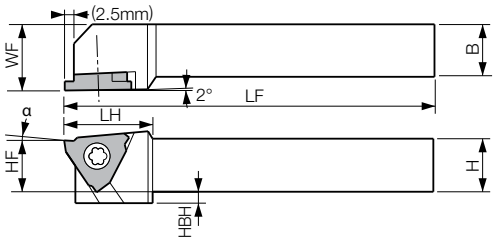
KTGF holders are being phased out.
Switch to KGBF style ➔ G17~G19





α (°)	Insert Grade
20°	PR1115, PR1215 PR930, KW10
11°	KPD001
6°	TC40

• Right-hand shown



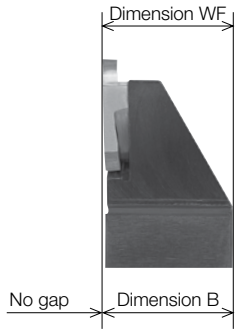
• Right-hand Insert for Right-hand Toolholder, Left-hand Insert for Left-hand Toolholder

Toolholder Dimensions

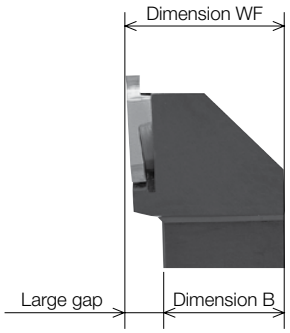
Part Number		Stock R	Stock L	Unit	Dimensions H	HBH	HF	B	LF	LH	WF	Spare Parts: Clamp Screw	Spare Parts: Wrench	Applicable Inserts ➔ G21
KTGF△R/L	6-3JXF	△	△	inch	0.375	0.079	0.375	0.375	4.750	0.728	0.383	SB-4070TRW	FT-8	TGF32△R/L
	8-3JXF	△	△		0.500	-	0.500	0.500	4.750	0.728	0.500			
	10-3JXF	△	△		0.625	-	0.625	0.625	4.750	0.728	0.098			
KTGF△R/L	1010JX-16F	△	△	mm	10	2	10	10	120	18.5	10	SB-4070TRW	FT-8	
	1212JX-16F	△	△		12	-	12	12	120	18.5	12			
	1616JX-16F	△	△		16	-	16	16	120	18.5	16			
KTGF△R/L	1212F-16F	△	△		12	-	12	12	85	18.5	12	SB-4070TRW	FT-8	
KTGF△R/L	1010F-16	△	△		10	4	10	10	80	18.5	12	SB-4070TRS	FT-10	
	1212H-16	△	△		12	2	12	12	100	18.5	16			
	1616H-16	△	△		16	-	16	16	100	18.5	20			
	2020K-16	△	△		20	-	20	20	125	20.0	25			
	2525M-16	△	△		25	-	25	25	150	20.0	32			

Usage Difference Between KTGF-F and KTGF Toolholders

It is necessary to use "Without Offset" in operating the swiss machine.



KTGF-F (without offset type)



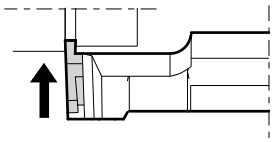
KTGF (with offset type)

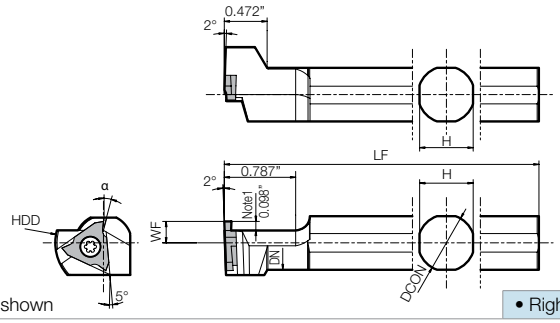
(Customer Service) **800.823.7284 - Option 1**
(Technical Support) **800.823.7284 - Option 2**
Visit us online at **KyoceraPrecisionTools.com**

● : Standard Item △ : Phaseout Item (will be removed from next catalog)
Contact your local Kyocera sales engineer to upgrade old products to new technology

S...KTGF (Sleeve Holder)

S...KTGF holders are being phased out.
Switch to S...KGBF style G17





α (°)	Insert Grade
20°	PR1115, PR1215, PR930, KW10
11°	KPD001
6°	TC40

• Left-hand shown

• Right-hand Insert for Left-hand Toolholder

Note 1) Dimension shown is the distance from the toolholder to the cutting edge. Reference dimension **CDX** in applicable insert table for actual grooving depth.

Toolholder Dimensions

Part Number	Stock	Unit	Dimensions						Spare Parts		Applicable Inserts Below
			DCON	LF	WF	DN	HDD	H	Clamp Screw	Wrench	
S15F-KTGFL16	△	inch	0.625	3.35	0.236	0.575	1.063	0.591	SB-4070TRS	FT-10	TGF32R
S19G-KTGFL16	△		0.750	3.54	0.236	0.693	1.063	0.669			
S19K-KTGFL16	△		0.750	4.73	0.236	0.693	1.063	0.669			
S25K-KTGFL16	△		1.000	4.73	3.940	0.929	1.260	0.906			
S12F-KTGFL16	△	mm	12.0	80	6	11.0	27	11			
S14H-KTGFL16	△		14.0	100	6	13.0	27	13			
S16F-KTGFL16	△		16.0	85	6	14.6	27	15			
S20G-KTGFL16	△		20.0	90	6	18.6	27	18			
S20K-KTGFL16	△		20.0	120	6	18.6	27	18			
S25.0H-KTGFL16	△		25.0	100	10	23.6	32	23			

Applicable Inserts

		P	M	K	N	S	H	H
		Carbon Steel / Alloy Steel	Stainless Steel	Cast Iron	Non-ferrous Metals	Titanium Alloy	Hard materials (≤40HRC)	Hard materials (≥40HRC)
TC40	R		●	◔	◔		●	○
	L		●	◔	◔		○	○
PR1215	R					●		
	L					●		
PR930	R					●		
	L					●		
PR1115	R					●		
	L					●		
KW10	R			●	●	●		
	L				●	●		
KPD001	R				●	●		
	L							

Classification of Usage
● : Light Interruption / 1st Choice
◔ : Light Interruption / 2nd Choice
● : Continuous / 1st Choice
○ : Continuous / 2nd Choice

(in)

Part Number	IC	S	D1
TGF32_	0.375	0.125	0.177

Insert (Right-handed Insert Shown)	Part Number	Unit	Dimensions CW	CDX	RE	TC40 R	TC40 L	PR1215 R	PR1215 L	PR930 R	PR930 L	PR1115 R	PR1115 L	KW10 R	KW10 L	KPD001 R	KPD001 L	Applicable Toolholders	Ref. Page for Toolholder
General (Square) (Corner is C Shape) TGF32R/L○○○	TGF32R/L 031N	inch	0.031	0.078	0.004			●	●									KTGFR/L...3F KTGFR/L...16F KTGFR/L...16 S...KTGFR/L16	G20 G21
	041N		0.041	0.078	0.004			●	●										
	047N		0.047	0.078	0.004			●											
	058N		0.058	0.078	0.004			△	△										
	062N		0.062	0.078	0.004			●	●										
	078N		0.078	0.098	0.004			●	●										
	094N		0.094	0.098	0.004			△	△										
General (Square) (Corner is R Shape) TGF32R/L ○○○-○○○	TGF32R/L 033-005	mm	0.33	0.8	0.05			●		●									
	050-005		0.50	1.2	0.05	●		●	●	●	●			●					
	075-010		0.75	2.0	0.10	●		●	●	●	●			●					
	095-010		0.95	2.0	0.10	●		●	●	●	●			●					
	100-010		1.00	2.0	0.10	●		●	●	●	●			●					
	120-010		1.20	2.0	0.10			●	●										
	125-010		1.25	2.0	0.10	●		●	●	●	●			●					
	140-010		1.40	2.0	0.10			●	●										
	145-010		1.45	2.0	0.10	●		●	●	●	●			●					
	150-010		1.50	2.0	0.10	●		●	●	●	●			●					
	175-010		1.75	2.0	0.10	●		●	●	●	●			●					
	200-010		2.00	2.5	0.10	●		●	●	●	●			●					
	250-010		2.50	2.5	0.10	●		●	●	●	●			●					
1 Edge	TGF32R 125-010	mm	1.25	2.0	0.10											●			
	150-010		1.50	2.0	0.10											●			
	200-010		2.00	2.5	0.10											●			

• Dimension **CDX** shows available grooving depth

Recommended Cutting Conditions G146

Inserts are sold in 10 piece boxes. *CBN & PCD Tools are sold in 1 piece boxes.*

● : Standard Item △ : Phaseout Item (will be removed from next catalog)
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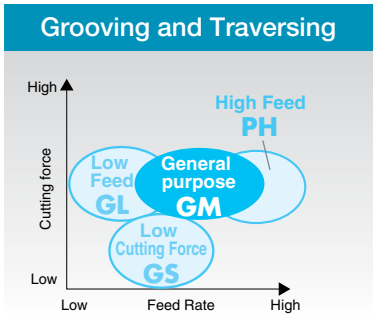
KGD Insert Lineup

Smooth Chip Control
Introducing new chipbreakers designed for a variety of workpiece materials.

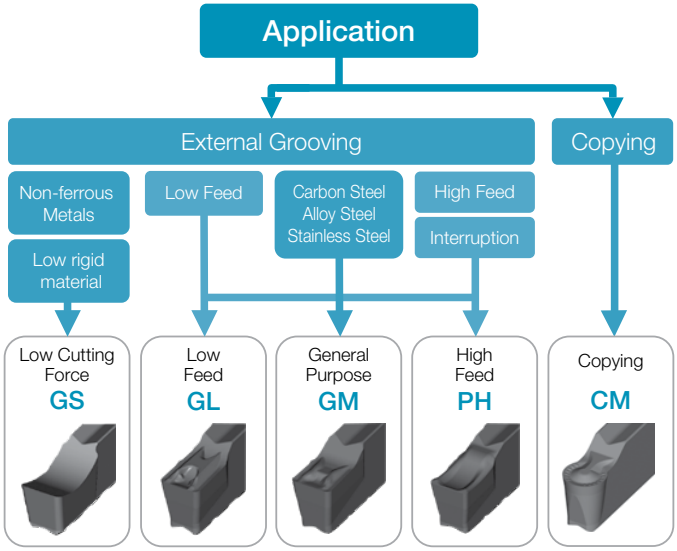
High Precision Edge Preparation
High precision molding technology with tolerance ±0.03mm (2, 3, 4mm types).

MEGACOAT Techology
Long tool life and high efficiency machining achieved by superior oxidation and wear resistance.

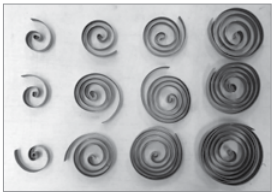
● Application Map



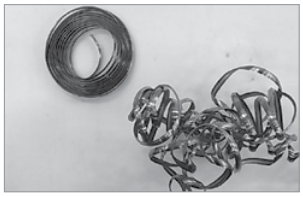
● Chipbreaker Selection



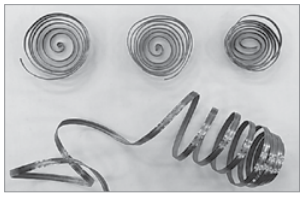
● Comparison of Chip Control - Structural Steel Vc = 490 sfm, f = 0.006 ipr



GM Chipbreaker



Competitor A

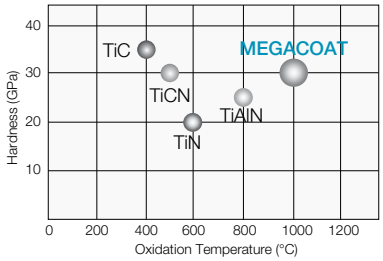


Competitor B

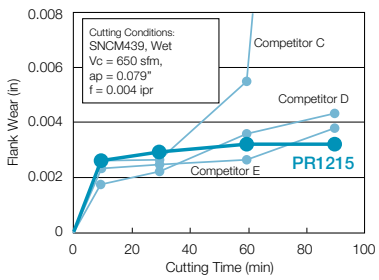
Better chip control than competitors

Reduces damage of cutting edge caused by crushing chips

● MEGACOAT Features



● Wear Resistance Comparison



PR1225
1st recommendation for cut-off, grooving, and traversing of steel

PR1215
Superior wear resistance, recommended for grooving and cut-off under stable conditions.

1st recommendation for machining of cast iron

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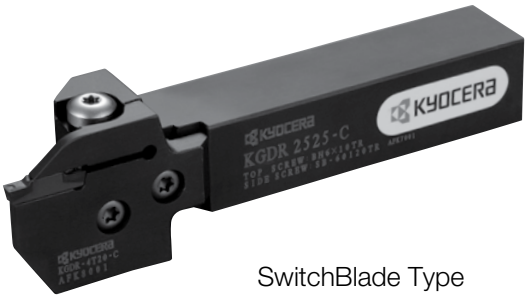
KGD Toolholder

Integral Type and SwitchBlade Type (Toolholder + Blade) are available



Integral Type

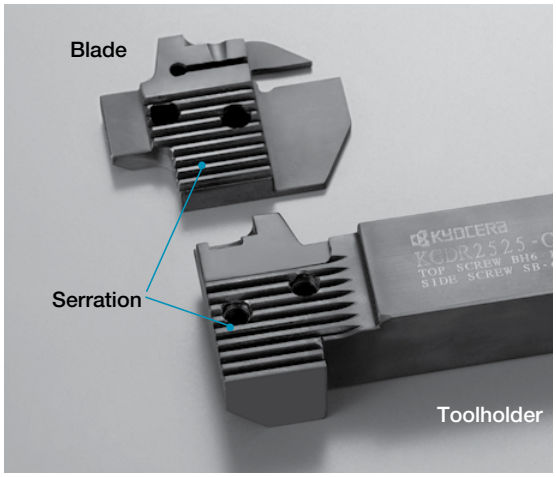


SwitchBlade Type

High Rigidity SwitchBlade Type Toolholder

Adaptable to a wide range of applications by swapping blades

Various edge widths and cutting depths can be achieved by changing the blade and toolholder combination.
Swap blades out easily to change groove width and depth.

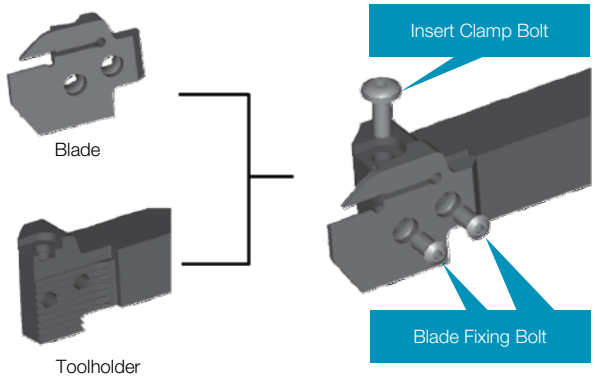


Jet Coolant-Through KGD-JCT Holders

Various edge widths and cutting depths can be achieved by changing the blade and toolholder combination.
Swap blades out easily to change groove width and depth.

Structure of Toolholder Unit (Toolholder + Blade)

● KGD-S (0˚SwitchBlade Type)

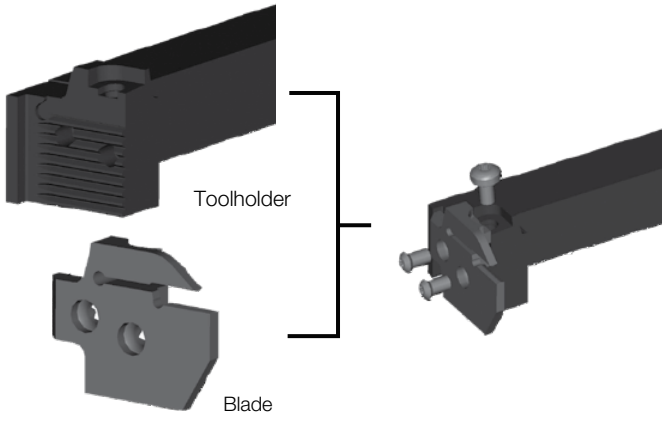


Blade Combination of 0˚ SwitchBlade Type

Toolholder (KGD**R** ○○○○-C)
+
Blade (KGD**R**-○T○○-C)

➡Right-hand **(R)** Blade for Right-hand **(R)** Toolholder,
Left-hand **(L)** Blade for Left-hand **(L)** Toolholder.

● KGDS-S (90˚SwitchBlade Type)



Blade Combination of 90° SwitchBlade Type

Toolholder (KGDS**R** ○○○○-C)
+
Blade (KGD**L**-○T○○-C)

➡Left-hand (L) Blade for Right-hand (R) Toolholder,
Right-hand (R) Blade for Left-hand (L) Toolholder.

Small Parts Grooving & Cut-Off

KGD-JCT

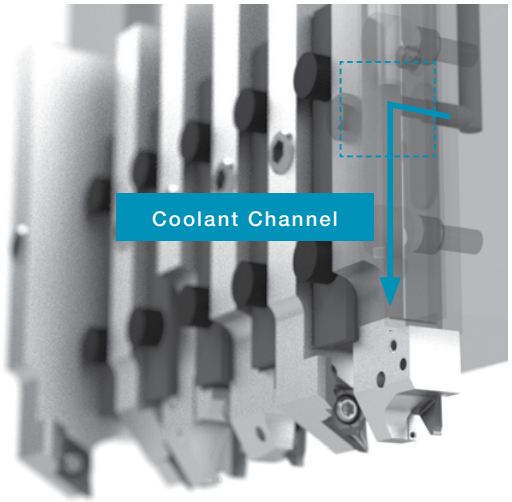
Jet Coolant-Through Cut-Off Holders for Small Parts Machining

KGD-JCTM NEW

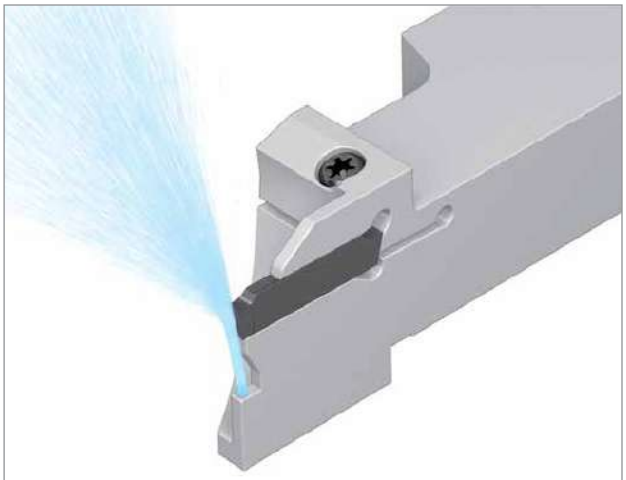
Direct from Turret Jet Coolant-Through Cut-Off Holders for Small Parts Machining

Small Diameter Grooving / Cut-Off

New JCTM-Series Direct Coolant System



Improved Tool Life Lowers Machining Costs



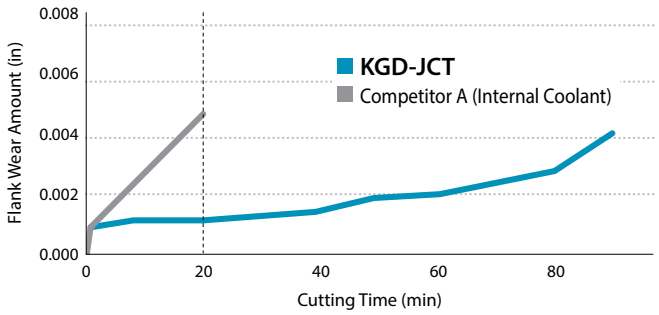
Effective Cooling of the Cutting Edge

Optimized Coolant Hole Position

Discharges Coolant towards the Flank Face of the Insert

Wear Resistance Comparison

(Internal Evaluation)



Cutting Conditions : Vc = 260 sfm, f=0.0024 ipr (at~Ø 0.079" : f = 0.0007 (ipr)
KGDR1625H-2JCT, GDM2020N-015PF PR1535 (Insert Width : 0.079")
Workpiece : 304 (Ø0.984")
Internal Coolant(218 psi) Cut-off

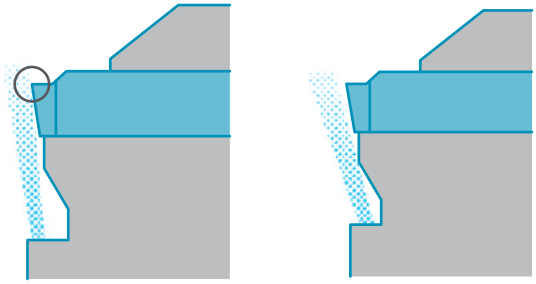
Coolant Discharge

KGD-JCT / KGD-JCTM

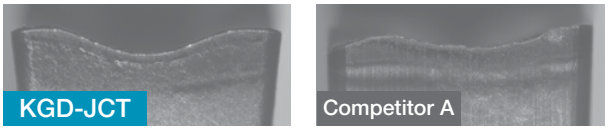
Sufficient cooling towards the cutting edge

Competitor A

Coolant does not flow directly towards the cutting edge



Cutting Edge (After Machining 20 min)



High density and high speeds coolant provides effective cooling of the cutting edge

Superior cooling action improves tool life

External Grooving & Cut-Off

KGD-JCT

Jet Coolant-Through Holders for External Grooving and Cut-Off

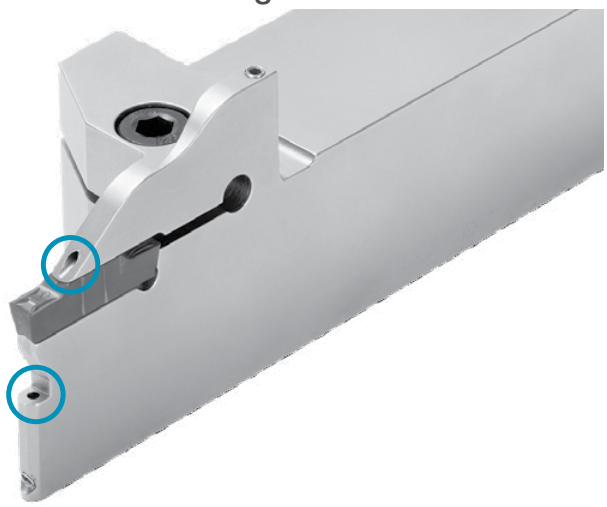
Grooving / Cut-Off

Improved Chip Control and Longer Tool Life for External Grooving and Cut-off

Discharges Coolant in Two Directions

Discharges coolant in two directions toward both the rake surface and the flank face of the insert

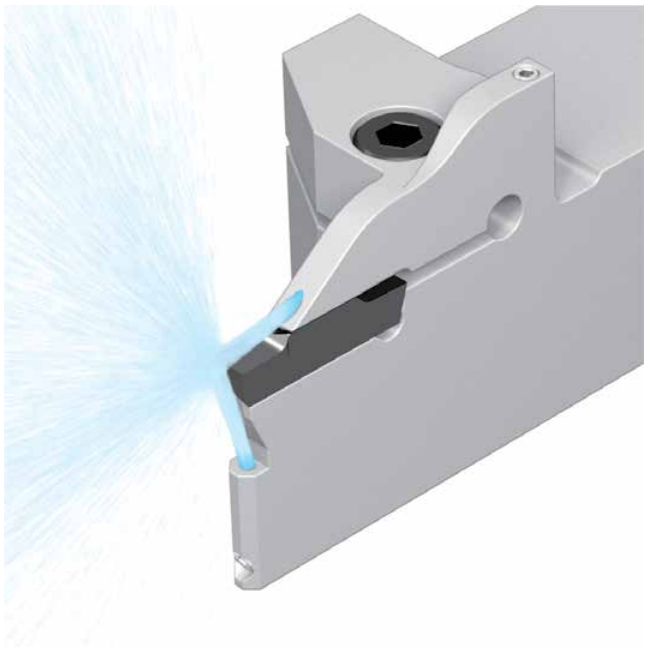
Excellent Chip Control and Long Tool Life



Superior Chip Control Performance

Coolant directed towards the rake face

Coolant hole position and angle improve chip control



Chip Control Comparison (Internal Evaluation)

KGD-JCT showed better chip control performance even at lower feed rates

f = 0.002 ipr (218 psi)

KGD-JCT



Competitor E



Competitor F



Competitor G

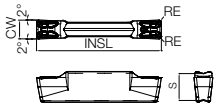
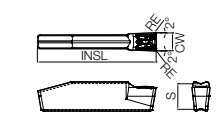
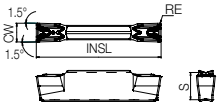
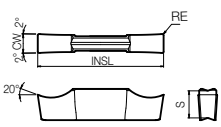
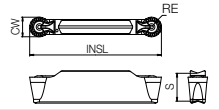
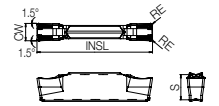
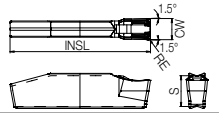


Cutting Conditions: Vc = 490 sfm, f = 0.002 ipr, d = 0.315", Wet
Edge Width 4 mm (0.157") Workpiece: 4131 Grooving

GDM / GDMS / GDG

Usage Classification
- ◕ : Light Interruption / 1st Choice
- ◔ : Light Interruption / 2nd Choice
- ● : Continuous / 1st Choice
- ○ : Continuous / 2nd Choice

		TN620	TN90	PR1535	PR1225	PR1215	GW15
P	Carbon Steel / Alloy Steel	●	○		◕	◔	
M	Stainless Steel			◕	◔	◔	
K	Cast Iron					◕	
N	Non-ferrous Metals						◕
S	Titanium Alloy			◕			◔
H	Hard materials (≤40HRC)				○		
	Hard materials (≥40HRC)						

Insert (Right-handed Insert Shown)			Part Number	CW inch	CW mm	CW Tolerance	RE	INSL	S	Ref. Page for Toolholder
Grooving & Traversing	General Purpose 2-edge		GDM 2420N-020GM	0.094	2.4	±0.0012	0.008	0.787	0.169	
			3020N-020GM	0.118	3.0		0.008			
			3020N-040GM	0.118	3.0		0.016			
			4020N-020GM	0.157	4.0		0.008			
			4020N-040GM	0.157	4.0		0.016			
			4020N-080GM	0.157	4.0		0.032			
			5020N-040GM	0.197	5.0	±0.0016	0.016			
			5020N-080GM	0.197	5.0		0.032			
			6020N-040GM	0.236	6.0		0.016			
			6020N-080GM	0.236	6.0		0.032			
			8030N-080GM	0.315	8.0	±0.0020	0.032	1.181	0.217	
			GDG 3120N-020GM	0.125	3.18	±0.0008	0.008	0.787	0.169	
	General Purpose 1-edge		GDMS 2220N-020GM	0.087	2.2	±0.0012	0.008	0.787	0.169	
			3020N-040GM	0.118	3.0		0.016			
			4020N-040GM	0.157	4.0		0.016			
			5020N-080GM	0.197	5.0	±0.0016	0.032			
			6020N-080GM	0.236	6.0		0.032			
	Low Feed 2-edge		GDM 2420N-020GL	0.094	2.4	±0.0012	0.008	0.787	0.169	G28 ~ G40
			3020N-020GL	0.118	3.0		0.008			
			3020N-040GL	0.118	3.0		0.016			
			4020N-020GL	0.157	4.0		0.008			
			4020N-040GL	0.157	4.0		0.016			
			5020N-040GL	0.197	5.0	±0.0016	0.016			
			6020N-040GL	0.236	6.0		0.016			
Grooving	Low Cutting Force 2-edge		GDG 2520N-020GS	0.098	2.5	±0.0008	0.008	0.787	0.169	
			3020N-020GS	0.118	3.0		0.008			
			3520N-020GS	0.138	3.5		0.008			
			4020N-040GS	0.157	4.0		0.016			
			5020N-040GS	0.197	5.0		0.016			
			6020N-040GS	0.236	6.0		0.016			
			8030N-040GS	0.315	8.0	±0.0008	0.016	1.181	0.217	
Full-R / Copying	2-edge		GDM 3020N-150R-CM	0.118	3.0	±0.0012	0.059	0.787	0.169	
			4020N-200R-CM	0.157	4.0		0.079			
			5020N-250R-CM	0.197	5.0	±0.0016	0.098	*0.827		
			6020N-300R-CM	0.236	6.0		0.118			
Grooving & Cut-off	High Feed 2-edge		GDM 2020N-020PH	0.079	2.0	±0.0012	0.008	0.787	0.169	
			3020N-030PH	0.118	3.0		0.012			
			4020N-030PH	0.157	4.0		0.012			
	High Feed 1-edge		GDMS 2020N-020PH	0.079	2.0	±0.0012	0.008	0.787		
			3020N-030PH	0.118	3.0		0.012			
			4020N-030PH	0.157	4.0		0.012			

*GDM50/60-CM differs from other part numbers in length (INSL) to avoid interference of a toolholder with workpiece.

Recommended Cutting Conditions ➔ G43~G44

Inserts are sold in 10 piece boxes.

Insert Identification System

Tolerance	Width	Hand of Tool	Chipbreaker	
M : M-Class	**20** : 2mm	**N** : Neutral	**GM**: Grooving & Traversing	**CM**: Copying
G : G-Class	**30** : 3mm		**GL**: Low Feed	**PH** : High Feed
	40 : 4mm		**GS**: Low Cutting Force	**NB** : Without Chipbreaker

G	D	M	S	30	20	N	-	040	GM
Series		No. of Edges			Insert Length			Corner-R (RE)	
		No Indication : 2-edge			**20** : 20mm			**020** : 0.2mm	
		S : 1-edge			**30** : 30mm			**040** : 0.4mm	
								150R : 1.5mm (Full-R)	

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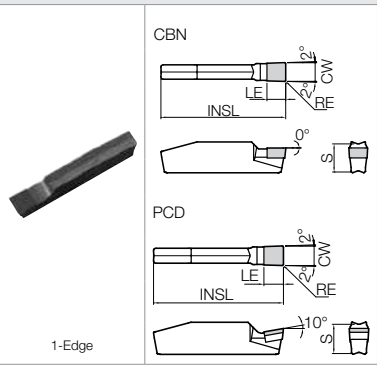
GDGS (CBN / PCD)

Classification of Usage
● : Light Interruption / 1st Choice
◔ : Light Interruption / 2nd Choice
● : Continuous / 1st Choice
○ : Continuous / 2nd Choice

K	Cast Iron			
N	Non-ferrous Metals			●
S	Titanium Alloy			●
H	Hard materials (≤40HRC)			
	Hard materials (≥40HRC)	●		
	Powdered Steel		●	

Insert (Right-handed Insert Shown)	Part Number	Dimensions (in) CW inch	CW mm	CW Tolerance	RE	INSL	S	LE	MEGA CBN KBN05M	CBN KBN570	PCD KPD001	Ref. Page for Toolholder
Grooving	GDGS 2020N-020NB	0.079	2.0	±0.0012	0.008	0.787	0.169	0.114	●	●	●	G28 ~ G40
	3020N-020NB	0.118	3.0		0.008						●	
	3020N-040NB	0.118	3.0		0.016				●	●		
	4020N-020NB	0.157	4.0		0.008						●	
	4020N-040NB	0.157	4.0		0.016				●	●		
	5020N-020NB	0.197	5.0		0.008						●	
	5020N-040NB	0.197	5.0		0.016				●	●		
	6020N-020NB	0.236	6.0		0.008						●	
	6020N-040NB	0.236	6.0		0.016				●			



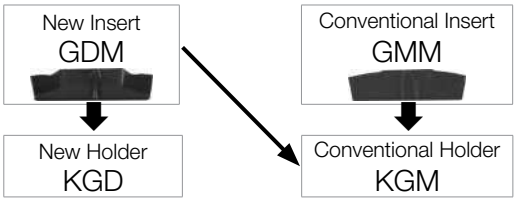
Recommended Cutting Conditions ➔ **G43~G44**

CBN & PCD Inserts are sold in 1 piece boxes.

KGD / KGM Combinations

● **Insert Pocket Angle of KGD / KGM Toolholders**

KGD...0°	Conventional KGM...5°
0°	5°



Installing conventional inserts into the new toolholder is not recommended.

Toolholder Identification System

KGD R 1616 JX - 3 D38 (Integral Type for Small Parts Machining)

Toolholder Hand	Shank Size	Toolholder Length	Applicable Inserts	Cutting Dia.
R : Right-hand **L** : Left-hand	**16**×**16**mm	**120mm**	GDM/GDMS **3~4**mm	CUTDIA **38**mm

KGD R 1616 H - 2 T 06 (Integral Type)

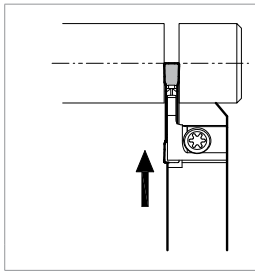
Toolholder Hand	Shank Size	Toolholder Length	Applicable Inserts	Max. Depth of Cut
R : Right-hand **L** : Left-hand	**16**×**16**mm	**100mm**	GDM/GDMS **2~3mm**	**06** : 06mm

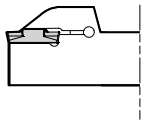
KGD / KGDS R 2020 X - 3 T 10 S (Separate Type / Unit Description)

Toolholder Hand	Shank Size	Toolholder Type	Applicable Inserts	Max. Depth of Cut
R : Right-hand **L** : Left-hand	**20**×**20**mm	Unit Description	GDM/GDMS **3~4**mm	**10** : 10mm

KGD (for Small Parts Machining)

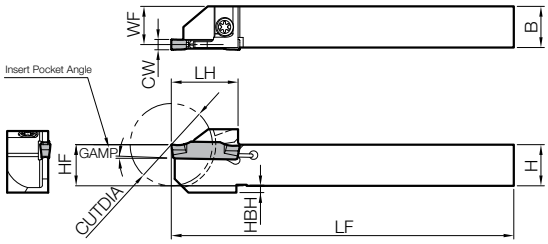
Insert Width: 0.051"~0.157" / 1.3mm~4.0mm





KGD□2012K-○D34
KGD□2020K-○D34
Shown in figure above

• Right-hand shown



Toolholder Dimensions (Inch Size)

Part Number	Stock R	Stock L	Cut-Off Dia. CUTDIA	Dimensions (in) H	HF	HBH	B	LF	LH	WF	GAMP	Insert Width CW (in) MIN	MAX	Spare Parts: Clamp Bolt	Spare Parts: Wrench
KGD□ 6-1.3JX	●	●	0.787	0.375	0.375	0.098	0.375	4.75	0.709	0.356	1°	-	0.051	SB-40120TR	LTW-15S
NEW 8-1.3JX	●	●	0.944	0.500	0.500	0.051	0.500	4.75	0.768	0.481					
KGD□ 6-1.5JX	●	●	0.787	0.375	0.375	0.098	0.375	4.75	0.709	0.351	1°	-	0.059		
8-1.5JX	●	●	0.944	0.500	0.500	0.051	0.500	4.75	0.768	0.476					
KGD□ 6-2JX	●	●	0.787	0.375	0.375	0.098	0.375	4.75	0.709	0.342	1°	0.079	0.118		
8-2JX	●	●	0.944	0.500	0.500	0.051	0.500	4.75	0.768	0.467					
10-2JX	●	●	1.259	0.625	0.625	-	0.625	4.75	0.965	0.592					
KGD□ 6-2.4JX	●	●	0.787	0.375	0.375	0.098	0.375	4.75	0.709	0.336	1°	0.094	0.118		
8-2.4JX	●	●	0.944	0.500	0.500	0.051	0.500	4.75	0.768	0.461					
10-2.4JX	●	●	1.259	0.625	0.625	-	0.625	4.75	0.965	0.586					
KGD□ 8-3JX	●	●	0.944	0.500	0.500	0.051	0.500	4.75	0.768	0.453	1°	0.118	0.118		
10-3JX	●	●	1.259	0.625	0.625	-	0.625	4.75	0.965	0.578			0.157		
KGD□ 10-3D38JX	●	●	1.496	0.625	0.625	-	0.625	4.75	1.142	0.578	1°	0.118	0.157	SE-50125TR	LTW-20
12-3D42JX	●	●	1.653	0.750	0.750	-	0.750	4.75	1.220	0.703					
43-3D42JX	●	●	1.653	0.750	0.750	-	0.500	4.75	1.220	0.453					

Toolholder Dimensions (Metric Size)

Part Number	Stock R	Stock L	Cut-Off Dia. CUTDIA	Dimensions (mm) H	HF	HBH	B	LF	LH	WF	GAMP	Insert Width CW (mm) MIN	MAX	Spare Parts: Clamp Bolt/Screw	Spare Parts: Wrench
KGD□ 1010JX-1.3D16	●	●	16	10	10	2	10	120	18.0	9.9	5°	1.3	1.3	SB-40120TR	LTW-15S
1010JX-1.3	●	●	20	10	10	2	10	120	18.0	9.5					
1212F-1.3D16	●	●	16	12	12	2	12	85	19.5	11.9					
1212JX-1.3D16	●	●	16	12	12	2	12	120	19.5	11.9					
1212F-1.3	●	●	24	12	12	2	12	85	19.5	11.5					
1212JX-1.3	●	●	24	12	12	2	12	120	19.5	11.5					
KGD□ 1010JX-1.5D16	●	●	16	10	10	2	10	120	18.0	9.7	5°	1.5	1.5	SB-40120TR	LTW-15S
1010JX-1.5	●	●	20	10	10	2	10	120	18.0	9.4					
1212F-1.5D16	●	●	16	12	12	2	12	85	19.5	11.7					
1212JX-1.5D16	●	●	16	12	12	2	12	120	19.5	11.7					
1212F-1.5	●	●	24	12	12	2	12	85	19.5	11.4					
1212JX-1.5	●	●	24	12	12	2	12	120	19.5	11.4					
KGD□ 1010JX-2	●	●	20	10	10	2	10	120	18.0	9.2	1°	2.0	3.0	SB-40120TR	LTW-15S
1212F-2	●	●	24	12	12	2	12	85	19.5	11.2					
1212JX-2	●	●	24	12	12	2	12	120	19.5	11.2					
1616JX-2	●	●	32	16	16	-	16	120	24.5	15.2					
2012K-2D34	●	●	34	20	20	-	12	125	32.5	11.2	0°			HH5X16	LW-4
2020K-2D34	●	●	34	20	20	-	20	125	32.5	19.2					
KGD□ 1010JX-2.4	●	●	20	10	10	2	10	120	18.0	9.0	1°	2.4	3.0	SB-40120TR	LTW-15S
1212F-2.4	●	●	24	12	12	2	12	85	19.5	11.0					
1212JX-2.4	●	●	24	12	12	2	12	120	19.5	11.0					
1616JX-2.4	●	●	32	16	16	-	16	120	24.5	15.0					
2012K-2.4D34	●	●	34	20	20	-	12	125	32.5	11	0°			HH5X16	LW-4
2020K-2.4D34	●	●	34	20	20	-	20	125	32.5	19					
KGD□ 1212JX-3	●	●	24	12	12	2	12	120	19.5	10.8	1°	3.0	3.0	SB-40120TR	LTW-15S
1212JX-3W	●	●	24	12	12	2	12	120	19.5	10.8			4.0		
1616JX-3	●	●	32	16	16	-	16	120	24.5	14.8					
1616JX-3D38	●	●	38	16	16	-	16	120	29.0	14.8	1°	3.0	4.0	SE-50125TR	LTW- 20
1913K-3D38	●	●	38	19	19	-	13	125	29.0	11.8					
2012JX-3D42	●	●	42	20	20	-	12	120	31.0	10.8					
2012JX-3D51	●	●	51	20	20	-	12	120	36.0	10.8					
2020JX-3D42	●	●	42	20	20	-	20	120	31.0	18.8					
2020JX-3D51	●	●	51	20	20	-	20	120	36.0	18.8					

Note 1) 0.157" (4mm) width insert can be installed in KGD□8-3JX and KGD□1212JX-3, but is not recommended due to the toolholder's rigidity.
2) Recommended tightening torque for clamp screw is 2.0Nm for SB-40120TR and 2.5Nm for SE-50125TR.
3) When machining material greater than Ø1.417" (36mm) with KGD□...-3D38(JX), KGD□...-3D42(JX), or KGD□...-3D51 toolholders, use 1-edge inserts. Max. workpiece diameter for 2-edge inserts is Ø1.417" (36mm)

Choose insert with width that falls within **MIN** and **MAX** parameters shown in table above. Insert table **G26~G27, H24~H25**

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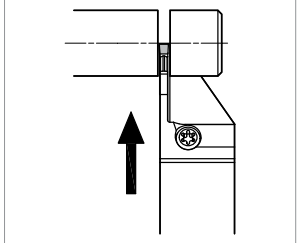
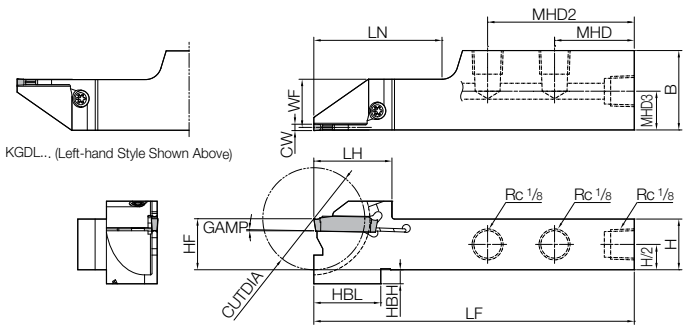
KGD-JCT (for Small Parts Machining / Jet Coolant-Through)

Small Diameter KGD-JCT holders are being phased out.
Switch to new KGD-JCTM style ➡ G30





• Right-hand shown

Toolholder Dimensions (Metric Size)

Insert Width: 0.079"~0.157" / 2.0mm~4.0mm

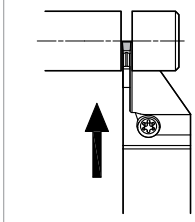
Part Number	Stock		Cut-Off Dia.	Dimensions (mm)												Insert Width CW (mm)		Spare Parts		
																		Clamp Bolt	Wrench	Plug
	R	L	CUTDIA	H=HF	HBH	B	LF	LH	HBL	LN	WF	MHD	MHD2	MHD3	GAMP	MIN	MAX			
KGDR 1220H-2JCT	△	△	24	12	8.5	20	100	19.5	21	44	11.2	35	-	8.4	1°	2.0	3.0	SB-40120TR	LTW-15S	GP-1
KGDL 1220H-2JCT	△	△							21.5					7.7						
KGDR 1625H-2JCT	△	△	32	16	4.5	25		24.5	21	40	15.2	25	46	12.2						
KGDL 1625H-2JCT	△	△												7.7						
KGDR 1220H-2.4JCT	△	△	24	12	8.5	20	100	19.5	21	44	11	35	-	8.4	1°	2.4	3.0			
KGDL 1220H-2.4JCT	△	△							21.5					7.7						
KGDR 1625H-2.4JCT	△	△	32	16	4.5	25		24.5	21	40	15	25	46	12.2						
KGDL 1625H-2.4JCT	△	△												7.7						
KGDR 1220H-3JCT	△	△	24	12	8.5	20	100	19.5	21	44	10.8	35	-	8.6	1°	3.0	3.0			
KGDL 1220H-3JCT	△	△							21.5					7.7						
KGDR 1625H-3JCT	△	△	32	16	4.5	25		24.5	21	40	14.8	25	46	12.2			4.0			
KGDL 1625H-3JCT	△	△												7.7						

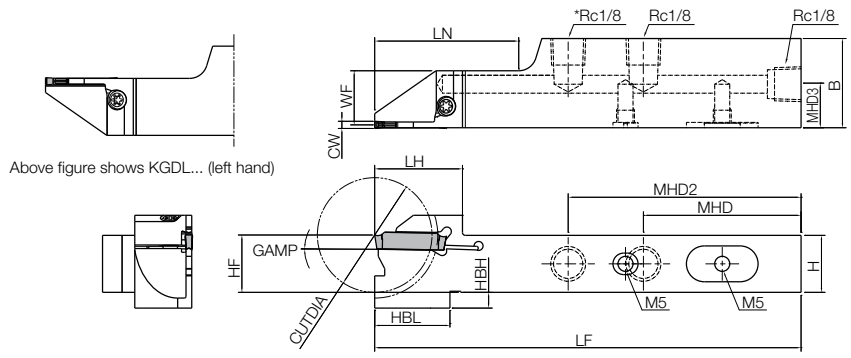
Choose insert with width that falls within **MIN** and **MAX** parameters shown in table above. Insert table ➡ **G26~G27, H24~H25**
Coolant Connections and Pipe Parts ➡ **H14-H15**



KGD-JCTM (for Small Parts Machining / Direct from Turret Jet Coolant-Through) NEW

Insert Width: 0.079"~0.157" / 2.0mm~4.0mm





• Right-hand shown

Toolholder Dimensions (Inch Size)

Part Number	Stock R	Stock L	Unit	Cut-Off Dia. CUTDIA	H=HF	HBH	B	LF	LH	HBL	LN	WF	MHD	MHD2	MHD3	Angle GAMP	Edge Width CW MIN	Edge Width CW MAX	Spare Parts: Clamp Screw	Wrench	Plug 1	Plug 2
KGDR 5.72-2JCTM	●		in	0.945	0.500	0.330	0.709	4.750	0.770	0.825	1.725	0.500	2.125	-	0.331	1°	0.079	0.118	SB-40120TR	LTW-15S	GP-1	HS5X4LP
KGDL 5.72-2JCTM		●								0.843					0.303							
KGDR 82.5-2JCTM	●			1.260	0.625	0.175	1.000		0.965	0.825	1.585	0.625	1.730	2.560	0.480							
KGDL 82.5-2JCTM		●													0.303							
KGDR 5.72-2.4JCTM	●			0.945	0.500	0.330	0.709	4.750	0.770	0.825	1.725	0.500	2.125	-	0.331	1°	0.094	0.118				
KGDL 5.72-2.4JCTM		●								0.843					0.303							
KGDR 82.5-2.4JCTM	●			1.260	0.625	0.175	1.000		0.965	0.825	1.585	0.625	1.730	2.560	0.480							
KGDL 82.5-2.4JCTM		●													0.303							
KGDR 5.72-3JCTM	●			0.945	0.500	0.330	0.709	4.750	0.770	0.825	1.725	0.500	2.125	-	0.331	1°	0.118	0.118				
KGDL 5.72-3JCTM		●								0.843					0.303							
KGDR 82.5-3JCTM	●			1.260	0.625	0.175	1.000		0.965	0.825	1.585	0.625	1.730	2.560	0.480			0.157				
KGDL 82.5-3JCTM		●													0.303							

Toolholder Dimensions (Metric Size)

Part Number	Stock R	Stock L	Unit	Cut-Off Dia. CUTDIA	H=HF	HBH	B	LF	LH	HBL	LN	WF	MHD	MHD2	MHD3	Angle GAMP	Edge Width CW MIN	Edge Width CW MAX	Spare Parts: Clamp Screw	Wrench	Plug 1	Plug 2
KGDR 1218JX-2JCTM	●		mm	24	12	8.5	18	120	19.5	21	44	11.2	54	-	8.4	1°	2.0	3.0	SB-40120TR	LTW-15S	GP-1	HS5X4LP
KGDL 1218JX-2JCTM		●								21.5					7.7							
KGDR 1625JX-2JCTM	●			32	16	4.5	25		24.5	21	40	15.2	44	65	12.2							
KGDL 1625JX-2JCTM		●													7.7							
KGDR 1218JX-2.4JCTM	●			24	12	8.5	18	120	19.5	21	44	11	54	-	8.4	1°	2.4	3.0				
KGDL 1218JX-2.4JCTM		●								21.5					7.7							
KGDR 1625JX-2.4JCTM	●			32	16	4.5	25		24.5	21	40	15	44	65	12.2							
KGDL 1625JX-2.4JCTM		●													7.7							
KGDR 1218JX-3JCTM	●			24	12	8.5	18	120	19.5	21	44	10.8	54	-	8.6	1°	3.0	3.0				
KGDL 1218JX-3JCTM		●								21.5					7.7							
KGDR 1625JX-3JCTM	●			32	16	4.5	25		24.5	21	40	14.8	44	65	12.2			4.0				
KGDL 1625JX-3JCTM		●													7.7							

Choose insert with width that falls within **MIN** and **MAX** parameters shown in table above. Insert table **G26~G27, H24~H25**

Coolant Connections and Pipe Parts **G32~G33**
Recommended Cutting Conditions **G31**

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Recommended Cutting Conditions

Workpiece	Chipbreaker	Recommended Insert Grade (Cutting Speed Vc: sfm)					f (ipr)				Notes
		MEGACOAT NANO	MEGACOAT		DLC Coating	Carbide	Edge Width CW (in)				
		PR1535	**PR1225**	**PR1215**	**PDL025**	**GW15**	0.079 (2.0mm)	0.079 - 0.157 (2.0 - 4.0mm)	0.098 / 0.118 (2.5mm / 3.0mm)	0.118 - 0.157 (3.0mm - 4.0mm)	
Carbon Steel	PF (RE = 0.0012)	☆ 230 – 490	★ 230 – 490	☆ 230 – 590	–	–	0.0008 – 0.0024	–	0.0008 – 0.0031	–	Wet
	PF (RE = 0.0059)						0.0012 – 0.0031		0.0016 – 0.0039		
	PQ						0.0012 – 0.0039		0.0016 – 0.0047		
	PG						0.0004 – 0.0016		0.0004 – 0.0020		
	PM	☆ 260 – 660	★ 260 – 660	☆ 330 – 660			–	0.0031 – 0.0071	–	–	
	PH						0.0039 – 0.0098	–		0.0059 – 0.0110	
Alloy Steel	PF (RE = 0.0012)	☆ 230 – 490	★ 230 – 490	☆ 230 – 590	–	–	0.0008 – 0.0024	–	0.0008 – 0.0031	–	
	PF (RE = 0.0059)						0.0012 – 0.0031		0.0016 – 0.0039		
	PQ						0.0012 – 0.0039		0.0016 – 0.0047		
	PG						0.0004 – 0.0016		0.0004 – 0.0020		
	PM	☆ 230 – 590	★ 230 – 590	☆ 260 – 590			–	0.0031 – 0.0071	–	–	
	PH						0.0039 – 0.0098	–		0.0059 – 0.0110	
Stainless Steel	PF (RE = 0.0012)	★ 200 – 390	☆ 200 – 390	☆ 200 – 490	–	–	0.0004 – 0.0016	–	0.0004 – 0.0020	–	
	PF (RE = 0.0059)						0.0012 – 0.0028		0.0016 – 0.0031		
	PQ						0.0008 – 0.0028		0.0008 – 0.0031		
	PG						0.0004 – 0.0012		0.0004 – 0.0016		
	PM	★ 200 – 490	☆ 200 – 490	☆ 200 – 490			–	0.0024 – 0.0047	–	–	
	PH						0.0020 – 0.0047	–		0.0031 – 0.0059	
Cast Iron	PF (RE = 0.0012)	–	–	★ 260 – 660	–	–	0.0008 – 0.0028	–	0.0012 – 0.0031	–	
	PF (RE = 0.0059)						0.0012 – 0.0035		0.0016 – 0.0039		
	PQ					☆ 160 – 330	0.0016 – 0.0039		0.0016 – 0.0047		
	PG						0.0004 – 0.0016		0.0004 – 0.0020		
	PM			★ 330 – 660		–	–	0.0031 – 0.0071	–	–	
	PH						0.0039 – 0.0098	–		0.0059 – 0.0110	
Aluminum Alloy	PQ	–	–	–	★ 660 – 1,640	☆ 660 – 1,480	–	–	–	–	
	PG						0.0004 – 0.0020		0.0004 – 0.0024		
Brass	PQ	–	–	–	–	★ 330 – 660	–	–	–	–	
	PG						0.0004 – 0.0028		0.0004 – 0.0031		

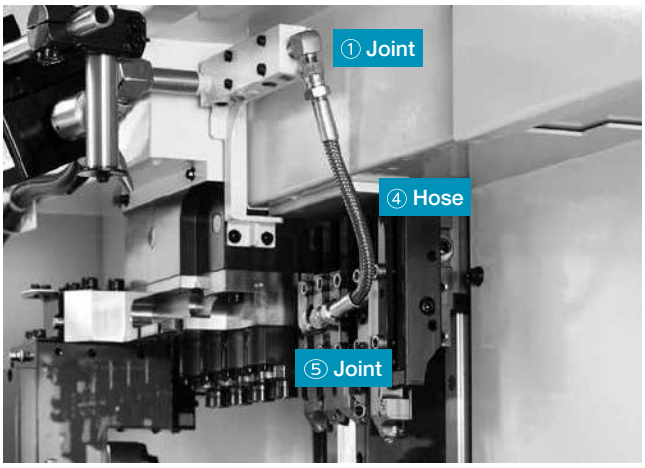
★ : 1st Recommendation ☆ : 2nd Recommendation

Coolant Pipe Parts

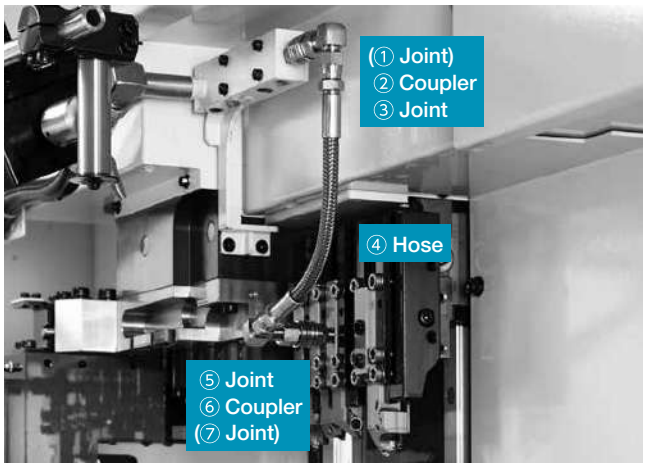
Pipe parts will be required separately if internal coolant is used.

Pump Pressure: up to 2,900 psi
Pump Pressure: up to 1,088 psi if couplers are used

Without Coupler (Pump Pressure: up to 2,900 psi)



With Coupler (Pump Pressure: up to 1,088 psi)



Combination Part Description Example

Part	Part Number
① Joint	J-ST-R1/8-G1/8
④ Hose	HS-G1/8-G1/8-500
⑤ Joint	J-ST-R1/8-G1/8

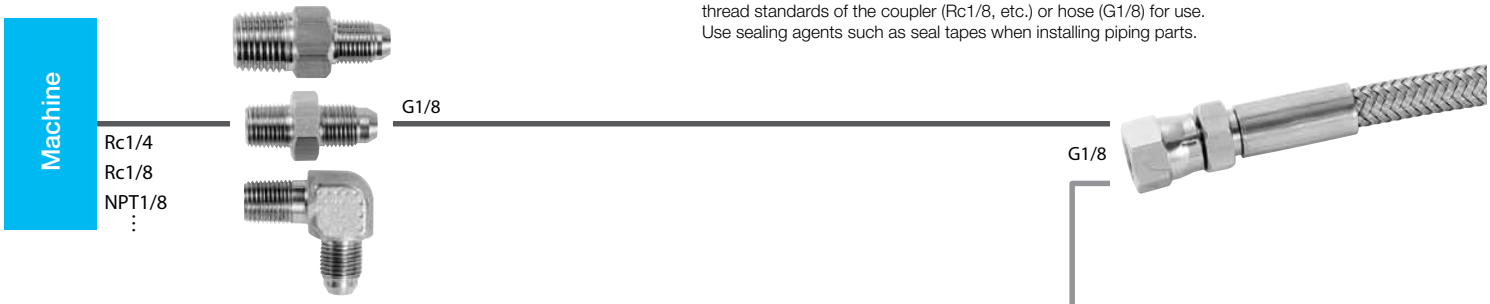
Convert the thread standards on the machine's side (Rc1/4, Rc1/8, NPT1/8, etc.) to the thread standard on the hose side (G1/8) for use.
Use sealing agents such as seal tapes when installing piping parts.

Combination Part Description Example

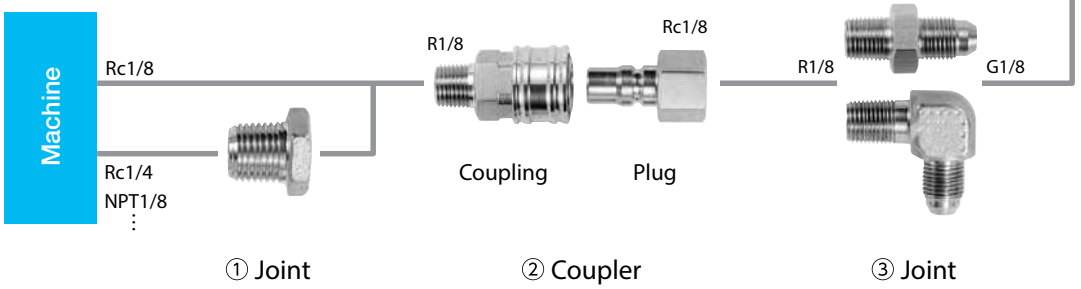
Part	Part Number
(① Joint)	-
② Coupler	CP-ST-R1/8, P-ST-RC1/8
③ Joint	J-AN-R1/8-G1/8
④ Hose	HS-G1/8-G1/8-200
⑤ Joint	J-AN-R1/8-G1/8
⑥ Coupler	P-ST-RC1/8, CP-ST-R1/8
(⑦ Joint)	-

Convert the thread standards on the machine's side (Rc1/4, Rc1/8, NPT1/8, etc.) to thread standards of the coupler (Rc1/8, etc.) or hose (G1/8) for use.
Use sealing agents such as seal tapes when installing piping parts.

Without Coupler (Pump Pressure: up to 2,900 psi)



With Coupler (Pump Pressure: up to 1,088 psi)



① Joint ② Coupler ③ Joint ④ Hose

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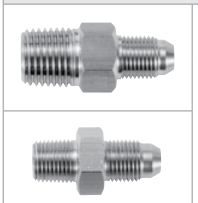
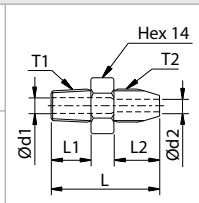
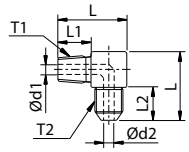
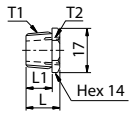
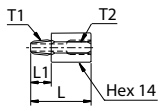
Piping Installation Parts Description

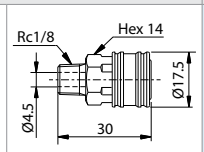
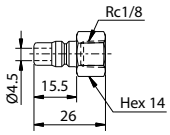
Joint (① ③ ⑤ ⑦)

Pressure Resistance: up to 2,900 psi
(Unit: mm)

Shape	Part Number	Stock	Ød1	Ød2	L	L1	L2	T1	T2
 	J-ST-R1/4-G1/8	●	5.5	4.0	34	13	13	R1/4	G1/8
	J-ST-NPT1/8-G1/8	●	3.5	3.5	29	10	13	NPT1/8	G1/8
	J-ST-R1/8-G1/8	●	4.0	4.0	29	10	13	R1/8	G1/8
 	J-AN-R1/8-G1/8	●	4.0	4.0	27	14	13	R1/8	G1/8
 	J-ST-R1/4-RC1/8	●	–	–	17	12	–	R1/4	Rc1/8
	J-ST-NPT1/8-RC1/8	●	3.5	–	30	10	–	NPT1/8	Rc1/8
	J-ST-R1/8-RC1/8	●	3.5	–	33	13	–	R1/8	Rc1/8

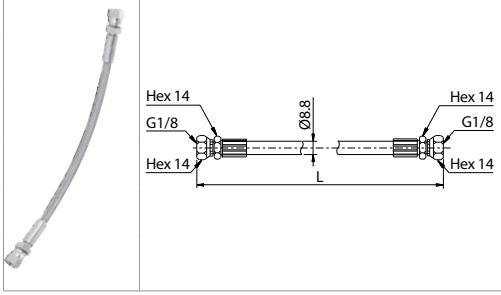
Coupler (② ⑥)

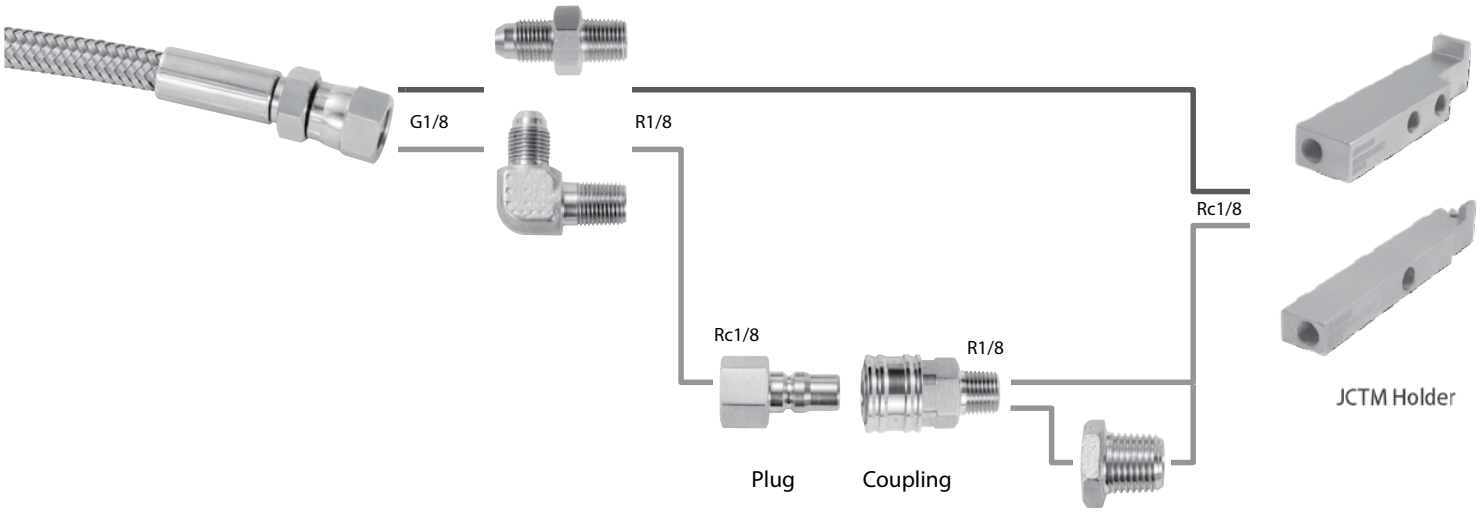
Pressure Resistance: up to 1,088 psi
(Unit: mm)

Shape	Part Number	Stock
 	CP-ST-R1/8	●
 	P-ST-RC1/8	●

Hose (④)

Pressure Resistance: up to 2,900 psi
(Unit: mm)

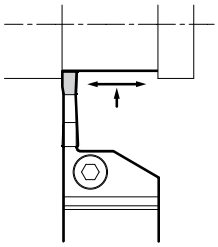
Shape	Part Number	Stock	L
	HS-G1/8-G1/8-200	●	200
	HS-G1/8-G1/8-300	●	300
	HS-G1/8-G1/8-400	●	400
	HS-G1/8-G1/8-500	●	500
	HS-G1/8-G1/8-600	●	600
	HS-G1/8-G1/8-800	●	800

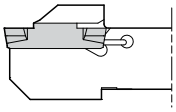


④ Hose ⑤ Joint ⑥ Coupler ⑦ Joint (Extension Joint)

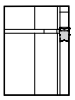
● : Standard Item △ : Phaseout Item (will be removed from next catalog)
Contact your local Kyocera sales engineer to upgrade old products to new technology

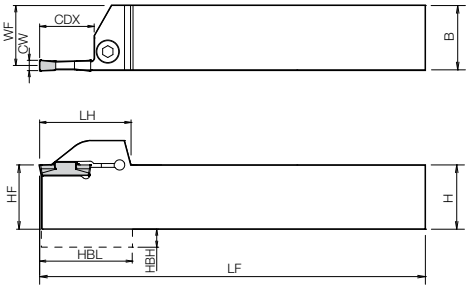
KGD (Integral-Style)





KGD□1216JX-3T06
KGD□1216JX-4T06
Shown in figure above





• Right-hand shown

Toolholder Dimensions (Inch Size)

Width (in)	Max. D.O.C. (in)	Part Number	Stock R	Stock L	H	HF	HBH	B	LF	LH	HBL	WF	CDX*	Insert Width CW (in) MIN	Insert Width CW (in) MAX	Spare Parts: Clamp Bolt	Spare Parts: Wrench
0.079" (2mm)	0.669" (17mm)	KGD□ 12-2T17	●	●	0.75	0.75	-	0.75	4.92	1.28	-	0.71	0.669" (17mm)	0.079" (2mm)	0.118" (3mm)	HH5X16	LW-4
		16-2T17	●	●	1.00	1.00	-	1.00	5.90	1.28	-	0.96				HH5X25	
0.118" (3mm)	0.393" (10mm)	KGD□ 12-3T10	●	●	0.75	0.75	-	0.75	4.92	1.20	-	0.70	0.393" (10mm)	0.118" (3mm)	0.157" (4mm)	HH5X16	LW-4
		16-3T10	●	●	1.00	1.00	-	1.00	5.90	1.20	-	0.95				HH5X25	
	0.787" (20mm)	KGD□ 12-3T20	●	●	0.75	0.75	-	0.75	4.92	1.35	-	0.70	0.787" (20mm)			HH5X16	LW-4
		16-3T20	●	●	1.00	1.00	-	1.00	5.90	1.39	-	0.95				HH5X25	
	1.000" (25.4mm)	KGD□ 12-3T254	●	●	0.75	0.75	-	0.75	4.92	1.52	-	0.70	1.000" (25.4mm)			HH5X16	LW-4
		16-3T254	●	●	1.00	1.00	-	1.00	5.90	1.52	-	0.95				HH5X25	
0.157" (4mm)	0.393" (10mm)	KGD□ 12-4T10	●	●	0.75	0.75	-	0.75	4.92	1.20	-	0.68	0.393" (10mm)	0.157" (4mm)	0.197" (5mm)	HH5X16	LW-4
		16-4T10	●	●	1.00	1.00	-	1.00	5.90	1.20	-	0.93				HH5X25	
	0.787 (20mm)	KGD□ 12-4T20	●	●	0.75	0.75	-	0.75	4.92	1.35	-	0.68	0.787 (20mm)			HH5X16	LW-4
		16-4T20	●	●	1.00	1.00	-	1.00	5.90	1.39	-	0.93				HH5X25	
	0.984 (25mm)	KGD□ 16-4T25	●	●	1.00	1.00	-	1.00	5.90	1.59	-	0.93	0.984 (25mm)			HH5X25	LW-4
0.197" (5mm)	0.393 (10mm)	KGD□ 12-5T10	●	●	0.75	0.75	-	0.75	4.92	1.20	-	0.66	0.393 (10mm)	0.197" (5mm)	0.236" (6mm)	HH5X16	LW-4
		16-5T10	●	●	1.00	1.00	-	1.00	5.90	1.20	-	0.91				HH5X25	
	0.669 (17mm)	KGD□ 12-5T17	●	●	0.75	0.75	-	0.75	4.92	1.47	-	0.66	0.669 (17mm)			HH5X16	LW-4
		16-5T17	●	●	1.00	1.00	-	1.00	5.90	1.47	-	0.91				HH5X25	
	0.984 (25mm)	KGD□ 16-5T25	●	●	1.00	1.00	-	1.00	5.90	1.59	-	0.91	0.984 (25mm)			HH5X25	LW-4
0.236" (6mm)	0.591 (15mm)	KGD□ 16-6T15	●	●	1.00	1.00	-	1.00	5.90	1.28	-	0.89	0.591 (15mm)	0.236" (6mm)	0.236" (6mm)	HH5X25	LW-4
	1.181 (30mm)	KGD□ 16-6T30	●	●	1.00	1.00	-	1.00	5.90	1.79	-	0.89	1.181 (30mm)				

Note 1) Dimension **CDX*** : Shows the maximum grooving depth. If the dimension **CDX** is 0.787" (20mm) or more, using a 2-edge insert, the maximum grooving depth is 0.709" (18mm).
2) Recommended tightening torque for clamp bolt is 6.5Nm for HH5X○○ and 8.0Nm for HH6X25.
3) Above toolholders can also be used for cut-off applications.

Choose insert with width that falls within **MIN** and **MAX** parameters shown in table above. Insert table **G26~G27**

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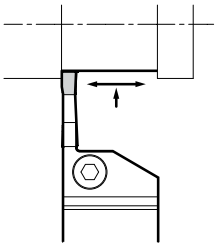
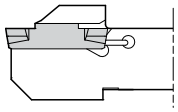
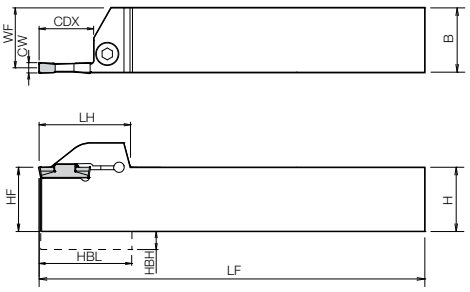
KGD (Integral-Style)





KGD□1216JX-3T06
KGD□1216JX-4T06
Shown in figure above





• Right-hand shown

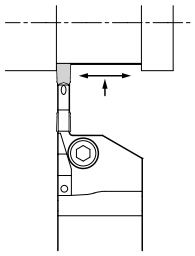
Toolholder Dimensions (Metric Size)

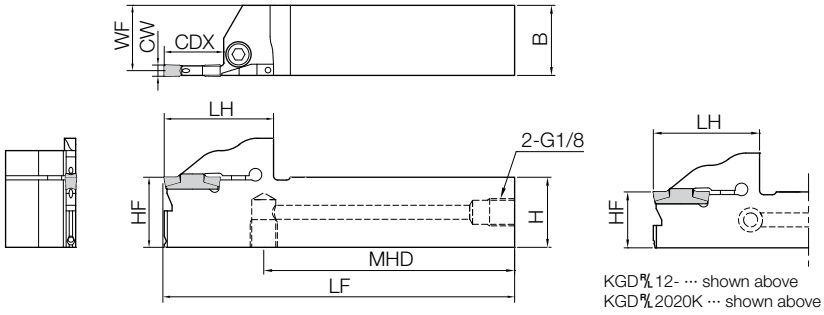
Width (mm)	Max. Grooving Depth (mm)	Part Number	Stock R	Stock L	H	HF	HBH	B	LF	LH	HBL	WF	CDX*	Insert Width CW (mm) MIN	Insert Width CW (mm) MAX	Spare Parts: Clamp Bolt/Screw	Spare Parts: Wrench
2.0	6	KGD□ 1616H-2T06	●	●	16	16	4.0	16	100	27.7	28.0	15.2	6	2.0	3.0	HH5X16	LW-4
		2020K-2T06	●	●	20	20	-	20	125	28.0	-	19.2				HH5X16	
		2525M-2T06	●	●	25	25	-	25	150	28.0	-	24.2				HH5X25	
	10	KGD□ 1616H-2T10	●	●	16	16	4.0	16	100	30.2	30.5	15.2	10			HH5X16	LW-4
		2020K-2T10	●	●	20	20	-	20	125	30.5	-	19.2				HH5X16	
		2525M-2T10	●	●	25	25	-	25	150	30.5	-	24.2				HH5X25	
	17	KGD□ 1616H-2T17	●	●	16	16	4.0	16	100	31.2	31.5	15.2	17			HH5X16	LW-4
		2012K-2T17	●	●	20	20	-	12	125	32.5	-	11.2				HH5X16	
		2020K-2T17	●	●	20	20	-	20	125	32.5	-	19.2				HH5X16	
		2525M-2T17	●	●	25	25	-	25	150	32.5	-	24.2				HH5X25	
2.4	17	KGD□ 2012K-2.4T17	●	●	20	20	-	12	125	32.5	-	11.0	17	2.4	3.0	HH5X16	LW-4
		2020K-2.4T17	●	●	20	20	-	20	125	32.5	-	19.0				HH5X16	
3.0	6	KGD□ 1216JX-3T06	●	●	12	12	2.0	16	120	19.5	19.0	14.8	6	3.0	4.0	SE-50125TR	LTW-20
		1616H-3T06	●	●	16	16	4.0	16	100	27.7	28.0	14.8				HH5X16	LW-4
		2020K-3T06	●	●	20	20	-	20	125	28.0	-	18.8				HH5X16	
		2525M-3T06	●	●	25	25	-	25	150	28.0	-	23.8				HH5X25	
	10	KGD□ 1616H-3T10	●	●	16	16	4.0	16	100	30.2	30.5	14.8	10			HH5X16	LW-4
		2020K-3T10	●	●	20	20	-	20	125	30.5	-	18.8				HH5X16	
		2525M-3T10	●	●	25	25	-	25	150	30.5	-	23.8				HH5X25	
	20	KGD□ 1616H-3T20	●	●	16	16	4.0	16	100	34.2	34.5	14.8	20			HH5X16	LW-4
		2012K-3T20	●	●	20	20	-	12	125	34.5	-	10.8				HH5X16	
		2020K-3T20	●	●	20	20	-	20	125	34.5	-	18.8				HH5X16	
		2525M-3T20	●	●	25	25	-	25	150	35.5		23.8				HH5X25	
4.0	6	KGD□ 1216JX-4T06	●	●	12	12	2.0	16	120	19.5	19.0	14.3	6	4.0	5.0	SE-50125TR	LTW-20
	10	KGD□ 2020K-4T10	●	●	20	20	-	20	125	30.5	-	18.3	10			HH5X16	LW-4
		2525M-4T10	●	●	25	25	-	25	150	30.5	-	23.3				HH5X25	
	20	KGD□ 2020K-4T20	●	●	20	20	-	20	125	34.5	-	18.3	20			HH5X16	
		2525M-4T20	●	●	25	25	-	25	150	35.5	-	23.3				HH5X25	
	25	KGD□ 2525M-4T25	●	●	25	25	-	25	150	40.5	-	23.3	25			HH5X25	
5.0	10	KGD□ 2020K-5T10	●	●	20	20	-	20	125	30.5	-	17.8	10	5.0	6.0	HH5X16	LW-4
		2525M-5T10	●	●	25	25	-	25	150	30.5	-	22.8				HH5X25	
	17	KGD□ 2020K-5T17	●	●	20	20	-	20	125	37.5	-	17.8	17			HH5X25	
		2525M-5T17	●	●	25	25	-	25	150	37.5	-	22.8				HH5X25	
	25	KGD□ 2525M-5T25	●	●	25	25	-	25	150	40.5	-	22.8	25			HH5X25	
6.0	15	KGD□ 2525M-6T15	●	●	25	25	-	25	150	32.5	-	22.4	15	6.0	6.0	HH5X25	LW-4
	30	KGD□ 2525M-6T30	●	●	25	25	-	25	150	45.5	-	22.4	30			HH5X25	
8.0	25	KGD□ 2525M-8T25	●	●	25	25	7.0	25	150	43.3	44.2	22.0	25	8.0	8.0	HH6X25	LW-5
		3232P-8T25	●	●	32	32	-	32	170	43.3	-	29.0				HH6X25	

Note 1) Dimension **CDX*** : Shows the maximum grooving depth. If the dimension **CDX** is 0.787" (20mm) or more, using a 2-edge insert, the maximum grooving depth is 0.709" (18mm).
2) Recommended tightening torque for clamp bolt/screw is 6.5Nm for HH5X○○, 8.0Nm for HH6X25 and 2.5Nm for SE-50125TR.
3) Above toolholders can also be used for cut-off applications.

Choose insert with width that falls within **MIN** and **MAX** parameters shown in table above. Insert table **G26~G27**

KGD-JCT (Integral Style / Jet Coolant-Through)





• Right-hand shown

Toolholder Dimensions (Inch Size)

Pressure Resistance: up to 2,175 psi

Width (mm)	Max. Grooving Depth (mm)	Part Number	Stock R	Stock L	H	HF	B	LF	LH	WF	CDX	MHD	Insert Width CW (in) MIN	Insert Width CW (in) MAX	Spare Parts: Clamp Bolt	Spare Parts: Wrench	Spare Parts: Plug
0.118 (3mm)	0.787 (20mm)	KGD□ 12-3T20JCT	●	●	0.750	0.750	0.750	5.000	1.496	0.702	0.787 (20mm)	3.590	0.118 (3mm)	0.157 (4mm)	HH5X16	LW-4	HSG1/8X8.0
		16-3T20JCT	●	●	1.000	1.000	1.000	5.000	1.535	0.952		3.551			HH5X25		
0.157 (4mm)	0.787 (20mm)	KGD□ 12-4T20JCT	●		0.750	0.750	0.750	5.000	1.496	0.683	0.787 (20mm)	3.590	0.157 (4mm)	0.197 (5mm)	HH5X16		
		16-4T20JCT	●	●	1.000	1.000	1.000	5.000	1.535	0.933		3.551			HH5X25		
	1.000 (25.4mm)	KGD□ 16-4T25.4JCT	●	●	1.000	1.000	1.000	5.000	1.732	0.933	1.000 (25.4mm)	3.354			HH5X25		

Toolholder Dimensions (Metric Size)

Pressure Resistance: up to 2,175 psi

Width (mm)	Max. Grooving Depth (mm)	Part Number	Stock R	Stock L	H	HF	B	LF	LH	WF	CDX	MHD	Insert Width CW (mm) MIN	Insert Width CW (mm) MAX	Spare Parts: Clamp Bolt	Spare Parts: Wrench	Spare Parts: Plug
3	6	KGD□ 2020K-3T06JCT	●	●	20	20	20	125	31.5	18.8	6	96.2	3.0	4.0	HH5X16	LW-4	HSG1/8X8.0
		2525K-3T06JCT	●	●	25	25	25		31.5	23.8		96.5			HH5X25		
	10	2020K-3T10JCT	●	●	20	20	20		34.0	18.8	10	94.2			HH5X16		
		2525K-3T10JCT	●	●	25	25	25		34.0	23.8		94.5			HH5X25		
	20	2020K-3T20JCT	●	●	20	20	20		38.0	18.8	20	90.2			HH5X16		
		2525K-3T20JCT	●	●	25	25	25		39.0	23.8		89.5			HH5X25		
4	10	KGD□ 2020K-4T10JCT	●	●	20	20	20	125	34.0	18.8	10	94.2	4.0	5.0	HH5X16	LW-4	HSG1/8X8.0
		2525K-4T10JCT	●	●	25	25	25		34.0	23.8		94.5			HH5X25		
	20	KGD□ 2020K-4T20JCT	●	●	20	20	20		38.0	18.8	20	90.2			HH5X16		
		2525K-4T20JCT	●	●	25	25	25		39.0	23.8		89.5			HH5X25		
	25	KGD□ 2525K-4T25JCT	●	●	25	25	25		44.0	23.8	25	84.5					

Choose insert with width that falls within **MIN** and **MAX** parameters shown in table above. Insert table ➡ G26~G27

Coolant Connections and Pipe Parts ➡ G37

(Customer Service) 800.823.7284 - Option 1
(Technical Support) 800.823.7284 - Option 2
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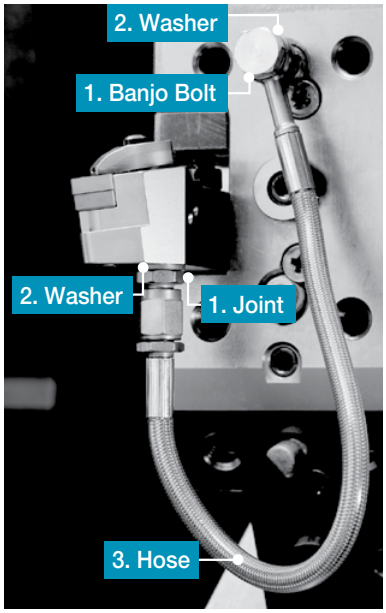
● : Standard Item △ : Phaseout Item (will be removed from next catalog)
Contact your local Kyocera sales engineer to upgrade old products to new technology

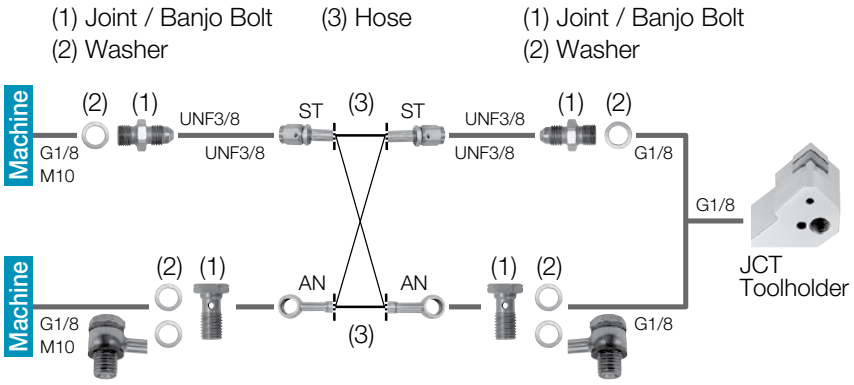
Easy Coolant Connections

Easy Connection with High Pressure Hose and Joint



- Even without a high pressure pump, internal coolant can be used at a normal pressure
- Banjo bolt available for angled hose connection and can be used in a variety of machines

Piping Installation Guide



Piping Parts

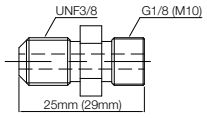
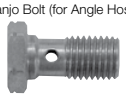
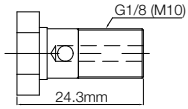
Optional Piping Parts Available

Choose from parts below to match your machine specifications

1. Joint / Banjo bolt × 2
2. Washer × 2-4
3. Hose × 1

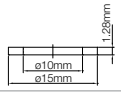
1. Joint / Banjo Bolt

Pressure Resistance: up to 4,350 psi

Shape		Part Number	Stock	Thread Standard
		**J-G1/8-UNF3/8**	●	G1/8
		J-M10X1.5-UNF3/8	●	M10X1.5
Banjo Bolt (for Angle Hose) 		**BB-G1/8**	●	G1/8
		BB-M10X1.5	●	M10X1.5

2. Washer

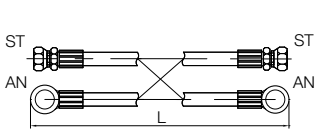
Pressure Resistance: up to 4,350 psi

Shape		Part Number	Stock
		**WS-10**	●

* Use 2 washers for a banjo bolt

3. Hose

Pressure Resistance: up to 4,350 psi

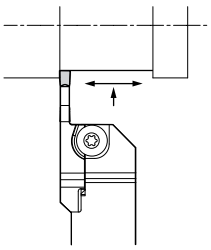
Shape		Part Number	Stock	Thread Standard		Dimensions (mm) L
		**HS-ST-ST-200**	●	UNF3/8	UNF3/8	200
		HS-ST-ST-250	●			250
		HS-ST-AN-200	●	UNF3/8	- (Banjo Bolt)	200
		HS-ST-AN-250	●			250
		HS-AN-AN-200	●	- (Banjo Bolt)	- (Banjo Bolt)	200
		HS-AN-AN-250	●			250

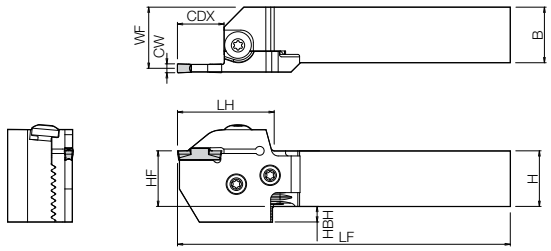
Precautions

1. Make sure machine door is completely closed before use of these parts.
2. Use appropriate seal for the male thread of the piping parts and make sure the connection is secure. Use plugs to seal off unused coolant holes.
3. Connect and fasten the coolant hose firmly.
4. The use of copper washers may cause leakage but will have no effect on the performance.
5. Commercial piping parts can be used if the thread standards are the same. Check the pressure resistance before use.
6. Regularly changing the coolant filter is recommended.

● : Standard Item △ : Phaseout Item (will be removed from next catalog)
Contact your local Kyocera sales engineer to upgrade old products to new technology

KGD-S (0° SwitchBlade Type)





• Right-hand shown (Right-hand Blade and Right-hand Toolholder)

Toolholder + Blade Dimensions (Inch Size)

(Choose **Right-hand** Blade for **Right-hand** Toolholder and **Left-hand** Blade for **Left-hand** Toolholder)

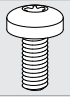
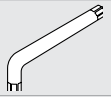
Shank Angle	Width (in)	Max. Grooving Depth (in)	Shank Size (in)	Unit Part Number (Toolholder + Blade)	Stock R	Stock L	Toolholder Part Number G41	Blade Part Number G41	Dimensions (in) H	HF	HBH	B	LF	LH	WF	CDX*	Insert Width CW (in) MIN.	MAX.
0°	0.079 (2mm)	0.669 (17mm)	□0.75	KGD□ 12X-2T17S	●	●	KGD□12-C	KGD□-2T17-C	0.75	0.75	0.472	0.75	4.80	1.57	0.88	0.669 (17mm)	0.079 (2mm)	0.118 (3mm)
			□1.00	16X-2T17S	●	●	KGD□16-C		1.00	1.00	0.276	1.00	5.79	1.57	1.13			
	0.118 (3mm)	0.394 (10mm)	□0.75	KGD□ 12X-3T10S	●	●	KGD□12-C	KGD□-3T10-C	0.75	0.75	0.472	0.75	4.53	1.30	0.87	0.394 (10mm)	0.118 (3mm)	0.157 (4mm)
			□1.00	16X-3T10S	●	●	KGD□16-C		1.00	1.00	0.276	1.00	5.51	1.30	1.12			
		0.787 (20mm)	□0.75	KGD□ 12X-3T20S	●	●	KGD□12-C	KGD□-3T20-C	0.75	0.75	0.472	0.75	4.92	1.69	0.87	0.787 (20mm)		
			□1.00	16X-3T20S	●	●	KGD□16-C		1.00	1.00	0.276	1.00	5.91	1.69	1.12			
	0.157 (4mm)	0.394 (10mm)	□0.75	KGD□ 12X-4T10S	●	●	KGD□12-C	KGD□-4T10-C	0.75	0.75	0.472	0.75	4.53	1.30	0.85	0.394 (10mm)	0.157 (4mm)	0.197 (5mm)
			□1.00	16X-4T10S	●	●	KGD□16-C		1.00	1.00	0.276	1.00	5.51	1.30	1.10			
		0.787 (20mm)	□0.75	KGD□ 12X-4T20S	●	●	KGD□12-C	KGD□-4T20-C	0.75	0.75	0.472	0.75	4.92	1.69	0.85	0.787 (20mm)		
			□1.00	16X-4T20S	●	●	KGD□16-C		1.00	1.00	0.276	1.00	5.91	1.69	1.10			
		0.984 (25mm)	□0.75	KGD□ 12X-4T25S	●	●	KGD□12-C	KGD□-4T25-C	0.75	0.75	0.472	0.75	5.12	1.89	0.85	0.984 (25mm)		
			□1.00	16X-4T25S	●	●	KGD□16-C		1.00	1.00	0.276	1.00	6.10	1.89	1.10			
	0.197 (5mm)	0.394 (10mm)	□0.75	KGD□ 12X-5T10S	●	●	KGD□12-C	KGD□-5T10-C	0.75	0.75	0.472	0.75	4.53	1.30	0.83	0.394 (10mm)	0.197 (5mm)	0.236 (6mm)
			□1.00	16X-5T10S	●	●	KGD□16-C		1.00	1.00	0.276	1.00	5.51	1.30	1.08			
		0.984 (25mm)	□0.75	KGD□ 12X-5T25S	●	●	KGD□12-C	KGD□-5T25-C	0.75	0.75	0.472	0.75	5.12	1.89	0.83	0.984 (25mm)		
			□1.00	16X-5T25S	●	●	KGD□16-C		1.00	1.00	0.276	1.00	6.10	1.89	1.08			

Note 1) When using the toolholder in normal mounting position, the lower jaw of the toolholder may interfere with the tool presetter.
2) The toolholder and blade part numbers are printed on the toolholder body. (Unit part numbers are not printed)
KGD-S: Right-hand blades for right-hand toolholders, and left-hand blades for left-hand toolholders.
3) If the unit part number is not listed (No Unit Part Number), please purchase toolholder and blade separately.
4) Dimension **CDX*** : Shows the maximum grooving depth. If the dimension **CDX** is 0.787" (20mm) or more, using a 2-edge insert, the maximum grooving depth is 0.709" (18mm).

Choose insert with width that falls within **MIN** and **MAX** parameters shown in table above. Insert table G26~G27

Spare Parts (Common with SwitchBlade Types)

* The parts are included in the toolholder and unit.

Unit Part Number	Spare Parts: Clamp Bolt (for Insert Clamp)	Spare Parts: Clamp Screw (for Blade)	Spare Parts: Wrench
			
KGD□·····S	BH6X10TR	SB-60120TR	LTW-25

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● : Standard Item △ : Phaseout Item (will be removed from next catalog)
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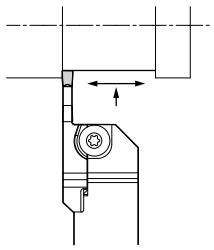
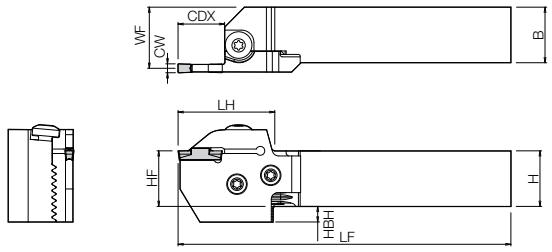
KGD-S (0° SwitchBlade Type)





• Right-hand shown (Right-hand Blade and Right-hand Toolholder)

Toolholder + Blade Dimensions (Metric Size)

(Choose **Right-hand** Blade for **Right-hand** Toolholder and **Left-hand** Blade for **Left-hand** Toolholder)

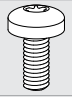
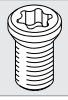
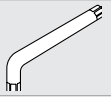
Shank Angle	Width (mm)	Max. Grooving Depth (mm)	Shank Size (mm)	Unit Part Number (Toolholder + Blade)	Stock R	Stock L	Toolholder Part Number G41	Blade Part Number G41	H	HF	HBH	B	LF	LH	WF	CDX*	Insert Width CW (mm) MIN.	Insert Width CW (mm) MAX.
0°	2	17	□20	KGD□ 2020X-2T17S	●		KGD□2020-C	KGD□-2T17-C	20	20	12	20	122	40	23.4	17	2.0	3.0
			□25	2525X-2T17S	●	●	KGD□2525-C		25	25	7	25	147	40	28.4			
			□32	No Unit Part Number ➡			KGD□3232-C		32	32	-	32	167	40	35.4			
	3	10	□20	KGD□ 2020X-3T10S	●		KGD□2020-C	KGD□-3T10-C	20	20	12	20	115	33	23.0	10	3.0	4.0
			□25	2525X-3T10S	●		KGD□2525-C		25	25	7	25	140	33	28.0			
			□32	No Unit Part Number ➡			KGD□3232-C		32	32	-	32	160	33	35.0			
		20	□20	KGD□ 2020X-3T20S	●	●	KGD□2020-C	KGD□-3T20-C	20	20	12	20	125	43	23.0	20		
			□25	2525X-3T20S	●	●	KGD□2525-C		25	25	7	25	150	43	28.0			
			□32	3232X-3T20S	●		KGD□3232-C		32	32	-	32	170	43	35.0			
	4	10	□20	KGD□ 2020X-4T10S	●		KGD□2020-C	KGD□-4T10-C	20	20	12	20	115	33	22.5	10	4.0	5.0
			□25	2525X-4T10S	●		KGD□2525-C		25	25	7	25	140	33	27.5			
		20	□20	KGD□ 2020X-4T20S	●		KGD□2020-C	KGD□-4T20-C	20	20	12	20	125	43	22.5	20		
			□25	2525X-4T20S	●	●	KGD□2525-C		25	25	7	25	150	43	27.5			
			□32	3232X-4T20S	●		KGD□3232-C		32	32	-	32	170	43	34.5			
		25	□20	KGD□ 2020X-4T25S	●	●	KGD□2020-C	KGD□-4T25-C	20	20	12	20	130	48	22.5	25		
			□25	2525X-4T25S	●	●	KGD□2525-C		25	25	7	25	155	48	27.5			
			□32	3232X-4T25S	●		KGD□3232-C		32	32	-	32	175	48	34.5			
	5	10	□20	KGD□ 2020X-5T10S	●	●	KGD□2020-C	KGD□-5T10-C	20	20	12	20	115	33	22.0	10	5.0	6.0
			□25	2525X-5T10S	●		KGD□2525-C		25	25	7	25	140	33	27.0			
		25	□20	No Unit Part Number ➡			KGD□2020-C	KGD□-5T25-C	20	20	12	20	130	48	22.0	25		
			□25	KGD□ 2525X-5T25S	●	●	KGD□2525-C		25	25	7	25	155	48	27.0			
			□32	3232X-5T25S	●		KGD□3232-C		32	32	-	32	175	48	34.0			

Note 1) When using the toolholder in normal mounting position, the lower jaw of the toolholder may interfere with the tool presetter.
2) The toolholder and blade part numbers are printed on the toolholder body. (Unit part numbers are not printed)
KGD-S: Right-hand blades for right-hand toolholders, and left-hand blades for left-hand toolholders.
3) If the unit part number is not listed (No Unit Part Number), please purchase toolholder and blade separately.
4) Dimension **CDX*** : Shows the maximum grooving depth. If the dimension **CDX** is 0.787" (20mm) or more, using a 2-edge insert, the maximum grooving depth is 0.709" (18mm).

Choose insert with width that falls within **MIN** and **MAX** parameters shown in table above. Insert table ➡ G26~G27

Spare Parts (Common with SwitchBlade Types)

* The parts are included in the toolholder and unit.

Unit Part Number	Spare Parts: Clamp Bolt (for Insert Clamp)	Spare Parts: Clamp Screw (for Blade)	Spare Parts: Wrench
			
KGD□·····S	BH6X10TR	SB-60120TR	LTW-25

● : Standard Item △ : Phaseout Item (will be removed from next catalog)
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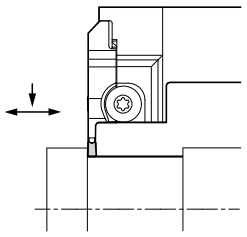
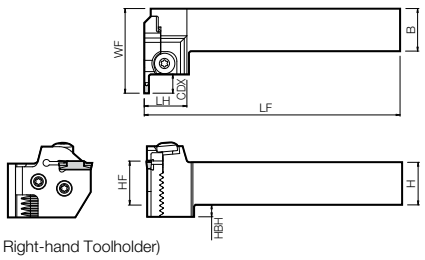
KGDS-S (90° SwitchBlade Type)





• Right-hand shown (Left-hand Blade and Right-hand Toolholder)

Toolholder + Blade Dimensions (Inch Size)

(Choose **Left-hand** Blade for **Right-hand** Toolholder and **Right-hand** Blade for **Left-hand** Toolholder)

Shank Angle	Width (mm)	Max. Grooving Depth (mm)	Shank Size (mm)	Unit Part Number (Toolholder + Blade)	Toolholder Part Number G41	Blade Part Number G41	Dimensions (in) H	HF	HBH	B	LF	LH	WF	CDX*	Insert Width CW (in) MIN.	MAX.
90°	0.079 (2mm)	0.669 (17mm)	□0.75	No Unit Part Number ➡	KGDS□12-C	KGD□-2T17-C	0.75	0.75	0.472	0.75	4.92	1.09	2.19	0.669 (17mm)	0.079 (2mm)	0.118 (3mm)
			□1.00		KGDS□16-C		1.00	1.00	0.276	1.00	5.91	1.09	2.25			
	0.118 (3mm)	0.394 (10mm)	□0.75		KGDS□12-C	KGD□-3T10-C	0.75	0.75	0.472	0.75	4.92	1.09	1.92	0.394 (10mm)	0.118 (3mm)	0.157 (4mm)
			□1.00		KGDS□16-C		1.00	1.00	0.276	1.00	5.91	1.09	1.97			
		0.787 (20mm)	□0.75		KGDS□12-C	KGD□-3T20-C	0.75	0.75	0.472	0.75	4.92	1.09	2.31	0.787 (20mm)		
			□1.00		KGDS□16-C		1.00	1.00	0.276	1.00	5.91	1.09	2.37			
	0.157 (4mm)	0.394 (10mm)	□0.75		KGDS□12-C	KGD□-4T10-C	0.75	0.75	0.472	0.75	4.92	1.09	1.92	0.394 (10mm)	0.157 (4mm)	0.197 (5mm)
			□1.00		KGDS□16-C		1.00	1.00	0.276	1.00	5.91	1.09	1.97			
		0.787 (20mm)	□0.75		KGDS□12-C	KGD□-4T20-C	0.75	0.75	0.472	0.75	4.92	1.09	2.31	0.787 (20mm)		
			□1.00		KGDS□16-C		1.00	1.00	0.276	1.00	5.91	1.09	2.37			
		0.984 (25mm)	□0.75		KGDS□12-C	KGD□-4T25-C	0.75	0.75	0.472	0.75	4.92	1.09	2.51	0.984 (25mm)		
			□1.00		KGDS□16-C		1.00	1.00	0.276	1.00	5.91	1.09	2.56			
	0.197 (5mm)	0.394 (10mm)	□0.75		KGDS□12-C	KGD□-5T10-C	0.75	0.75	0.472	0.75	4.92	1.09	1.92	0.394 (10mm)	0.197 (5mm)	0.236 (6mm)
			□1.00		KGDS□16-C		1.00	1.00	0.276	1.00	5.91	1.09	1.97			
		0.984 (25mm)	□0.75		KGDS□12-C	KGD□-5T25-C	0.75	0.75	0.472	0.75	4.92	1.09	2.51	0.984 (25mm)		
			□1.00		KGDS□16-C		1.00	1.00	0.276	1.00	5.91	1.09	2.56			

Toolholder + Blade Dimensions (Metric Size)

(Choose **Left-hand** Blade for **Right-hand** Toolholder and **Right-hand** Blade for **Left-hand** Toolholder)

Shank Angle	Width (mm)	Max. Grooving Depth (mm)	Shank Size (mm)	Unit Part Number (Toolholder + Blade)	Stock R	Stock L	Toolholder Part Number G41	Blade Part Number G41	Dimensions (mm) H	HF	HBH	B	LF	LH	WF	CDX*	Insert Width CW (mm) MIN.	MAX.
90°	2	17	□20	No Unit Part Number ➡			KGDS□2020-C	KGD□-2T17-C	20	20	12	20	125	27.7	56.7	17	2.0	3.0
			□25				KGDS□2525-C		25	25	7	25	150	27.7	56.7			
	3	10	□20	KGDS□ 2020X-3T10S	●	●	KGDS□2020-C	KGD□-3T10-C	20	20	12	20	125	27.7	49.7	10	3.0	4.0
			□25	2525X-3T10S	●	●	KGDS□2525-C		25	25	7	25	150	27.7	49.7			
		20	□20	No Unit Part Number ➡			KGDS□2020-C	KGD□-3T20-C	20	20	12	20	125	27.7	59.7	20		
			□25				KGDS□2525-C		25	25	7	25	150	27.7	59.7			
	4	10	□20				KGDS□2020-C	KGD□-4T10-C	20	20	12	20	125	27.7	49.7	10	4.0	5.0
			□25				KGDS□2525-C		25	25	7	25	150	27.7	49.7			
		20	□20				KGDS□2020-C	KGD□-4T20-C	20	20	12	20	125	27.7	59.7	20		
			□25				KGDS□2525-C		25	25	7	25	150	27.7	59.7			
		25	□20				KGDS□2020-C	KGD□-4T25-C	20	20	12	20	125	27.7	64.7	25		
			□25				KGDS□2525-C		25	25	7	25	150	27.7	64.7			
	5	10	□20				KGDS□2020-C	KGD□-5T10-C	20	20	12	20	125	27.7	49.7	10	5.0	6.0
			□25				KGDS□2525-C		25	25	7	25	150	27.7	49.7			
		25	□20				KGDS□2020-C	KGD□-5T25-C	20	20	12	20	125	27.7	64.7	25		
			□25				KGDS□2525-C		25	25	7	25	150	27.7	64.7			

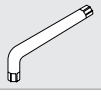
Choose insert with width that falls within **MIN** and **MAX** parameters shown in table above. Insert table ➡ **G26~G27**

Note

1) When using the toolholder in normal mounting position, the lower jaw of the toolholder may interfere with the tool presetter.
2) The toolholder and blade part numbers are printed on the toolholder body. (Unit part numbers are not printed)
KGDS-S: Left-hand blades for right-hand toolholders, and right-hand blades for left-hand toolholders.
3) If the unit part number is not listed (No Unit Part Number), please purchase toolholder and blade separately.
4) Dimension **CDX*** : Shows the maximum grooving depth. If the dimension **CDX** is 0.787" (20mm) or more, using a 2-edge insert, the maximum grooving depth is 0.709" (18mm).

Spare Parts (Common with SwitchBlade Types)

* The parts are included in the toolholder and unit.

Unit Part Number	Spare Parts: Clamp Bolt (for Insert Clamp)	Clamp Bolt (for Blade)	Wrench
			
KGDS□·····S	BH6X10TR	SB-60120TR	LTW-25

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● : Standard Item △ : Phaseout Item (will be removed from next catalog)
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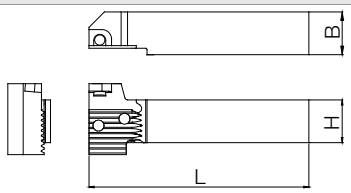
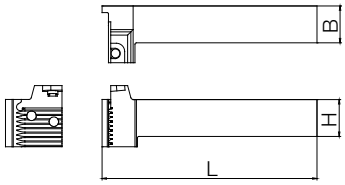
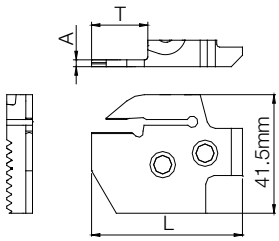
Toolholder Dimensions

KGD-S (0° SwitchBlade Type) Right-hand shown	Toolholder Part Number	Stock R	Stock L	Unit	Dimensions L	Dimensions B	Dimensions H
	KGDR/L 12-C	●	●	inch	4.09	0.75	0.75
	16-C	●	●		5.08	1.00	1.00
	KGDR/L 2020-C	●	●	mm	104	20	20
	2525-C	●	●		129	25	25
	3232-C	●	●		149	32	32

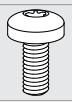
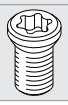
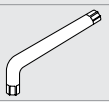
KGDS-S (90° SwitchBlade Type) Right-hand shown	Toolholder Part Number	Stock R	Stock L	Unit	Dimensions L	Dimensions B	Dimensions H
	KGDSR/L 12-C	●	●	inch	4.80	0.75	0.75
	16-C	●	●		5.79	1.00	1.00
	KGDSR/L 2020-C	●	●	mm	122	20	20
	2525-C	●	●		147	25	25

Blade Dimensions

Blade Right-hand shown	Blade Part Number	Stock R	Stock L	Unit	Dimensions L	Dimensions T	Dimensions A
	KGDR/L -2T17-C	●	●	mm	51.2	17.2	1.7
	-3T10-C	●	●		44.2	10.2	2.4
	-3T20-C	●	●		53.2	20.2	2.4
	-4T10-C	●	●		44.2	10.2	3.4
	-4T20-C	●	●		54.2	20.2	3.4
	-4T25-C	●	●		59.2	25.2	3.4
	-5T10-C	●	●		44.2	10.2	4.4
	-5T25-C	●	●		59.2	25.2	4.4

Spare Parts (Common with SwitchBlade Types)

* The parts are included in the toolholder and unit.

Unit Part Number	Spare Parts: Clamp Bolt (for Insert Clamp)	Spare Parts: Clamp Screw (for Blade)	Spare Parts: Wrench
			
KGDR/L·····S KGDSR/L·····S	BH6X10TR	SB-60120TR	LTW-25

Setting the Insert

1. Completely eliminate chips from the insert mounting part. (see **Fig.1**)
2. Put the insert into the toolholder and push until it contacts the holder's surface for fixing the insert's back end. (see **Fig.1**, **Fig.2**)
3. Keeping the insert pushed against the toolholder's locating surface, tighten the insert clamp bolt at an appropriate torque.
4. Make sure there is no gap between the insert and the toolholder's locating surface and that the insert is set straight. (see **Fig.2**, **Fig.3**)

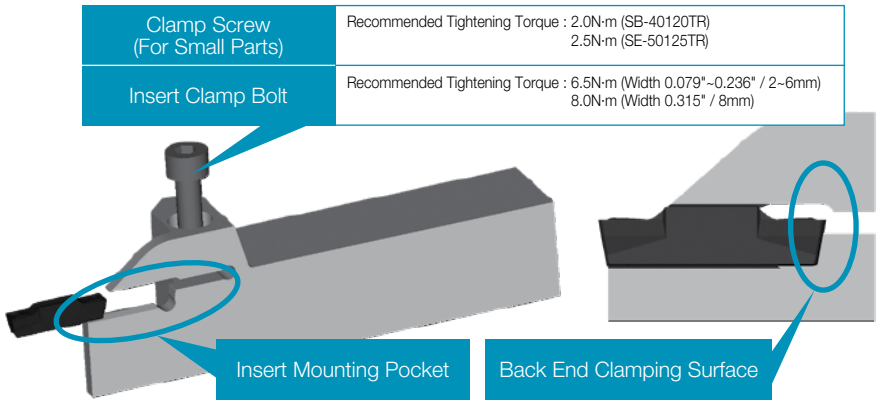


Fig.1 Fig.2

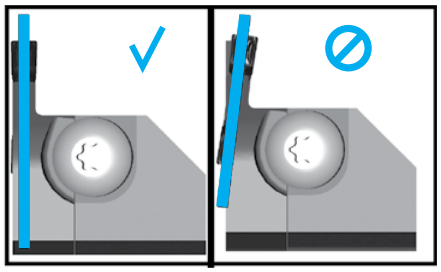


Fig.3

Setting the Blade (SwitchBlade Type toolholder)

1. Use compressed air or other measures to remove chips and dust from the serrated surface. (See **Fig.1**)
2. Mate and fit the serrations of the blade and toolholder. (See **Fig.2**)
3. Tighten the blade fixing screws at an appropriate torque. You can tighten them in any order. (See **Fig.2**) (Recommended tightening torque : 8Nm)
4. Mount the insert after setting the blade.

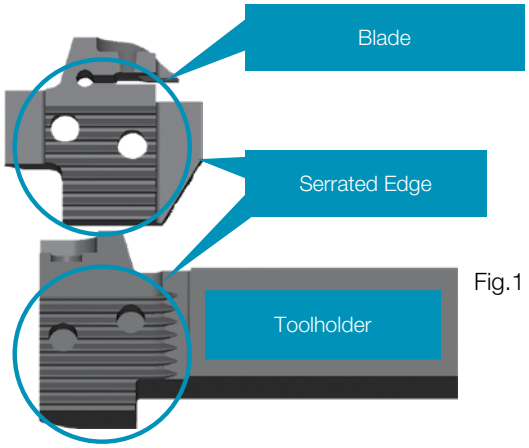


Fig.1

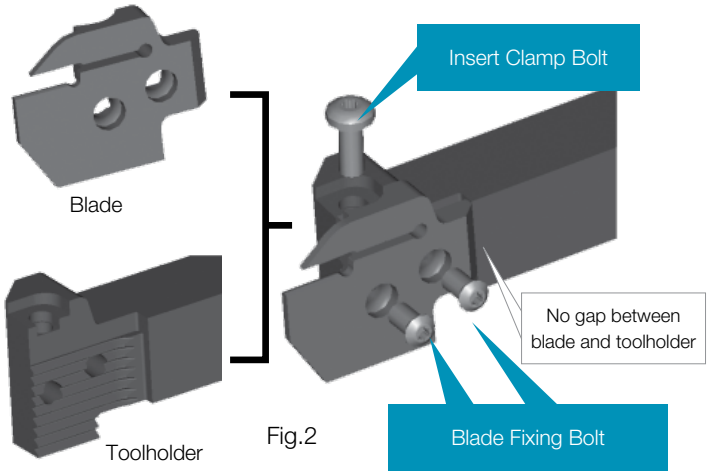
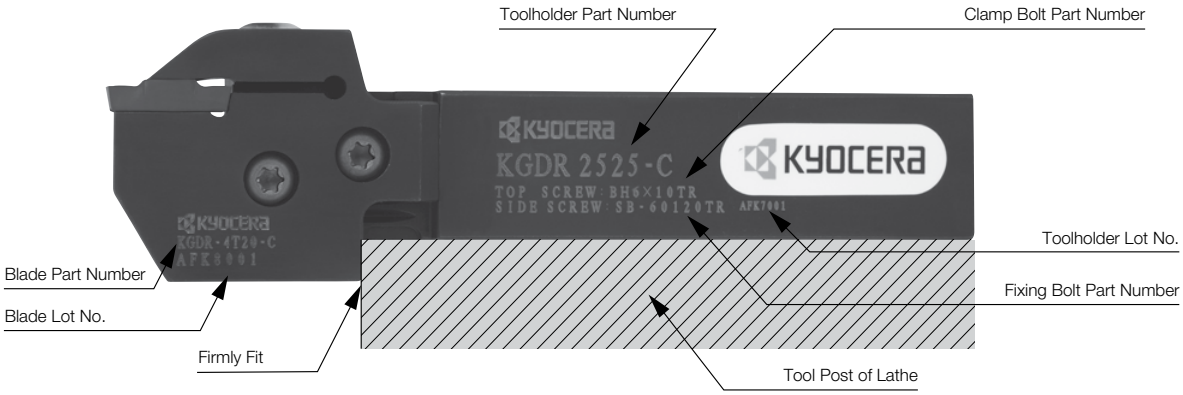


Fig.2

SwitchBlade Type Toolholder Identification System and Their Setting to Lathe

● Firmly fit the lower jaw to the tool post of the lathe.



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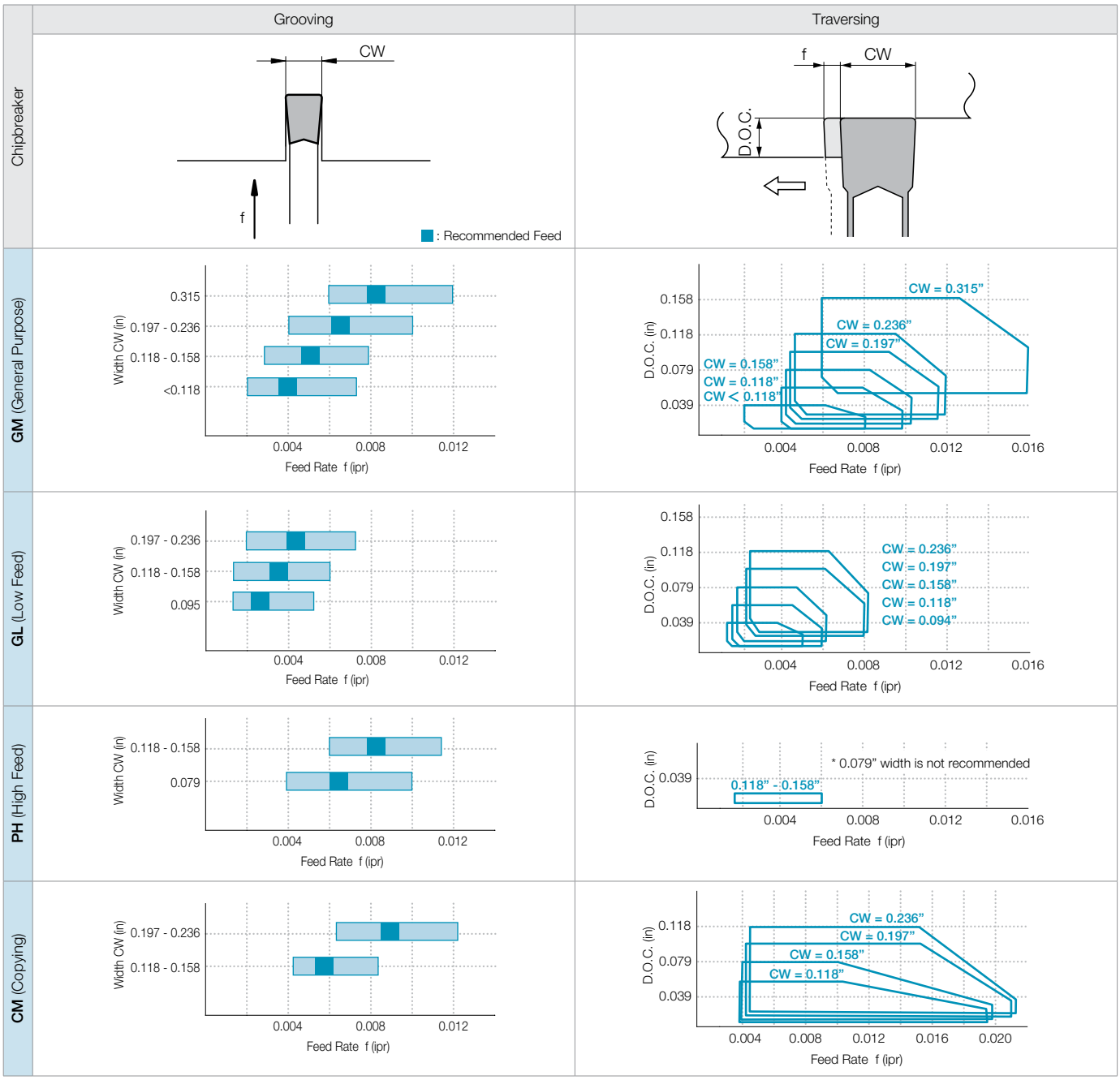
Recommended Cutting Conditions (Vc)

Workpiece	Chipbreaker	Recommended Insert Grade (Vc : sfm)									Notes
		Cermet		MEGACOAT NANO	MEGACOAT		Carbide	MEGACOAT CBN	CBN	PCD	
		TN620	TN90	PR1535	PR1225	PR1215	GW15	KBN05M	KBN570	KPD001	
Carbon Steel	GM GL CM PH GS	☆ 260 - 720	☆ 330 - 720	☆ 260 - 660	★ 260 - 660	☆ 330 - 660	-	-	-	-	Coolant
Alloy Steel		☆ 230 - 660	☆ 260 - 660	☆ 230 - 590	★ 230 - 590	☆ 260 - 590	-	-	-	-	
Stainless Steel		-	-	★ 200 - 490	☆ 200 - 490	☆ 200 - 490	-	-	-	-	
Cast Iron		-	-	-	-	★ 330 - 660	-	-	-	-	
Aluminum Alloy	GS NB	-	-	-	-	-	☆ 660 - 1,640	-	-	★ 490 - 6,560	
Brass		-	-	-	-	-	☆ 330 - 660	-	-	★ 660 - 2,620	
Hard Materials	NB	-	-	-	-	-	-	★ 260 - 490	-	-	
Powdered Steel		-	-	-	-	-	-	-	★ 330 - 820	-	

★ : 1st Recommendation ☆ : 2nd Recommendation

Recommended Cutting Conditions (Feed Rate / D.O.C.)

(Workpiece Material : 1049)

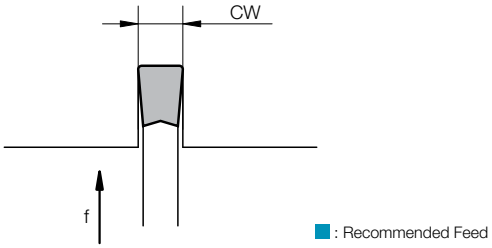


1) The above values reflect a CDX dimension that is 0.669" (17mm) or less.
2) If the toolholder is not for the 0.315" (8mm) width insert and its CDX dimension is over 0.669" (17mm), set the values for traversing to less than 90% of recommended cutting conditions above.

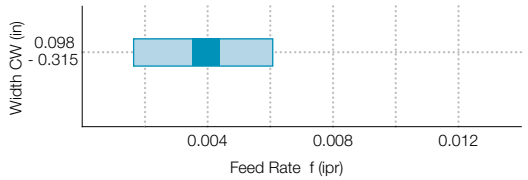
Recommended Cutting Conditions (Feed Rate / D.O.C.)

(Workpiece Material : 1049)

Chipbreaker: Grooving



GS (Low Cutting Force)



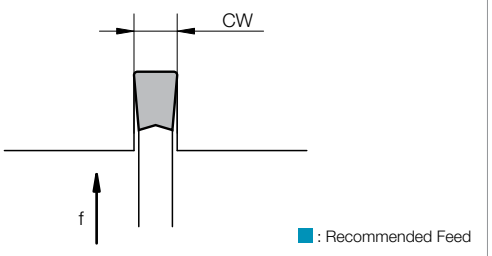
* When traversing, keep D.O.C. less than the Corner-R (RE)

1) The above values reflect a CDX dimension that is 0.669" (17mm) or less.

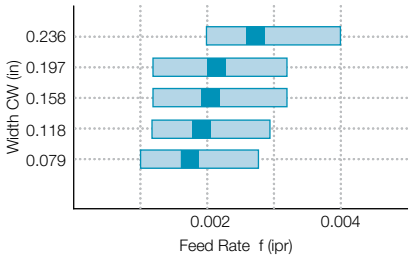
Recommended Cutting Conditions (Feed Rate)

Workpiece: Grooving

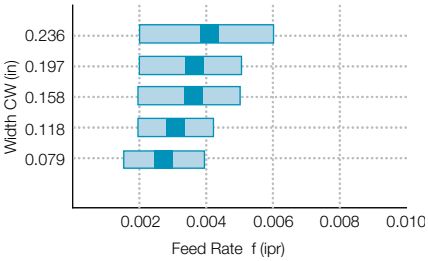
Insert Grade



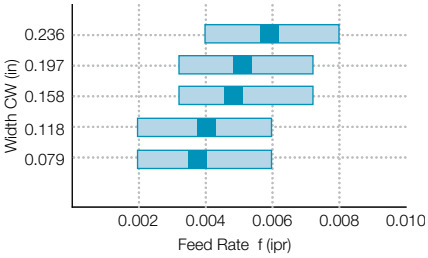
Hard Materials — KBN05M



Powdered Steel — KBN570



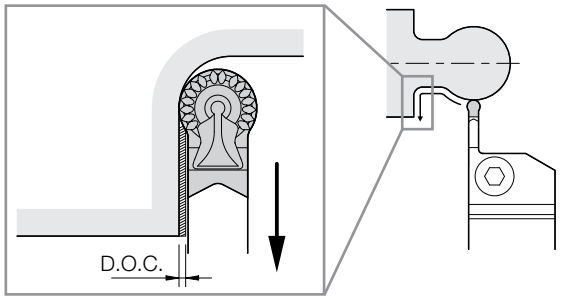
Aluminum Alloy / Brass — KPD001



CM Chipbreaker (Back Turning)

- Estimated maximum cutting amount (D.O.C.) for back turning

Part Number		Max. D.O.C. (in)				
		Toolholder Part Number				
		KGD...-2T...	KGD...-3T...	KGD...-4T...	KGD...-5T...	KGD...-6T...
GDM	3020N-150R-CM	0.009	0.008	-	-	-
	4020N-200R-CM	-	0.009	0.008	-	-
	5020N-250R-CM	-	-	0.012	0.008	-
	6020N-300R-CM	-	-	-	0.012	0.010



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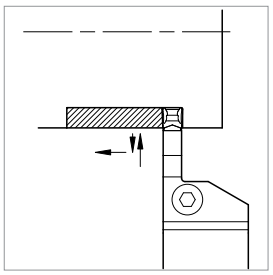
Guide for External Grooving

① Traversing After Grooving

1. Grooving Depths Over 0.020" (0.5mm) : When Roughing (see **Fig.1**)
   Before traversing, pull the tool back about 0.004" (0.1mm) after grooving, instead of traversing subsequent to grooving.
   (Failure to pull the tool back before traversing will result in an unbalanced load applied on only one side of the cutting edge.)

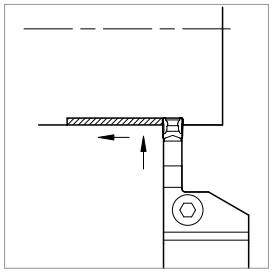
Fig.1



Before traversing, pull the tool back about 0.004" (0.1mm) after grooving.
(Grooving Depth Over 0.020" (0.5mm) : When Roughing)

2. Grooving Depths Under 0.020" (0.5mm) : When Finishing (see **Fig.2**)
   Traversing subsequent to grooving is possible because shallow groove depths apply a small load on the cutting edge.
   (Dwell-motion is not necessary)

Fig.2

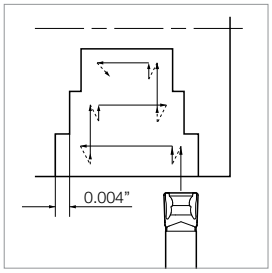


Traversing Subsequent to Grooving.
(Grooving Depth Under 0.020" (0.5mm) : When Finishing)

②

1. When widening the groove width, use "Step Traversing" as shown in **Fig.3**

Fig.3

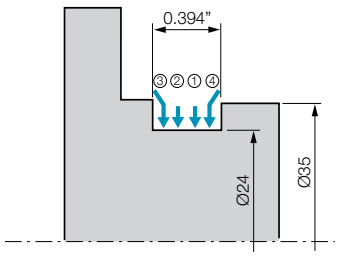


2. The widened groove and side walls should be finished last.
   (For better chip control, D.O.C. over 0.020" (0.5mm) is recommended.)
   Note: If the workpiece is not supported at the center, reduce the feed rate when grooving towards center

Case Studies

5120H (Grooving)

- Gear
- Vc = 370~540 sfm
- f = 0.002 ipr
- Wet
- GDM4020N-040GM (PR1225)
- KGDL2525X-3T10S



GM Chipbreaker (PR1225)	1,500 pcs/C
Competitor K (PVD Coated Carbide)	250 pcs/C

6X Longer Life

- KGD type grooving toolholder + GM chipbreaker (PR1225) showed 6 times longer tool life than that of Competitor K.
- Good chip control without burned chips.

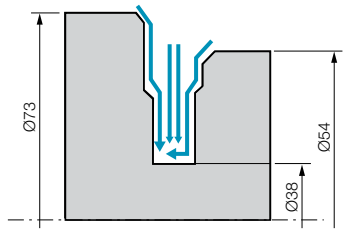


Competitor K　GM Chipbreaker

(User Evaluation)

Structural Steel (Grooving, Traversing)

- Gear
- Vc = 560 sfm
- f = 0.006 ipr (Roughing) 0.004 ipr (Finishing)
- D.O.C = 0.008" (Finishing)
- Wet
- GDM4020N-040GM (PR1215)
- KGDR2525X-4T20S



GM Chipbreaker (PR1215)	250 pcs/C
Competitor L (Roughing: PVD Coated Carbide) (Finishing: Cermet)	200 pcs/C

- GM chipbreaker reduced chip entanglement (occurrence rate 80% ➡ 10%). The problem was persistent with Competitor L. Machining productivity is improved.



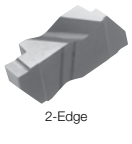
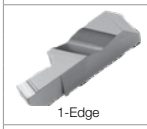
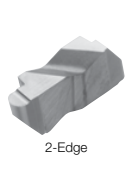
Chips easily tangled　Competitor L (Finishing)



Smooth chip control　GM Chipbreaker (Finishing)

(User Evaluation)

KCG / KCGP / KCGDP / KCRP

Insert (Right-handed Insert Shown)	Part Number	CW (inch)	CW (mm)	CDX	RE	W1	INSL	S	Cermet TC40 R	Cermet TC40 L	Cermet TC60 R	Cermet TC60 L	MEGA COAT CVD PR1215 R	MEGA COAT CVD PR1215 L	PVD PR660 R	PVD PR660 L	PVD PR930 R	PVD PR930 L	Carbide KW10 R	Carbide KW10 L	Ceramic A65 R	Ceramic A65 L
 2-Edge	KCG 2062R/L	0.062	1.57	0.110	0.008	0.150	0.540	0.219													●	●
	2125R/L	0.125	3.18																			●
	3062R/L	0.062	1.57	0.094	0.008	0.195	0.810	0.344													●	
	3094R/L	0.094	2.39	0.150																	●	●
	3125R/L	0.125	3.18																		●	
	3156R/L	0.156	3.96																		●	●
 2-Edge	KCGP 2031R/L	0.031	0.79	0.050	0.003	0.150	0.540	0.219		●		●	●	●			●	●	●	●		
	2041R/L	0.041	1.04							●	●		●	●			●					
	2047R/L	0.047	1.19							●	●		●	●	●	●	●	●	●	●		
	KCGP 2058R/L	0.058	1.47	0.110	0.008	0.150	0.540	0.219		●			●									
	2062R/L	0.062	1.57							●		●	●	●		●	●	●	●	●		
	KCGP 2094R/L	0.094	2.39	0.110	0.008	0.150	0.540	0.219		●			●	●			●	●	●	●		
	2125R/L	0.125	3.18						●	●			●	●	●		●	●	●			
	KCGP 3031R/L	0.031	0.79	0.050	0.008	0.195	0.810	0.344		●			●	●			●	●				
	3047R/L	0.047	1.19	0.075								●	●	●	●		●	●	●			
	3062R/L	0.062	1.57	0.094									●	●			●	●	●	●		
	3072R/L	0.072	1.83						●	●	●	●	●	●				●				
	KCGP 3078R/L	0.078	1.98	0.094	0.008	0.195	0.810	0.344		●	●		●	●		●	●	●				
	3088R/L	0.088	2.24							●		●	●				●	●				
	KCGP 3094R/L	0.094	2.39	0.150	0.008	0.195	0.810	0.344	●	●		●	●	●			●	●	●	●		
	3097R/L	0.097	2.46							●							●					
	3105R/L	0.105	2.67							●							●	●				
	KCGP 3110R/L	0.110	2.79	0.150	0.008	0.195	0.810	0.344	●	●			●	●			●					
	3122R/L	0.122	3.10						●									●				
	3125R/L	0.125	3.18								●		●	●			●	●	●	●		
	KCGP 3142R/L	0.142	3.61	0.150	0.008	0.195	0.810	0.344	●	●							●	●				
	3156R/L	0.156	3.96							●	●			●		●	●	●				
	3178R/L	0.178	4.52							●							●	●				
	KCGP 3185R/L	0.185	4.70	0.150	0.008	0.195	0.810	0.344	●	●							●	●				
	3189R/L	0.189	4.80						●	●	●	●	●	●		●	●	●	●	●		
	KCGP 4125R/L	0.125	3.18	0.150	0.008	0.255	1.272	0.453	●	●			●	●			●	●				
	4189R/L	0.189	4.80	0.250	0.018					●			●	●			●	●				
	4213R/L	0.213	5.41						●	●							●	●				
	KCGP 4219R/L	0.219	5.56	0.250	0.018	0.255	1.272	0.453	●	●							●	●				
	4250R/L	0.250	6.35							●			●	●			●	●				
 1-Edge	KCGDP 3062R/L	0.062	1.57	0.125	0.008	0.195	0.886	0.344	●	●			●	●			●					
	3094R/L	0.094	2.39	0.250	0.008	0.195	0.990	0.344	●	●			●	●			●	●				
	3125R/L	0.125	3.18						●				●	●			●	●				
	3189R/L	0.189	4.80	0.250	0.023				●	●								●				
 2-Edge	KCRP 2031R/L	0.062	1.57	0.094	0.031	0.150	0.540	0.219					●	●			●					
	2039R/L	0.078	1.98	0.110	0.039												●	●				
	2047R/L	0.094	2.39	0.150	0.047								●	●								
	2062R/L	0.125	3.18	0.150	0.062						●		●	●								
	KCRP 3031R/L	0.062	1.57	0.094	0.031	0.195	0.810	0.344		●	●		●	●			●	●		●		
	3047R/L	0.094	2.39	0.150	0.047				●				●	●			●	●				
	3062R/L	0.125	3.18	0.150	0.062								●	●		●	●	●				
	KCRP 3078R/L	0.156	3.96	0.150	0.078	0.195	0.810	0.344									●	●				
	3094R/L	0.188	4.78	0.150	0.094					●			●	●			●	●				
	KCRP 4125R/L	0.250	6.35	0.250	0.125	0.255	1.272	0.453	●	●					●		●	●				

- Dimension **CDX** shows available Grooving Depth.

Applicable Toolholders ➡ **G47, G139**

Recommended Cutting Conditions (Cera-Notch)

Workpiece Material	Cermet Feeds (ipr)	Carbide Feeds (ipr)	Recommended Insert Grade (Vc : sfm) Cermet TC40	Cermet TC60	MEGACOAT PR1215	Carbide PR660	Carbide PR930	Carbide KW10	Ceramic A65
Carbon Steel	0.002~0.005	0.002~0.010	300~900	250~900	300~800	200~550	250~650	-	-
Alloy Steel	0.002~0.005	0.002~0.010	250~800	250~800	300~750	100~500	150~550	-	-
Stainless Steel	0.002~0.005	0.002~0.010	-	200~600	300~600	100~550	100~550	-	-
Tool Steel	0.002~0.005	0.002~0.010	200~650	200~650	300~600	-	100~550	-	-
Hardened Steel (>45Rc)	-	-	-	-	-	-	-	-	250~500*
Gray Cast Iron	0.003~0.006	0.002~0.012	200~700	-	300~700	-	-	-	500~1000
Ductile Iron	0.003~0.006	0.002~0.012	-	150~600	300~600	-	-	-	500~1000
Aluminum	0.002~0.008	0.002~0.012	150~1600	-	-	-	-	500~1600	-

Speeds & Feeds listed are for external grooving. Reduce parameters by 10% for internal grooving.
*Feeds = 0.003~0.008 ipr

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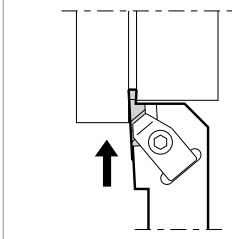
● : Standard Item △ : Phaseout Item (will be removed from next catalog)
Contact your local Kyocera sales engineer to upgrade old products to new technology

KKC



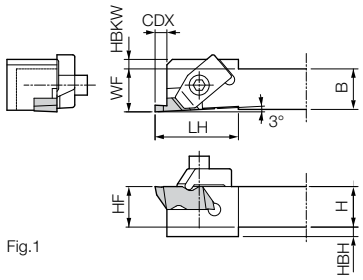


Fig.1

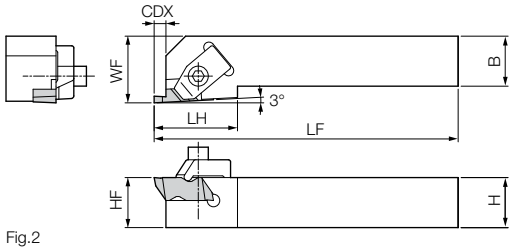


Fig.2

• Right-hand shown

• Right-hand Insert for Right-hand Toolholder, Left-hand Insert for Left-hand Toolholder

Toolholder Dimensions

Part Number	Stock		Unit	Dimensions									Drawing	Spare Parts		
														Clamp	Clamp Screw	Wrench
	R	L		H	HF	HBH	B	LF	LH	WF	HBKW	CDX*				
KKC☐ 1212M-2-150F	●		mm	12	12	-	12	150	19.05	12.25	-	3.5	Fig.1	CKC-2☐	SKC-2	(7/64 hex)
KKC☐ 6-2CF	●	●		0.375	0.375	0.125	0.375	5.000	0.750	0.385	0.125	0.138	Fig.1			
8-2X	●	●		0.500	0.500	-	0.500	3.500	0.750	0.750	-	0.138	Fig.2	CKC-2☐	SKC-2	(7/64 hex)
8-2DF	●	●		0.500	0.500	-	0.500	6.000	0.750	0.510	-	0.138	Fig.1			
10-2DF	●	●		0.625	0.625	-	0.625	6.00	0.750	0.635	-	0.138	Fig.1			
12-2B	●	●		0.750	0.750	-	0.750	4.50	0.750	1.000	-	0.138	Fig.2			
12-2C	●			0.750	0.750	-	0.750	5.00	0.750	1.000	-	0.138	Fig.2	CKC-2☐	SKC-2	(7/64 hex)
16-2C	●	●		1.000	1.000	-	1.000	5.00	0.750	1.250	-	0.138	Fig.2			
16-2D	●	●	inch	1.000	1.000	-	1.000	6.00	0.750	1.250	-	0.138	Fig.2			
12-3B	●	●		0.750	0.750	-	0.750	4.50	1.250	1.000	-	0.210	Fig.2			
12-3C	●	●		0.750	0.750	-	0.750	5.00	1.250	1.000	-	0.210	Fig.2			
16-3C	●	●		1.000	1.000	-	1.000	5.00	1.250	1.250	-	0.210	Fig.2			
16-3D	●	●		1.000	1.000	-	1.000	6.00	1.250	1.250	-	0.210	Fig.2	CKC-3☐	SKC-3	LW-156
20-3D	●	●		1.250	1.250	-	1.250	6.00	1.250	1.500	-	0.210	Fig.2			
16-4D	●	●		1.000	1.000	-	1.000	6.00	1.380	1.250	-	0.294	Fig.2			
20-4D	●			1.250	1.250	-	1.250	6.00	1.380	1.500	-	0.294	Fig.2			

* **CDX** dimension shows the distance from the toolholder to the cutting edge. For actual maximum grooving depth, see **CDX** dimension in insert table.

Applicable Inserts ➔ **G46**

• Note: **Right-hand** bars require **right-hand** inserts and clamps
Left-hand bars require **left-hand** inserts and clamps

Also Available for Threading. See Page ➔ **J24**

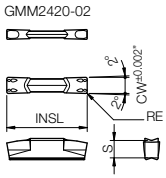
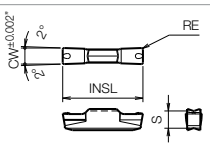
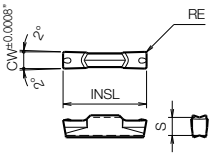
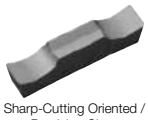
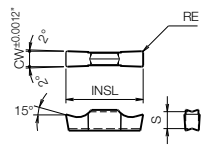
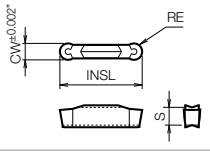
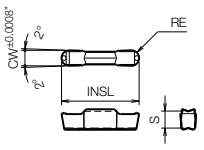
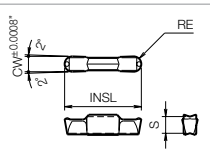
Applicable Inserts

Toolholder	Inserts ➔ G46	
	2-Edge Use	1-Edge Use
KKC☐ …-2	KCGP-2, KCG-2, KCRP-2	
KKC☐ …-3	KCGP-3, KCG-3, KCRP-3	KCGDP-3
KKC☐ …-4	KCGP-4, KCRP-4	

GMM / GMG

Classification of Usage
- ◕ : Light Interruption / 1st Choice
- ◔ : Light Interruption / 2nd Choice
- ● : Continuous / 1st Choice
- ○ : Continuous / 2nd Choice

P	Carbon Steel / Alloy Steel			◔	◕		
M	Stainless Steel			◕	◔		
K	Cast Iron					◕	◔
N	Non-ferrous Metals						◕
S	Titanium Alloy						◕
H	Hard materials (≤40HRC)			○	●		
	Hard materials (≥40HRC)						

Insert (Right-handed Insert Shown)		Part Number		Dimensions (in) CW inch	CW mm	RE	INSL	S	Cermet TN90	CVD Coated Carbide CR9025	PVD Coated Carbide PR915	PR930	PR905	Carbide KW10	Ref. Page for Toolholder
 Chip Control Oriented M-Class	 GMM2420-02	GMM	2420-020MW	0.095	2.4	0.008	0.787	0.169	●	●		●	●	●	G52,G53
			3020-020MW	0.118	3.0	0.008			●	●	●	●	●	●	
			3020-040MW			0.016			●	●	●	●	●	●	
			4020-020MW	0.158	4.0	0.008			●	●		●	●		G52
			4020-040MW			0.016			●	●	●	●	●	●	G53
			4020-080MW			0.031			●	●	●	●	●		G54
			5020-040MW	0.197	5.0	0.016			●	●	△	●	●	●	
			5020-080MW			0.031			●	●	●	●	●	●	
			6020-040MW	0.236	6.0	0.016				●	●	●	●		G52,G53
			6020-080MW			0.031				●		●	●	●	
			8030-080MW	0.315	8.0	0.031	1.181	0.217		●		●	●	●	G52,G53
 Sharp Cutting Oriented M-Class		GMM	3020-020MS	0.118	3.0	0.008	0.787	0.169	●	●	●	●		●	
			3020-040MS			0.016			●	●	●	●		●	G52
			4020-040MS	0.158	4.0				●	●	●	●		●	G53
			5020-040MS	0.197	5.0	0.016					●	●		●	G54
			6020-040MS	0.236	6.0									●	G52,G53
 Sharp Cutting Oriented Precision Class		GMG	3020-000MS	0.118	3.0	0.000	0.787	0.169			●	●		△	
			3020-020MS			0.008			●	●	●	●		●	
			3020-040MS			0.016			●	●	●	●		●	
			4020-020MS	0.158	4.0	0.008			●	△		●		●	G52
			4020-040MS			0.016	0.787	0.169		●		●		●	G53
			4020-080MS			0.031				●	●	●			G54
			5020-040MS	0.197	5.0	0.016	0.787	0.169				●			
			5020-080MS			0.031						●			
			6020-080MS	0.236	6.0	0.031	0.787	0.169						●	G52,G53
 Sharp-Cutting Oriented / Precision Class Ground Chipbreaker		GMG	2520-030MG	0.098	2.5	0.012	0.787	0.169	●			●		●	G52,G53
			3020-030MG	0.118	3.0				●		●	●	●	●	
			3520-030MG	0.138	3.5							●	●		G52
			4020-040MG	0.158	4.0	0.016			●	●		●	●	●	G53
			5020-040MG	0.197	5.0				●			●	●	●	G54
			6020-040MG	0.236	6.0							●	●		
			8030-050MG	0.315	8.0	0.020	1.181	0.217	●	●		●	●	●	G52,G87
 Chip Control Oriented / M Class / Full-R / Copying		GMM	3020-150R	0.118	3.0	0.059	0.787	0.169	●	●	●	●	●	●	
			4020-200R	0.158	4.0	0.079			●	●	●	●	●	●	G52
			5020-250R	0.197	5.0	0.098				●		●	●	●	G53
			6020-300R	0.236	6.0	0.118			●	●		●	●	●	G54
 Sharp-Cutting Oriented / Precision Class Full-R / Copying		GMG	3020-150R	0.118	3.0	0.059	0.787	0.169	●	●		●		●	
			4020-200R	0.158	4.0	0.079				●		●			G52
			5020-250R	0.197	5.0	0.098						●			G53
															G54
 Undercutting Chip Control Oriented		GMG	3020-150RU	0.118	3.0	0.059	0.787	0.169		●		●			
			4020-200RU	0.158	4.0	0.079						●			G52
															G53
															G55

Recommended Cutting Conditions ➡ **G153**

Inserts are sold in 10 piece boxes.

(Customer Service) **800.823.7284 - Option 1**
(Technical Support) **800.823.7284 - Option 2**
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● : Standard Item △ : Phaseout Item (will be removed from next catalog)
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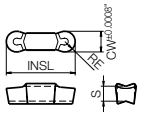
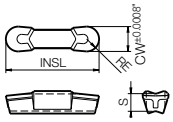
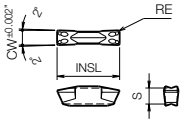
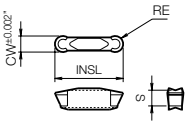
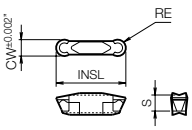
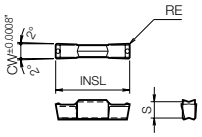
GMM / GMGA / FGG

Classification of Usage
- ● : Light Interruption / 1st Choice
- ◔ : Light Interruption / 2nd Choice
- ● : Continuous / 1st Choice
- ○ : Continuous / 2nd Choice

P	Carbon Steel / Alloy Steel			◔	●	
M	Stainless Steel			●	◔	
K	Cast Iron					●
N	Non-ferrous Metals					●
S	Titanium Alloy					●
H	Hard materials (≤40HRC)			○	●	
	Hard materials (≥40HRC)					

Insert (Right-handed Insert Shown)		Part Number	Dimensions (in) CW inch	CW mm	RE	INSL	S	Cermet TN90	CVD Coated Carbide CR9025	PVD Coated Carbide PR915	PVD Coated Carbide PR930	Carbide KW10	Ref. Page for Toolholder
 Sharp-Cutting Oriented / Precision Class / Full-R / Copying		GMGA 6020-300R	0.236	6.0	0.118	0.787	0.169					●	G52 G53
 Sharp Cutting Oriented / Precision Class / Full-R / Copying		GMGA 8030-400R	0.315	8.0	0.157	1.181	0.217					●	G52 G87
 Chip Control Oriented / M Class		GMM 3014-04	0.118	3.0	0.016	0.551	0.169	●			●		
 Chip Control Oriented / M Class Full-R / Copying		GMM 3014-15R	0.118	3.0	0.059	0.551	0.169	●					-
 Undercutting Chip Control Oriented		GMM 3014-15RU	0.118	3.0	0.059	0.551	0.169				△		
 Face Grooving Chip Control Oriented Precision Class		FGGR/L 3020-02	0.118	3.0	0.008	0.787	0.169	R L	R L	R L	R L	R L	G55
		4020-04	0.158	4.0	0.016				● ●		● ●	● ●	
		5020-04	0.197	5.0	0.016				● ●			● ●	

Recommended Cutting Conditions G153

Chipbreakers

Series	Insert	Features
GMM...MW		Excellent chip evacuation during grooving, traversing, and cut-off.
GMG...MG		Low cutting forces with ground chipbreaker.
GMG...MS GMM...MS		Grooving, traversing and cut-off operations have minimum cutting forces with positive edge
GMM...MT		Small corner-R (RE) minimizes the core which remains in the center of the face.
GMM...TK		Large corner-R (RE) with stable performance during cut-off.
GMM...NB		Flat rake face without chipbreaker. Good performance for brass.

Edge Preparation

Edge Preparation	Chamfered + Honed Cutting Edge Corner-R(RE) = 0.05	Chamfered + Honed Cutting Edge Sharp Corner
		
MT-Chipbreaker	**CR9025 / PR915**	**PR930 / KW10**
Edge Preparation	Chamfered + Honed Cutting Edge Corner-R(RE) = 0.20~0.30	Sharp Edge Corner-R(RE) = 0.20~0.30
		
TK-Chipbreaker	**CR9025 / PR915**	**PR930 / KW10**
Edge Preparation	Honed Cutting Edge Corner-R(RE) = 0.05	Sharp Edge Sharp Corner
		
Without Chipbreaker (-NB)	**CR9025**	**PR930 / KW10**

• Sharp Edge Spec. can reduce cutting resistance to 40% less than that of chamfer edge

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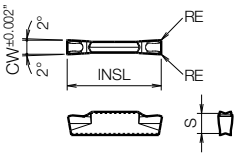
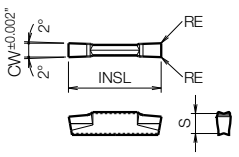
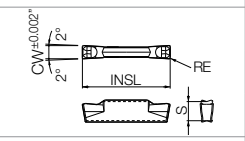
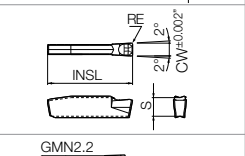
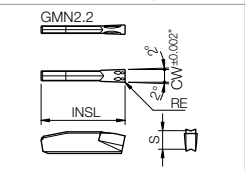
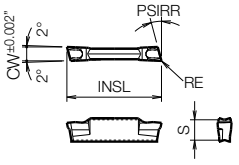
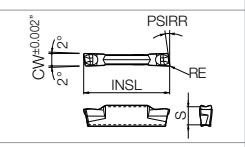
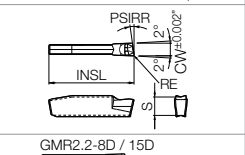
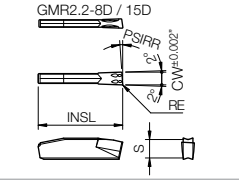
GMM / GMN / GM®/L

Classification of Usage
- ● : Light Interruption / 1st Choice
- ◔ : Light Interruption / 2nd Choice
- ● : Continuous / 1st Choice
- ○ : Continuous / 2nd Choice

		Cermet	CVD Coated Carbide	PVD Coated Carbide		Carbide	Ref. Page for Toolholder
		TN90	CR9025	PR915	PR930	KW10	
P	Carbon Steel / Alloy Steel			◔	●		
M	Stainless Steel			●	◔		
K	Cast Iron					●	
N	Non-ferrous Metals					●	
S	Titanium Alloy					●	
H	Hard materials (≤40HRC)			○	●		
	Hard materials (≥40HRC)						

Insert (Right-handed Insert Shown)	Part Number	CW inch	CW mm	RE	INSL	S	PSIR®/L Angle (°)	Cermet TN90	CVD Coated Carbide CR9025	PVD Coated Carbide PR915	PVD Coated Carbide PR930	Carbide KW10	Ref. Page for Toolholder
 Deep Grooving / Cut-Off Sharp Cutting Oriented		GMM 1520-MT	0.059	1.5	0.000	0.787	0.169	-				●	●	G52
		1520-MT			0.002						●			
		2020-MT	0.079	2.0	0.000							●	●	G52
					0.002					●	●			G53
		2520-MT	0.098	2.5	0.000							●	●	
					0.002						●			
		3020-MT	0.118	3.0	0.000							●	●	G52-G54
					0.002				●	●				
 Deep Grooving / Cut-Off Sharp Cutting Oriented Without Chipbreaker		GMM 1520-NB	0.059	1.5	0.000	0.787	0.169	-				●	●	G52
		1520-NB			0.002									
		2020-NB	0.079	2.0	0.000							●	●	G52
					0.002									G53
		2520-NB	0.098	2.5	0.000							●	△	
					0.002									
		3020-NB	0.118	3.0	0.000								●	G52-G54
					0.002									
 Deep Grooving / Cut-Off Stability Oriented		GMM 2020-TK	0.079	2.0	0.008	0.787	0.169	-			●	●	●	G52
		2520-TK	0.098	2.5	0.008						●	●	●	G53
		3020-TK	0.118	3.0	0.010				●	●	●	●		G52-G54
 Cut-Off / Stability Oriented 1-Edge		GMN 2-TK	0.079	2.0	0.008	0.787	0.169	-			●	●	●	G52-G53
		3-TK	0.118	3.0	0.010				●	●	●	●		G52
														G53
		4-TK	0.158	4.0	0.012				●	●	●	●		G54
 Deep Grooving / Cut-Off 1-Edge		GMN 2.2	0.087	2.2	0.007	0.787	0.169	-	●	●		●	●	G52-G53
		3	0.118	3.0	0.008				●	●		●	●	G52
		4	0.158	4.0	0.010				●			●	●	G53
		5	0.197	5.0	0.031					●		●	●	G54
		6	0.236	6.0	0.031				●			●	●	G52-G53
									R L	R L	R L	R L	R L	
 Cut-Off / Sharp Cutting Oriented with Lead Angle		GMM 1520®/L-MT-15D	0.059	1.5	0.000	0.787	0.169	15°				●	●	G52
		1520®/L-MT-15D			0.002						●			
		2020®/L-MT-15D		2.0	0.000							● ●	●	G52
					0.002					●	●			G53
		2520®/L-MT-15D	0.098	2.5	0.000							●		
					0.002						●			
		3020®/L-MT-15D		3.0	0.000							● ●	●	G52-G54
					0.002				●	●				
 Cut-Off / Stability Oriented With Lead Angle		GMM 2020®/L-TK-8D	0.079	2.0	0.008	0.787	0.169	8°			●	●	●	G52
		2520®/L-TK-8D	0.098	2.5	0.008							●		G53
		3020®/L-TK-8D	0.118	3.0	0.010						●	●		G52-G54
 Cut-Off / Stability Oriented 1-Edge with Lead Angle		GM®/L 2-TK-8D	0.079	2.0	0.008	0.787	0.169	8°				●	●	G52-G53
		3-TK-8D	0.118	3.0	0.010						●	●	●	G52
														G53
		4-TK-8D	0.158	4.0	0.012						●	●	●	G54
 Cut-Off Sharp Cutting Oriented 1-Edge with Lead Angle		GM®/L 2.2-8D	0.087	2.2	0.007	0.787	0.169	8°	●		●	● ●	●	G52
		2.2-15D			0.000			15°	●		●		●	G53
		3-4D	0.118	3.0	0.008			4°	●		● ●	● ●	●	G52
		3-15D						15°			●			G53
		4-4D	0.158	4.0	0.010			4°			● ●	●		G54

Recommended Cutting Conditions ➡ G153

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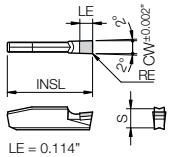
GMN

Classification of Usage
- ● : Light Interruption / 1st Choice
- ◔ : Light Interruption / 2nd Choice
- ● : Continuous / 1st Choice
- ○ : Continuous / 2nd Choice

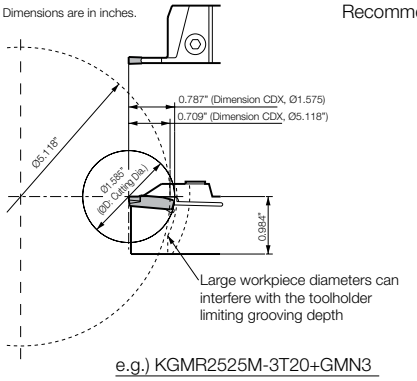
					Ref. Page for Toolholder
P	Carbon Steel / Alloy Steel				
M	Stainless Steel				
K	Cast Iron				
N	Non-ferrous Metals		●		
S	Titanium Alloy		●		
H	Hard materials (≤40HRC)				
	Hard materials (≥40HRC)	○	●		

Insert	Part Number	Dimensions (in) CW inch	CW mm	RE	INSL	S	CBN KBN510	CBN KBN525	PCD KPD001	PCD KPD010	Ref. Page for Toolholder
 Deep Grooving 1-Edge	 LE = 0.114"	GMN 2	0.079	2.0	0.008	0.787	0.169			●	●	G52-G53
					0.016			●	●			
		3	0.118	3.0	0.008					●	●	G52
					0.016			●	●			G53
		4	0.158	4.0	0.008					●	●	G54
					0.016			●	●			
		5	0.197	5.0	0.008					●	●	
					0.016			△	△			
		6	0.236	6.0	0.008						●	G52-G53
					0.016			△	△			

Recommended Cutting Conditions ➔ **G153**

KGM / KGM-T Available Cutting Diameter

There is a limit to available grooving depth depending on the workpiece diameter



e.g.) KGMR2525M-3T20+GMN3

KGM Available Cutting Diameter Table

Toolholders		ØD Cutting Diameter																
KGM℠	0810K-1.5-125	-	-	-	-	-	-	-	-	-	-	-	-	10mm	14mm	16mm	32mm	∞
	1010○-1.5…	-	-	-	-	-	-	-	20mm	25mm	32mm	40mm	60mm	∞	∞	∞	∞	
	1212○-1.5…	-	-	-	-	25mm	26mm	28mm	32mm	36mm	40mm	60mm	100mm					
	0810K-2-125	-	-	-	-	-	-	-	-	-	-	-	-	10mm	14mm	16mm	32mm	
	6-2-5								0.80"	1.00"	1.28"	1.60"	2.40"	∞	∞	∞	∞	
	1010○-2…	-	-	-	-	-	-	-	20mm	25mm	32mm	40mm	60mm					
	8-2-6					1.00"	1.04"	1.12"	2.00"	∞	∞	∞	∞					
	1212○-2…	-	-	-	-	25mm	26mm	28mm	50mm									
	1616○-2…	32mm	40mm	50mm	60mm	80mm	100mm	∞	∞									
	1010○-2.5…	-	-	-	-	-	-	-	20mm	25mm	32mm	40mm	60mm					
	1212○-2.5…	-	-	-	-	25mm	26mm	28mm	32mm	36mm	40mm	60mm	100mm					
	1616○-2.5…	32mm	40mm	50mm	60mm	80mm	100mm	∞	∞	∞	∞	∞	∞					
	1616○-3…	32mm	40mm	50mm	60mm	80mm	100mm											
Available Grooving Depth CDX (in)		0.64"	0.60"	0.56"	0.52"	0.50"	0.48"	0.44"	0.40"	0.36"	0.32"	0.28"	0.24"	0.20"	0.16"	0.12"	0.08"	0.04"
Available Grooving Depth CDX (mm)		16mm	15mm	14mm	13mm	12.5mm	12mm	11mm	10mm	9mm	8mm	7mm	6mm	5mm	4mm	3mm	2mm	1mm

KGM-T Available Cutting Diameter Table (GMN, GM℠ When Using 1-edge Insert)

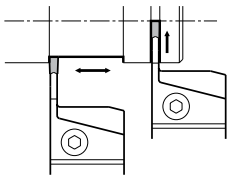
Toolholders		ØD Cutting Diameter											
KGM℠	2012K-2T17	-	-	-	-	-	-	-	-	66mm	80mm	130mm	260mm	∞
	12-2T	-	-	-	-	-	-	-	-	2.64"	3.20"	5.20"	10.40"	
	2020K-2T17	-	-	-	-	-	-	-	-	66mm	80mm	130mm	260mm	
	16-2T	-	-	-	-	-	-	-	-	2.64"	3.20"	5.20"	10.40"	
	2525M-2T1710	-	-	-	-	-	-	-	-	66mm	80mm	130mm	260mm	
	1616H-3T20	-	-	-	-	-	40mm	54mm	70mm	100mm	180mm	∞	∞	
	2012K-3T20	-	-	-	-	-	40mm	90mm	130mm	240mm				
	12-3T	-	-	-	-	-	1.60"	3.60"	5.20"	9.60"				
	2020K-3T20	-	-	-	-	-	40mm	90mm	130mm	240mm				
	16-3T	-	-	-	-	-	1.60"	3.60"	5.20"	9.60"				
	2525M-3T20	-	-	-	-	-	40mm	90mm	130mm	240mm				
	12-4T	-	-	-	-	-	1.60"	3.60"	5.20"	9.60"				
	2020K-4T20	-	-	-	-	-	40mm	90mm	130mm	240mm	∞	∞	∞	
	2525M-4T20	-	-	-	-	-	40mm	90mm	130mm	240mm				
	16-4T	-	-	2.00"	5.60"	9.60"								
	2525M-4T25	-	-	50mm	140mm	240mm								
	16-5T	-	-	2.00"	5.60"	9.60"								
	2525M-5T25	-	-	50mm	140mm	240mm	∞	∞	∞	∞				
	3232P-5T25	-	-	50mm	280mm	600mm								
	2525M-6T30	100mm	300mm	∞	∞	∞								
Available Grooving Depth CDX (in)		1.20"	1.08"	1.00"	0.92"	0.88"	0.80"	0.76"	0.72"	0.68"	0.64"	0.60"	0.56"	<0.52"
Available Grooving Depth CDX (mm)		30mm	27mm	25mm	23mm	22mm	20mm	19mm	18mm	17mm	16mm	15mm	14mm	<13mm

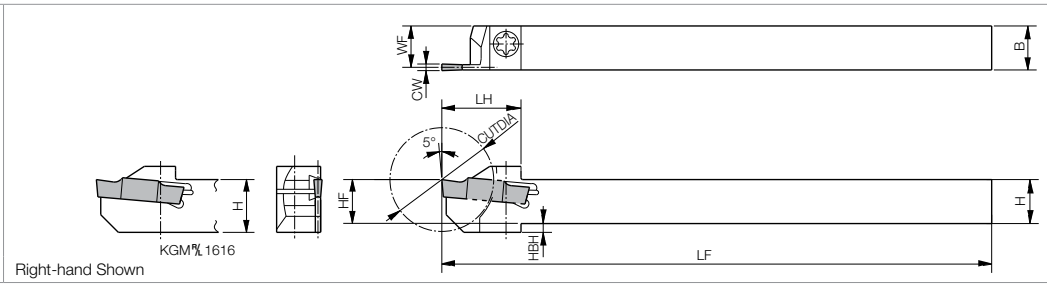
CBN & PCD Inserts are sold in 1 piece boxes.

● : Standard Item △ : Phaseout Item (will be removed from next catalog)
Contact your local Kyocera sales engineer to upgrade old products to new technology

KGM (Small Parts) - Will be phased out and removed from catalog. Switch to KGD G28

Insert Width : 0.079"~0.118" / 1.5mm~4.0mm





Right-hand Shown

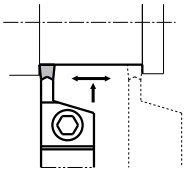
Toolholder Dimensions

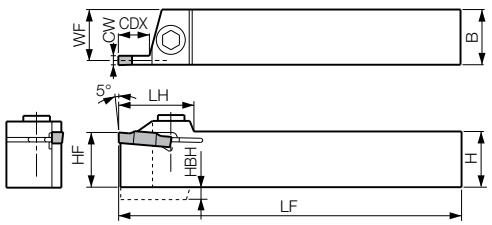
Part Number	Stock R	Stock L	Unit	Cut-Off Dia. CUTDIA	Dimensions H	HF	HBH	B	LF	LH	WF	Insert Width CW MIN	MAX	Spare Parts Clamp Screw	Wrench
KGM 6-2-5	●	●	inch	0.787	0.375	0.375	0.079	0.375	5.000	0.750	0.342	0.079	0.118	SE-40120TR	LTW-15S
8-2-6	●	●	inch	0.984	0.500	0.500	0.051	0.500	6.000	0.830	0.467	0.079	0.118	SE-40120TR	LTW-15S
KGM 1010JX-1.5	●	●	mm	18	10	10	2	10	120	18.0	9.40	1.5	2.0	SE-40120TR	LTW-15S
1212JX-1.5	●	●	mm	23	12	12	2	12	120	20.5	11.40	1.5	2.0	SE-40120TR	LTW-15S
KGM 1010JX-2	●	●	mm	18	10	10	2	10	120	18.0	9.15	2.0	3.0	SE-40120TR	LTW-15S
1212JX-2	●	●	mm	23	12	12	2	12	120	19.0	11.15	2.0	3.0	SE-40120TR	LTW-15S
1616JX-2	●	●	mm	30	16	16	-	16	120	24.5	15.15	2.0	3.0	SE-50125TR	LTW-20
KGM 1212JX-2.5	●	●	mm	23	12	12	2	12	120	20.5	11.00	2.4	3.0	SE-40120TR	LTW-15S
1616JX-2.5	●	●	mm	30	16	16	-	16	120	25.5	15.00	2.4	3.0	SE-50125TR	LTW-20
KGM 1616JX-3	●	●	mm	30	16	16	-	16	120	25.5	14.80	3.0	4.0	SE-50125TR	LTW-20
KGM 1212F-1.5-85	●		mm	23	12	12	2	12	85	19.0	11.40	1.5	2.0	SE-40120TR	LTW-15S
1212F-2-85	●	●	mm	23	12	12	2	12	85	19.0	11.15	2.0	3.0	SE-40120TR	LTW-15S
1212F-2.5-85	●		mm	23	12	12	2	12	85	19.0	11.00	2.4	3.0	SE-40120TR	LTW-15S

Choose insert with width that falls within **MIN** and **MAX** parameters shown in table above. Insert table **G48~G51**

KGM - Will be phased out and removed from catalog. Switch to KGD G34~G39

Insert Width : 0.118"~0.315" / 3mm~8mm





Right-hand Shown

Toolholder Dimensions

Part Number	Stock R	Stock L	Unit	Dimensions H	HF	HBH	B	LF	LH	WF	CDX	Insert Width CW MIN	MAX	Spare Parts Clamp Screw	Clamp Screw	Wrench	Wrench
KGM 12-3	●		inch	0.750	0.750	-	0.750	5.000	1.070	0.702	0.354	0.118	0.157	-	HH5X16	-	LW-4
16-3	●		inch	1.000	1.000	-	1.000	6.000	1.070	0.953	0.354	0.118	0.157	-	HH5X25	-	LW-4
KGM 1212H-3	●		mm	12	12	4	12	100	27	10.8	9	3.0	3.0	SB-5TR	-	LTW-20	-
1616H-3	●		mm	16	16	4	16	100	27	14.8	9	3.0	4.0	-	HH5X16	-	LW-4
2020K-3	●	●	mm	20	20	-	20	125	27	18.8	9	3.0	4.0	-	HH5X16	-	LW-4
2525M-3	●	●	mm	25	25	-	25	150	27	23.8	9	3.0	4.0	-	HH5X25	-	LW-4
KGM 2020K-4	●		mm	20	20	-	20	125	27	18.3	10	4.0	5.0	-	HH5X16	-	LW-4
2525M-4	●	●	mm	25	25	-	25	150	27	23.3	10	4.0	5.0	-	HH5X25	-	LW-4
KGM 2020K-5	●	△	mm	20	20	-	20	125	27	17.8	10	5.0	6.0	-	HH5X16	-	LW-4
2525M-5	●		mm	25	25	-	25	150	27	22.8	10	5.0	6.0	-	HH5X25	-	LW-4
KGM 2525M-8	●	●	mm	25	25	7.5	25	150	40	22.0	25	8.0	8.0	-	HH6X25	-	LW-5

- Dimension **CDX** shows available grooving depth
- 4.0mm width insert can be installed in KGM 1212H-3, but is not recommended due to the toolholder's rigidity

Choose insert with width that falls within **MIN** and **MAX** parameters shown in table above.
Insert table **G48~G51**

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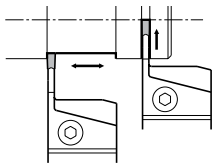
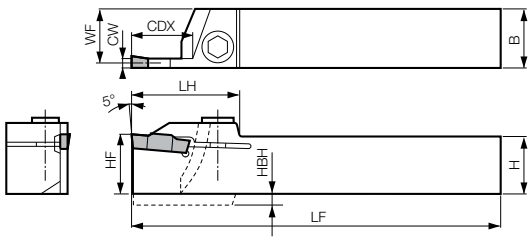
● : Standard Item △ : Phaseout Item (will be removed from next catalog)
Contact your local Kyocera sales engineer to upgrade old products to new technology

KGM-T - Will be phased out and removed from catalog. Switch to KGD G34~G39

Insert Width : 0.078"~0.236" / 2.0mm~5.0mm





Right-hand Shown

Toolholder Dimensions

Part Number	Stock R	Stock L	Unit	H	HF	HBH	B	LF	LH	WF	CDX	Insert Width CW MIN	Insert Width CW MAX	Spare Parts: Clamp Screw	Spare Parts: Clamp Screw	Spare Parts: Wrench	Spare Parts: Wrench
KGM□ 12-2T	●	●	inch	0.75	0.75	-	0.75	5.0	1.30	0.717	0.669	0.078	0.118	-	HH5X16	-	LW-4
16-2T	●			1.00	1.00	-	1.00	6.0	1.30	0.967	0.669				HH5X25		
KGM□ 12-3T	●	●		0.75	0.75	-	0.75	5.0	1.42	0.702	0.787	0.118	0.157	-	HH5X16	-	
16-3T	●	●		1.00	1.00	-	1.00	6.0	1.42	0.953	0.787				HH5X25		
KGM□ 12-4T	●	●		0.75	0.75	-	0.75	5.0	1.42	0.683	0.787	0.157	0.197	-	HH5X16	-	
16-4T	●	●		1.00	1.00	-	1.00	6.0	1.22	0.933	0.984				HH5X25		
KGM□ 16-5T	●	●		1.00	1.00	-	1.00	6.0	1.22	0.913	0.984	0.197	0.236	-	HH5X25	-	-
KGM□ 2012K-2T17		●	mm	20	20	-	12	125	33	11.15	17	2.0	3.0	SB-5TR	-	LTW-20	-
2020K-2T17	●	●		20	20	-	20	125	33	19.15	17	2.0	3.0	-	HH5X16	-	LW-4
2525M-2T17	●	●		25	25	-	25	150	33	24.15	17	2.0	3.0		HH5X25		
KGM□ 1616H-3T20	●			16	16	4	16	100	36	14.8	20	3.0	4.0	-	HH5X16	-	LW-4
2012K-3T20		●		20	20	-	12	125	36	10.8	20	3.0	4.0	SB-5TR	-	LTW-20	-
2020K-3T20	●	●		20	20	-	20	125	36	18.8	20	3.0	4.0	-	HH5X16	-	LW-4
2525M-3T20	●	●		25	25	-	25	150	36	23.8	20	3.0	4.0		HH5X25		
KGM□ 2020K-4T20	●			20	20	-	20	125	36	18.3	20	4.0	5.0	-	HH5X16	-	LW-4
2525M-4T20	●			25	25	-	25	150	36	23.3	20	4.0	5.0		HH5X25		
2525M-4T25	●	●		25	25	-	25	150	41	23.3	25	4.0	5.0				
KGM□ 2525M-5T25	●	●		25	25	-	25	150	42	22.8	25	5.0	6.0	-	HH5X25	-	LW-4
3232P-5T25	●			32	32	-	32	170	42	29.8	25	5.0	6.0				
KGM□ 2525M-6T30	●			25	25	-	25	150	45	22.4	30	6.0	6.0	-	HH5X25	-	LW-4

- Dimension **CDX** shows the distance from the toolholder to the cutting edge. Refer to table on **G51** for relationship between available grooving depth and cutting diameter
- When using GMG / GMM type 2-edge insert, set groove depth under 0.591"(15mm)

Choose insert with width that falls within **MIN** and **MAX** parameters shown in table above. Insert table **G48~G51**

Applicable Inserts

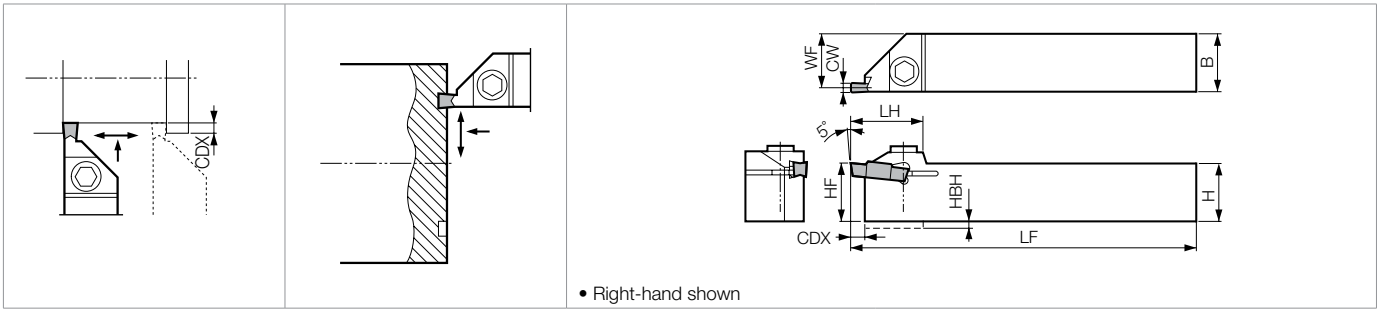
Application	Grooving / Traversing	Grooving / Traversing	Grooving	Full-R / Copying	Full-R / Copying	Deep Grooving / Cut-Off	Deep Grooving / Cut-Off	Deep Grooving / Cut-Off	Deep Grooving / Cut-Off	Deep Grooving / Cut-Off	Deep Grooving
Ref. Page	G48	G48	G48	G48	G49	G50	G50	G50	G50	G50	G51
Insert / Toolholder	MW	MS	MG			MT	NB	TK	TK		CBN • PCD
KGM□...1.5	-	-	-	-	-	GMM1520...MT GMM2020...MT GMM1520□...MT GMM2020□...MT	GMM1520...NB GMM2020...NB	GMM2020...TK GMM2020□...TK	GMN2...TK GM□2...TK	-	-
KGM□...-2- KGM□...-2(T)	GMM2420...MW GMM3020...MW	GMG3020...MS GMM3020...MS	GMG2520...MG GMG3020...MG	GMG3020...R GMM3020...R	-	GMM2020...MT GMM2520...MT GMM3020...MT GMM2020□...MT GMM2520□...MT GMM3020□...MT	GMM2020...NB GMM2520...NB GMM3020...NB	GMM2020...TK GMM2520...TK GMM3020...TK GMM2020□...TK GMM2520□...TK GMM3020□...TK	GMN2...TK GMN3...TK GM□2...TK GM□3...TK	GMN2.2 GMN3 GM□2.2 GM□3	GMN2 GMN3
KGM□...2.5	GMM2420...MW GMM3020...MW	GMG3020...MS GMM3020...MS	GMG2520...MG GMG3020...MG	GMG3020...R GMM3020...R	-	GMM2520...MT GMM3020...MT GMM2520□...MT GMM3020□...MT	GMM2520...NB GMM3020...NB	GMM2520...TK GMM3020...TK GMM2520□...TK GMM3020□...TK	GMN3...TK GM□3...TK	GMN3 GM□3	GMN3
KGM□...-3(T)	GMM3020...MW GMM4020...MW	GMG3020...MS GMM3020...MS GMG4020...MS GMM4020...MS	GMG3020...MG GMG3520...MG GMG4020...MG	GMG3020...R GMM3020...R GMG4020...R GMM4020...R	-	GMM3020...MT GMM3020□...MT	GMM3020...NB	GMM3020...TK GMM3020□...TK	GMN3...TK GMN4...TK GM□3...TK GM□4...TK	GMN3 GMN4 GM□3 GM□4	GMN3 GMN4
KGM□...-4(T)	GMM4020...MW GMM5020...MW	GMG4020...MS GMM4020...MS GMG5020...MS GMM5020...MS	GMG4020...MG GMG5020...MG	GMG4020...R GMM4020...R GMG5020...R GMM5020...R	-	-	-	-	GMN4...TK GM□4...TK	GMN4 GMN5 GM□4	GMN4 GMN5
KGM□...-5(T)	GMM5020...MW GMM6020...MW	GMG5020...MS GMM5020...MS GMG6020...MS GMM6020...MS	GMG5020...MG GMG6020...MG	GMG5020...R GMM5020...R GMG6020...R GMM6020...R	GMGA6020..R	-	-	-	-	GMN5 GMN6	GMN5 GMN6
KGM□...-6T	GMM6020..MW	GMG6020..MS GMM6020..MS	GMG6020..MG	GMG6020..R GMM6020..R	GMGA6020..R	-	-	-	-	GMN6	GMN6
KGM□...8	GMM8030..MW	-	GMG8030..MG	-	GMGA8030..R	-	-	-	-	-	-

- If using a full-R insert, you need to modify the insert seat tip of the toolholder.

Recommended Cutting Condtions **G153**
Recommended Cutting Condtions (CBN / PCD) **G152**

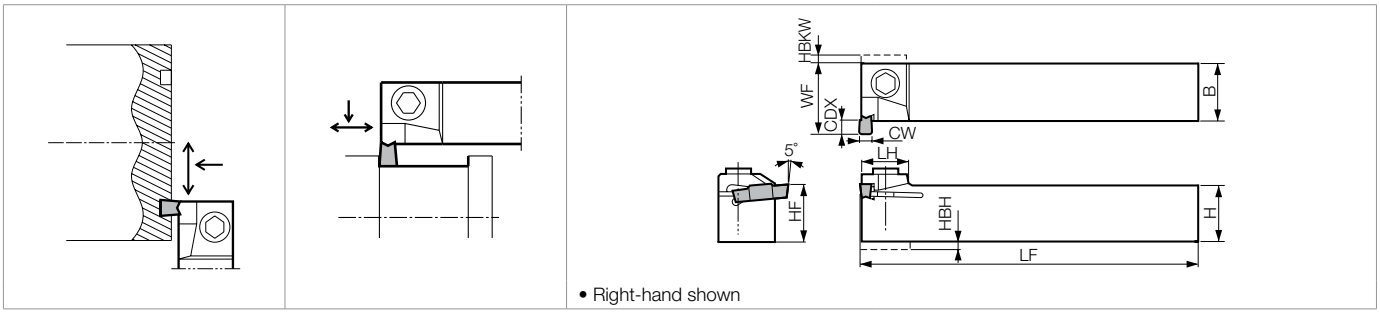
● : Standard Item △ : Phaseout Item (will be removed from next catalog)
Contact your local Kyocera sales engineer to upgrade old products to new technology

KGMM



• Right-hand shown

KGMS



• Right-hand shown

Toolholder Dimensions

Part Number	Stock R	Stock L	Unit	H	HF	HBH	B	LF	LH	WF	HBKW	CDX	Insert Width CW (mm) MIN	Insert Width CW (mm) MAX	Spare Parts: Screw	Spare Parts: Screw	Spare Parts: Wrench	Spare Parts: Wrench
KGMMR 2525M-3	●		mm	25	25	-	25	150	25	23.8	-	4.8	3.0	5.0	-	HH5X25	-	LW-4
KGMSR 2525M-3	●		mm	25	25	-	25	150	17	30	-	4.8	3.0	5.0	-	HH5X25	-	LW-4

• Dimension **CDX** shows available grooving depth. (Ref. to the table ➡ **G49** for Face Grooving and minimum cutting diameter)

Applicable Inserts [External Grooving]

Application	Grooving / Traversing	Grooving / Traversing	Grooving	Full-R / Copying	Grooving	Grooving	Grooving	Grooving	Grooving	Grooving
Ref. Page	➡ G48	➡ G48	➡ G48	➡ G48	➡ G50	➡ G50	➡ G50	➡ G50	➡ G50	➡ G51
Insert / Toolholder	**MW**	**MS**	**MG**		**MT**	**NB**	**TK**	**TK**		**CBN • PCD**
KGMMR···3 KGMSR···3	GMM3020..MW GMM4020..MW GMM5020..MW	GMG3020..MS GMM3020..MS GMG4020..MS GMM4020..MS GMG5020..MS GMM5020..MS	GMG3020..MG GMG3520..MG GMG4020..MG GMG5020..MG	GMG3020..R GMM3020..R GMG4020..R GMM4020..R GMG5020..R GMM5020..R	GMM3020..MT	GMM3020..NB	GMM3020..TK	GMN3..TK GMN4..TK	GMN3 GMN4 GMN5	GMN3 GMN4 GMN5

Applicable Inserts [Face Grooving]

Application	Grooving / Traversing	Undercutting	Grooving / Traversing	Grooving / Traversing	Grooving	Full-R / Copying	Grooving	Grooving	Grooving	Grooving
Ref. Page	➡ G49	➡ G48	➡ G48	➡ G48	➡ G48	➡ G48	➡ G50	➡ G50	➡ G50	➡ G50
Insert / Toolholder			**MW**	**MS**	**MG**		**MT**	**NB**	**TK**	
KGMMR···3 KGMSR···3	FGG‰3020.. FGG‰4020.. FGG‰5020..	GMG3020..RU GMG4020..RU GMG5020..RU	GMM3020..MW GMM4020..MW GMM5020..MW	GMG3020..MS GMM3020..MS GMG4020..MS GMM4020..MS GMG5020..MS GMM5020..MS	GMG3020..MG GMG3520..MG GMG4020..MG GMG5020..MG	GMG3020..R GMM3020..R GMG4020..R GMM4020..R GMG5020..R GMM5020..R	GMM3020..MT	GMM3020..NB	GMM3020..TK	GMN3 GMN4 GMN5 GMN3..TK GMN4..TK

Recommended Cutting Condtions ➡ **G153**
Recommended Cutting Condtions (CBN / PCD) ➡ **G152**

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● : Standard Item △ : Phaseout Item (will be removed from next catalog)
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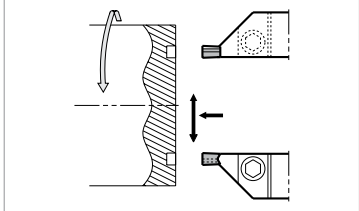
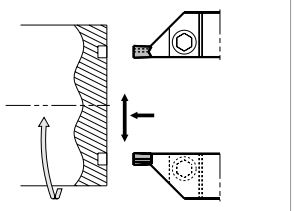
Selection of Insert & Toolholder (Face Grooving)

KGMM

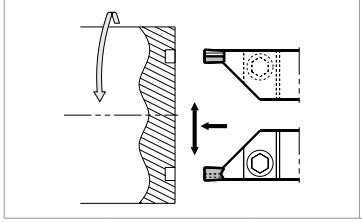
Toolholder	Left-hand (L)
Insert	Left-hand (L)



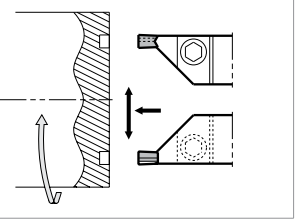
Toolholder	Right-hand (R)
Insert	Right-hand (R)



Toolholder	Right-hand (R)
Insert	Left-hand (L)

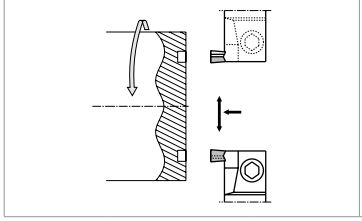


Toolholder	Left-hand (L)
Insert	Right-hand (R)

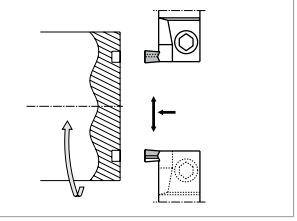


KGMS

Toolholder	Right-hand (R)
Insert	Left-hand (L)

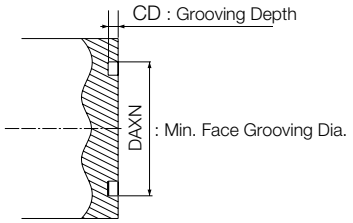


Toolholder	Left-hand (L)
Insert	Right-hand (R)



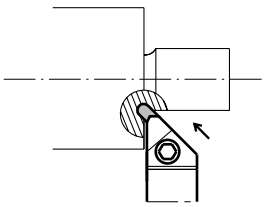
Min. Cutting Dia. & Grooving Depth (Face Grooving)

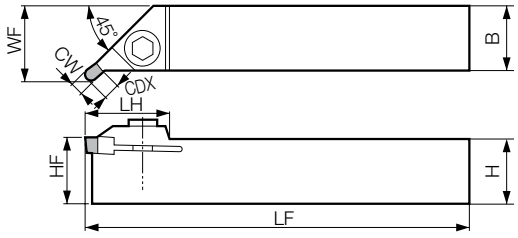
KGMM / KGMS



Part Number	DAXN	CD
GMG/GMM3020-○○□□	Ø100mm	4.8mm
GMG/GMM4020-○○□□		
GMG/GMM5020-○○□□		
FGG℠3020-02	Ø22mm	4.3mm
FGG℠4020-04	Ø28mm	4.8mm
FGG℠5020-04	Ø30mm	
GMG3020-150RU	Ø22mm	4.3mm
GMG4020-200RU	Ø28mm	4.8mm

KGMU (External Undercutting Toolholder)





• Right-hand shown

Toolholder Dimensions

Part Number	Stock		Unit	Dimensions							Insert Width CW (mm)		Spare Parts	
													Clamp Bolt	Wrench
	R	L		H	HF	B	LF	LH	WF	CDX	MIN	MAX		
KGMUR 2525M	●		mm	25	25	25	150	28.5	28.6	4.8	3.0	5.0 (6.0)	HH5X25	LW-4

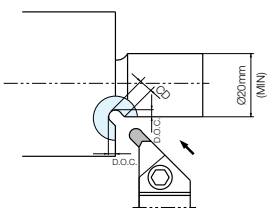
• Dimension **CDX** shows the distance from the Toolholder to the cutting edge. Ref. to the table below for the available Grooving Depth.
Dimension **WF** shows for GMM5020-RU. MAX CW in ( ) indicates external grooving inserts when installed.

Applicable Inserts

Application	Undercutting
Ref. Page	G48
Insert / Toolholder	
KGMU℠ 2525M	GMG3020..RU GMG4020..RU

• External grooving inserts (grooving width 3mm~6mm) will be attached.
(In case of using GMG○○20-○○○□□, GMM○○20-○○○□□, GMN○ insert)

Undercut Depth t



Part Number	Undercut Depth CD (mm)	Distance from the face of the workpiece. D.O.C. (mm)
GMG3020-150RU	3.5	1.8
GMG4020-200RU	4.0	1.9
GMG5020-250RU	4.5	2.1

*In case of undercutting for the diameter over 100mm, external grooving inserts GMG○○20-○○○□□, GMM○○20-○○○□□,GMN○ are also available.

● : Standard Item △ : Phaseout Item (will be removed from next catalog)
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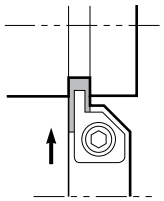
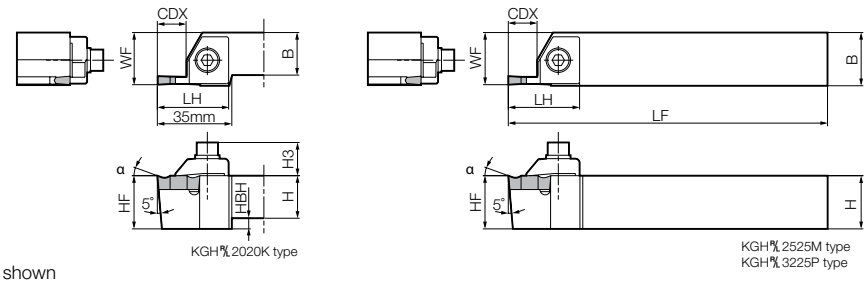
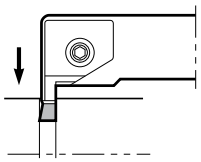
KGH

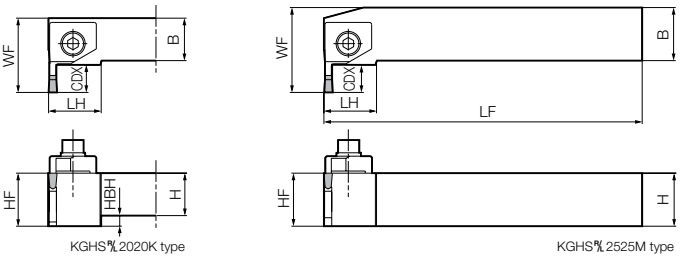




• Right-hand shown

KGHS





• Right-hand shown

Toolholder Dimensions

Part Number		Stock R	Stock L	Unit	Dimensions H	HF	HBH	B	LF	LH	WF	CDX	Spare Parts Clamp	Clamp Bolt	Washer	Spring	Wrench
KGH□	2020K-4	●	●	mm	20	20	5	20	125	33.5	24.5-24.8	13	CGH-1□	HH6X25	W-6	SP-6	LW-5
	2525M-4	●	●		25	25	-	25	150	33.5	24.5-24.8	13					
	2020K-5	●	●		20	20	5	20	125	33.5	25.0-25.8	13					
	2525M-5	●	●		25	25	-	25	150	33.5	25.0-25.8	13					
	3225P-5	●	●		32	32	-	25	170	33.5	25.0-25.8	13					
	2020K-7	●	●		20	20	5	20	125	33.5	24.5-25.0	13	CGH-2□	HH6X25	W-6	SP-6	LW-5
	2525M-7	●	●		25	25	-	25	150	33.5	24.5-25.0	13					
	2525M-10	●	●		25	25	-	25	150	41.0	25.5-26.5	17	CGH-3□	HH6X25	W-6	SP-6	LW-5
	3225P-10	●			32	32	-	25	170	41.0	25.5-26.5	17					
KGHS□	2020K-4	●	●		20	20	5	20	125	25.0	35.0	13	CGH-1□	HH6X25	W-6	SP-6	LW-5
	2525M-4	●	●		25	25	-	25	150	25.0	40.0	13					
	2020K-5	●	●		20	20	5	20	125	25.0	35.0	13					
	2525M-5	●	●		25	25	-	25	150	25.0	40.0	13					

- Dimension **CDX** shows available grooving depth.
- Dimension F1 of KGH□ Toolholder depends on the insert's edge width.
- Clamp KGH□ ... CGH-○R for Right-hand Toolholder, and CGH-○L for Left-hand Toolholder.
  KGHS□ ... CGH-○L for Right-hand Toolholder, and CGH-○R for Left-hand Toolholder.

Applicable Inserts ➡ **G57**

Rake Angle (α) after Installment of GH / GHU

GH-○○○○-○○		GHU○○-○○	
α (°)	Insert Grade	α (°)	Insert Grade
0°	A65, A66N, PT600M	10°	TN60 CR9025
10°	TC40		
20°	TN90, TC60 PR930 KW10		

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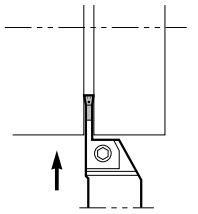
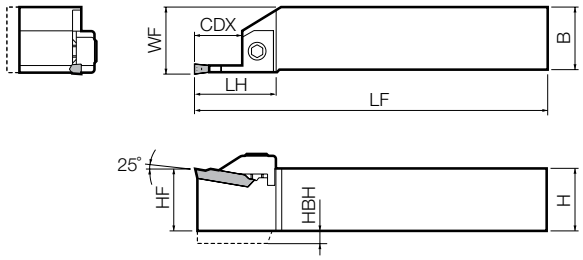
KGA





• Right-hand shown

Toolholder Dimensions

Part Number		Stock R	Stock L	Unit	Dimensions H	HF	HBH	B	LF	LH	WF	CDX	Spare Parts Clamp	Clamp Bolt	Spring	Wrench
KGA□R/L	2020K-3	●	●	mm	20	20	5	20	125	37	21.5	20	CGA-3□R/L	HH6X20	SP-6	LW-5
	2525M-3	●	●		25	25	-	25	150	37	26.5	20				
	2020K-4	●			20	20	5	20	125	37	21.5	20	CGA-4□R/L	HH6X20	SP-6	LW-5
	2525M-4	●			25	25	-	25	150	37	26.5	20				
	2020K-5	●			20	20	5	20	125	42	21.5	25	CGA-5□R/L	HH6X20	SP-6	LW-5
	2525M-5	●			25	25	-	25	150	42	26.5	25				

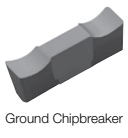
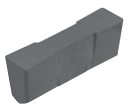
- Dimension **CDX** shows available grooving depth.
- Clamp: CGA-○R for Right-hand Toolholder, and CGA-○L for Left-hand Toolholder.

Applicable Inserts (in)

Part Number	INSL	S
GH4020-○○~GH8020-○○	0.787	0.295
GH10025-05~GH12025-05	0.984	0.295
GHU○○-○○	0.787	0.295
GA30 , GA40	0.984	0.197
GA50	1.181	0.197

		Cermet TN60	TN90	TC40	TC60	CVD Coated Carbide CR9025	PVD Coated Carbide PR930	Carbide KW10	Ceramic A65	A66N	PT600M
P	Carbon Steel / Alloy Steel						●				
M	Stainless Steel						●				
K	Cast Iron							●	○		●
N	Non-ferrous Metals							●			
S	Titanium Alloy							●			
H	Hard materials (≤40HRC)						●				
	Hard materials (≥40HRC)									○	●

Classification of Usage
● : Light Interruption / 1st Choice
◴ : Light Interruption / 2nd Choice
● : Continuous / 1st Choice
○ : Continuous / 2nd Choice

Insert (Right-handed Insert Shown)	Part Number		Dimensions (in) CW	RE	Applicable Toolholders	Ref. Page for Toolholder
 Ground Chipbreaker	GH	4020-02	0.157	0.008	KGH□R/L…4 KGHS□R/L…4	G56
		4020-05		0.020		
		4520-02	0.177	0.008		
		4520-05		0.020		
		5020-02	0.197	0.008	KGH□R/L…5 KGHS□R/L…5	
		5020-05		0.020		
		5520-02	0.217	0.008		
		5520-05		0.020		
		6020-02	0.236	0.008		
		6020-05		0.020		
		6520-02	0.256	0.008		
		6520-05		0.020		
 Ceramic		7020-02	0.276	0.008	KGH□R/L…7 KGHS□R/L…7	
		7020-05		0.020		
		7520-02	0.295	0.008		
		7520-05		0.020		
		8020-02	0.315	0.008		
		8020-05		0.020		
		10025-05	0.394	0.020	KGH□R/L…10	
		12025-05	0.472	0.020		
 Molded Chipbreaker	GHU	40-20	0.157	0.010	KGH□R/L…4 KGHS□R/L…4	G56
		50-20	0.197	0.012	KGH□R/L…5 KGHS□R/L…5	
		60-20	0.236	0.012		
	GA	30	0.118	0.008	KGA□R/L…3	
		40	0.157	0.010	KGA□R/L…4	G57
		50	0.197	0.012	KGA□R/L…5	

Ceramic insert is above shape.

Recommended Cutting Conditions ➡ **G150**

Inserts are sold in 10 piece boxes.

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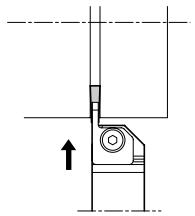
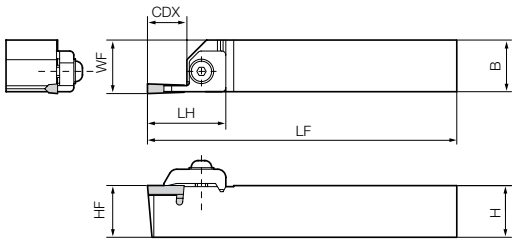
EGT





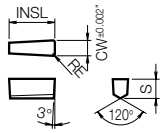
• Right-hand shown

Toolholder Dimensions

Part Number	Stock		Unit	Dimensions							Spare Parts	
											Clamp Set	Wrench
	R	L		H	HF	B	LF	LH	WF	CDX		
EGT□ 16-1	●	□	inch	1.00	1.00	1.00	6.00	1.34	1.0085~1.0285	0.63	R: HCL-009 L: HCL-011	LW-156

• Clamp Set: ETG□… HCL-009 for Right-hand Toolholder, HCL-011 for Left-hand Toolholder

Applicable Inserts

Insert Right-handed Insert Shown		Part Number	Previous Part Number	Unit	Dimensions					Insert Grade
					CW		RE	INSL	S	Ceramic
					inch	mm				**A65**
		**GG 157-20 T00320**	-	inch	0.157	4.0	0.020	0.591	0.197	●
		197-32 T00320	-		0.197	5.0	0.032	0.591	0.197	●

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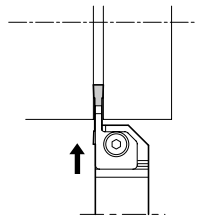
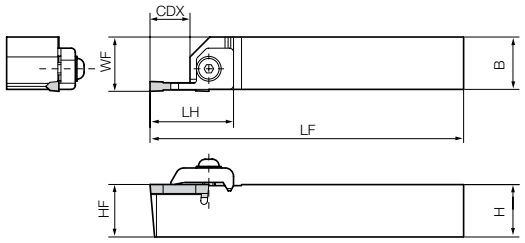
KDB





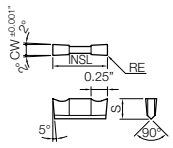
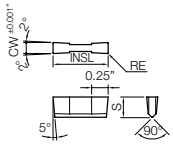
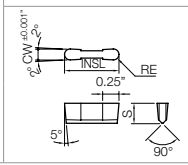
• Right-hand shown

Toolholder Dimensions

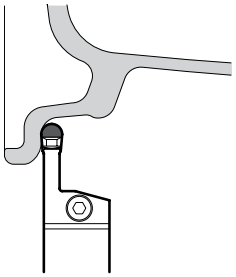
Part Number	Stock		Unit	Dimensions							Spare Parts	
											Clamp Set	Wrench
	R	L		H	HF	B	LF	LH	WF	CDX		
KDB$\frac{R}{L}$ 16-1	●	□	inch	1.00	1.00	1.00	6.00	-	1.0050~1.0360	0.75	R: HCL-009 L: HCL-011	LW-156

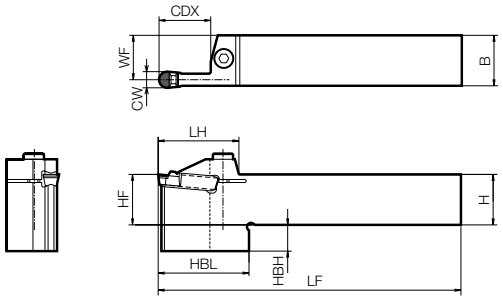
• Clamp Set: KDB$\frac{R}{L}$... HCL-009 for Right-hand Toolholder, HCL-011 for Left-hand Toolholder

Applicable Inserts

Insert		Part Number	Unit	Dimensions					Insert Grade		
				CW		RE	INSL	S	Cermet		Ceramic
				inch	mm				TN60	TC30	A65
		DB 125R15	inch	0.125	3.18	0.015	1.125	0.250	●		
		187R15		0.187	4.75	0.015	1.125	0.250		●	
		187R30		0.187	4.75	0.030	1.125	0.250	●	●	
		250R15		0.250	6.35	0.015	1.125	0.250	●		
		375R30		0.375	9.525	0.030	1.125	0.250	●	●	
		DB 125R15 T00420		0.125	3.18	0.015	1.125	0.250			●
		187R30 T00420		0.187	4.75	0.030	1.125	0.250			●
		DB 125FNR T00420		0.125	3.18	0.063	1.125	0.250			●
		187FNR T00420		0.187	4.75	0.094	1.125	0.250			●

KGMW (External / Facing / Copying)



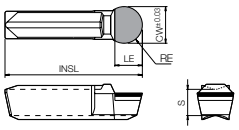
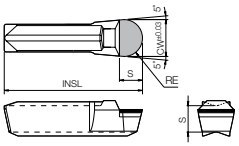


• Right-hand shown

Toolholder Dimensions

Part Number	Stock		Dimensions (mm)									Spare Parts		Applicable Inserts
												Clamp Bolt	Wrench	
	R	L	H	HF	HBH	B	LF	LH	HBL	WF	CDX			
KGMWR 2525M-6	●		25	25	13	25	150	40	55	22.8	25	HH6X25	LW-5	GMGW6030-30R

Applicable Inserts

Insert		Part Number		Dimensions (mm)						No. of Edges	PCD
				W	rε	L	H	M	S		KPD001
		**GMGW**	**6030-30R**	6	3	30	5.5	5	4.5	1	●
			8030-40R	8	4	30	5.5	6	6.0	1	●
		**GMGW**	**8030-40R-HR**	8	4	30	5.5	6	5.0	1	●

• GMGW inserts are exclusively used for KGMW type toolholder. It cannot be used for other toolholder because of its different installation angle.
• GMGW inserts Edge Preparation: R-honed Cutting Edge.

PCD Inserts are sold in 1 piece boxes.

Recommended Cutting Conditions

Workpiece Material	Recommended Insert Grade (Vc sfm)	① f (feed) during Grooving (ipr)
	PCD	② f (feed) during Traversing (ipr)
	KPD001	③ D.O.C. during Traversing (in)
Aluminum	★ 490~8,860	① 0.0020~0.0120
		② 0.0080~0.0310
		③ MAX 0.118

★ : 1st Recommendation

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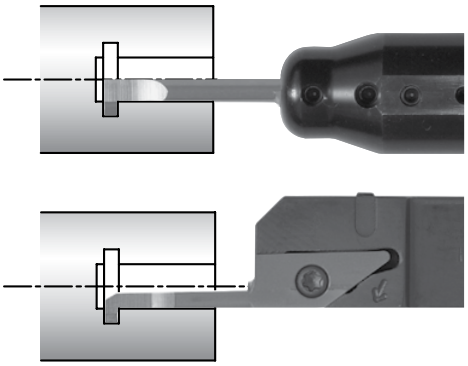
Small Diameter Internal Grooving Ø0.118"~ / (Ø3mm)~ (G59~G61)

EZ Bar / Double-Sided Micro Bar / Swiss IQ Bar



Type	EZG
Min. Bore Dia.	0.118"~0.315" (3.00mm~8.00mm)
Edge Width	0.020"~0.079" (0.50mm ~ 2.00mm)
Grooving Depth	0.039"~0.079" (1.00mm ~ 2.00mm)
Ref. Page	G63



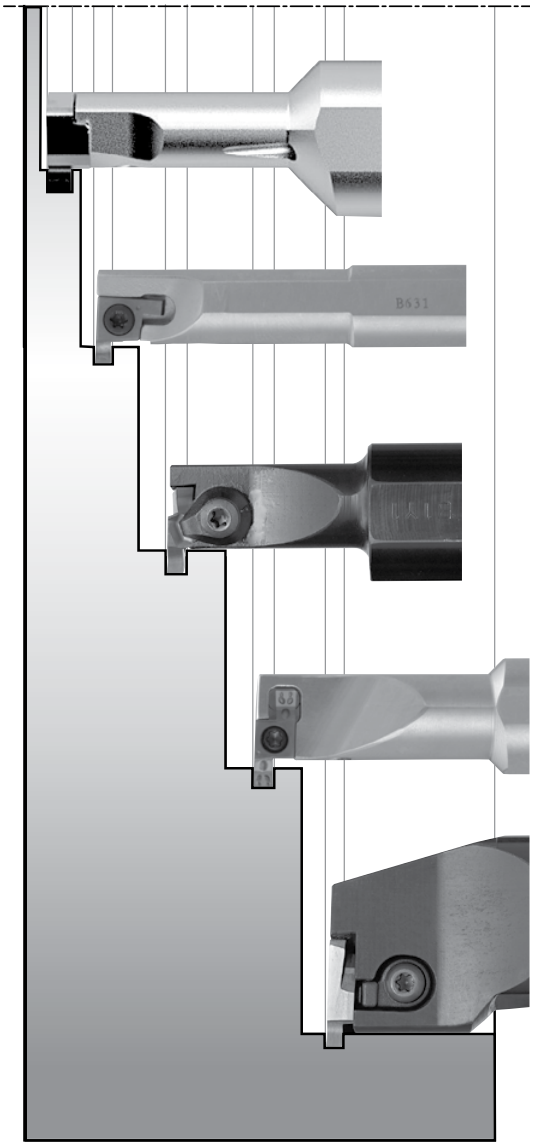
EZ Bars

Type	VNG
Min. Bore Dia.	0.158"~0.276" (4.0mm~7.0mm)
Edge Width	0.039"~0.079" (1.0mm ~ 2.0mm)
Grooving Depth	0.032"~0.079" (0.8mm ~ 2.0mm)
Ref. Page	G65



Swiss IQ Bars

Internal Shallow Grooving Ø0.315"~ / (Ø8mm)~ (G65~G77)

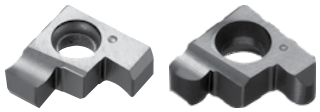


Type	SIGC
Min. Bore Dia.	8.0mm~12.00mm
Edge Width	1.0mm ~ 3.0mm
Grooving Depth	1.0mm ~ 3.0mm
Ref. Page	G69



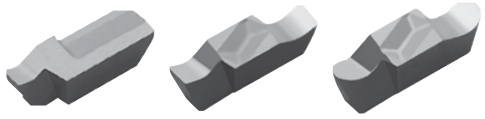
1-Edge
Ground Chipbreaker

Type	SIGE
Min. Bore Dia.	0.315"~0.375" (8.0mm~12.00mm)
Edge Width	0.039"~0.118" (1.0mm ~ 3.0mm)
Grooving Depth	0.059"~0.087" (1.5mm ~ 2.2mm)
Ref. Page	G73



2-Edge
Ground Chipbreaker
2-Edge
Ground Chipbreaker Full-R

Type	SI-GIV / GIV
Min. Bore Dia.	0.472"~0.984" (12.0mm~40.0mm)
Edge Width	0.031"~0.197" (1.0mm~5.0mm)
Grooving Depth	0.067"~0.248" (1.7mm~6.5mm)
Ref. Page	G78



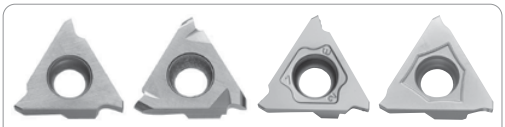
1-Edge
Ground Chipbreaker
2-Edge
Ground Chipbreaker
2-Edge
Ground Chipbreaker Full-R

Type	SIGE
Min. Bore Dia.	0.551"~1.575" (14.0mm~40.0mm)
Edge Width	0.039"~0.197" (1.0mm~5.0mm)
Grooving Depth	0.098"~0.256" (2.5mm~6.5mm)
Ref. Page	G73

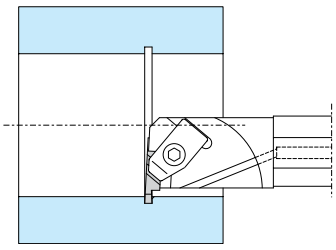


2-Edge
Molded Chipbreaker
2-Edge
Ground Chipbreaker
2-Edge
Ground Chipbreaker Full-R

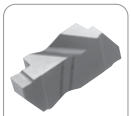
Type	KIGBA
Min. Bore Dia.	1.378"~1.575" (35.0mm~40.0mm)
Edge Width	0.013"~0.189" (0.33mm~4.8mm)
Grooving Depth	0.032"~0.110" (0.8mm~2.8mm)
Ref. Page	G80



Ground Chipbreaker
Ground Chipbreaker Full-R
GM Chipbreaker
MY Chipbreaker

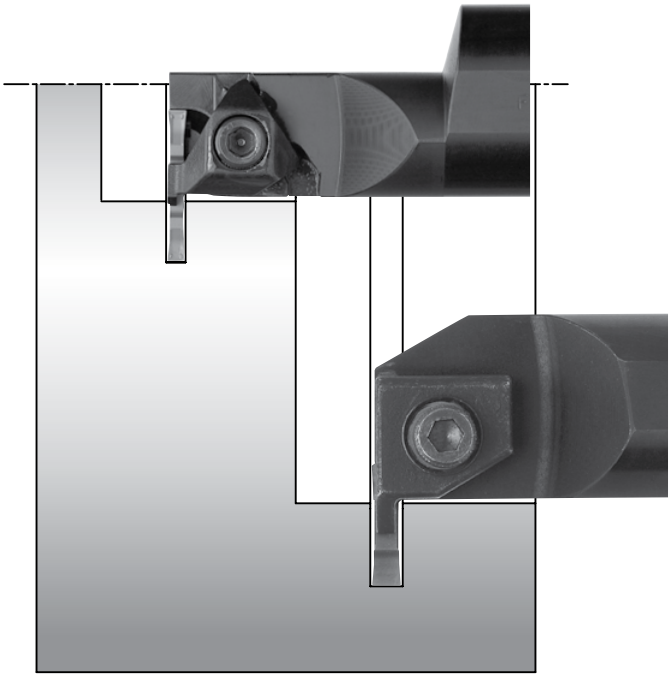


Type	A-KKC
Min. Bore Dia.	1.000"~2.750"
Edge Width	0.031"~0.189"
Grooving Depth	0.040"~0.240"
Ref. Page	G91

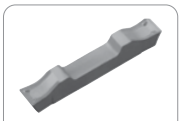


Ground Chipbreaker

Internal Deep Grooving (G86, G88)

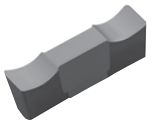


Type	KGIA
Min. Bore Dia.	1.260"~2.598" (32.0mm~66.0mm)
Edge Width	0.118"~0.197" (3.0mm ~ 5.0mm)
Grooving Depth	0.394"~0.591" (10.0mm ~ 15.0mm)
Ref. Page	G88



Molded Chipbreaker

Type	KIGH
Min. Bore Dia.	1.772"~2.559" (45.0mm~65.0mm)
Edge Width	1.575"~0.315" (4.0mm~8.0mm)
Grooving Depth	0.472" (12.0mm)
Ref. Page	G86

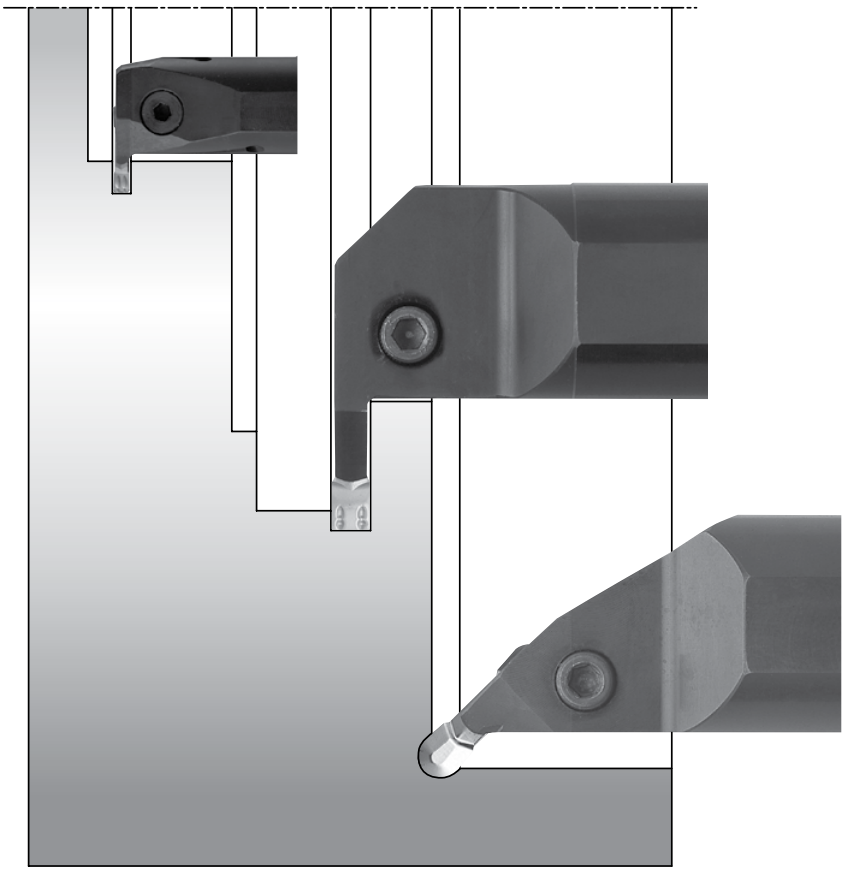


Ground Chipbreaker



Molded Chipbreaker

Internal Grooving & Traversing Ø0.787"~ (Ø20mm~) (G84, G87, G89)



Type	KGDI
Min. Bore Dia.	0.709"~1.575" (18.0mm~40.0mm)
Edge Width	0.079"~0.197" (2.0mm~5.0mm)
Grooving Depth	0.177"~0.433" (4.5mm~11.0mm)
Ref. Page	G84



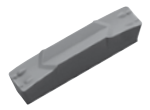
Molded Chipbreaker

Type	KIGM-V
Min. Bore Dia.	0.787"~1.575" (20.0mm~40.0mm)
Edge Width	0.118"~0.197" (3.0mm~5.0mm)
Grooving Depth	0.217"~0.433" (5.5mm~11.0mm)
Ref. Page	G89



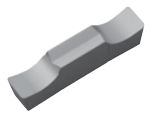
Molded Chipbreaker Full-R

Type	KIGM-8
Min. Bore Dia.	2.559" (65.0mm)
Edge Width	0.315" (8.0mm)
Grooving Depth	0.787" (20mm)
Ref. Page	G87



Molded Chipbreaker

Type	KIGMU-8
Min. Bore Dia.	2.559" (65.0mm)
Edge Width	0.315" (8.0mm)
Grooving Depth	0.087" (2.2mm)
Ref. Page	G87



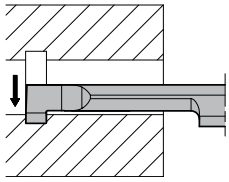
Ground Chipbreaker

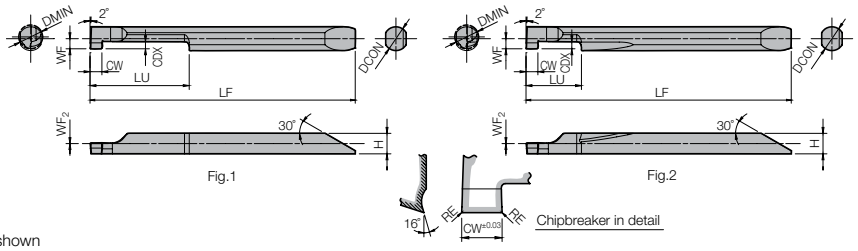


Molded Chipbreaker Full-R

800.823.7284
Visit us online at KyoceraPrecisionTools.com

EZG (Small Diameter Internal Grooving)





• Right-hand shown

Micro Bar Dimensions

Part Number		Min. Bore Dia.	Dimensions (mm)									Drawing	MEGACOAT PR1225		Carbide GW05	Applicable Sleeves F33~F37
		DMIN	CW±0.03*	RE	DCON	H	LF	LU	WF	WF2	CDX		R	L	R	
EZG®	040040-050	4	0.5	±0.013 0.05	4	3.45	44.7	12	1.70	0	1.0	Fig.2	●	●	●	EZH040..
	040040-100	4	1.0		4	3.45	44.7	12	1.70	0	1.0		●	●	●	
	040040-150	4	1.5		4	3.45	44.7	12	1.70	0	1.0		●	●	●	
	040040-200	4	2.0		4	3.45	44.7	12	1.70	0	1.0		●	●	●	
	050050-100	5	1.0		5	4.30	52.8	20	2.15	0	1.5	Fig.1	●	●	●	EZH050..
	050050-150	5	1.5		5	4.30	52.8	20	2.15	0	1.5		●	●	●	
	050050-200	5	2.0		5	4.30	52.8	20	2.15	0	1.5		●	●	●	
	060060-100	6	1.0		6	5.15	60.7	20	2.65	0	2.0	Fig.1	●	●	●	EZH060..
	060060-150	6	1.5		6	5.15	60.7	20	2.65	0	2.0		●	●	●	
	060060-200	6	2.0		6	5.15	60.7	20	2.65	0	2.0		●	●	●	
	070070-100	7	1.0		7	6.20	63.7	25	3.05	0	2.0	Fig.1	●	●	●	EZH070..
	070070-150	7	1.5		7	6.20	63.7	25	3.05	0	2.0		●	●	●	
	070070-200	7	2.0		7	6.20	63.7	25	3.05	0	2.0		●	●	●	
	080070-100	8	1.0		7	6.20	63.7	25	3.45	0	2.0		●	●	●	
	080070-150	8	1.5		7	6.20	63.7	25	3.45	0	2.0		●	●	●	
	080070-200	8	2.0		7	6.20	63.7	25	3.45	0	2.0		●	●	●	
EZGR	030030-050S	3	0.5	±0.013 0.05	3	2.50	38.7	5	1.25	0	0.8	Fig.2	●			EZH030..
	030030-100S	3	1.0		3	2.50	38.7	5	1.25	0	0.8		●			
	040040-050S	4	0.5		4	3.45	44.7	8	1.70	0	1.0	Fig.2	●			EZH040..
	040040-100S	4	1.0		4	3.45	44.7	8	1.70	0	1.0		●			
	040040-150S	4	1.5		4	3.45	44.7	8	1.70	0	1.0		●			
	040040-200S	4	2.0		4	3.45	44.7	8	1.70	0	1.0		●			
	050050-100S	5	1.0		5	4.30	52.8	10	2.15	0	1.5	Fig.2	●			EZH050..
	050050-150S	5	1.5		5	4.30	52.8	10	2.15	0	1.5		●			
	050050-200S	5	2.0		5	4.30	52.8	10	2.15	0	1.5		●			
	060060-100S	6	1.0		6	5.15	60.7	10	2.65	0	2.0	Fig.2	●			EZH060..
	060060-150S	6	1.5		6	5.15	60.7	10	2.65	0	2.0		●			
	060060-200S	6	2.0		6	5.15	60.7	10	2.65	0	2.0		●			
	070070-100S	7	1.0		7	6.20	63.7	10	3.05	0	2.0	Fig.2	●			EZH070..
	070070-150S	7	1.5		7	6.20	63.7	10	3.05	0	2.0		●			
	070070-200S	7	2.0		7	6.20	63.7	10	3.05	0	2.0		●			
	080070-100S	8	1.0		7	6.20	63.7	10	3.45	0	2.0		●			
	080070-150S	8	1.5		7	6.20	63.7	10	3.45	0	2.0		●			
	080070-200S	8	2.0		7	6.20	63.7	10	3.45	0	2.0		●			

- Dimension **CDX** shows available grooving depth
- "S" in part number represents short length

EZ Bar Identification System

EZ G R 030 030 – 050 S

EZ	Application	Hand of Tool	Min. Bore Dia.	Shank Dia.	Groove Width	Type
Symbol of Bar						
	G: Internal Grooving	R: Right-hand L: Left-hand	030 : 3mm 040 : 4mm ⋮	030 : 3mm 040 : 4mm ⋮	050 : 0.5mm 100 : 1.0mm ⋮	S: Short Length (LU dimension)

Recommended Cutting Conditions

Workpiece Material	Recommended Insert Grade (Vc sfm)		EZGR030030-...S	EZGR040040-...(S) EZGR050050-...(S)	EZGR060060-...(S) EZGR070070-...(S) EZGR080070-...(S)	Notes
	MEGACOAT	Carbide				
	PR1225	GW05	Feed Rate (ipr)			
Carbon Steel / Alloy Steel	★ 100~330	-	~0.0008	~0.0012	~0.0020	Wet
Stainless Steel	★ 100~260	-	~0.0004	~0.0008	~0.0012	
Non-Ferrous	-	★ ~980	-	~0.0020	~0.0031	

EZ Bars are sold in 1 piece boxes.

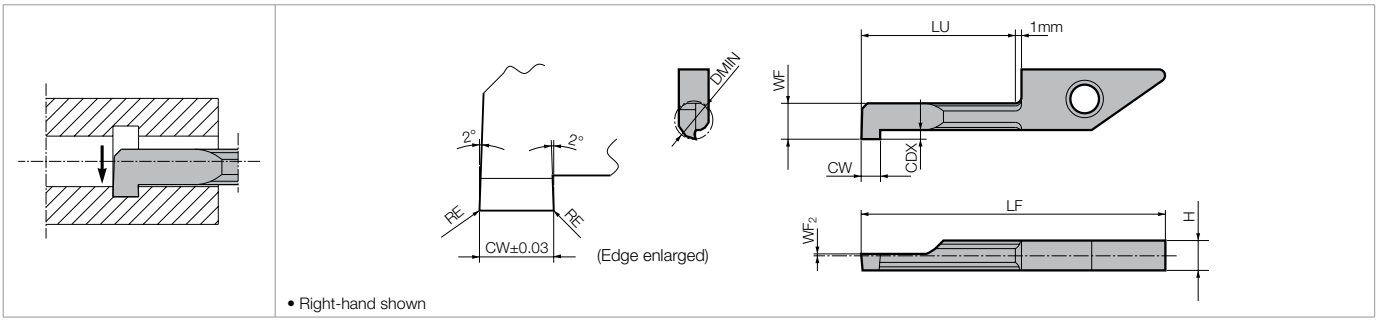
★ : 1st Recommendation

● : Standard Item △ : Phaseout Item (will be removed from next catalog)
Contact your local Kyocera sales engineer to upgrade old products to new technology

Sleeve Part Number				Applicable Intenal Grooving Bar		Applicable Machine Manufacturer
EZH-CT (Adjustable Overhang Length / with Coolant Hole) → F32-F33	EZH-HP (Adjustable Overhang Length) → F34-F35	EZH-ST → F36-F37	Sleeve Shank Dia. DCON (mm)	EZG	EZ Bar Shank Dia. DCON (mm)	
-	-	EZH 03012ST-80	12.00	EZG_ 030030-...	3	(General purpose)
		04012ST-80		EZG_ 040040-...	4	
		05012ST-80		EZG_ 050050-...	5	
		06012ST-80		EZG_ 060060-...	6	
		07012ST-80		EZG_ 070070-...	7	
				EZG_ 080070-...	8	
-	EZH 03016HP-100	EZH 03016ST-100	16.00	EZG_ 030030-...	3	(General purpose)
	04016HP-100	04016ST-100		EZG_ 040040-...	4	
	05016HP-100	05016ST-100		EZG_ 050050-...	5	
	06016HP-100	06016ST-100		EZG_ 060060-...	6	
	07016HP-100	07016ST-100		EZG_ 070070-...	7	
				EZG_ 080070-...	8	
EZH 03019CT-120	EZH 03019HP-120	EZH 03019ST-120	0.750"	EZG_ 030030-...	3	Citizen Machinery
04019CT-120	04019HP-120	04019ST-120		EZG_ 040040-...	4	
05019CT-120	05019HP-120	05019ST-120		EZG_ 050050-...	5	
06019CT-120	06019HP-120	06019ST-120		EZG_ 060060-...	6	
07019CT-120	07019HP-120	07019ST-120		EZG_ 070070-...	7	
				EZG_ 080070-...	8	
EZH 03020CT-120	EZH 03020HP-120	EZH 03020ST-120	20.00	EZG_ 030030-...	3	Amada Machine Tools Eguro Tsugami Citizen Machinery (General purpose)
04020CT-120	04020HP-120	04020ST-120		EZG_ 040040-...	4	
05020CT-120	05020HP-120	05020ST-120		EZG_ 050050-...	5	
06020CT-120	06020HP-120	06020ST-120		EZG_ 060060-...	6	
07020CT-120	07020HP-120	07020ST-120		EZG_ 070070-...	7	
				EZG_ 080070-...	8	
EZH 03022CT-135	EZH 03022HP-135	EZH 03022ST-135	22.00	EZG_ 030030-...	3	Star Micronics Nomura DS Tsugami
04022CT-135	04022HP-135	04022ST-135		EZG_ 040040-...	4	
05022CT-135	05022HP-135	05022ST-135		EZG_ 050050-...	5	
06022CT-135	06022HP-135	06022ST-135		EZG_ 060060-...	6	
07022CT-135	07022HP-135	07022ST-135		EZG_ 070070-...	7	
				EZG_ 080070-...	8	
EZH 03025.0CT-135	EZH 03025.0HP-135	EZH 03025.0ST-135	25.00	EZG_ 030030-...	3	Amada Machine Tools Eguro Tsugami Citizen Machinery (General purpose)
04025.0CT-135	04025.0HP-135	04025.0ST-135		EZG_ 040040-...	4	
05025.0CT-135	05025.0HP-135	05025.0ST-135		EZG_ 050050-...	5	
06025.0CT-135	06025.0HP-135	06025.0ST-135		EZG_ 060060-...	6	
07025.0CT-135	07025.0HP-135	07025.0ST-135		EZG_ 070070-...	7	
				EZG_ 080070-...	8	
EZH 03025.4CT-120	EZH 03025.4HP-120	EZH 03025.4ST-120	1.000"	EZG_ 030030-...	3	Citizen Machinery
04025.4CT-120	04025.4HP-120	04025.4ST-120		EZG_ 040040-...	4	
05025.4CT-120	05025.4HP-120	05025.4ST-120		EZG_ 050050-...	5	
06025.4CT-120	06025.4HP-120	06025.4ST-120		EZG_ 060060-...	6	
07025.4CT-120	07025.4HP-120	07025.4ST-120		EZG_ 070070-...	7	
				EZG_ 080070-...	8	

- Choose sleeves' (DCON) that match with DCON dimension of Internal Grooving Bars.
- Adjustment Pin cannot be installed to EZH-ST Sleeves. To adjust overhang of the bar, please use EZH-CT/HP Sleeves.
- Machine manufacturers in random order.

VNG



• Right-hand shown

Dimensions

Classification of Usage
● : Light Interruption / 1st Choice
◔ : Light Interruption / 2nd Choice
● : Continuous / 1st Choice
○ : Continuous / 2nd Choice

		MEGA COAT	PVD	Carbide	PCD		Ref. Page for Toolholder
P	Carbon Steel / Alloy Steel	●	○				
M	Stainless Steel	●	○				
K	Cast Iron			●			
N	Non-ferrous Metals				●		
S	Titanium Alloy				●		
H	Hard materials (≤40HRC)	○	○				
	Hard materials (≥40HRC)						

Part Number		Min. Bore Dia.	Dimensions (mm)									MEGA COAT	PVD	Carbide	PCD		Ref. Page for Toolholder
			CW		RE	H	LF	LU	WF	WF_2	CDX						
		DMIN	inch	mm								PR1225	PR930	KW10	KPD001	KPD010	
VNGR	0410-11	4	0.039	1.0	0.05	3.9	30.8	11	0.1	3.5	0.8	●	●	●			
	0420-11	4	0.079	2.0	0.05	3.9	30.8	11	0.1	3.5	0.8	●	●	●			
	0510-11	5	0.039	1.0	0.05	3.9	30.8	11	0.1	4.4	1.0	●	●	●			
	0520-11	5	0.079	2.0	0.05	3.9	30.8	11	0.1	4.4	1.0	●	●	●			
	0610-20	6	0.039	1.0	0.05	3.9	39.8	20	0.3	5.2	1.8	●	●	●			
	0620-20	6	0.079	2.0	0.05	3.9	39.8	20	0.3	5.2	1.8	●	●	●			
	0710-20	7	0.039	1.0	0.05	3.9	39.8	20	0.3	6.2	2.0	●	●	●			
	0720-20	7	0.079	2.0	0.05	3.9	39.8	20	0.3	6.2	2.0	●	●	●			F40 F41
VNGR	0410-11NB	4	0.039	1.0	0.05	3.9	30.8	11	0.1	3.5	0.8				□		
	0420-11NB	4	0.079	2.0	0.05	3.9	30.8	11	0.1	3.5	0.8				□		
	0510-11NB	5	0.039	1.0	0.05	3.9	30.8	11	0.1	4.4	1.0				□		
	0520-11NB	5	0.079	2.0	0.05	3.9	30.8	11	0.1	4.4	1.0				□		
	0610-20NB	6	0.039	1.0	0.05	3.9	39.8	20	0.3	5.2	1.8				□	□	
	0620-20NB	6	0.079	2.0	0.05	3.9	39.8	20	0.3	5.2	1.8				□	□	
	0710-20NB	7	0.039	1.0	0.05	3.9	39.8	20	0.3	6.2	2.0				□	□	
	0720-20NB	7	0.079	2.0	0.05	3.9	39.8	20	0.3	6.2	2.0				□		

- Dimension **CDX** shows available grooving depth
- Dimension **WF_2** indicates the cutting edge is above the tool's center position

Recommended Cutting Conditions

Workpiece Material	Recommended Insert Grade (Vc sfm)			VNG04 VNG05	VNG06 VNG07	Notes
	MEGACOAT	PVD	Carbide			
	PR1225	PR930	KW10	Feed Rate (ipr)		
Carbon Steel / Alloy Steel	★ 100~325	☆ 100~325	-	~0.0012	~0.0020	Wet
Stainless Steel	★ 100~250	☆ 100~250	-	~0.0008	~0.0012	
Non-ferrous Metals	-	-	★ ~975	~0.0020	~0.0031	

★ : 1st Recommendation ☆ : 2nd Recommendation

Swiss IQ Bars are sold in 5 piece boxes. *CBN & PCD Inserts are sold in 1 piece boxes.*

● : Standard Item △ : Phaseout Item (will be removed from next catalog)
Contact your local Kyocera sales engineer to upgrade old products to new technology

SIGC

Small Internal Grooving Series

New Clamping System Ensures a Firm Insert Hold for High-Precision Machining

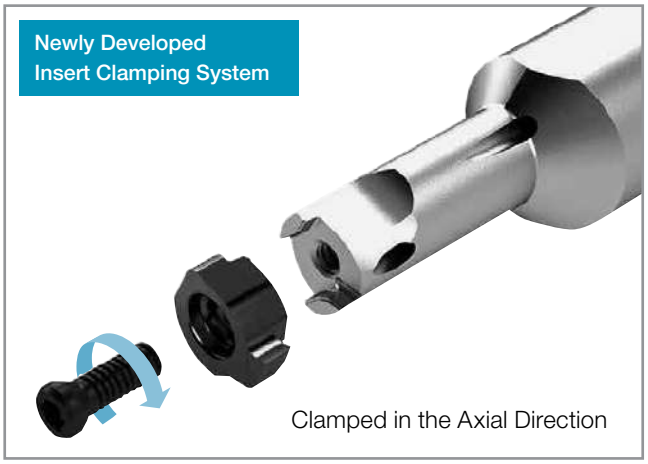
Excellent Chip Evacuation with Double Coolant Holes

Optimized Flute Shape with a ø8mm Minimum Bore Diameter

1 Firm Insert Clamping System for High-Precision Machining

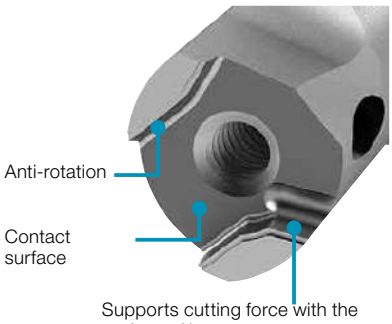
High strength clamping action by pulling the bottom surface of the insert in axial direction

Stable machining is achieved by ensuring a firm clamp on the insert



Clamping Part

Large contact surface improves chip stability

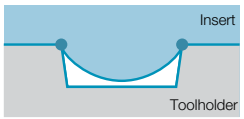


SIGC



Bottom Surface Contact

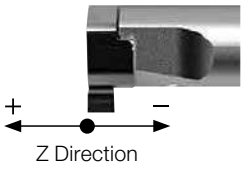
Competitor A

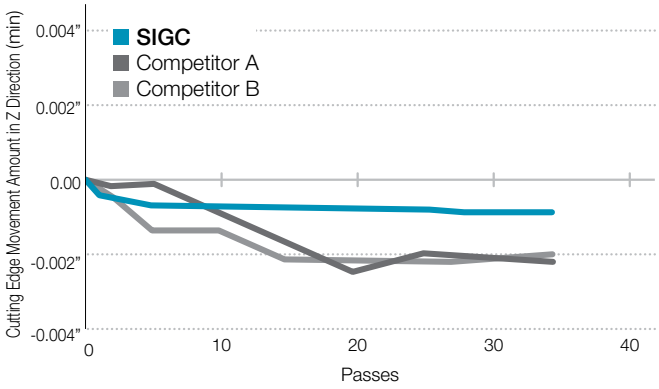


Point Contact

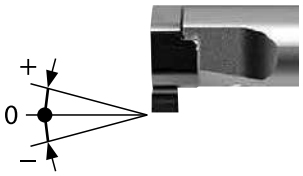
Cutting Edge Stability Position Comparison (Internal evaluation)

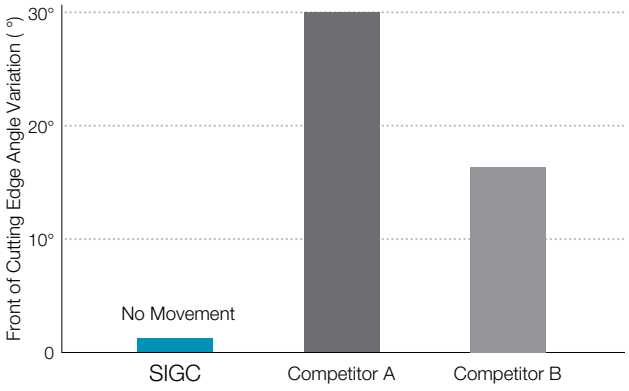
Cutting Edge Movement Amount in Z Direction (in.)





Front of Cutting Edge Angle Variation (°)





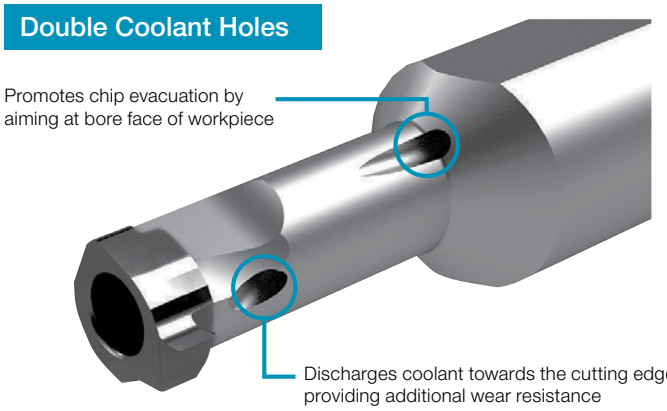
Cutting Conditions : Vc = 160 sfm, D.O.C. = 0.008", f = 0.002 ipr, Wet Workpiece: 4137 External Turning

SIGC ensures high precision machining by preventing cutting edge position movement

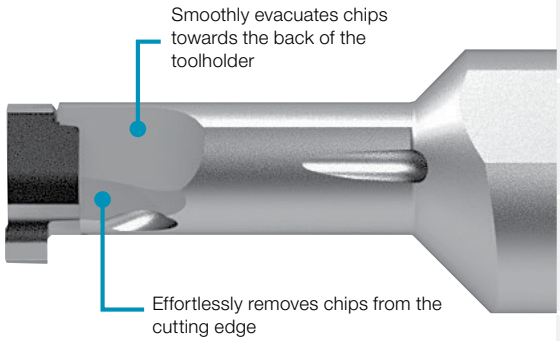
2 Firm Insert Clamping System for High-Precision Machining

Excellent chip evacuation with double coolant holes and optimized flute shape

Double Coolant Holes



Flute Shape

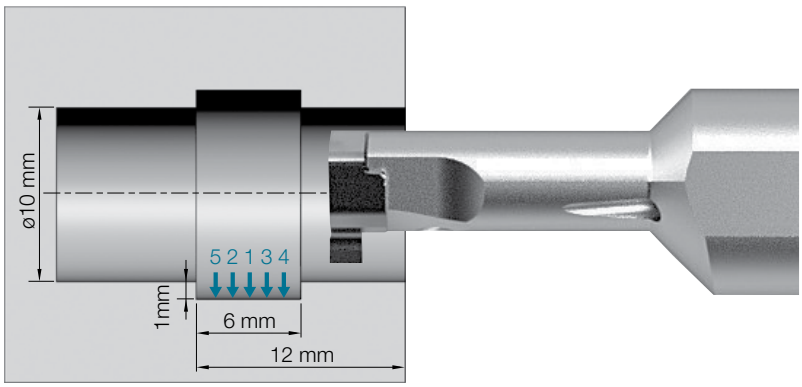


Provides better solutions for chip evacuation in small internal grooving applications

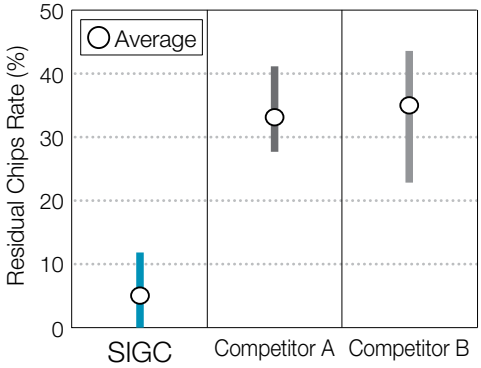
Prevents chip crunching

Chip Evacuation Comparison (Internal evaluation)

Cutting Conditions : Vc = 164 sfm, D.O.C. = 0.039" (Shouldering), f = 0.001 ipr, Wet (Internal Coolant), Workpiece : SCM415 (JIS), With Edge Width 0.079"

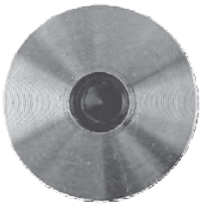
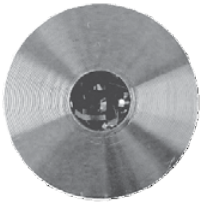
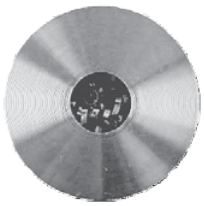


Residual Chips Rate (%)



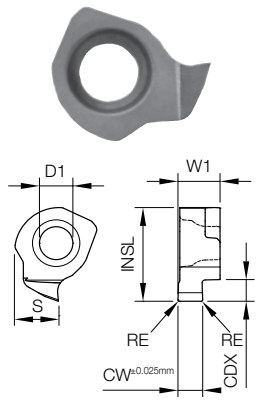
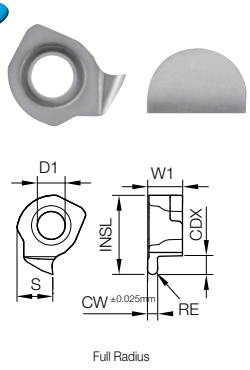
$$\text{Residual Chips Rate (\%)} = \frac{\text{Weight of remaining chip in the hole (g)}}{\text{Weight of chips removed (g)}} \times 100$$

Chip Evacuation Comparison

SIGC	Competitor A	Competitor B
		
		

No Remaining Chips
Good Chip Evacuation

Applicable Inserts

Insert (Right-handed Insert Shown)	Part Number	CW	CDX	RE	W1	INSL	S	D1	MEGACOAT NANO PLUS PR1725 R	MEGACOAT NANO PLUS PR1725 L	MEGACOAT NANO PR1535 R	MEGACOAT NANO PR1535 L	Applicable Toolholders
	GC08R 100-005	1.00	1.5	0.05	3.4	7.7	3.5	2.7	●	●	●	●	SIGCR0812-EH SIGCR0806-WH
	GC08R 120-005	1.20							●	●	●	●	
	GC08R 125-005	1.25							●	●	●	●	
	GC08R 150-010	1.50		0.1					●	●	●	●	
	GC08R 200-010	2.00							●	●	●	●	
	GC10R 100-005	1.00	2.2	0.05	4.7	9.6	4.4	3.5	●	●	●	●	SIGCR1016-EH SIGCR1008-WH-L85 SIGCR1008-WH-L100
	GC10R 120-005	1.20							●	●	●	●	
	GC10R 125-005	1.25							●	●	●	●	
	GC10R 145-010	1.45		0.1					●	●	●	●	
	GC10R 150-010	1.50							●	●	●	●	
	GC10R 200-010	2.00							●	●	●	●	
	GC10R 250-020	2.50		0.2					●	●	●	●	
	GC10R 300-020	3.00							●	●	●	●	
	GC12R 100-005	1.00	2.2	0.05	4.7	11.6	5.4	3.5	●	●	●	●	SIGCR1216-EH SIGCR1210-WH-L95 SIGCR1210-WH-L110
	GC12R 120-005	1.20							●	●	●	●	
	GC12R 125-005	1.25							●	●	●	●	
	GC12R 145-010	1.45		0.1					●	●	●	●	
	GC12R 150-010	1.50							●	●	●	●	
	GC12R 200-010	2.00							●	●	●	●	
	GC12R 250-020	2.50		0.2					●	●	●	●	
	GC12R 300-020	3.00							●	●	●	●	
NEW  Full Radius	GC08R 100-050R	1.00	1.5	0.5	3.4	7.7	3.5	2.7	●		●		SIGCR0812-EH SIGCR0806-WH
	GC08R 200-100R	2.00		1.0					●		●		
	GC10R 100-050R	1.00	2.2	0.5	4.7	9.6	4.4	3.5	●		●		SIGCR1016-EH SIGCR1008-WH-L85 SIGCR1008-WH-L100
	GC10R 200-100R	2.00		1.0					●		●		
	GC12R 100-050R	1.00	2.2	0.5	4.7	11.6	5.4	3.5	●		●		SIGCR1216-EH SIGCR1210-WH-L95 SIGCR1210-WH-L110
	GC12R 200-100R	2.00		1.0					●		●		

- Dimension **CDX** shows available grooving depth.

Inserts are sold in 5 piece boxes.

Recommended Cutting Conditions

Workpiece	Recommended Insert Grade (Vc : sfm) MEGACOAT NANO PLUS PR1725	MEGACOAT NANO PR1535	(1) Feed Rate for Grooving (ipr) / (2) Feed Rate for Traversing (ipr) / (3) D.O.C. for Traversing (in) GC08R...	GC10R, GC12R 100 ~ 200...	GC10R, GC12R 250 ~ 300...	Notes
Carbon Steel	★ 160 - 260	☆ 160 - 260	(1) 0.0004 ~ 0.0012	(1) 0.0008 ~ 0.0016	(1) 0.0008 ~ 0.0016	Coolant
			(2) 0.0004 ~ 0.0012	(2) 0.0008 ~ 0.0016	(2) 0.0008 ~ 0.0016	
			(3) Max. 0.0020	(3) Max. 0.0020	(3) Max. 0.0039	
Alloy Steel	★ 160 - 260	☆ 160 - 260	(1) 0.0004 ~ 0.0012	(1) 0.0008 ~ 0.0016	(1) 0.0008 ~ 0.0016	
			(2) 0.0004 ~ 0.0012	(2) 0.0008 ~ 0.0016	(2) 0.0008 ~ 0.0016	
			(3) Max. 0.0020	(3) Max. 0.0020	(3) Max. 0.0039	
Stainless Steel	☆ 160 - 260	★ 160 - 260	(1) 0.0004 ~ 0.0012	(1) 0.0004 ~ 0.0012	(1) 0.0004 ~ 0.0012	
			(2) 0.0004 ~ 0.0012	(2) 0.0004 ~ 0.0012	(2) 0.0004 ~ 0.0012	
			(3) Max. 0.0020	(3) Max. 0.0020	(3) Max. 0.0039	

★ : 1st Recommendation ☆ : 2nd Recommendation

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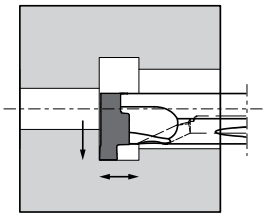
(Technical Support) 800.823.7284 - Option 2
Visit us online at KyoceraPrecisionTools.com

● : Standard Item △ : Phaseout Item (will be removed from next catalog)
Contact your local Kyocera sales engineer to upgrade old products to new technology

SIGC Bar (With Coolant Hole)



Excellent Bar

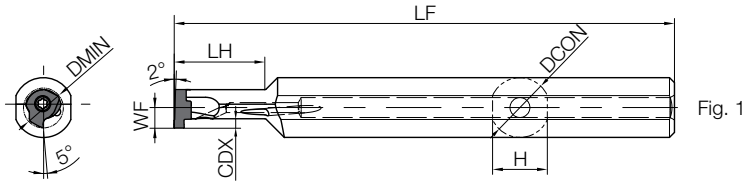


Fig. 1

Carbide Shank Bar

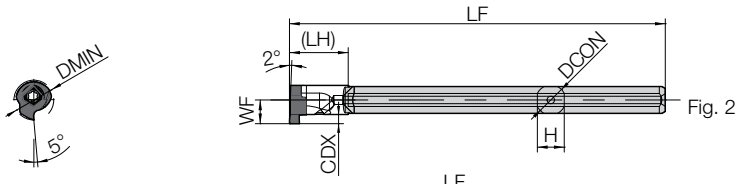


Fig. 2

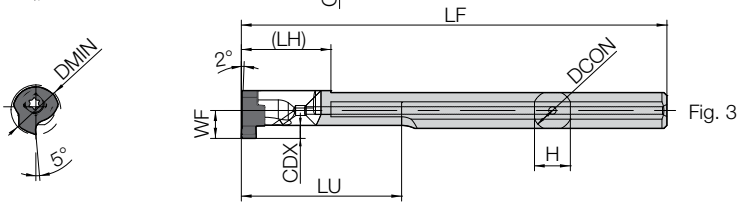


Fig. 3

• Right-hand shown

Right-Hand Insert for Right-Hand Toolholder, Left-Hand Insert for Left-Hand Toolholder

Toolholder Dimensions

Part Number	Stock		Min. Bore Dia.	Dimensions (mm)							Drawing	Spare Parts		Applicable Inserts ➡ G68
												Clamp Screw	Wrench	
	R	L	DMIN	DCON	H	LF	LU	LH	WF	CDX				
SIGC□ 0812-EH	●	●	8	12	11	100	-	18	4.1	1.5	Fig.1	SB-2270T□	FT-7	GC08□100-005 ~ GC08□200-010
SIGC□ 1016-EH	●	●	10	16	15	100	-	21	5.0	2.2		SB-3070T□	FT-8	GC10□100-005 ~ GC10□300-020
SIGC□ 1216-EH	●	●	12	16	15	110	-	25	6.0	2.2				GC12□100-005 ~ GC12□300-020
SIGC□ 0806-WH	●	●	8	6	5.4	75	-	12	4.8	1.5	Fig.2	SB-2270T□	FT-7	GC08□100-005 ~ GC08□200-010
SIGC□ 1008-WH-L85	●	●	10	8	7.2	85	32	18	5.6	2.2	Fig.3	SB-3070T□	FT-8	GC10□100-005 ~ GC10□300-020
SIGCR 1008-WH-L100	●					100	45							GC10R100-005 ~ GC10R300-020
SIGCR 1210-WH-L95	●		12	10	9.2	95	32		6.6					GC12R100-005 ~ GC12R300-020
SIGC□ 1210-WH-L110	●	●				110	45							GC12□100-005 ~ GC12□300-020

Mounting Inserts

Use compressed air or other measures to remove chips or debris from the insert pocket
Mount the insert into the toolholder and ensure the bottom makes contact with the end of the toolholder's surface
Keeping the insert seated, tighten the insert clamp screw at an appropriate torque
Recommended tightening torque for clamp screw: 0.8 Nm (SB-2270TR) 1.2 Nm (SB-3070TR)
L-hand clamp screw for L-hand Toolholders (See table to the right)

GC**R-***	GC**L-***
Right-hand screw	Left-hand screw
Toolholder : SIGCR****-**	Toolholder : SIGCL****-**
Insert : GC**R-***	Insert : GC**L-***
Clamp Screw : SB-****TR	Clamp Screw : SB-****TL

Applicable Sleeve

Shank Size (Diameter : mm)	06 (6 mm)	08 (8 mm)	10 (10 mm)	12 (12 mm)	16 (16 mm)
Toolholders	SIGC□ 0806-WH	SIGC□ 1008-WH-L85 SIGC□ 1008-WH-L100	SIGC□ 1210-WH-L95 SIGC□ 1210-WH-L110	SIGC□ 0812-EH	SIGC□ 1016-EH SIGC□ 1216-EH
SH Sleeve (for Boring Bars)	SH 06…	SH 08…	SH 10…	SH 12…	SH 16…
SHC Sleeve (for Coolant-Through)	-	SHC 08…	SHC 10…	SHC 12…	SHC 16…
SHA Sleeve	-	SHA 08…	SHA 10…	SHA 12…	-
EZH Sleeve (for EZ Bars)	EZH 06…ST/CT/HP…	EZH 08…ST/CT/HP…	-	-	-

Remove the positioning pin when mounting SIGC to the EZH-CT/HP Sleeve.
(Positioning function is not available.)

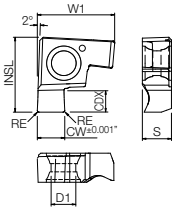
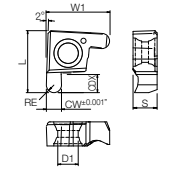
Applicable Inserts

(in)

Part Number	W1	INSL	S	D1
GE□...-A	0.263	0.256	0.102	0.098
GER...-AR				
GE□...-B	0.333	0.323	0.125	0.106
GER...-BR				

		Cermet	MEGACOAT	PVD Coated Carbide	Carbide	
P	Carbon Steel / Alloy Steel		●	◔		
M	Stainless Steel		●	◔		
K	Cast Iron					◔
N	Non-ferrous Metals					●
S	Titanium Alloy					●
H	Hard materials (≤40HRC)		●	○		

Classification of Usage
● : Light Interruption / 1st Choice
◔ : Light Interruption / 2nd Choice
● : Continuous / 1st Choice
○ : Continuous / 2nd Choice

Insert (Right-handed Insert Shown)	Part Number	Dimensions (in) CW inch	CW mm	CDX	RE	TN6020 R	TN6020 L	PR1225 R	PR1225 L	PR1025 R	PR1025 L	GW15 R	GW15 L	KW10 R	KW10 L	Applicable Toolholders	Ref. Page for Toolholder
 2-Edge 	GE□ 031-002A	0.031	-	0.037	0.002					●	●					SIGE□05EH SIGE□...A-EH SIGE□...A-WH	G73 G74
	GE□ 041-002A	0.041		0.059						●	●						
	GE□ 047-002A	0.047								●	●						
	GE□ 058-002A	0.058								●	●						
	GE□ 062-004A	0.062			0.004					●	●						
	GE□ 072-004A	0.072								●	●						
	GE□ 078-004A	0.078								●	●						
	GE□ 100-005A	-	1.00	0.059	0.002	●		●	●	●				●			
	GE□ 120-005A		1.20			●		●	●	●							
	GE□ 125-005A		1.25					●	●	●				●			
	GE□ 150-010A		1.50		0.004	●		●	●	●				●	●		
	GE□ 200-010A		2.00			●		●	●	●				●			
	GE□ 031-002B	0.031	-	0.044	0.002					●	●					SIGE□06EH SIGE□...B-EH SIGE□...B-WH SIGER...B-WH-90	G73 G74 G75
	GE□ 041-002B	0.041		0.087						●	●						
	GE□ 047-002B	0.047								●	●						
	GE□ 058-002B	0.058								●	●						
	GE□ 062-004B	0.062			0.004					●	●						
	GE□ 072-004B	0.072								●	●						
	GE□ 078-004B	0.078								●	●						
	GE□ 088-004B	0.088								●	●						
	GE□ 094-004B	0.094								●	●						
	GE□ 097-004B	0.097								●	●						
	GE□ 105-008B	0.105			0.008					●	●						
	GE□ 110-008B	0.110								●	●						
	GE□ 122-008B	0.122								●	●						
	GE□ 100-005B	-	1.00	0.087	0.002	●		●	●	●	●			●	●		
	GE□ 120-005B		1.20			●		●	●	●				●			
	GE□ 125-005B		1.25					●	●	●				●			
	GE□ 145-010B		1.45		0.004	●		●	●	●				●			
	GE□ 150-010B		1.50			●	●	●	●	●				●			
	GE□ 200-010B		2.00			●	●	●	●	●	●			●	●		
	GE□ 250-020B		2.50		0.008	●	●	●	●	●	●			●			
	GE□ 300-020B		3.00			●	●	●	●	●	●			●	●		
 2-Edge Full-R 	GER 100-050AR	-	1.00	0.059	0.020			●		●				●		SIGER05EH SIGER...A-EH SIGER...A-WH	G73 G74
	GER 200-100AR		2.00		0.039			●		●							
	GER 100-050BR		1.00	0.087	0.020			●		●				●		SIGER...B-EH SIGER...B-WH SIGER...B-WH-90	G73 G74 G75
	GER 200-100BR		2.00		0.039			●		●				●			

- Dimension **CDX** shows available grooving depth.

Recommended Cutting Conditions G76

Inserts are sold in 10 piece boxes.

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(Technical Support) 800.823.7284 - Option 2
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● : Standard Item △ : Phaseout Item (will be removed from next catalog)
Contact your local Kyocera sales engineer to upgrade old products to new technology

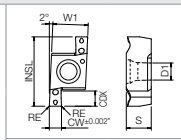
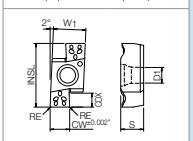
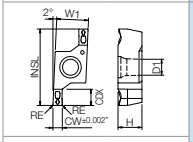
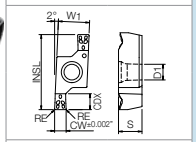
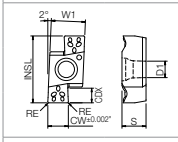
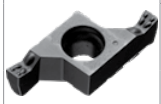
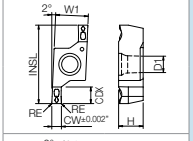
Applicable Inserts

(in)

Part Number	W1	INSL	S	D1
GER...-CM	0.228	0.452	0.159	0.110
GER...-DM	0.268	0.647	0.199	0.134
GER...-EM	0.376	0.853	0.219	0.173

		Cermet	MEGA COAT	PVD Coated Carbide	Carbide		
		TN6020	PR1225	PR1025	GW15	KW10	
P	Carbon Steel / Alloy Steel		●	◔			
M	Stainless Steel		●	◔			
K	Cast Iron					◔	
N	Non-ferrous Metals					●	
S	Titanium Alloy					●	
H	Hard materials (≤40HRC)		●	○			
	Hard materials (≥40HRC)						

Classification of Usage
● : Light Interruption / 1st Choice
◔ : Light Interruption / 2nd Choice
● : Continuous / 1st Choice
○ : Continuous / 2nd Choice

Insert (Right-handed Insert Shown)	Part Number	Dimensions (in) CW inch	CW mm	CDX	RE	TN6020 R	TN6020 L	PR1225 R	PR1225 L	PR1025 R	PR1025 L	GW15 R	GW15 L	KW10 R	KW10 L	Applicable Toolholders	Ref. Page for Toolholder
	GER 150-010CM	-	1.50	0.098	0.004			●		●						SIGE[R/L]...C-EH SIGE[R/L]...C-WH SIGER...C-WH-90	G73 G74 G75
	GER 200-010CM		2.00					●		●							
	GER 250-020CM		2.50					●		●							
	GER 300-020CM		3.00	0.098	0.008			●		●							
	GER 350-020CM		3.50					●		●							
	GER 150-010DM	-	1.50	0.118	0.004			●		●						SIGER...D-EH	G73
	GER 200-010DM		2.00					●		●							
	230-020DM		2.30	0.126	0.008			●		●							
	250-020DM		2.50					●		●							
	300-020DM		3.00					●		●							
	350-020DM		3.50	0.177				●		●							
	400-020DM		4.00					●		●							
	GER 150-010EM	-	1.50	0.118	0.004			●		●						SIGER...E-EH	
	GER 200-010EM		2.00	0.126				●		●							
	250-020EM		2.50	0.177	0.008			●		●							
	300-020EM		3.00					●		●							
	350-020EM		3.50	0.217				●		●							
	400-020EM		4.00					●		●							
	450-020EM		4.50	0.256				●		△							
	500-020EM		5.00					●		●							

2-Edge Molded Chipbreaker

• Dimension **CDX** shows available grooving depth.

Recommended Cutting Conditions G76

Chip Evacuation Comparison (Molded Chipbreaker)

Toolholder \ f (ipr)	SCM415 (Min. Bore Dia.) 0.0020"	0.0028"	0.0039"	Evaluation
SIGER1612C-EH GER300-020CM (PR1025)				Good Chip Control
Competitor A (Width 0.1181")			Insert Cracks	Unstable Chip Control and Biting
Competitor B (Width 0.1181")				Unstable Chip Control and Biting

(Vc = 330 sfm, D.O.C. = 0.079", Wet)

(Internal Evaluation)

Chip Evacuation Comparison

(Min. Cutting Dia. Ø0.3150")

Toolholder \ f (ipr)	SCM415 0.0008"	Evaluation
SIGER0808A-EH GER200-010A (PR1025)		Good Chip Control
Competitor C (Width 0.079")		Unstable Chip Control and Biting

(Vc = 175 sfm, D.O.C. = 0.049", Wet)

(Internal Evaluation)

Inserts are sold in 10 piece boxes.

● : Standard Item △ : Phaseout Item (will be removed from next catalog)
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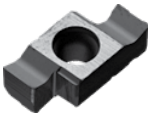
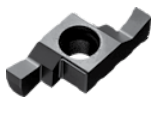
Applicable Inserts

(in)

Part Number	W1	INSL	S	D1
GE□...-C	0.228	0.452	0.159	0.110
GER...-CR				
GE□...-D	0.268	0.647	0.199	0.134
GER...-DR				
GE□...-E	0.376	0.853	0.219	0.173

		Cermet	MEGACOAT	PVD Coated Carbide	Carbide	
P	Carbon Steel / Alloy Steel		●	◔		
M	Stainless Steel		●	◔		
K	Cast Iron					◔
N	Non-ferrous Metals					●
S	Titanium Alloy					●
H	Hard materials (≤40HRC)		●	○		
	Hard materials (≥40HRC)					

Classification of Usage
● : Light Interruption / 1st Choice
◔ : Light Interruption / 2nd Choice
● : Continuous / 1st Choice
○ : Continuous / 2nd Choice

Insert (Right-handed Insert Shown)	Part Number	Dimensions (in) CW inch	CW mm	CDX	RE	Cermet TN6020 R	Cermet TN6020 L	MEGACOAT PR1225 R	MEGACOAT PR1225 L	PVD Coated Carbide PR1025 R	PVD Coated Carbide PR1025 L	Carbide GW15 R	Carbide GW15 L	Carbide KW10 R	Carbide KW10 L	Applicable Toolholders	Ref. Page for Toolholder
 2-Edge	GE□ 100-005C		1.00		0.002	●	●	●	●	●	●	●	●			SIGE□...C-EH SIGE□...C-WH SIGER...C-WH-90	G73 G74 G75
	120-005C		1.20			●		●	●	●	●	●					
	125-005C		1.25			●		●		●	●	●	●				
	140-005C		1.40			●		●		●		●					
	145-010C		1.45		0.004			●		●	●						
	150-010C		1.50			●		●	●	●	●	●	●				
	170-010C	-	1.70	0.098				●		●		●					
	185-010C		1.85					●		△							
	195-010C		1.95					●									
	200-010C		2.00			●		●	●	●	●	●	●				
	250-020C		2.50		0.008	●	●	●	●	●		●	●				
	300-020C		3.00			●	●	●	●	●		●					
	350-020C		3.50					●		●	●	●					
	GE□ 100-005D		1.00		0.002	●		●	●	●		●	●			SIGE□...D-EH	G73
	140-005D		1.40	0.098		●		●	●	●		●					
	145-010D		1.45		0.004	●		●		●	●						
	150-010D		1.50	0.118		●	●	●	●	●	●	●	●				
	170-010D		1.70			●		●	●	△							
	185-010D		1.85							●							
	195-010D		1.95							●							
	200-010D		2.00	0.126		●	●	●	●	●		●					
	225-010D		2.25					●	●	●							
	230-020D	-	2.30		0.008	●		●	●			●					
	250-020D		2.50			●	●	●	●	●	●	●					
	275-020D		2.75														
	280-020D		2.80							●		●					
	300-020D		3.00			●	●	●	●	●		●	●				
	330-020D		3.30	0.177						●							
	350-020D		3.50					●									
	400-020D		4.00			●		●	●	△		●					
 2-Edge	GE□ 100-005E		1.00	0.098	0.002	●		●	●	●		●					G73
	150-010E		1.50		0.004	●		●	●	●	●	●	●				
	170-010E		1.70	0.118		●		●	●	●		●					
	185-010E		1.85			●				●	●						
	195-010E		1.95							●	●						
	200-010E		2.00	0.126		●		●		●	●	●	●				
	225-010E		2.25			●		●		△		●					
	230-020E		2.30		0.008	●	●	●		△		●					
	250-020E		2.50	0.177		●	●	●	●	●		●	●				
	275-020E		2.75						●			●					
	280-020E		2.80			●		●	●	●	●						
	300-020E	-	3.00			●	●	●	●	●	●	●	●			SIGE□...E-EH	
	330-020E		3.30			●		●		●	●						
	350-020E		3.50			●	●	●		●	●	●					
	400-020E		4.00	0.217		●		●		●	●	●	●				
	430-020E		4.30			●		●									
	450-020E		4.50			●		●				●					
	460-020E		4.60	0.256				●		●							
	500-020E		5.00			●		●		●	●	●					
 2-edge Full-R	GER 200-100CR		2.00		0.039			●		●		●				SIGER...C-EH SIGER...C-WH SIGER...C-WH-90	G73 G74 G75
	250-125CR		2.50	0.098	0.049			●		●		●					
	300-150CR	-	3.00		0.059			●		●		●					
	GER 200-100DR		2.00	0.126	0.039			●		●		●				SIGER...D-EH	G73
	300-150DR		3.00	0.177	0.059			●		●		●					

- Dimension **CDX** shows available grooving depth.

Recommended Cutting Conditions G76

Inserts are sold in 10 piece boxes.

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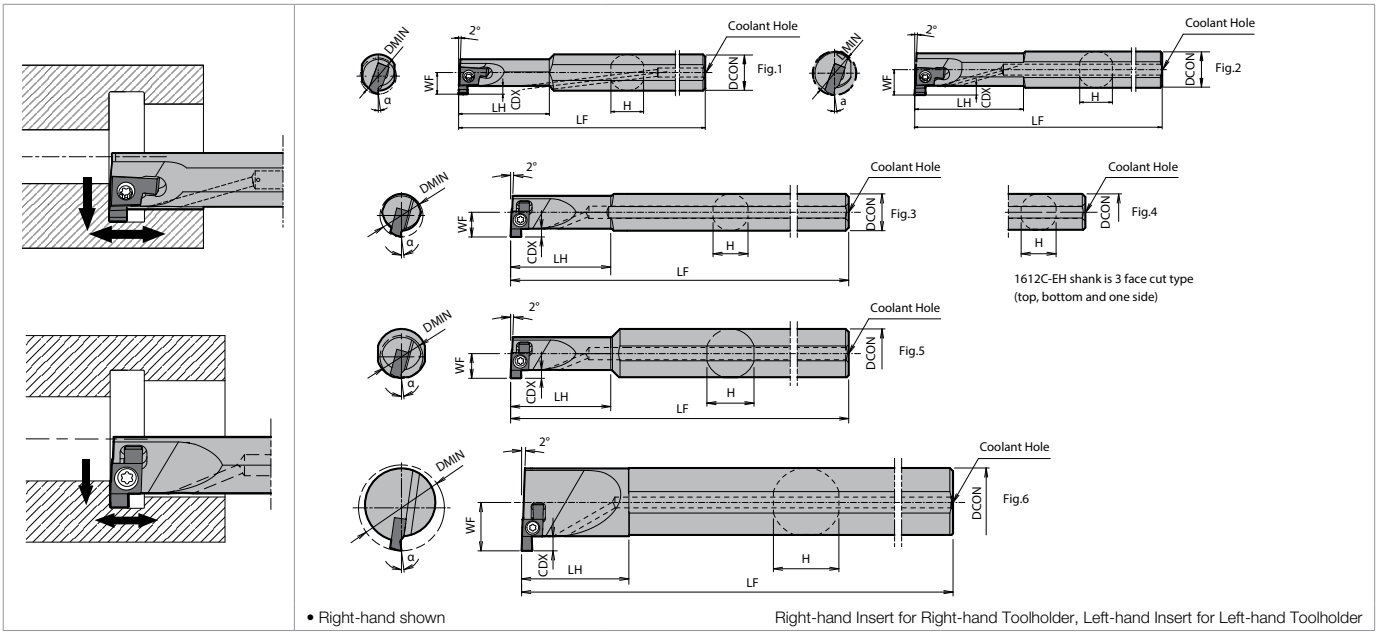
SIGE-EH Excellent Bar (With Coolant Hole)



• Right-hand shown

Right-hand Insert for Right-hand Toolholder, Left-hand Insert for Left-hand Toolholder

Toolholder Dimensions

Part Number		Stock R	Stock L	Unit	Min. Bore Dia. DMIN	DCON	H	LF	LH	WF	CDX	Drawing	Spare Parts: Clamp Screw	Spare Parts: Wrench FT	Spare Parts: Wrench DT	Applicable Inserts (G70~G72)
SIGE-□	05EH	●	●	inch	0.313	0.313	0.283	3.940	0.787	0.177	0.059	Fig.1	SB-2045TRN	FT-6	-	GE□031-002A~GE□200-010A GER100-050AR~GER200-100AR
	06EH	●	●		0.394	0.375	0.354	4.920	0.984	0.232	0.087	Fig.1	SB-2255TR	-	DT-7	GE□031-002B~GE□300-020B GER100-050BR~GER200-100BR
	0809C-EH	●	●		0.551	0.500	0.460	5.900	1.300	0.315	0.098	Fig.3	SB-2570TR	FT-8	-	GE□100-005C~GE□350-020C GER150-010CM~GER350-020CM GER200-100CR~GER300-150CR
	0810C-EH	●	●		0.630	0.500	0.460	5.900	0.788	0.335	0.098					
	1213D-EH	●	●		0.790	0.750	0.710	7.09	1.575	0.477	0.177	Fig.5	SB-3080TR	FT-10	-	GE□100-005D~GE□400-020D GER150-010DM~GER400-020DM GER200-100DR~GER300-150DR
	1616E-EH	●	●		1.000	1.000	0.960	7.88	1.772	0.614	0.255	Fig.5	SB-4085TR	FT-15	-	GE□100-005E~GE□500-020E GER150-010EM~GER500-020EM
	2020E-EH	●	●		1.250	1.250	1.170	8.66	2.166	0.748	0.255					
	2025E-EH	●	●		1.575	1.250	1.170	9.84	1.772	0.906	0.255	Fig.6				
SIGE-□	0808A-EH	●	●	mm	8	8	7.2	100	20	4.8	1.5	Fig.1	SB-2045TRN	FT-6	-	GE□031-002A~GE□200-010A GER100-050AR~GER200-100AR
	1010B-EH	●	●		10	10	9.0	125	25	6.2	2.2	Fig.1	SB-2255TR	-	DT-7	GE□031-002B~GE□300-020B GER100-050BR~GER200-100BR
	1210B-EH	●	●		12	10	9.0	125	30	7.0	2.2	Fig.2				
	1412C-EH	●	●		14	12	11.4	150	33	8.0	2.5	Fig.3	SB-2570TR	FT-8	-	GE□100-005C~GE□350-020C GER150-010CM~GER350-020CM GER200-100CR~GER300-150CR
	1612C-EH	●	●		16	12	11.4	150	20	8.5	2.5	Fig.4				
	1616C-EH	●	●		16	16	15.0	160	36	9.0	2.5	Fig.5				
	2020D-EH	●	●		20	20	19.0	180	40	12.1	4.5	Fig.5	SB-3080TR	FT-10	-	GE□100-005D~GE□400-020D GER150-010DM~GER400-020DM GER200-100DR~GER300-150DR
	2525E-EH	●	●		25	25	24.0	200	45	15.6	6.5	Fig.5	SB-4085TR	FT-15	-	GE□100-005E~GE□500-020E GER150-010EM~GER500-020EM
	3232E-EH	●	●		32	32	30.4	220	55	19.0	6.5					
	4032E-EH	●	●		40	32	30.4	250	45	23.0	6.5	Fig.6				

• Dimension **CDX** shows available grooving depth. See **CDX** dimension of insert table for actual grooving depth.

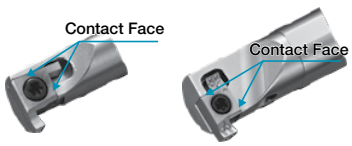
Features

- **Traditional top clamp has been replaced with a screw clamp only. This design creates a large chip pocket that provides excellent chip evacuation**



- **Cost effective chip control from a molded chipbreaker**

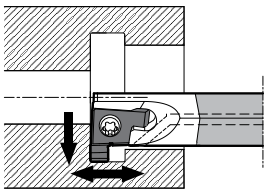
- **Cutting Edge is Protected in the Pocket**

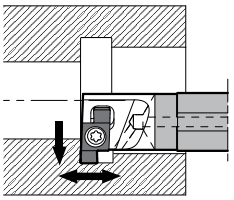


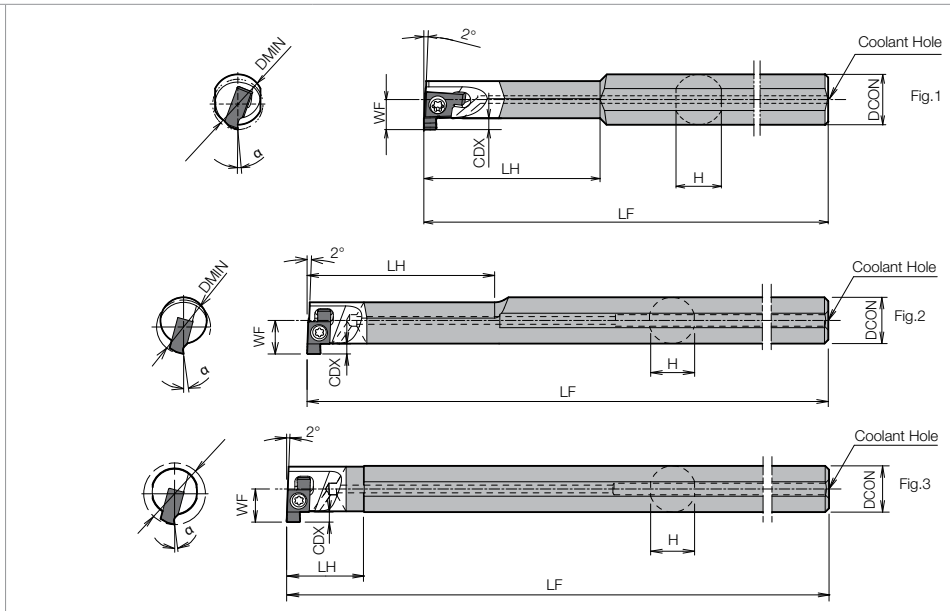
- **8mm Minimum Cutting Diameter with 2-Edge Design**



SIGE-WH Carbide Shank Bar (With Coolant Hole)







• Right-hand shown

Right-hand Insert for Right-hand Toolholder, Left-hand Insert for Left-hand Toolholder

Toolholder Dimensions

Part Number		Stock R	Stock L	Min. Bore Dia. DMIN	Dimensions (mm) DCON	H	LF	LH	WF	CDX	Drawing	Spare Parts: Clamp Screw	Spare Parts: Wrench		Applicable Inserts
SIGE	0808A-WH	●	●	8	8	7.2	125	28	4.8	1.5	Fig.1	SB-2045TRN	FT-6	-	GE 031-002A~GE 200-010A GER100-050AR~GER200-100AR
	1010B-WH	●	●	10	10	9.0	125	35	6.2	2.2	Fig.1	SB-2255TR	-	DT-7	GE 031-002B~GE 300-020B GER100-050BR~GER200-100BR
	1210B-WH	●	●	12	10	9.0	140	45	7.0	2.2					
	1412C-WH	●	●	14	12	11.4	150	50	8.7	2.5	Fig.2	SB-2570TR	FT-8	-	GE 100-005C~GE 350-020C GER150-010CM~GER350-020CM GER200-100CR~GER300-150CR
	1612C-WH	●	●	16	12	11.4	180	20	8.5	2.5	Fig.3				

• Dimension **CDX** shows available grooving depth. See **CDX** dimension of insert table for actual grooving depth.

Applicable Inserts and Rake Angle (α) After Installment of Insert

Toolholder		Ground Chipbreaker	α (°)	Molded Chipbreaker	α (°)
SIGE	05EH	GE 031-002A~GE 200-010A GER100-050AR~GER200-100AR	5°	-	-
	06EH	GE 031-002B~GE 300-020B GER100-050BR~GER200-100BR	5°	-	-
SIGE	0808A-EH	GE 100-005A~GE 200-010A GER100-050AR~GER200-100AR	5°	-	-
	0809C-EH 0810C-EH	GE 100-005C~GE 350-020C GER200-100CR~GER300-150CR	8	GER150-010CM~GER350-020CM	10°
	1010B-EH 1210B-EH	GE 100-005B~GE 300-020B GER100-050BR~GER200-100BR	5°	-	-
	1213D-EH	GE 100-005D~GE 400-020D GER200-100DR~GER300-150DR	9°	GER150-010DM~GER400-020DM	10°
	1412C-EH 1612C-EH 1616C-EH	GE 100-005C~GE 350-020C GER200-100CR~GER300-150CR	8°	GER150-010CM~GER350-020CM	10°
	1616E-EH	GE 100-005E~GE 500-020E	10°	GER150-010EM~GER500-020EM	10°
	2020D-EH	GE 100-005D~GE 400-020D GER200-100DR~GER300-150DR	9°	GER150-010DM~GER400-020DM	10°
	2020E-EH 2025E-EH 2525E-EH 3232E-EH 4032E-EH	GE 100-005E~GE 500-020E	10°	GER150-010EM~GER500-020EM	10°
SIGE	0808A-WH	GE 031-002A~GE 200-010A GER100-050AR~GER200-100AR	5°	-	-
	1010B-WH 1210B-WH 1008B-WH-90 1210B-WH-90	GE 031-002B~GE 300-020B GER100-050BR~GER200-100BR	5°	-	-
	1412C-WH 1612C-WH 1412C-WH-90	GE 100-005C~GE 350-020C GER200-100CR~GER300-150CR	8°	GER150-010CM~GER350-020CM	10°

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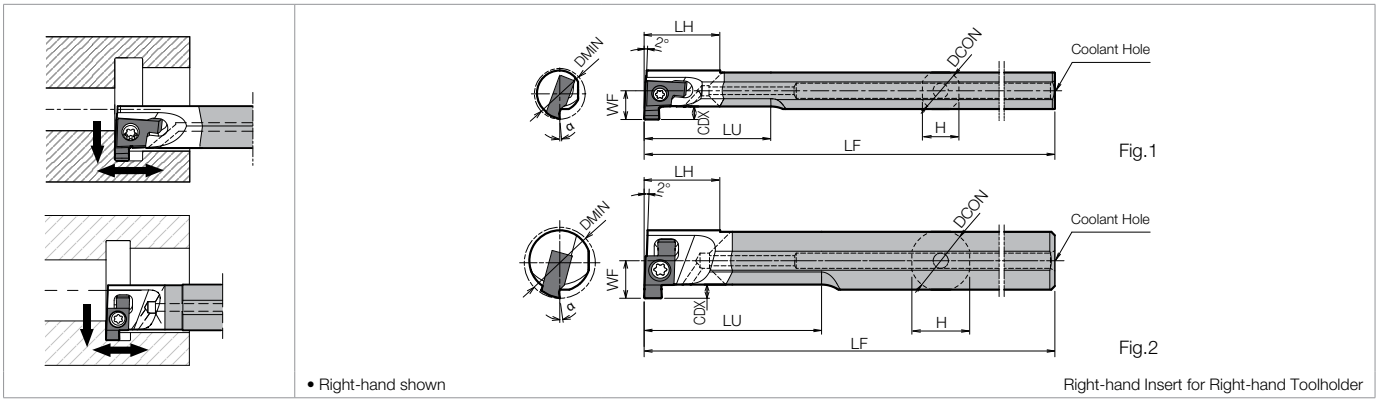
● : Standard Item △ : Phaseout Item (will be removed from next catalog)
Contact your local Kyocera sales engineer to upgrade old products to new technology

SIGE-WH-90 Carbide Shank Bar (With Coolant Hole)



• Right-hand shown

Right-hand Insert for Right-hand Toolholder

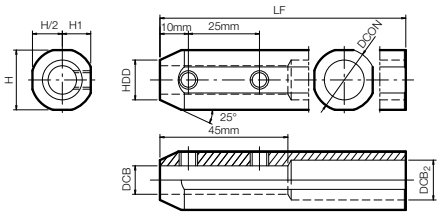
Toolholder Dimensions

Part Number		Stock	Min. Bore Dia.	Dimensions (mm)							Drawing	Spare Parts		Applicable Inserts
												Clamp Screw	Wrench	G70~G72
			DMIN	DCON	H	LF	LU	*LH	WF	CDX				
SIGER	1008B-WH-90	●	10	8	7.2	90	25	15	5.6	2.2	Fig.1	SB-2255TR	FT-7	GER031-002B~GER300-020B GER100-050BR~GER200-100BR
	1210B-WH-90	●	12	10	9.4	90	30	15	6.6	2.2				
	1412C-WH-90	●	14	12	11.4	90	35	15	7.4	2.5	Fig.2	SB-2570TR	FT-8	GER100-005C~GER350-020C GER150-010CM~GER350-020CM GER200-100CR~GER300-150CR

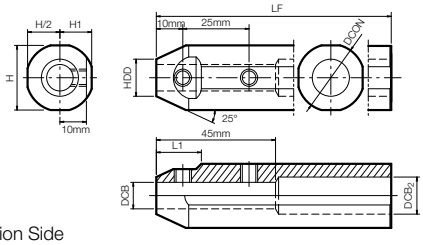
*Dimension **LH** shows minimum overhang length.

• Ref. to Page G74 for applicable Insert & Rake Angle (α) after Installment of Insert.

Applicable Sleeves



Holder Installation Side Fig.1



Holder Installation Side Fig.2

Part Number		Stock	Dimensions (mm)								Drawing	Spare Parts		Applicable Machine Manufacturer
												Screw	Wrench	
			DCB	DCON	HDD	DCB_2	H	H1	LF	L1				
SHA	0820-120	□	8	20.00	14	12	19.0	9.25	120	-	Fig.1	HS6x4P	LW-3	Amada Machine Tools Eguro Tsugami Citizen Machinery
	1020-120	●	10	20.00	14	12	19.0	9.25	120	-				
SHA	0825.0-135	●	8	25.00	14	14	24.0	11.50	135	17	Fig.2	HS6x4P	LW-3	
	1025.0-135	●	10	25.00	14	14	24.0	11.50	135	17				
	1225.0-135	●	12	25.00	16	14	24.0	11.50	135	17				
SHA	0819-120	□	8	19.05	14	12	18.0	8.75	120	-	Fig.1	HS6x4P	LW-3	Citizen Machinery
	1019-120	□	10	19.05	14	12	18.0	8.75	120	-				
SHA	0820-120	□	8	20.00	14	12	19.0	9.25	120	-				
	1020-120	●	10	20.00	14	12	19.0	9.25	120	-				
SHA	0825.4-120	●	8	25.40	14	14	24.4	12.00	120	17	Fig.2	HS6x4P	LW-3	
	1025.4-120	●	10	25.40	14	14	24.4	12.00	120	17				
	1225.4-120	●	12	25.40	16	14	24.4	12.00	120	17				
SHA	0822-125	●	8	22.00	14	14	21.0	10.00	125	-	Fig.1	HS6x4P	LW-3	Star Micronics Nomura DS
	1022-125	●	10	22.00	14	14	21.0	10.00	125	-				
	1222-125	□	12	22.00	16	14	21.0	10.00	125	-				
SHA	0823-120	□	8	23.00	14	14	22.0	10.50	120	16	Fig.2	HS6x4P	LW-3	Nomura DS
	1023-120	□	10	23.00	14	14	22.0	10.50	120	16				
	1223-120	□	12	23.00	16	14	22.0	10.50	120	16				

※ : Depth of DCB…45mm (All types of SHA sleeves)

• Choose sleeves with **DCB** dimension that matches the **DCON** dimension of the toolholder.

• Machine manufacturers are in random order.

● : Standard Item □ : Made to Order △ : Phaseout Item (will be removed from next catalog)

Contact your local Kyocera sales engineer to upgrade old products to new technology

Recommended Cutting Conditions (Ground Chipbreaker : GE□...A(R), GE□...B(R))

Workpiece Material	Recommended Insert Grade (Vc sfm)				① f (feed) during Grooving (ipr) ② f (feed) during Traversing (ipr) ③ D.O.C. during Traversing (in)			Notes
	Cermet	MEGACOAT	PVD	Carbide	GE□031-002A ~ GE□078-004A GE□100-005A ~ GE□200-010A GER100-050AR ~ GER200-100AR	GE□031-002B ~ GE□088-004B GE□100-005B ~ GE□200-010B GER100-050BR ~ GER200-100BR	GE□094-004B ~ GE□122-008B GE□250-020B ~ GE□300-020B	
	TN6020	**PR1225**	**PR1025**	**KW10**				
Carbon Steel	☆ 160~260	★ 160~260	☆ 160~260	-	① 0.0004~0.0012 ② 0.0004~0.0012 ③ Max. 0.0020	① 0.0008~0.0016 ② 0.0008~0.0016 ③ Max. 0.0020	① 0.0008~0.0016 ② 0.0008~0.0016 ③ Max. 0.0039	Wet
Alloy Steel	☆ 160~260	★ 160~260	☆ 160~260	-	① 0.0004~0.0012 ② 0.0004~0.0012 ③ Max. 0.0020	① 0.0008~0.0016 ② 0.0008~0.0016 ③ Max. 0.0020	① 0.0008~0.0016 ② 0.0008~0.0016 ③ Max. 0.0039	
Stainless Steel	-	★ 160~260	☆ 160~260	-	① 0.0004~0.0012 ② 0.0004~0.0012 ③ Max. 0.0020	① 0.0004~0.0012 ② 0.0004~0.0012 ③ Max. 0.0020	① 0.0004~0.0012 ② 0.0004~0.0012 ③ Max. 0.0039	
Cast Iron	-	-	-	★ 160~260	① 0.0004~0.0012 ② 0.0004~0.0012 ③ Max. 0.0020	① 0.0008~0.0016 ② 0.0008~0.0016 ③ Max. 0.0020	① 0.0008~0.0016 ② 0.0008~0.0016 ③ Max. 0.0039	
Aluminum	-	-	-	★ 160~330	① 0.0004~0.0012 ② 0.0004~0.0012 ③ Max. 0.0039	① 0.0008~0.0016 ② 0.0008~0.0016 ③ Max. 0.0039	① 0.0008~0.0016 ② 0.0008~0.0016 ③ Max. 0.0079	
Brass	-	-	-	★ 160~330	① 0.0004~0.0012 ② 0.0004~0.0012 ③ Max. 0.0039	① 0.0008~0.0016 ② 0.0008~0.0016 ③ Max. 0.0039	① 0.0008~0.0016 ② 0.0008~0.0016 ③ Max. 0.0079	

• Use PVD coated grade or uncoated carbide for traversing with edge width 0.0394"(1mm). (GE□100-005A/100-005B)

★ : 1st Recommendation ☆ : 2nd Recommendation

Recommended Cutting Conditions (Ground Chipbreaker : GE□...C(R),GE□...D(R),GE□...E)

Workpiece Material	Recommended Insert Grade (Vc sfm)				① f (feed) during Grooving (ipr) ② f (feed) during Traversing (ipr) ③ D.O.C. during Traversing (in)						Notes
	Cermet	MEGA-COAT	PVD	Carbide	GE□ 100~200-010C 200-100CR	GE□ 250~350-020C 250~300-150CR					
					GE□ 100~145-010D	GE□ 150~195-010D	GE□ 200~280-020D 200-100DR		GE□ 300~400-020D 300-150DR		
	TN6020	**PR1225**	**PR1025**	**GW15**	GE□ 100-010E	GE□ 150~195-010E	GE□ 200~225-010E 230-020E	GE□ 250~330-020E		GE□ 350~430-020E	GE□ 450~500-020E
Carbon Steel	☆ 390~590	★ 200~460	☆ 200~460	-	① 0.0012~0.0031 ② 0.0012~0.0031 ③ Max. 0.0118	① 0.0012~0.0031 ② 0.0012~0.0031 ③ Max. 0.0118	① 0.0016~0.0035 ② 0.0016~0.0035 ③ Max. 0.0118	① 0.0016~0.0035 ② 0.0016~0.0035 ③ Max. 0.0118	① 0.0020~0.0047 ② 0.0020~0.0039 ③ Max. 0.0197	① 0.0020~0.0047 ② 0.0020~0.0039 ③ Max. 0.0197	① 0.0020~0.0047 ② 0.0020~0.0039 ③ Max. 0.0197
Alloy Steel	☆ 330~520	★ 200~390	☆ 200~390	-	① 0.0012~0.0028 ② 0.0012~0.0039 ③ Max. 0.0118	① 0.0012~0.0028 ② 0.0012~0.0039 ③ Max. 0.0118	① 0.0016~0.0031 ② 0.0016~0.0031 ③ Max. 0.0118	① 0.0016~0.0031 ② 0.0016~0.0031 ③ Max. 0.0118	① 0.0020~0.0039 ② 0.0020~0.0039 ③ Max. 0.0197	① 0.0020~0.0039 ② 0.0020~0.0039 ③ Max. 0.0197	① 0.0020~0.0039 ② 0.0020~0.0039 ③ Max. 0.0197
Stainless Steel	☆ 230~430	★ 200~360	☆ 200~360	-	① 0.0012~0.0028 ② 0.0012~0.0039 ③ Max. 0.0118	① 0.0012~0.0028 ② 0.0012~0.0039 ③ Max. 0.0118	① 0.0016~0.0031 ② 0.0016~0.0031 ③ Max. 0.0118	① 0.0016~0.0031 ② 0.0016~0.0031 ③ Max. 0.0118	① 0.0020~0.0039 ② 0.0020~0.0039 ③ Max. 0.0197	① 0.0020~0.0039 ② 0.0020~0.0039 ③ Max. 0.0197	① 0.0020~0.0039 ② 0.0020~0.0039 ③ Max. 0.0197
Cast Iron	-	-	-	★ 200~330	① 0.0012~0.0031 ② 0.0012~0.0031 ③ Max. 0.0118	① 0.0012~0.0031 ② 0.0012~0.0031 ③ Max. 0.0118	① 0.0016~0.0035 ② 0.0016~0.0035 ③ Max. 0.0118	① 0.0016~0.0035 ② 0.0016~0.0035 ③ Max. 0.0118	① 0.0020~0.0047 ② 0.0020~0.0039 ③ Max. 0.0197	① 0.0020~0.0047 ② 0.0020~0.0039 ③ Max. 0.0197	① 0.0020~0.0047 ② 0.0020~0.0039 ③ Max. 0.0197
Aluminum	-	-	-	★ 490~980	① 0.0020~0.0047 ② 0.0020~0.0047 ③ Max. 0.0197	① 0.0020~0.0047 ② 0.0020~0.0047 ③ Max. 0.0197	① 0.0020~0.0059 ② 0.0020~0.0059 ③ Max. 0.0197	① 0.0020~0.0059 ② 0.0020~0.0059 ③ Max. 0.0197	① 0.0031~0.0059 ② 0.0031~0.0059 ③ Max. 0.0315	① 0.0031~0.0059 ② 0.0031~0.0059 ③ Max. 0.0315	① 0.0031~0.0059 ② 0.0031~0.0059 ③ Max. 0.0315
Brass	-	-	-	★ 330~820	① 0.0020~0.0047 ② 0.0020~0.0047 ③ Max. 0.0197	① 0.0020~0.0047 ② 0.0020~0.0047 ③ Max. 0.0197	① 0.0020~0.0059 ② 0.0020~0.0059 ③ Max. 0.0197	① 0.0020~0.0059 ② 0.0020~0.0059 ③ Max. 0.0197	① 0.0031~0.0059 ② 0.0031~0.0059 ③ Max. 0.0315	① 0.0031~0.0059 ② 0.0031~0.0059 ③ Max. 0.0315	① 0.0031~0.0059 ② 0.0031~0.0059 ③ Max. 0.0315

• Use PVD coated grade or uncoated carbide for traversing with edge width 0.0394" (1mm). (GE□100-010C / 100-010D / 100-010E)

★ : 1st Recommendation ☆ : 2nd Recommendation

Recommended Cutting Conditions (Molded Chipbreaker : GER...CM, GER...DM, GER...EM)

Workpiece Material	Recommended Insert Grade (Vc sfm)				① f (feed) during Grooving (ipr) ② f (feed) during Traversing (ipr) ③ D.O.C. during Traversing (in)						Notes
	Cermet	MEGA COAT	PVD	Carbide	GER 150~200-010CM	GER 250~350-020CM					
					GER 150~200-010DM		GER 230~250-020DM	GER 300~400-020DM			
	TN6020	**PR1225**	**PR1025**	**GW15**	GER 150~200-010EM			GER 250~350-020EM	GER 350~400-020EM	GER 450~500-020CM	
Carbon Steel	-	★ 200~520	☆ 200~520	-	① 0.0012~0.0039 ② 0.0012~0.0039 ③ Max. 0.0394	① 0.0012~0.0047 ② 0.0012~0.0039 ③ Max. 0.0591	① 0.0016~0.0047 ② 0.0016~0.0039 ③ Max. 0.0591	① 0.0020~0.0047 ② 0.0020~0.0039 ③ Max. 0.0591	① 0.0020~0.0047 ② 0.0020~0.0039 ③ Max. 0.0591	① 0.0020~0.0047 ② 0.0020~0.0039 ③ Max. 0.0591	Wet
Alloy Steel	-	★ 200~460	☆ 200~460	-	① 0.0012~0.0039 ② 0.0012~0.0039 ③ Max. 0.0394	① 0.0012~0.0039 ② 0.0012~0.0039 ③ Max. 0.0591	① 0.0016~0.0047 ② 0.0016~0.0039 ③ Max. 0.0591	① 0.0020~0.0047 ② 0.0020~0.0039 ③ Max. 0.0591	① 0.0020~0.0047 ② 0.0020~0.0039 ③ Max. 0.0591	① 0.0020~0.0047 ② 0.0020~0.0039 ③ Max. 0.0591	
Stainless Steel	-	★ 200~360	☆ 200~360	-	① 0.0012~0.0031 ② 0.0012~0.0039 ③ Max. 0.0394	① 0.0012~0.0031 ② 0.0012~0.0039 ③ Max. 0.0591	① 0.0016~0.0031 ② 0.0016~0.0039 ③ Max. 0.0591	① 0.0020~0.0039 ② 0.0020~0.0039 ③ Max. 0.0591	① 0.0020~0.0039 ② 0.0020~0.0039 ③ Max. 0.0591	① 0.0020~0.0039 ② 0.0020~0.0039 ③ Max. 0.0591	

★ : 1st Recommendation ☆ : 2nd Recommendation

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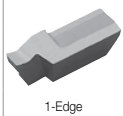
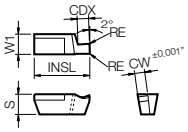
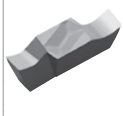
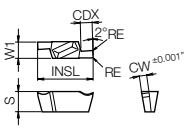
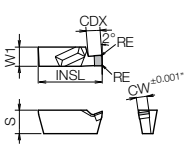
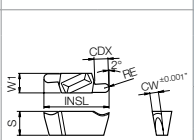
Applicable Inserts (GIV / GIV-E / GIV-W)

Part Number	W1	INSL	S
GV□…SS GVR09-...	0.142 0.130	0.354	0.118
GV□…S	0.157	0.433	0.157
GV□…A GVR12-...	0.157	0.472	0.197
GV□…B GVR15-...	0.177	0.591	0.217
GV□…C GVR21-...	0.228	0.827	0.256

Classification of Usage
- ● : Light Interruption / 1st Choice
- ◔ : Light Interruption / 2nd Choice
- ● : Continuous / 1st Choice
- ○ : Continuous / 2nd Choice

P	Carbon Steel / Alloy Steel				●	◔		
M	Stainless Steel				●	◔		
K	Cast Iron						●	
N	Non-ferrous Metals						●	●
S	Heat-resistant Alloy						●	●
H	Hard materials (≤40HRC)				○	○		
	Hard materials (≥40HRC)							

Applicable Toolholders ➔ G79

Insert (Right-handed Insert Shown)	Part Number	Previous Part Number	Dimensions (in) CW inch	CW mm	CDX	RE	Cermet TN90 R	TN90 L	TC40 R	TC40 L	TC60 R	TC60 L	MEGA COAT PR1225 R	PR1225 L	PVD Carbide PR930 R	PR930 L	Carbide KW10 R	KW10 L	PCD KPD010 R	KPD010 L	Applicable Toolholders
 1-Edge 	GV□ 100-020SS	GV□ 100SS	0.039	1.00	0.091	0.008	○				●		●	●	●		●	●			GIV□…1SS SI-GIVR10-09
	125-020SS	125SS	0.049	1.25							●		●	●	●		●	●			
	145-020SS	145SS	0.057	1.45			○				●		●	●	●		●	●			
	200-020SS	200SS	0.079	2.00			○				●		●	●	●		●	●			
	250-020SS	250SS	0.098	2.50							●		●	●	●		●	●			
	300-020SS	300SS	0.118	3.00							●		●	●	●		●	●			
	GVR 09-031	GV□ 09-031	0.031	0.79	0.091	0.008					●										
	09-062	09-062	0.062	1.57							●										
	09-125	09-125	0.125	3.18							●										
	GV□ 100-020S	GV□ 100S	0.039	1.00	0.091	0.008	○		●	●	●		●	●	●	●	●	●			GIV□…1S GIV□…1SE
	125-020S	125S	0.049	1.25			○		●	●	●		●		●		●	●			
	145-020S	145S	0.057	1.45					●		●		●		●		●	●			
	185-020S	185S	0.073	1.85					●		●		●		●		●	●			
	200-020S	200S	0.079	2.00			○		●	●	●		●	●	●	●	●	●			
	250-020S	250S	0.098	2.50					●		●		●	●	●		●	●			
	340-020S	340S	0.134	3.40					●		●		●		●		●	●			
 2-Edge 	GVR 12-032	GV□ 12-032	0.032	0.81	0.091	0.008			●												
	12-062	12-062	0.062	1.57					●												
	12-094	12-094	0.094	2.39					●												
	12-125	12-125	0.125	3.18					●												
	GV□ 100-020A	GV□ 100A	0.039	1.00	0.091	0.008	○		●	●	●	●	●	●	●	●	●	●			SI-GIVR12-12 GIV□…1A GIV□…1AE GIV□…1AW
	125-020A	125A	0.049	1.25			○		●	●	●		●	●	●		●	●			
	145-020A	145A	0.057	1.45			○		●	●	●	●	●	●	●		●	●			
	185-020A	185A	0.073	1.85					●		●		●	●	●		●	●			
	200-020A	200A	0.079	2.00			○		●	●	●	●	●	●	●	●	●	●			
	250-020A	250A	0.098	2.50			○		●		●		●	●	●		●	●			
	300-020A	300A	0.118	3.00			○		●		●		●		●		●	●			
	340-020A	340A	0.134	3.40					●		●		●		●		●	●			
	GVR 15-062	GVR 15-062	0.062	1.57	0.091	0.008			●												
	15-094	15-094	0.094	2.39					●												
	GV□ 145-020B	GV□ 145B	0.057	1.45	0.110	0.008	○		●	●	●	●	●	●	●	●	●	●			SI-GIVR16-15 GIV□…1B GIV□…1BE GIV□…1BW
	185-020B	185B	0.073	1.85			○		●	●	●	●	●		●		●				
	200-020B	200B	0.079	2.00	0.126		○	○	●	●	●	●	●	●	●	●	●	●			
	230-020B	230B	0.091	2.30			○		●		●	●	●	●	●	●	●				
	250-020B	250B	0.098	2.50			○		●	●	●	●	●	●	●	●	●	●			
	280-020B	280B	0.110	2.80					●	●	●		●		●		●				SI-GIVR16-15 GIV□…2B GIV□…2BE GIV□…2BW
	300-020B	300B	0.118	3.00			○		●	●	●	●	●	●	●	●	●	●			
	340-020B	340B	0.134	3.40	0.165	0.008			●		●		●		●		●				
	400-020B	400B	0.157	4.00			○		●		●		●		●		●	●			
	GVR 21-125	GVR 21-125	0.125	3.18	0.165	0.008			●												SI-GIVR20-21 GIV□…1C GIV□…1CE GIV□…1CW
	GV□ 280-020C	GV□ 280C	0.110	2.80	0.177	0.008	○		●	●	●	●	●	●	●		●	●			
	300-020C	300C	0.118	3.00			○	○	●	●	●	●	●	●	●	●	●	●			
	340-020C	340C	0.134	3.40	0.217	0.008	○		●	●	●	●	●	●	●	●	●	●			
	400-020C	400C	0.157	4.00			○		●	●	●	●	●	●	●	●	●	●			SI-GIVR20-21 GIV□…2C GIV□…2CE GIV□…2CW
	430-020C	430C	0.169	4.30					●	●	●	●	●		●		●	●			
	460-020C	460C	0.181	4.60	0.248	0.008			●				●		●		●	●			
	500-020C	500C	0.197	5.00					●		●	●	●	●	●	●	●	●			
 1-Edge 	GV□ 145-020A	GV□ 145A	0.057	1.45	0.091	0.008													●		SI-GIVR12-12 GIV□…1A GIV□…1AE GIV□…1AW
	200-020A	200A	0.079	2.00															●		
	300-020A	300A	0.118	3.00															□		
	GV□ 200-020B	GV□ 200B	0.079	2.00	0.126	0.008													●		SI-GIVR16-15 GIV□…1B GIV□…1BE GIV□…1BW
	250-020B	250B	0.098	2.50	0.126														●		
	300-020B	300B	0.118	3.00	0.165														□		SI-GIVR16-15 GIV□…2B□
	GV□ 300-020C	GV□ 300C	0.118	3.00	0.177	0.008													□		SI-GIVR20-21 GIV□…1C□
	400-020C	400C	0.157	4.00	0.217														□		SI-GIVR20-21 GIV□…2C□
 2-Edge Full-R 	GV□ 200-100AR	GV□ 100AR	0.079	2.00	0.091	0.039					●		●	●	●	●	●				SI-GIVR12-12 GIV□…1A GIV□…1AE GIV□…1AW
	250-125AR	125AR	0.098	2.50		0.049					●		●		●		●				
	300-150AR	150AR	0.118	3.00		0.059					●		●		●		●				
	GV□ 200-100BR	GV□ 100BR	0.079	2.00	0.126	0.039	△				●		●		●		●	●			SI-GIVR16-15 GIV□…1B□
	300-150BR	150BR	0.118	3.00	0.165	0.059	△				●		●		●		●	●			SI-GIVR16-15 GIV□…2B□

- Dimension **CDX** shows available grooving depth.

Inserts are sold in 10 piece boxes. *CBN & PCD Inserts are sold in 1 piece boxes.*

Recommended Cutting Condtions ➔ **G151**
Applicable Toolholders ➔ **G79**

● : Standard Item □ : Made to Order △ : Phaseout Item (will be removed from next catalog)
Contact your local Kyocera sales engineer to upgrade old products to new technology

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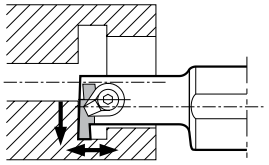
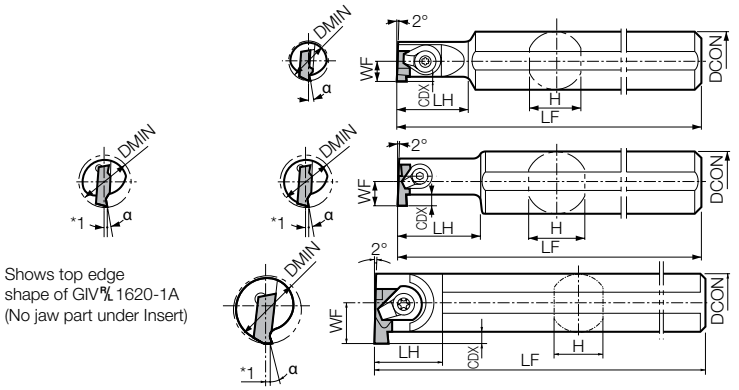
GIV (SI-GIV)





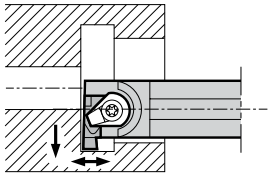
Shows top edge shape of GIV□1620-1A (No jaw part under Insert)

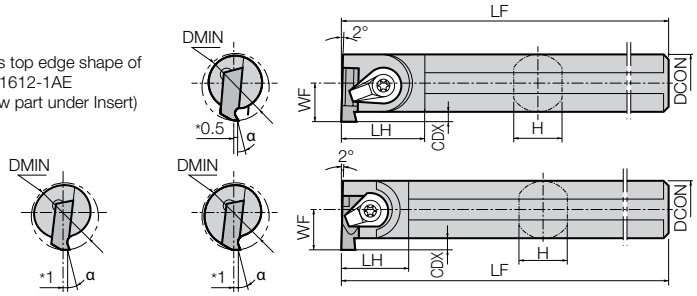
Fig.1 Fig.2 Fig.3

• Right-hand shown

Right-hand Insert for Right-hand Toolholder, Left-hand Insert for Left-hand Toolholder.

GIV-E Excellent Bar





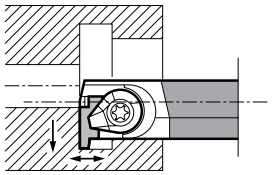
Shows top edge shape of GIV□1612-1AE (No jaw part under Insert)

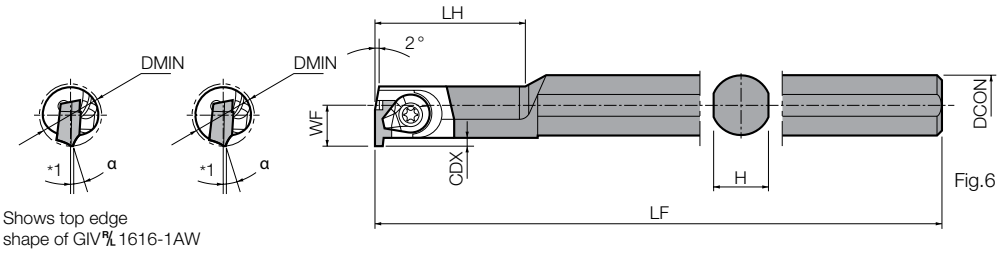
Fig.4 Fig.5

• Right-hand shown

Right-hand Insert for Right-hand Toolholder, Left-hand Insert for Left-hand Toolholder.

GIV-W Carbide Shank Bar





Shows top edge shape of GIV□1616-1AW (No jaw part under Insert)

Fig.6

• Right-hand shown

Right-hand Insert for Right-hand Toolholder, Left-hand Insert for Left-hand Toolholder.

Applicable Inserts and Rake Angle (α) After Installment of Insert

Toolholder	Insert Part Number G77			Rake Angle (α)	
	General Grooving (Square)		Full-R Grooving (Round)	TC40	TN90,TC60 PR930,PR1225 KW10
SI-GIVR10-09	GVR09-...	GV□100~300-020SS	-	10°	10°
SI-GIVR12-12	GVR12-...	GV□100~340-020A	GVR12-R		
SI-GIVR16-15	GVR15-...	GV□145~400-020B	-		
SI-GIVR20-21	GVR21-...	GV□280~500-020C	-		
GIV□···1SS	GV□100~300-020SS	GVR09-...	-	10°	15°
GIV□···1S	GV□100~340-020S	-	-	10°	15°
GIV□···1SE	GV□100~340-020S	-	-	3°	8°
GIV□···1A(□)	GV□100~340-020A	GVR12-...	GV□200-100AR~300-150AR	3°	8°
GIV□···1B(□)	GV□145~250-020B	GVR15-...	GV□200-100BR	4°	9°
GIV□···2B(□)	GV□280~400-020B		GV□300-150BR		
GIV□···1C(□)	GV□280~340-020C	GVR21-...	-	5°	10°
GIV□···2C(□)	GV□400~500-020C		-		

*** GIV, GIV-E and GIV-W are designed to set the cutting edge height 1mm above the center height. (0.5mm for GIV□1612-1AE)**

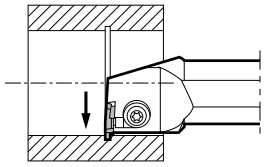
Toolholder Dimensions

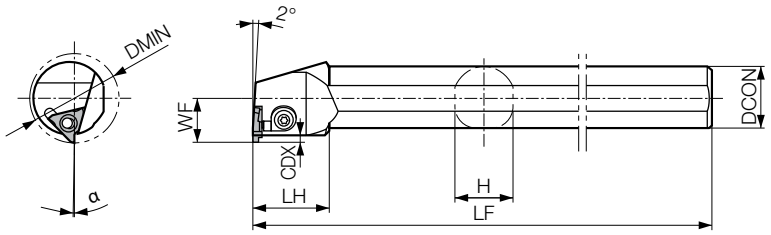
Part Number		Stock R	Stock L	Unit	Min. Bore Dia. DMIN	Dimensions DCON	H	LF	LH	WF	CDX	Drawing	Spare Parts: Clamp Set		Wrench	Wrench	Ref. Page for Applicable Inserts
SI-GIVR	**10-09**	●		inch	0.472	0.625	0.590	5.910	0.787	0.236	0.087	Fig.1	CPS-4V	-	FT-10	-	
	12-12	●			0.630	0.750	0.710	6.300	1.100	0.314	0.090	Fig.2	CPS-5V	-	FT-15	-	
	16-15	●			0.790	1.000	0.960	7.100	1.380	0.394	0.125						
	20-21	●			0.984	1.250	1.170	7.875	1.700	0.492	0.177	Fig.2	-	CPS-6V	-	LW-3	
GIVR/L	**1216-1SS**	●	●	mm	12	16	15.0	150	20	6.0	2.2	Fig.1	CPS-4V	-	FT-10	-	
	1420-1S	●	●		14	20	19.0	150	24	7.0	2.2	Fig.1	CPS-5F	-	FT-15	-	
	1620-1A	●	●		16	20	19.0	160	28	8.0	2.2	Fig.2	CPS-5V	-	FT-15	-	
	2025-1B	●	●		20	25	23.0	180	35	10.0	Note 1) 2.8	Fig.2	CPS-5V	-	FT-15	-	
	2025-2B	●	●		20	25	23.0	180	35	10.0	Note 2) 3.2						
	2532-1C	●	●		25	32	30.0	200	43	12.5	Note 3) 4.5	Fig.2	-	CPS-6V	-	LW-3	
	3232-1C	●	●		32	32	30.0	220	52	16.0	Note 3) 4.5						
	4032-1C	●	●		40	32	30.0	250	43	21.0	Note 3) 4.5	Fig.3	-	CPS-6V	-	LW-3	
	2532-2C	●	●		25	32	30.0	200	43	12.5	Note 4) 5.5	Fig.2	-	CPS-6V	-	LW-3	
	3232-2C	●	●		32	32	30.0	220	52	16.0	Note 4) 5.5						
	4032-2C	●	●		40	32	30.0	250	43	22.2	Note 4) 5.5	Fig.3	-	CPS-6V	-	LW-3	G77
GIVR/L	**1412-1SE**	●	●		14	12	11.4	150	18	7.7	1.7	Fig.4	CPS-5F	-	FT-15	-	
	1612-1AE	●	●		16	12	11.4	150	19	8.2	2.2	Fig.5	CPS-5V	-	FT-15	-	
	2016-1BE	●	●		20	16	15.2	180	20	11.2	Note 1) 2.8	Fig.5	CPS-5V	-	FT-15	-	
	2016-2BE	●	●		20	16	15.2	180	19	11.7	Note 5) 3.2						
	2520-1CE	●	●		25	20	19.0	200	25	14.5	Note 6) 4.5	Fig.5	-	CPS-6V	-	LW-3	
	3225-1CE	●	●		32	25	24.0	220	24	17.5	Note 7) 4.5						
	4032-1CE	●	●		40	32	31.0	240	29	21.0	Note 7) 4.5						
	2720-2CE	●	●		27	20	19.0	200	25	16.2	Note 4) 5.5						
	3225-2CE	●	●		32	25	24.0	220	24	18.7	Note 4) 5.5						
	4032-2CE	●	●		40	32	31.0	240	29	22.2	Note 4) 5.5						
GIVR/L	**1616-1AW**	●	●		16	16	15.0	175	48	10.6	2.2	Fig.6	CPS-5V	-	FT-15	-	
	2020-1BW	●	●		20	20	19.0	220	60	14.6	Note 1) 2.8	Fig.6	CPS-5V	-	FT-15	-	
	2020-2BW	●	●		20	20	19.0	220	60	14.6	Note 2) 3.2						
	2525-1CW	●	●		25	25	24.0	260	70	19.1	Note 3) 4.5	Fig.6	-	CPS-6V	-	LW-3	
	2525-2CW	●	●		25	25	24.0	260	70	19.1	Note 4) 5.5						

- Dimension **CDX** shows available grooving depth.

Note 1: GV®/L200~250-020B Insert can be used up to a Groove Depth 3.2mm.
Note 2: GV®/L300~400-020B Insert can be used up to a Groove Depth 4.2mm.
Note 3: GV®/L340-020C Insert can be used up to a Groove Depth 5.5mm.
Note 4: GV®/L430~500-020C Insert can be used up to a Groove Depth 6.3mm.
Note 5: GV®/L300~400-020B Insert can be used up to a Groove Depth 3.8mm. (When using GIV®/L2016-2BE)
Note 6: GV®/L340-020C Insert can be used up to a Groove Depth 4.7mm. (When using GIV®/L2520-1CE)
Note 7: GV®/L340-020C Insert can be used up to a Groove Depth 5.3mm. (When using GIV®/L3225-1CE, GIV®/L4032-1CE)
If you need any of insert groove depth specified in notes 1 to 7, modify the dimension **CDX** of toolholder.

KIGBA





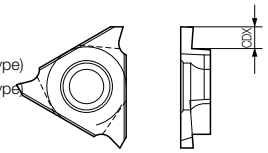
• Right-hand shown

• Left-hand Insert for Right-hand Toolholder, Right-hand Insert for Left-hand Toolholder.

Toolholder Dimensions

Part Number	Stock		Unit	Min. Bore Dia.	Dimensions						Spare Parts		Applicable Inserts
											Clamp Set	Wrench	
	R	L		DMIN	DCON	H	LF	LH	WF	*CDX			G6~G11
KIGBA R/L 16-3	●	●	inch	1.38	1.00	0.92	9.0	1.18	0.69	0.12	LGBA-16R/LS	FT-15	GBA32R/L Type
20-4	●	●		1.57	1.25	1.18	10.0	1.18	0.90	0.12	LGBA-22R/LS	FT-15	GBA43R/L Type
KIGBA R/L 3525-16	●	●	mm	35	25	23	220	30	17.5	2.8	LGBA-16R/LS	FT-15	GBA32R/L type
4032-22	●	●		40	32	30	250	30	23.0	3.0	LGBA-22R/LS	FT-15	GBA43R/L type

*Dimension **CDX** shows the distance from the Toolholder to the cutting edge.
Available Grooving Depth depends on the insert.
KIGBA R/L 3525-16: Dimension **CDX** of the applicable insert (GBA32 type)
4032-22: Dimension **CDX** of the applicable insert (GBA43 type)
1. 2.0mm (Dimension **CDX** < 2.8mm)
2. 2.8mm (Dimension **CDX** ≧ 2.8mm)



• Clamp Set : LGBA-○○LS for Right-hand Toolholder, and LGBA-○○RS for Left-hand Toolholder.

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Rake Angle (α) after Installment of GBA

GBA32R/L○○○-○○○		GBA43R/L○○○-○○○		GBA43R/L○○○-○○○R (Full-R)		
α (°)	Insert Grade	α (°)	Insert Grade	α (°)	Insert Grade	Full-R
+1°	TN620, TN90, PV7040, PR930, PR1115, PR1215, PR1625, PR905 KPD001, KPD010	-9°	KBN510, KBN525	+1°	TN620, TN90, PV7040, PR930 PR1115, PR1215, PR1625, PR905	050R~150R
		+1°	TN620, TC40, TN90, PV7040 PR930, PR1115, PR1215 PR1625, PR905 KPD001, KPD010	+5°	TN620, TN90, PV7040, PR930 PR1115, PR1215, PR1625, PR905	200R
+11°	KW10	+11°	KW10	+5°	KW10	050R~200R

Rake Angle (α) after Installment of GBA-GM

α (°)	Insert Part Number
+1°	GBA43R/L150-020GM
+6°	GBA43R/L175-020GM ~ GBA43R/L265-030GM
+3°	GBA43R/L300-030GM ~ GBA43R/L400-040GM

Rake Angle (α) after Installment of GBA-MY

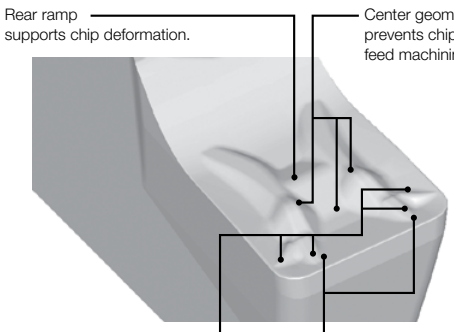
α (°)	Insert Part Number
+6°	GBA43R/L175-020MY ~ GBA43R/L350-030MY
+5°	GBA43R/L400-040MY

KGDI Internal Grooving

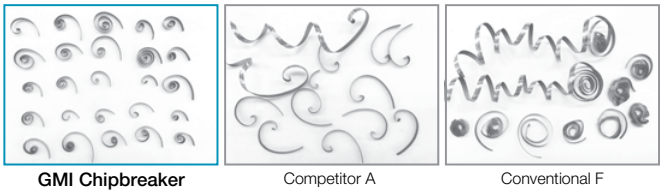
Stable Machining with Excellent Chip Control and Smooth Chip Evacuation

1 Excellent Chip Control with GMI Chipbreaker for Internal Grooving

Evenly breaks chips in various cutting conditions with newly designed chipbreaker geometry.
Good chip control even in finishing applications with small depths of cut.



Chip Control Comparison (Internal Evaluation)

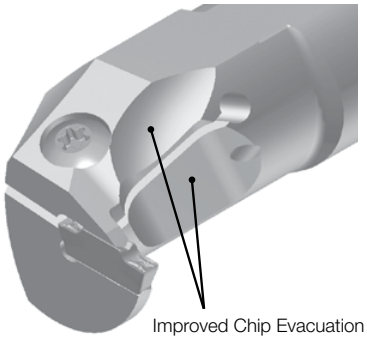


Smooth chip control with stable chip shape compared with Competitor A and Conventional F.
Prevents frequent machine stops caused by tangled chips.

Cutting Conditions: Vc = 330 sfm, f = 0.003 ipr Toolholder: KGDIR3225B-3
Insert: GDM3015N-040GMI Workpiece: 5120 Steel

2 Smooth Chip Evacuation by Creating Chip Pocket

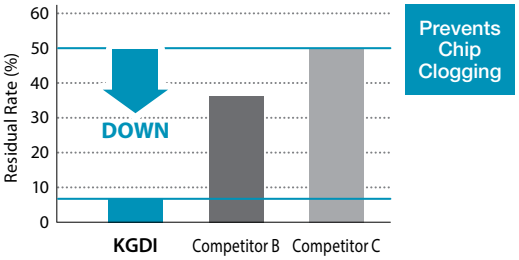
Smooth chip evacuation when grooving and finishing.

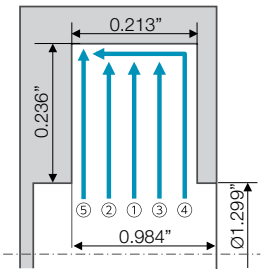


Improved Chip Evacuation with Innovative Chip Pockets

Cutting Conditions:
Vc = 330 sfm
①: D.O.C. = 0.118", ②③: D.O.C. = 0.039", ④⑤: D.O.C. = 0.008"
f = 0.003 ipr
Toolholder: KGDIR3225B-3
Insert: GDM3015N-040GMI
Workpiece: 4131 Steel

Residual Chips (Internal Evaluation)



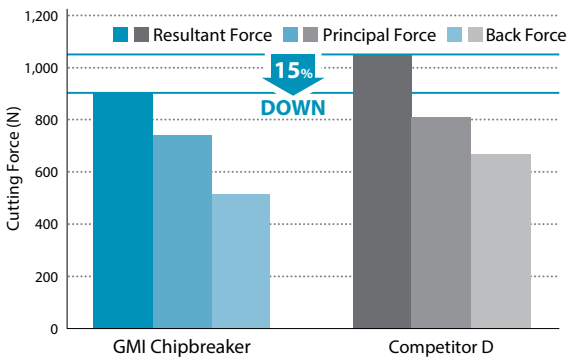


Chips remaining in machined bore were greatly reduced compared with Competitor B and C.

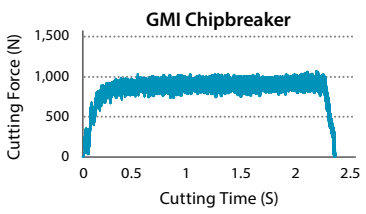
3 Low Cutting Forces and Stable Machining

GMI chipbreaker prevents chip clogging and reduces cutting forces.

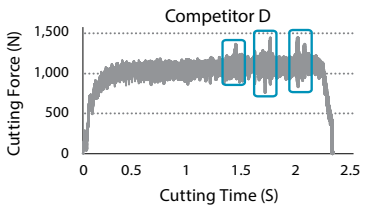
Cutting Force Comparison (Internal Evaluation)



Cutting Conditions: Vc = 490 sfm, f = 0.004 ipr Toolholder: KGDIR3225B-3
Insert: GDM3015N-040GMI Workpiece: 4131 Steel



Stable machining with consistent in cutting force.



Cutting force spike due to clogged chips.

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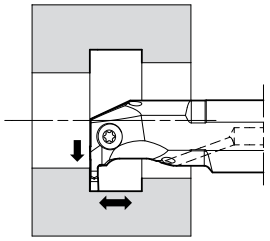
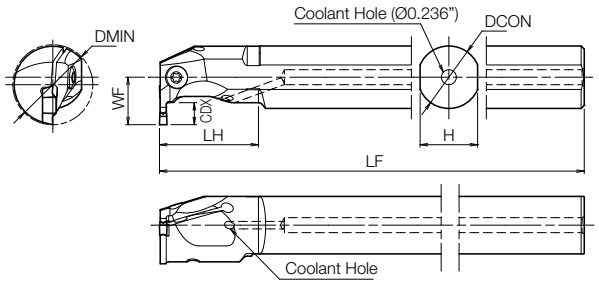
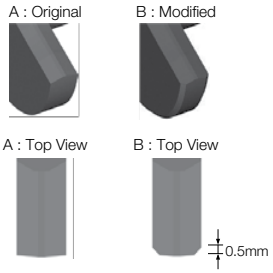




A : Available with Original Holder Shape
B : Available with Modified Holder Shape (Below)



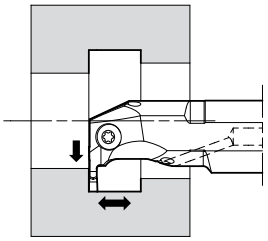
• Right-hand shown

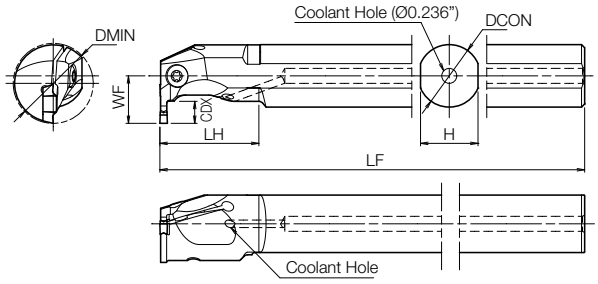
Toolholder Dimensions (Inch Sizes)

Part Number		Stock		Min. Bore Dia.		Dimensions (in)						Edge Width CW		Spare Parts			
														Clamp Screw		Wrench	
		R	L	DMIN		DCON	H	LF	LH	WF	CDX	MIN	MAX				
				GMI	CM												
KGDIR	10B-2	●		0.709	-	0.625	0.591	6	0.984	0.374	0.177	0.079	0.079	GS-50	-	LW-3	-
	12B-2	●		0.984		0.75	0.709	7	1.181	0.571	0.236	0.079	0.079				
	16B-2	●		1.260		1	0.906	8	1.575	0.748	0.276	0.079	0.079	-	SB-5TR	-	LTW-20
KGDIR	10B-3	●		0.787	0.827	0.625	0.591	6	0.984	0.453	0.217	0.118	0.118	GS-50	-	LW-3	-
	12B-3	●		0.984	1.024	0.75	0.709	7	1.181	0.571	0.236	0.118	0.118				
	16B-3	●		1.260	1.299	1	0.906	8	1.575	0.748	0.315	0.118	0.118	-	SB-5TR	-	LTW-20
KGDIR	16B-4	●		1.260	A: 1.575 B: 1.299	1	0.906	8	1.575	0.748	0.335	0.157	0.197	-	SB-5TR	-	LTW-20
	20B-4	●		1.575	A: 1.890 B: 1.614	1.25	1.142	8.5	1.969	0.925	0.433	0.157	0.197				
KGDIR	16B-5	●		1.260	A: 1.457 B: 1.338	1	0.906	8	1.575	0.748	0.335	0.197	0.197	-	SB-5TR	-	LTW-20
	20B-5	●		1.575	A: 1.772 B: 1.653	1.25	1.142	8.5	1.969	0.925	0.433	0.197	0.197				

* Possible by slightly chamfering toolholder's tip about 0.5 mm

KGDI





• Right-hand shown

Toolholder Dimensions (Metric Sizes)

Part Number		Stock R	Stock L	Min. Bore Dia. DMIN GMI	Min. Bore Dia. DMIN CM	DCON	H	LF	LH	WF	CDX	Edge Width CW MIN	Edge Width CW MAX	Spare Parts: Clamp Screw		Spare Parts: Wrench	
KGDI	1816B-2	●	●	18		16	15	150	25	9.5	4.5	2	2	GS-50	-	LW-3	-
	2520B-2	●	●	25	-	20	18	180	30	14.5	6	2	2				
	3225B-2	●	●	32		25	23	200	40	19	7	2	2	-	SB-5TR	-	LTW-20
KGDI	2016B-3	●	●	20	21	16	15	150	25	11.5	5.5	3	3	GS-50	-	LW-3	-
	2520B-3	●	●	25	26	20	18	180	30	14.5	6	3	3				
	3225B-3	●	●	32	33	25	23	200	40	19	8	3	3	-	SB-5TR	-	LTW-20
KGDI	3225B-4	●	●	32	40 (34*)	25	23	200	40	19	8.5	4	5	-	SB-5TR	-	LTW-20
	4032B-4	●	●	40	48 (42*)	32	29	220	50	23.5	11	4	5				
KGDI	3225B-5	●	●	32	37 (34*)	25	23	200	40	19	8.5	5	5	-	SB-5TR	-	LTW-20
	4032B-5	●	●	40	45 (42*)	32	29	220	50	23.5	11	5	5				

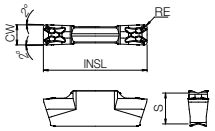
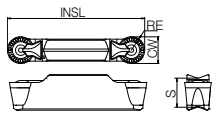
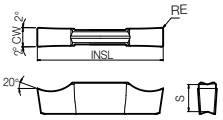
* Possible by slightly chamfering toolholder's tip about 0.5 mm

(Customer Service) 800.823.7284 - Option 1
(Technical Support) 800.823.7284 - Option 2
Visit us online at KyoceraPrecisionTools.com
● : Standard Item △ : Phaseout Item (will be removed from next catalog)
Contact your local Kyocera sales engineer to upgrade old products to new technology

Applicable Inserts

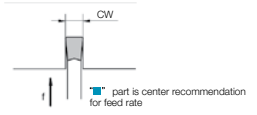
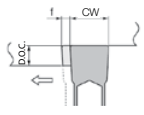
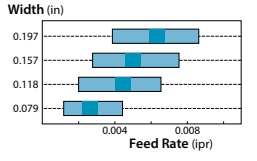
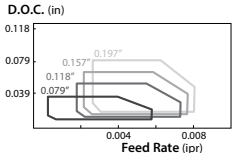
Usage Classification
● : Light Interruption / 1st Choice
◔ : Light Interruption / 2nd Choice
● : Continuous / 1st Choice
○ : Continuous / 2nd Choice

		Cermet	MEGACOAT NANO	MEGACOAT		Uncoated Carbide
P	Carbon Steel / Alloy Steel	●	◔	●	◔	
M	Stainless Steel		●	◔	◔	
K	Cast Iron				●	
N	Non-Ferrous Metals					●

Insert		Part Number	Dimensions (in) CW in	CW mm	CW Tolerance	RE	INSL	S	TN620	PR1535	PR1225	PR1215	GW15	Applicable Toolholders ➡ G83~G84
 General Purpose		**GDM 2013N-020GMI**	0.079	2.0	±0.0012	0.008	0.531	0.169	●	●	●	●		KGDI✎...-2
		3015N-040GMI	0.118	3.0		0.016	0.610	0.181	●	●	●	●		KGDI✎...-3
		4020N-040GMI	0.157	4.0		0.016	0.787	0.169	●	●	●	●		KGDI✎...-4
		5020N-040GMI	0.197	5.0	±0.0016	0.016	0.787	0.169	●	●	●	●		KGDI✎...-4 KGDI✎...-5
		5020N-080GMI	0.197	5.0		0.031	0.787	0.169	●	●	●	●		KGDI✎...-4 KGDI✎...-5
 Full Radius		**GDM 3015N-150R-CM**	0.118	3.0	±0.0012	0.059	0.642	0.181	●	●	●	●		KGDI✎...-3
		4020N-200R-CM	0.157	4.0		0.079	0.787	0.169	●	●	●	●		KGDI✎...-4
		5020N-250R-CM	0.197	5.0	±0.0016	0.098	0.827	0.169	●	●	●	●		KGDI✎...-4 KGDI✎...-5
NEW  Low Cutting Force		**GDG 3015N-020GS**	0.118	3.0	±0.0008	0.008	0.787	0.169					●	KGDI✎...-3

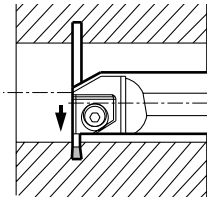
Recommended Cutting Conditions

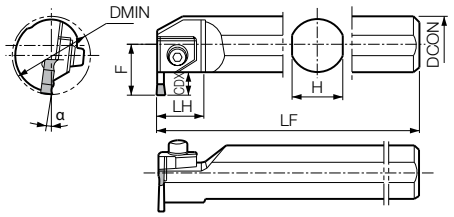
Workpiece Material	Chipbreaker	Recommended Insert Grade (Vc sfm) Cermet TN620	MEGACOAT NANO PR1535	MEGACOAT PR1225	MEGACOAT PR1215	Uncoated Carbide GW15	Notes
Carbon Steel	GMI CM	☆ 330~720	☆ 260~490	★ 260~660	☆ 330~660	-	Wet
Alloy Steel		☆ 260~660	☆ 230~490	★ 230~590	☆ 260~590	-	
Stainless Steel		☆ 230~590	★ 200~490	☆ 200~490	☆ 200~490	-	
Cast Iron		-	-	-	★ 330~660	-	
Non-Ferrous Metals	GS	-	-	-	-	★ 660~1,640	

Chipbreaker	Grooving	Traversing
		
GMI (General Purpose)		

● : Standard Item △ : Phaseout Item (will be removed from next catalog)
Contact your local Kyocera sales engineer to upgrade old products to new technology

KIGH





• Right-hand shown

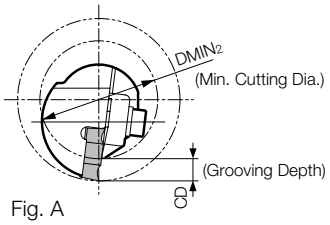


Fig. A

Toolholder Dimensions

Part Number		Stock	Min. Bore Dia. DMIN	Dimensions (mm) DCON	H	LF	LH	WF	CDX	Spare Parts: Clamp	Clamp Bolt	Washer	Spring	Wrench
KIGHR	**4532B-4**	●	45	32	30	200	27	28.2	12	CGH-1L	HH6X25	W-6	SP-6	LW-5
	5540B-4	●	55	40	38	250	27	32.3	12					
	6550B-4	●	65	50	48	300	27	37.3	12					
	4532B-5	●	45	32	30	200	27	28.2	12	CGH-1L	HH6X25	W-6	SP-6	LW-5
	5540B-5	●	55	40	38	250	27	32.3	12					
	6550B-5	●	65	50	48	300	27	37.3	12					
	5540B-7	●	55	40	38	250	27	32.3	12	CGH-2L	HH6X25	W-6	SP-6	LW-5

- Dimension **CDX** shows the distance from the Toolholder to the cutting edge. For the actual Grooving Depth (**CD**), ref. to "List of Min. Available Cutting Diameter and Groove Depth".
- Dimension **LH** depends on the width of the installed Insert.

Rake Angle (α) after Installment of GH / GHU

GH○○○○-○○		GHU○○-○○	
α (°)	Insert Grade	α (°)	Insert Grade
-5°	A65, A66N, PT600M	+5°	TN60 CR9025
+5°	TC40		
+15°	TN90, TC60 PR930 KW10		

List of the Min. Cutting Diameter and Grooving Depth (Refer to Fig.A)

Part Number		$DMIN_2$ Min. Cutting Dia. (mm)					
KIGHR	**4532B-○**	Ø110	Ø70	Ø65	Ø60	Ø55	Ø45
	5540B-○	Ø70	Ø60	Ø55			
	6550B-○	Ø65					
Available Grooving Depth CD (mm)		12.0	11.5	11.0	10.0	9.0	under 8.0

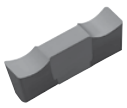
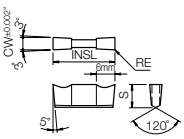
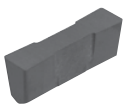
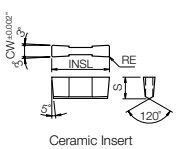
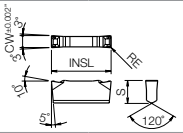
Applicable Inserts

(mm)

Part Number	INSL	S
GH4020-○○~GH8020-○○	20	7.5
GHU○○-○○	20	

P	Carbon Steel / Alloy Steel					●				
M	Stainless Steel					●				
K	Cast Iron						●	○		●
N	Non-ferrous Metals						●			
S	Titanium Alloy						●			
H	Hard materials (≤40HRC)					●				
	Hard materials (≥40HRC)								○	●

Classification of Usage
● : Light Interruption / 1st Choice
◔ : Light Interruption / 2nd Choice
● : Continuous / 1st Choice
○ : Continuous / 2nd Choice

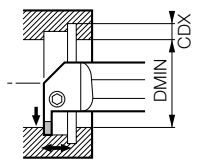
Insert		Part Number		Dimensions (mm) CW	RE	Cermet TN60	TN90	TC40	TC60	CVD Coated Carbide CR9025	PVD Coated Carbide PR930	Carbide KW10	Ceramic A65	A66N	PT600M	Applicable Toolholders
 Ground Chipbreaker		**GH**	**4020-02**	4.0	0.20			●	●		●	●				KIGHR4532B-4 KIGHR5540B-4 KIGHR6550B-4
			4020-05		0.50			●	●		●	●	●	●	●	
			4520-02	4.5	0.20			●								
			4520-05		0.50			●								
			5020-02	5.0	0.20			●	●		●	●				KIGHR4532B-5 KIGHR5540B-5 KIGHR6550B-5
			5020-05		0.50			●	●		●	●	●	●	●	
			5520-02	5.5	0.20			●								
			5520-05		0.50			●								
			6020-02	6.0	0.20			●	●		●	●				
			6020-05		0.50			●	●		●	●	●		△	
 Ceramic	 Ceramic Insert		**6520-02**	6.5	0.20			●								
			6520-05		0.50			●								
			7020-02	7.0	0.20			●	●		●	●				
			7020-05		0.50			●	●		●	●	●			
			7520-02	7.5	0.20			●								KIGHR5540B-7 KIGHR6550B-7
			7520-05		0.50			●								
			8020-02	8.0	0.20			●	●		●	●				
			8020-05		0.50			●	●		●	●				
 Molded Chipbreaker		**GHU**	**40-20**	4.0	0.25	●				●						KIGHR…○○○○B-4
			50-20	5.0	0.30	●				●						KIGHR…○○○○B-5
			60-20	6.0	0.30	●				●						

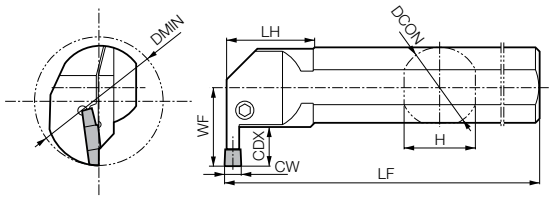
Recommended Cutting Conditions ➡ **G147**

Inserts are sold in 10 piece boxes.

● : Standard Item △ : Phaseout Item (will be removed from next catalog)
Contact your local Kyocera sales engineer to upgrade old products to new technology

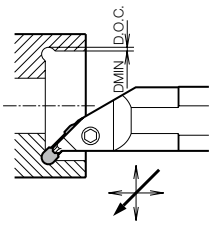
KIGM-8 (8mm-Width Insert / Large Internal Diameter Deep Grooving)

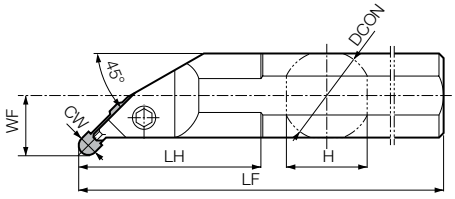




• Right-hand shown

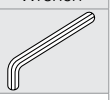
KIGMU-8 (8mm-Width Insert / Large Internal Diameter Undercut Grooving)





• Right-hand shown

Toolholder Dimensions

Part Number	Stock		Min. Bore Dia.	Dimensions (mm)							Insert Width CW (mm)		Spare Parts	
													Clamp Bolt	Wrench
	R	L	DMIN	DCON	H	LF	LH	WF	CDX	D.O.C.	MIN	MAX		
KIGM□ 6540B-8	●	●	65	40	36	300	41	41	20	-	8	8	HH6X20	LW-5
KIGMUR 6540B-8	●		65	40	36	300	83	26	-	2.2	8	8	HH6X20	LW-5

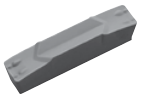
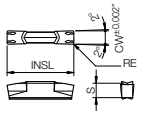
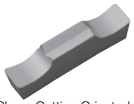
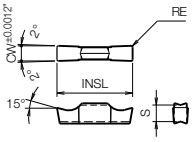
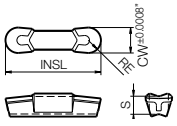
- Dimension CDX shows available grooving depth.
- Dimension D.O.C. shows the distance from the Internal face of the workpiece.

Applicable Inserts

Part Number	INSL	S
GMM8030-080MW	30.0	5.5
GMG8030-050MG	30.0	5.5
GMGA8030-400R	30.0	5.5

P	Carbon Steel / Alloy Steel			◔	●		
M	Stainless Steel			●	◔		
K	Cast Iron					●	◔
N	Non-ferrous Metals						●
S	Titanium Alloy						●
H	Hard materials (≤40HRC)			○	●		
	Hard materials (≥40HRC)						

Classification of Usage
● : Light Interruption / 1st Choice
◔ : Light Interruption / 2nd Choice
● : Continuous / 1st Choice
○ : Continuous / 2nd Choice

Insert (Right-handed Insert Shown)		Part Number	Previous Part Number	Dimensions (mm)		Cermet	CVD Coated Carbide	PVD Coated Carbide			Carbide	Applicable Toolholders
				CW	RE	TN90	CR9025	PR915	PR930	PR905	KW10	
 Chip Control Oriented M Class		GMM 8030-080MW	GMM 8030-08	8.0	0.8		●		●	●	●	KIGM□...-8 KIGMUR...-8
 Sharp-Cutting Oriented / Precision Class Ground Chipbreaker		GMG 8030-050MG	GMG 8030-05MG	8.0	0.5	●	●		●	●	●	
 Sharp-Cutting Oriented / Precision Class Full-R / Copying		GMGA 8030-400R	GMGA 8030-40R	8.0	4.0						●	

- If using a full-R insert with KIGM-8 type toolholder, you need to modify the corner of insert adapter of toolholder.

Recommended Cutting Conditions G153

Inserts are sold in 10 piece boxes.

● : Standard Item △ : Phaseout Item (will be removed from next catalog)
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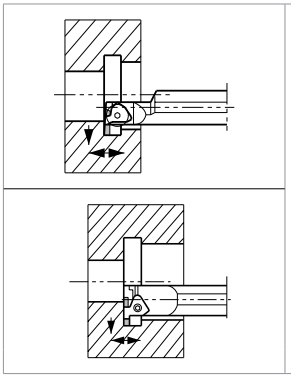
KGIA



Integral Type

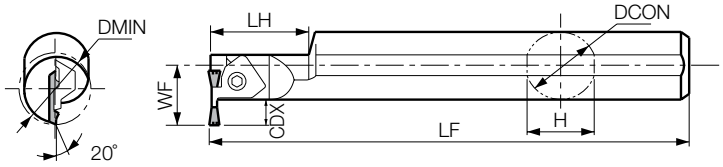


Fig. 1

SwitchBlade Type

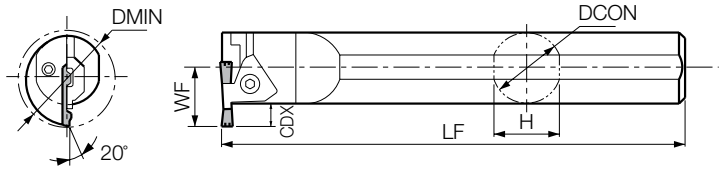


Fig. 2

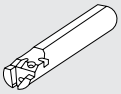
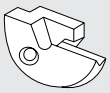
• Right-hand shown

Toolholder Dimensions

Part Number		Stock	Min. Bore Dia.	Dimensions (mm)						Drawing	Spare Parts			
											Clamp	Clamp Bolt	Spring	Wrench
			DMIN	DCON	H	LF	LH	WF	CDX					
KGIAR	**3232B-3**	●	32	32	30.4	200	45	26.5	10	Fig.1	CGIA-3R	HH5X15	SP-5	LW-4
	4332B-3	●	43	32	30.0	200	-	26.3	10	Fig.2	CGIA-3R	HH5X15	SP-5	LW-4
	5140B-3	●	51	40	38.0	250	-	30.3	10					
	3232B-4	●	32	32	30.4	200	45	26.5	10	Fig.1	CGIA-4R	HH5X15	SP-5	LW-4
	4332B-4	●	43	32	30.0	200	-	26.3	10	Fig.2	CGIA-4R	HH5X15	SP-5	LW-4
	5140B-4	●	51	40	38.0	250	-	30.3	10					
	5640B-5	●	56	40	38.0	250	-	35.3	15	Fig.2	CGIA-5R	HH5X15	SP-5	LW-4
	6650B-5	●	66	50	48.0	250	-	40.3	15					

• Dimension **CDX** shows available grooving depth.

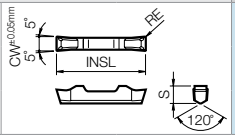
Composition

Type	Toolholder Part Number		Spare Parts			
			Toolholder	Blade	Clamp Screw	Wrench
						
Integral Type	**KGIAR**	**3232B-3**	-	-	-	-
Separate Type		**4332B-3**	KGIAR32H	BGIAR43-3	SB-40140TR	FT-15
		5140B-3	KGIAR40H	BGIAR51-3	SB-40140TR	FT-15
Integral Type		**3232B-4**	-	-	-	-
SwitchBlade Type		**4332B-4**	KGIAR32H	BGIAR43-4	SB-40140TR	FT-15
		5140B-4	KGIAR40H	BGIAR51-4	SB-40140TR	FT-15
SwitchBlade Type		**5640B-5**	KGIAR40H	BGIAR56-5	SB-40140TR	FT-15
		6650B-5	KGIAR50H	BGIAR66-5	SB-40140TR	FT-15

Applicable Inserts

P	Carbon Steel / Alloy Steel	○	◕
M	Stainless Steel	○	◕
K	Cast Iron		
N	Non-ferrous Metals		
S	Titanium Alloy		
H	Hard materials (≤40HRC)	○	●
	Hard materials (≥40HRC)		

Classification of Usage
◕ : Light Interruption / 1st Choice
◔ : Light Interruption / 2nd Choice
● : Continuous / 1st Choice
○ : Continuous / 2nd Choice

Insert Right-handed Insert Shown		Part Number		Dimensions (mm)				Cermet	CVD Coated Carbide	Applicable Toolholders
				CW	RE	INSL	S	TN60	CR9025	
 Molded Chipbreaker		**GIA**	**30**	3.0	0.20	25	5.0	●	●	KGIAR…3
			40	4.0	0.25	25	5.0	●	●	KGIAR…4
			50	5.0	0.30	30	5.0	●	●	KGIAR…5

Recommended Cutting Conditions ➡ **G150**

Inserts are sold in 10 piece boxes.

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● : Standard Item △ : Phaseout Item (will be removed from next catalog)
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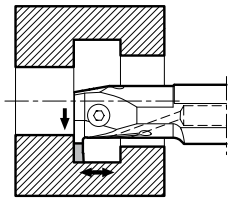
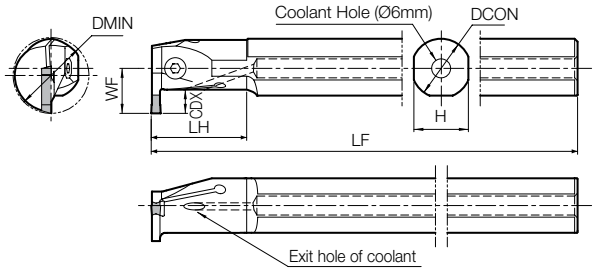
KIGM-V (KIGM-V is phasing out and will be removed from next catalog. Switch to **KGDI** G78~G79)





• Right-hand shown

Toolholder Dimensions

Part Number		Stock R	Stock L	Unit	Min. Bore Dia. DMIN	Dimensions DCON	H	LF	LH	WF	CDX	Edge Width CW MIN	MAX	Spare Parts: Clamp Screw		Wrench	
KIGM®	10B-3V	●	●	inch	0.787	0.625	0.591	6.000	0.984	0.453	0.217	0.118	0.118	GS-50	-	LW-3	-
	12B-3V	●	●		0.966	0.750	0.709	7.000	1.260	0.571	0.217	0.118	0.118				
	16B-3V	●	●		1.260	1.000	0.906	8.000	1.575	0.748	0.315	0.118	0.118	-	SB-5TR	-	LTW-20
	16B-4V	●	●		1.260	1.000	0.906	8.000	1.575	0.748	0.335	0.157	0.197				
	20B-4V	●	●		1.550	1.250	1.140	8.500	1.969	0.925	0.433	0.157	0.197				

• Dimension **CDX** shows available grooving depth.

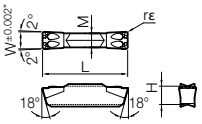
Applicable Inserts

(in)

Part Number	INSL	S
GMM3015…V(□)	0.610	0.169
GMM4020…V(□)	0.787	0.169
GMM5020…V(□)	0.787	0.169

P	Carbon Steel / Alloy Steel			◔	●		
M	Stainless Steel			●	◔		
K	Cast Iron					●	◔
N	Non-ferrous Metals						●
S	Titanium Alloy						●
H	Hard materials (≤40HRC)			○	●		
	Hard materials (≥40HRC)						

Classification of Usage
● : Light Interruption / 1st Choice
◔ : Light Interruption / 2nd Choice
● : Continuous / 1st Choice
○ : Continuous / 2nd Choice

Insert		Part Number	Previous Part Number	Dimensions (in) CW	RE	Cermet TN90	CVD Coated Carbide CR9025	PVD Coated Carbide PR915	PR930	PR905	Carbide KW10	Applicable Toolholders
 Chip Control Oriented M Class		GMM 3015-040V	GMM 3015-04V	0.118	0.016	●	●	●	●	●	●	KIGM® 2016B-3V KIGM® 2520B-3V KIGM® 3225B-3V
		4020-040V	4020-04V	0.157	0.016	●	●	●	●	●	●	KIGM® 3225B-4V KIGM® 4032B-4V
		5020-080V	5020-08V	0.197	0.031		●	●	●	●	●	

• It is not recommended to use this for KIGM-V Internal Grooving Toolholders against GMM...V / GMM...VR which the front relief angle is 18°, because the relief angle of the insert used for GMM4020-04 toolholder is 10°.

Recommended Cutting Conditions G153

Inserts are sold in 10 piece boxes.

● : Standard Item △ : Phaseout Item (will be removed from next catalog)
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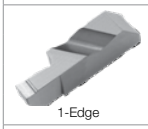
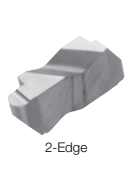
KCG / KCGP / KCGDP / KCRP

Insert (Right-handed Insert Shown)	Part Number	CW (inch)	CW (mm)	CDX	RE	W1	INSL	S	Cermet TC40 R	Cermet TC40 L	Cermet TC60 R	Cermet TC60 L	MEGA COAT CVD PR1215 R	MEGA COAT CVD PR1215 L	PVD PR660 R	PVD PR660 L	PVD PR930 R	PVD PR930 L	Carbide KW10 R	Carbide KW10 L	Ceramic A65 R	Ceramic A65 L
 2-Edge	KCG 2062R/L	0.062	1.57	0.110	0.008	0.150	0.540	0.219													●	●
	2125R/L	0.125	3.18																			●
	3062R/L	0.062	1.57	0.094	0.008	0.195	0.810	0.344													●	
	3094R/L	0.094	2.39	0.150																	●	●
	3125R/L	0.125	3.18																		●	
	3156R/L	0.156	3.96																		●	●
 2-Edge	KCGP 2031R/L	0.031	0.79	0.050	0.003	0.150	0.540	0.219		●		●	●	●			●	●	●	●		
	2041R/L	0.041	1.04							●	●		●	●			●					
	2047R/L	0.047	1.19							●	●		●	●	●	●	●	●	●	●		
	KCGP 2058R/L	0.058	1.47	0.110	0.008	0.150	0.540	0.219		●			●									
	2062R/L	0.062	1.57							●		●	●	●		●	●	●	●	●		
	KCGP 2094R/L	0.094	2.39	0.110	0.008	0.150	0.540	0.219		●			●	●			●	●	●	●		
	2125R/L	0.125	3.18						●	●			●	●	●		●	●	●			
	KCGP 3031R/L	0.031	0.79	0.050	0.008	0.195	0.810	0.344		●			●	●			●	●				
	3047R/L	0.047	1.19	0.075								●	●	●	●		●	●	●			
	3062R/L	0.062	1.57	0.094									●	●			●	●	●	●		
	3072R/L	0.072	1.83						●	●	●	●	●	●				●				
	KCGP 3078R/L	0.078	1.98	0.094	0.008	0.195	0.810	0.344		●	●		●	●		●	●	●				
	3088R/L	0.088	2.24							●		●	●				●	●				
	KCGP 3094R/L	0.094	2.39	0.150	0.008	0.195	0.810	0.344	●	●		●	●	●			●	●	●	●		
	3097R/L	0.097	2.46							●							●					
	3105R/L	0.105	2.67							●							●	●				
	KCGP 3110R/L	0.110	2.79	0.150	0.008	0.195	0.810	0.344	●	●			●	●			●					
	3122R/L	0.122	3.10						●									●				
	3125R/L	0.125	3.18								●		●	●			●	●	●	●		
	KCGP 3142R/L	0.142	3.61	0.150	0.008	0.195	0.810	0.344	●	●							●	●				
	3156R/L	0.156	3.96							●	●			●		●	●	●				
	3178R/L	0.178	4.52							●							●	●				
	KCGP 3185R/L	0.185	4.70	0.150	0.008	0.195	0.810	0.344	●	●							●	●				
	3189R/L	0.189	4.80						●	●	●	●	●	●		●	●	●	●	●		
	KCGP 4125R/L	0.125	3.18	0.150	0.008	0.255	1.272	0.453	●	●			●	●			●	●				
	4189R/L	0.189	4.80	0.250	0.018					●			●	●			●	●				
	4213R/L	0.213	5.41						●	●							●	●				
	KCGP 4219R/L	0.219	5.56	0.250	0.018	0.255	1.272	0.453	●	●							●	●				
	4250R/L	0.250	6.35							●			●	●			●	●				
 1-Edge	KCGDP 3062R/L	0.062	1.57	0.125	0.008	0.195	0.886	0.344	●	●			●	●			●					
	3094R/L	0.094	2.39	0.250	0.008	0.195	0.990	0.344	●	●			●	●			●	●				
	3125R/L	0.125	3.18						●				●	●			●	●				
	3189R/L	0.189	4.80	0.250	0.023				●	●								●				
 2-Edge	KCRP 2031R/L	0.062	1.57	0.094	0.031	0.150	0.540	0.219					●	●			●					
	2039R/L	0.078	1.98	0.110	0.039												●	●				
	2047R/L	0.094	2.39	0.150	0.047								●	●								
	2062R/L	0.125	3.18	0.150	0.062						●		●	●								
	KCRP 3031R/L	0.062	1.57	0.094	0.031	0.195	0.810	0.344		●	●		●	●			●	●		●		
	3047R/L	0.094	2.39	0.150	0.047				●				●	●			●	●				
	3062R/L	0.125	3.18	0.150	0.062								●	●		●	●	●				
	KCRP 3078R/L	0.156	3.96	0.150	0.078	0.195	0.810	0.344									●	●				
	3094R/L	0.188	4.78	0.150	0.094					●			●	●			●	●				
	KCRP 4125R/L	0.250	6.35	0.250	0.125	0.255	1.272	0.453	●	●					●		●	●				

- Dimension **CDX** shows available Grooving Depth.

Recommended Cutting Conditions (Cera-Notch)

Workpiece Material	Cermet Feeds (ipr)	Carbide Feeds (ipr)	Recommended Insert Grade (Vc : sfm) Cermet TC40	Cermet TC60	MEGACOAT PR1215	Carbide PR660	Carbide PR930	Carbide KW10	Ceramic A65
Carbon Steel	0.002~0.005	0.002~0.010	300~900	250~900	300~800	200~550	250~650	-	-
Alloy Steel	0.002~0.005	0.002~0.010	250~800	250~800	300~750	100~500	150~550	-	-
Stainless Steel	0.002~0.005	0.002~0.010	-	200~600	300~600	100~550	100~550	-	-
Tool Steel	0.002~0.005	0.002~0.010	200~650	200~650	300~600	-	100~550	-	-
Hardened Steel (>45Rc)	-	-	-	-	-	-	-	-	250~500*
Gray Cast Iron	0.003~0.006	0.002~0.012	200~700	-	300~700	-	-	-	500~1000
Ductile Iron	0.003~0.006	0.002~0.012	-	150~600	300~600	-	-	-	500~1000
Aluminum	0.002~0.008	0.002~0.012	150~1600	-	-	-	-	500~1600	-

Speeds & Feeds listed are for external grooving. Reduce parameters by 10% for internal grooving.
*Feeds = 0.003~0.008 ipr

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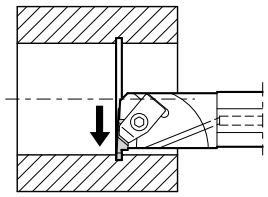
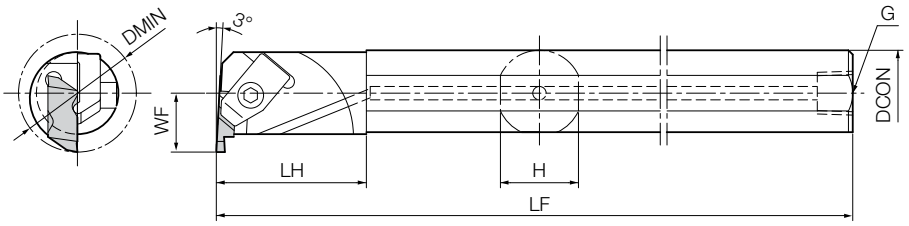
A-KKC





• Right-hand shown

• Left-hand Insert for Right-hand Toolholder, Right-hand Insert for Left-hand Toolholder

Toolholder Dimensions

Part Number	Stock R	Stock L	Unit	Min. Bore Dia. DMIN	Dimensions (in) DCON	H	LF	LH	WF	G	Spare Parts: Clamp	Clamp Screw	Wrench
A10M-KKCR-2	●		inch	1.000	0.625	0.596	6.00	1.153	0.500	1/8-27 NPT	CKC-2L	SKC-2	(7/64 Hex)
A10S-KKCR-2	●			1.000	0.625	0.596	10.00	1.153	0.500	1/8-27 NPT			
A12R-KKCR-2	●			1.125	0.750	0.728	8.00	1.171	0.562	1/8-27 NPT			
A12S-KKCR-2	●			1.125	0.750	0.728	10.00	1.171	0.562	1/8-27 NPT			
A16T-KKC℞-2	●	●		1.375	1.000	0.910	12.00	1.100	0.688	1/8-27 NPT	CKC-3℞	SKC-3	(LW-156)
A16X-KKC℞-3	●			1.375	1.000	0.910	9.00	1.750	0.688	1/8-27 NPT			
A16T-KKC℞-3	●	●		1.375	1.000	0.910	12.00	1.750	0.688	1/4-18 NPT			
A20U-KKC℞-3	●			1.750	1.250	1.138	14.00	1.750	0.875	1/4-18 NPT			
A24U-KKC℞-3	●	●		2.000	1.500	1.366	14.00	1.750	1.000	1/4-18 NPT			
A28U-KKC℞-4	●			2.500	1.750	1.593	14.00	1.750	1.250	1/4-18 NPT			
A32V-KKC℞-4	●	●		2.750	2.000	1.820	16.00	1.750	1.375	1/4-18 NPT			

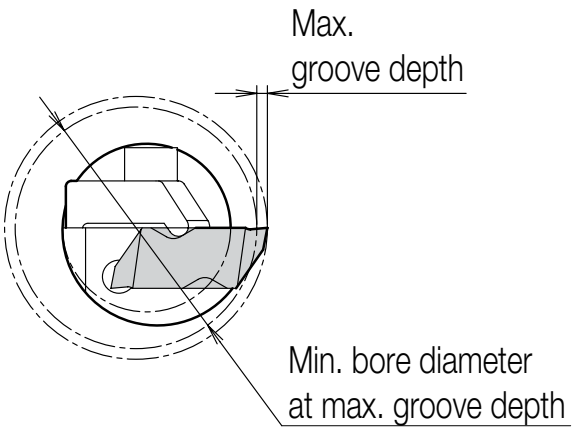
• Note: Right hand bars require left hand inserts and clamps. Left hand bars require right hand inserts and clamps

Also Available for Internal Threading. See Page J25

Applicable Insert

Toolholder	Insert G90
A-KKC℞ …-2	**KCGP-2, KCG-2, KCRP-2**
A-KKC℞ …-3	**KCGP-3, KCG-3, KCRP-3**
A-KKC℞ …-4	**KCGP-4, KCRP-4**

Cutting Diameter Table



• "**CDX**" dimension is same as the "**CDX** dimension" of the available insert.

(inch)

Insert Size	CDX Dimension	Max Groove Depth	Min Bore Dia.
KCG-2 KCGP-2 KCRP-2	0.050	0.040	1.000
	0.110	0.110	2.500
		0.102	1.750
		0.098	1.500
		0.080	1.000
KCG-3 KCGP-3 KCRP-3	0.075	0.050	1.325
	0.094	0.080	1.250
		0.070	1.625
		0.065	1.325
	0.150	0.140	2.375
		0.135	2.125
		0.128	1.875
		0.115	1.625
		0.100	1.375
KCGP-4 KCRP-4	0.150	0.140	2.750
	0.250	0.240	5.750
		0.235	5.000
		0.230	4.500
		0.208	3.250
		0.190	2.500

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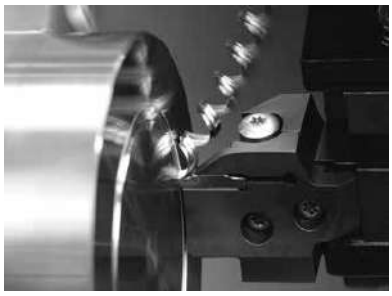
Face Grooving Dia. (DAXN / DAXX)

Face grooving diameter DAXN (min) ~ DAXX (max) is the suitable range for the initial grooving plunge on the unprocessed workpiece
(See Fig.1).
Then, you can widen it towards the inside or the outside within the tool's diameter range.



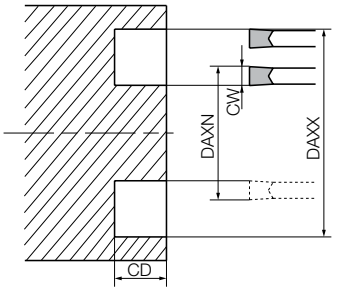
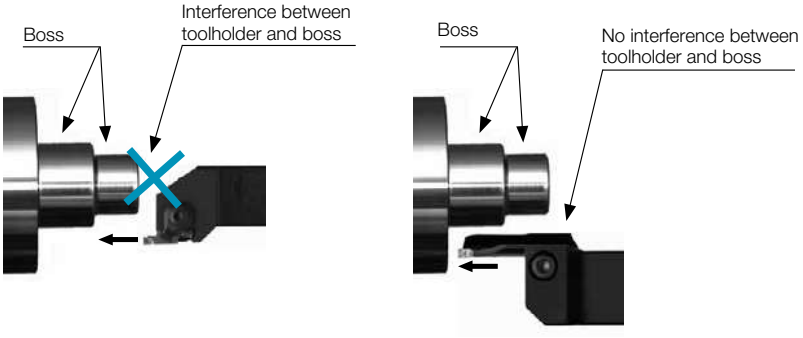


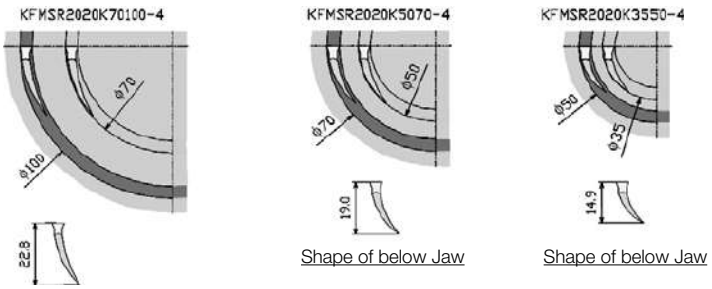
Fig.1

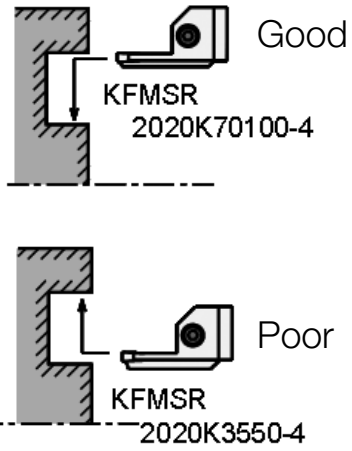
Caution for Face Grooving

1) When face grooving, the suitable toolholder depends on the length of the boss



2) Selection of Face Grooving Toolholder



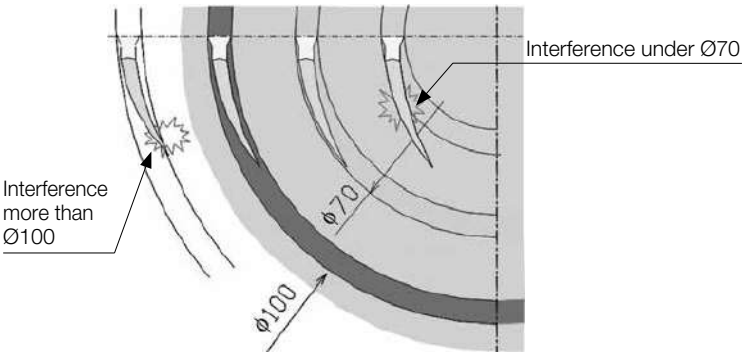


Wider grooving (turning) should be performed from the outside inwards.

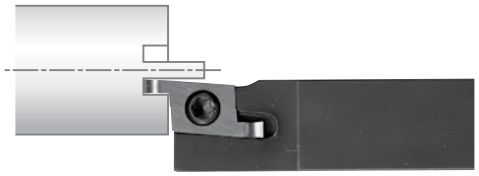
- Example of usage for the face grooving toolholder. When face grooving, KFMSR2525M70100-4 should be plunged between Ø70mm~Ø100mm starting at the outer diameter and moving torwards center. The jaw of toolholder interferes with the workpiece at diameters above Ø100mm or below Ø70mm.

3) Interference of Face Grooving Toolholder

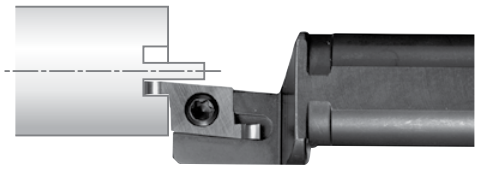
e.g.) KFMSR2525M70100-4



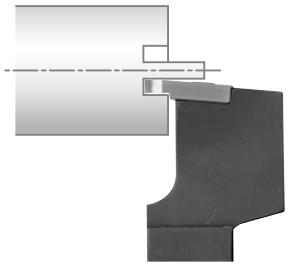
Small Diameter Face Grooving Ø0.236" (Ø6mm)~



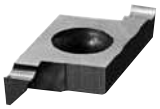
Type	STW
Min. Face Groove Dia.	0.236" (6.0mm)
Edge Width	0.020"~0.079" (0.5mm ~ 2.0mm)
Grooving Depth	0.039"~0.118" (1.0mm ~ 3.0mm)
Ref. Page	G100



Type	S...-STW
Min. Face Groove Dia.	0.236" (6.0mm)
Edge Width	0.020"~0.079" (0.5mm ~ 2.0mm)
Grooving Depth	0.039"~0.118" (1.0mm ~ 3.0mm)
Ref. Page	G100



Type	STWS
Min. Face Groove Dia.	0.236" (6.0mm)
Edge Width	0.020"~0.079" (0.5mm ~ 2.0mm)
Grooving Depth	0.039"~0.118" (1.0mm ~ 3.0mm)
Ref. Page	G101

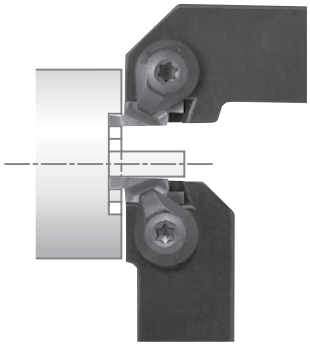


Twin Bar Horizontal Type



Twin Bar Vertical Type

Small Diameter Face Grooving Ø0.315" (Ø8mm)~



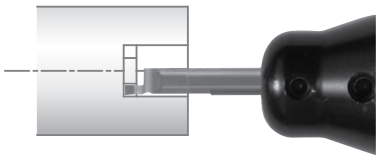
Type	GFVS-AA
Min. Face Groove Dia.	0.315" (8.0mm)
Edge Width	0.039"~0.118" (1.0mm ~ 3.0mm)
Grooving Depth	0.0866" (2.2mm)
Ref. Page	G130

Type	GFVT-AA
Min. Face Groove Dia.	0.315" (8.0mm)
Edge Width	0.039"~0.118" (1.0mm ~ 3.0mm)
Grooving Depth	0.0866" (2.2mm)
Ref. Page	G130

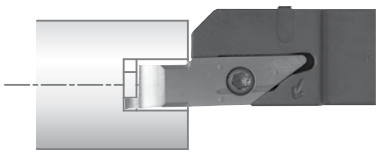


Ground Chipbreaker

Small Diameter Face Grooving Ø0.197"~, Ø0.315"~ (Ø5mm~, Ø8mm~)



Type	EZFG
Min. Face Groove Dia.	0.197", 0.236", 0.315" (5.0mm, 6.0mm, 8.0mm)
Edge Width	0.039"~0.118" (1.0mm ~ 3.0mm)
Grooving Depth	0.079"~0.118" (1.5mm ~ 3.0mm)
Ref. Page	G96



Type	VNFG
Min. Face Groove Dia.	0.315" (8.0mm)
Edge Width	0.039"~0.118" (1.0mm ~ 3.0mm)
Grooving Depth	0.079"~0.118" (2.0mm ~ 3.0mm)
Ref. Page	G98

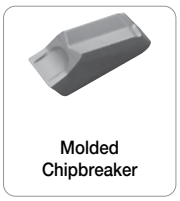


EZ-Bar



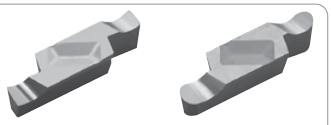
Swiss IQ Bar

Face Grooving Ø0.787" (Ø20mm)~



Molded Chipbreaker

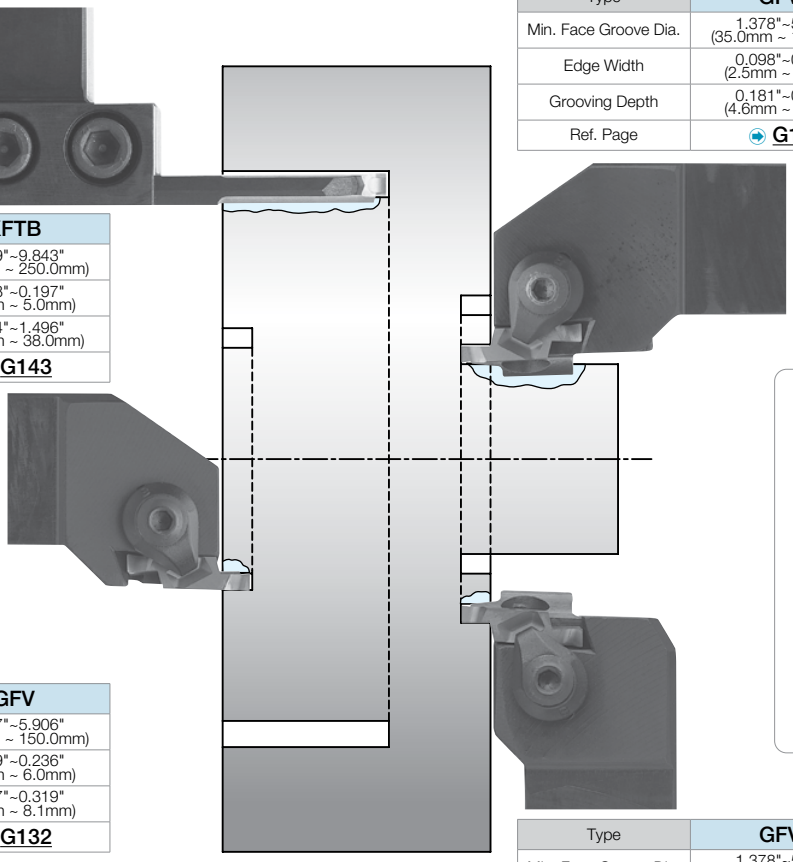
Type	KFTB
Min. Face Groove Dia.	2.559"~9.843" (65.0mm ~ 250.0mm)
Edge Width	0.158"~0.197" (4.0mm ~ 5.0mm)
Grooving Depth	0.984"~1.496" (25.0mm ~ 38.0mm)
Ref. Page	G143



Ground Chipbreaker

Ground Chipbreaker Full-R

Type	GFV
Min. Face Groove Dia.	0.787"~5.906" (20.0mm ~ 150.0mm)
Edge Width	0.079"~0.236" (2.0mm ~ 6.0mm)
Grooving Depth	0.087"~0.319" (2.2mm ~ 8.1mm)
Ref. Page	G132



Type	GFVS
Min. Face Groove Dia.	1.378"~5.906" (35.0mm ~ 150.0mm)
Edge Width	0.098"~0.236" (2.5mm ~ 6.0mm)
Grooving Depth	0.181"~0.319" (4.6mm ~ 8.1mm)
Ref. Page	G134



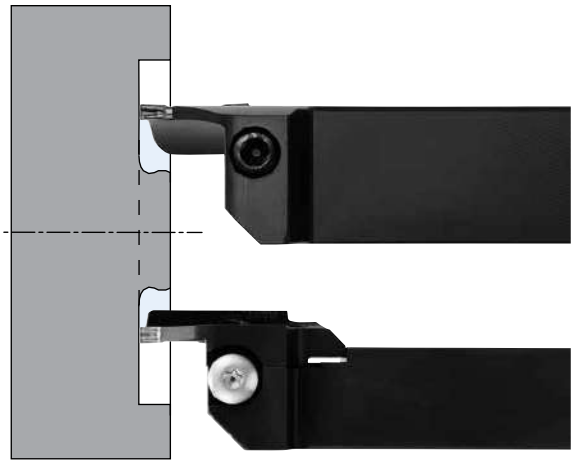
Ground Chipbreaker



Ground Chipbreaker Full-R

Type	GFVT
Min. Face Groove Dia.	1.378"~5.906" (35.0mm ~ 150.0mm)
Edge Width	0.098"~0.236" (2.5mm ~ 6.0mm)
Grooving Depth	0.181"~0.319" (4.6mm ~ 8.1mm)
Ref. Page	G134

KGDF Face Grooving Ø0.984" (Ø25mm)~ (G86~G113)



Type	KGDF-Z
Min. Face Groove Dia.	1.969" (50.0mm)
Edge Width	0.118"~0.197" (3.0mm ~ 5.0mm)
Grooving Depth	0.591" (15.0mm)
Ref. Page	G116

Type	*KGDF
Min. Face Groove Dia.	0.984" (25.0mm)
Edge Width	0.079"~0.236" (2.0mm ~ 6.0mm)
Grooving Depth	0.236"~1.260" (6.0mm ~ 32.0mm)
Ref. Page	G106

*The SwitchBlade type toolholders can accept all blades if their hand is matching.

Grooving and Turning **GM**



Deep Grooving and Turning **DM**



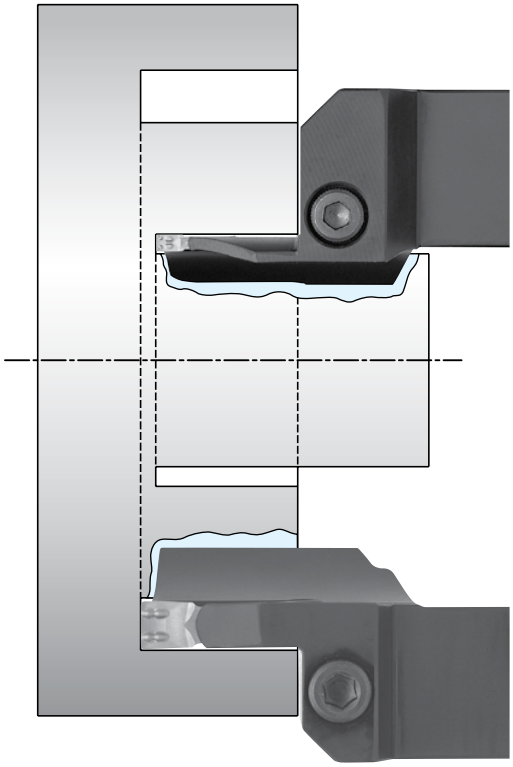
High Feed Rate **GH**



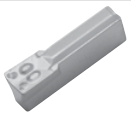
Full Radius (R) **CM**



Face Grooving & Turning Ø0.984" (Ø25mm)~



Type	KFMS
Min. Face Groove Dia.	0.984"~9.252" (25.0mm~235.0mm)
Edge Width	0.118"~0.236" (3.0mm ~ 6.0mm)
Grooving Depth	0.512"~1.260" (13.0mm ~ 32.0mm)
Ref. Page	G140



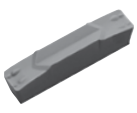
Molded Chipbreaker

Type	KKCE
Min. Face Groove Dia.	0.940"~1.630"
Edge Width	0.125"~0.189" (3.15mm~4.80mm)
Grooving Depth	0.060"~0.150" (1.52mm~3.81mm)
Ref. Page	G139

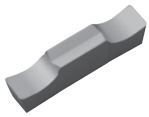


Ground Chipbreaker

Type	KFMS-8
Min. Face Groove Dia.	2.126"~6.102" (54.0mm~155.0mm)
Edge Width	0.315" (8.0mm)
Grooving Depth	0.984" (25.0mm)
Ref. Page	G142



Molded Chipbreaker

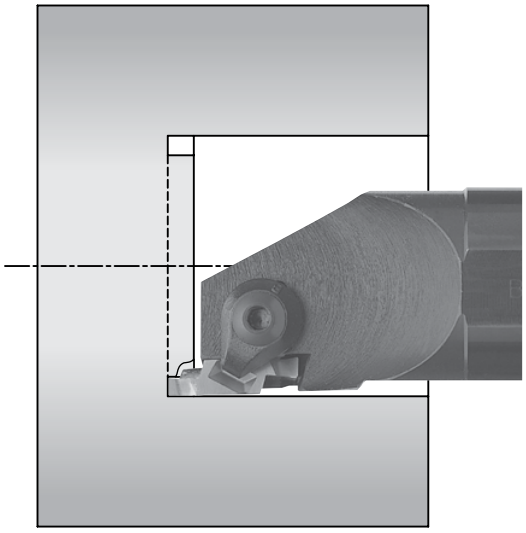


Ground Chipbreaker



Molded Chipbreaker Full-R

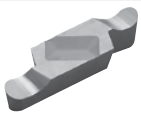
Face Grooving Ø1.378" (Ø35mm)~



Type	GIFV
Min. Face Groove Dia.	1.378"~1.969" (35.0mm~50.0mm)
Edge Width	0.079"~0.236" (2.0mm~6.0mm)
Grooving Depth	0.087"~0.319" (2.2mm~8.1mm)
Ref. Page	G144

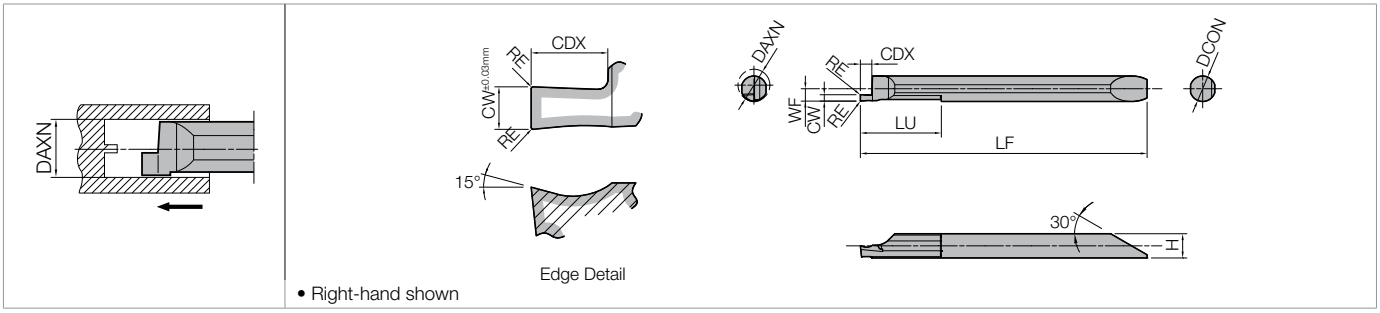


Ground Chipbreaker



Ground Chipbreaker Full-R

EZFG



• Right-hand shown

Dimensions

Part Number	Min. Face Groove Dia.	Dimensions (mm)								MEGACOAT (NEW)		Carbide (NEW)	Applicable Sleeve ➡ G97
	DAXN	CW±0.03	RE	DCON	H	LF	LU	WF	CDX	PR1225 R	PR1225 L	GW05 R	
EZFG R 050040-100	5	1.0	±0.013 0.05	4	3.8	45.0	12	1.9	1.5	●	●	●	EZH040..
EZFG R 050040-150		1.5							2.0	●	●	●	
EZFG R 060050-100	6	1.0	±0.013 0.05	5	4.8	53.2	15	2.4	1.5	●	●	●	EZH050..
EZFG R 060050-150		1.5							2.5	●	●	●	
EZFG R 060050-200		2.0							3.0	●	●	●	
EZFG R 080070-100	8	1.0	±0.013 0.05	7	6.8	64.2	25	3.4	2.0	●	●	●	EZH070..
EZFG R 080070-150		1.5							2.5	●	●	●	
EZFG R 080070-200		2.0							3.0	●	●	●	
EZFG R 080070-300		3.0								●	●	●	

• Dimension **CDX** shows the available grooving depth.

Recommended Cutting Conditions

Workpiece Material	Insert Grade (Vc: sfm)		EZFG R 050040-100 EZFG R 060050-100 EZFG R 080070-100	EZFG R 050040-150 EZFG R 060050-150 EZFG R 080070-150	EZFG R 060050-200 EZFG R 080070-200	EZFG R 080070-300	Notes
	MEGACOAT	Carbide					
	PR1225	GW05	Feed Rate (ipr)				
Carbon Steel / Alloy Steel	★ 100~330	-	~0.0008	~0.0012	~0.0016	~0.0020	Wet
Stainless Steel	★ 100~260	-	~0.0004	~0.0008	~0.0008	~0.0012	
Non-Ferrous	-	★ ~980	~0.0012	~0.0020	~0.0024	~0.0031	

★ : 1st Recommendation

EZ-Bar Sleeve Identification System (Face Grooving)

EZ FG R 050 040 – 100

EZ Symbol of Bar	Application	Hand of Tool	Min. Bore Dia.	Shank Dia.	Groove Width
	FG : Face Grooving	R : Right-hand L : Left-hand	050 : 5mm 060 : 6mm 080 : 8mm	040 : 4mm 050 : 5mm 070 : 7mm	100 : 1.0mm 150 : 1.5mm 200 : 2.0mm 300 : 3.0mm

EZ Bars are sold in 1 piece boxes.

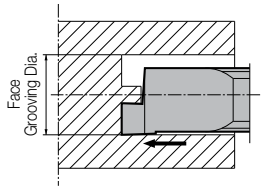
(Customer Service) 800.823.7284 - Option 1
(Technical Support) 800.823.7284 - Option 2
Visit us online at KyoceraPrecisionTools.com
● : Standard Item △ : Phaseout Item (will be removed from next catalog)
Contact your local Kyocera sales engineer to upgrade old products to new technology

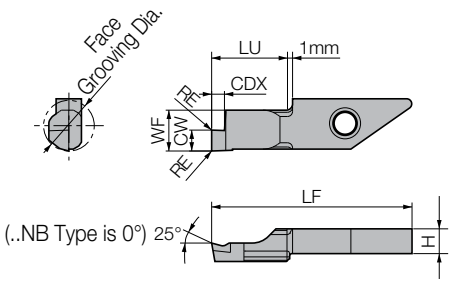
Applicable Sleeves

Sleeve Part Number				Applicable Bar for Internal Face Grooving		
EZH-CT (Adjustable Overhang Length / with Coolant Hole) → F32~F33	EZH-HP (Adjustable Overhang Length) → F34~F35	EZH-ST → F36~F37	Sleeve Shank Dia. DCON (mm)	EZFG	EZ Bar Shank Dia. DCON (mm)	Applicable Machine Manufacturer
-	-	EZH 04012ST-80	12.00	EZFG®L 050040-...	4	(General Purpose)
		05012ST-80		EZFG®L 060050-...	5	
		07012ST-80		EZFG®L 080070-...	7	
-	EZH 04016HP-100	EZH 04016ST-100	16.00	EZFG®L 050040-...	4	(General Purpose)
	05016HP-100	05016ST-100		EZFG®L 060050-...	5	
	07016HP-100	07016ST-100		EZFG®L 080070-...	7	
EZH 04019CT-120	EZH 04019HP-120	EZH 04019ST-120	0.750"	EZFG®L 050040-...	4	Citizen Machinery
05019CT-120	05019HP-120	05019ST-120		EZFG®L 060050-...	5	
07019CT-120	07019HP-120	07019ST-120		EZFG®L 080070-...	7	
EZH 04020CT-120	EZH 04020HP-120	EZH 04020ST-120	20.00	EZFG®L 050040-...	4	Amada Machine Tools / Eguro / Tsugami / Citizen Machinery / (General purpose)
05020CT-120	05020HP-120	05020ST-120		EZFG®L 060050-...	5	
07020CT-120	07020HP-120	07020ST-120		EZFG®L 080070-...	7	
EZH 04022CT-135	EZH 04022HP-135	EZH 04022ST-135	22.00	EZFG®L 050040-...	4	Star Micronics / Nomura DS / Tsugami
05022CT-135	05022HP-135	05022ST-135		EZFG®L 060050-...	5	
07022CT-135	07022HP-135	07022ST-135		EZFG®L 080070-...	7	
EZH 04025.0CT-135	EZH 04025.0HP-135	EZH 04025.0ST-135	25.00	EZFG®L 050040-...	4	Amada Machine Tools / Eguro / Tsugami / Citizen Machinery / (General purpose)
05025.0CT-135	05025.0HP-135	05025.0ST-135		EZFG®L 060050-...	5	
07025.0CT-135	07025.0HP-135	07025.0ST-135		EZFG®L 080070-...	7	
EZH 04025.4CT-120	EZH 04025.4HP-120	EZH 04025.4ST-120	1.000"	EZFG®L 050040-...	4	Citizen Machinery
05025.4CT-120	05025.4HP-120	05025.4ST-120		EZFG®L 060050-...	5	
07025.4CT-120	07025.4HP-120	07025.4ST-120		EZFG®L 080070-...	7	

- Choose sleeves with a **DCON** dimension that matches the **DCB** dimension of the EZ Bar.
- **EZH-ST** sleeves are not adjustable. To adjust overhang of the **EZFG** bars, please use **EZH-CT/HP** sleeves.
- Machine manufacturers in random order.

VNFG (Swiss IQ Bar)





• Right-hand shown

Dimensions

Classification of Usage
● : Light Interruption / 1st Choice
◔ : Light Interruption / 2nd Choice
● : Continuous / 1st Choice
○ : Continuous / 2nd Choice

		MEGA COAT	PVD Coated Carbide	Carbide	PCD	
		PR1225	PR930	KW10	KPD001	KPD010
P	Carbon Steel / Alloy Steel	●	○			
M	Stainless Steel	●	○			
K	Cast Iron			●		
N	Non-ferrous Metals			○	●	
S	Titanium Alloy			○	●	
H	Hard materials (≤40HRC)	○	○			
	Hard materials (≥40HRC)					

Part Number	Face Grooving Dia.		Dimensions (mm)								Ref. Page for Toolholder
	DAXN (MIN)	DAXX (MAX)	$CW^{\pm 0.001}$ inch	$CW^{\pm 0.03}$ mm	RE	H	LF	LU	WF	CDX	
VNFGR 0810-10	8 (0)	∞ (∞)	0.039	1.0	0.05	3.9	29.6	10	7.3	2.0	
0820-10			0.079	2.0	0.05	3.9	29.6	10	7.3	2.0	
0830-10			0.118	3.0	0.05	3.9	29.6	10	7.3	3.0	F40 F41
VNFGR 0820-10NB			0.079	2.0	0.05	3.9	29.6	10	7.3	2.0	
0830-10NB			0.118	3.0	0.05	3.9	29.6	10	7.3	3.0	

Part Number	MEGA COAT	PVD Coated Carbide	Carbide	PCD	
	PR1225	PR930	KW10	KPD001	KPD010
VNFGR 0810-10	●	●	●		
0820-10	●	●	●		
0830-10	●	●	●		
VNFGR 0820-10NB				□	□
0830-10NB				□	□

• Dimension **CDX** shows the available grooving depth

• Face grooving diameter **DAXN (0)** means that you can make the initial groove within **DAXN** (min) - **DAXX** (max) and then widen it to the center.

Swiss IQ Bars are sold in 5 piece boxes. *CBN & PCD Inserts are sold in 1 piece boxes.*

(Customer Service) **800.823.7284 - Option 1**
(Technical Support) **800.823.7284 - Option 2**
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● : Standard Item □ : Made to Order △ : Phaseout Item (will be removed from next catalog)
Contact your local Kyocera sales engineer to upgrade old products to new technology

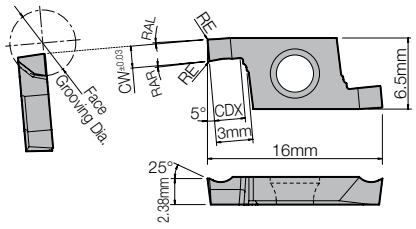
Recommended Cutting Conditions

Workpiece Material	Recommended Insert Grade (Vc sfm)			VNFG0810	VNFG0820	VNFG0830	Notes
	MEGACOAT	PVD Coated Carbide	Carbide				
	PR1225	**PR930**	**KW10**	**Feed Rate (ipr)**			
Carbon Steel / Alloy Steel	★ 100~330	☆ 100~330	-	~0.0008	~0.0016	~0.0020	Wet
Stainless Steel	★ 100~260	☆ 100~260	-	~0.0004	~0.0008	~0.0012	
Non-ferrous Metals	-	-	★ ~980	~0.0016	~0.0024	~0.0031	

★ : 1st Recommendation ☆ : 2nd Recommendation

TWFG (Horizontal Type)





• Left-hand Shown

Part Number	Face Grooving Dia.		Dimensions (mm)				Angle (°)	Insert Grade		
	DAXN (MIN)	DAXX (MAX)	CW inch	CW mm	RE	CDX	RA	MEGA COAT NANO PR1535	PVD Coated Carbide PR1025	Carbide KW10
TWFGL 050	6 (0)	∞ (∞)	0.020	0.50	0.05	1.0	1.5°	●	△	●
080			0.031	0.80	0.05	1.5	1.5°	●	△	●
100			0.039	1.00	0.05	2.2	2.0°	●	△	●
125			0.049	1.25	0.05	2.2	2.0°	●	△	●
150			0.059	1.50	0.05	2.2	2.0°	●	△	●
180			0.071	1.80	0.05	3.0	2.0°	●	△	●
200			0.079	2.00	0.05	3.0	2.0°	●	△	●

• Dimension **CDX** shows the available grooving depth

• Face grooving diameter **DAXN (0)** means that you can make the initial groove within **DAXN** (min) - **DAXX** (max) and then widen it to the center.

STW (Square Shank for Horizontal Type)

Right-hand toolholder for boring, see Page F44



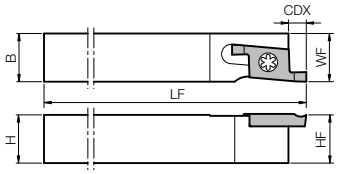


Fig.1

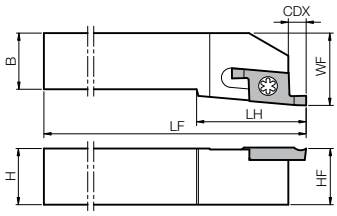


Fig.2

• Left-hand Shown

Toolholder Dimensions

Part Number	Stock	Dimensions (mm) H	HF	B	LF	LH	WF	CDX	Drawing	Spare Parts Clamp Screw	Wrench	Applicable Inserts Above
STWL 1616K-15	●	16	16	16	125	-	16	3	Fig.1	SB-3080TR	LTW-10S	TWFGL ○○○
2020K-15	●	20	20	20	125	25	25	3	Fig.2	SB-3080TR	LTW-10S	TWFGL ○○○
2525M-15	●	25	25	25	150	25	32	3				

• Dimension **CDX** shows the distance from the Toolholder to the cutting edge. See dimension **CDX** of insert table for available Groove Depth.

S...-STW (Round Shank for Horizontal Type)

Right-hand toolholder for boring, see Page F44



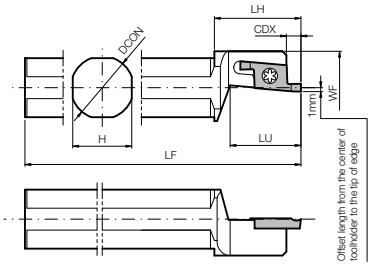


Fig.1

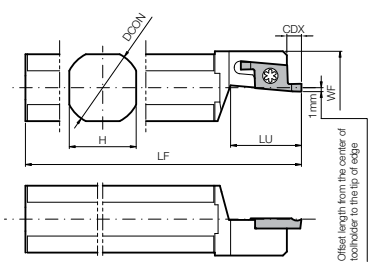


Fig.2

• Left-hand Shown

Toolholder Dimensions

Part Number	Stock	Dimensions (mm) DCON	WF	H	LF	LU	LH	CDX	Drawing	Spare Parts Clamp Screw	Wrench	Applicable Inserts Above
S12F- STWL15	●	12.000	20.0	11	80	18	22	3	Fig.1	SB-3080TR	LTW-10S	TWFGL ○○○
S16F- STWL15	●	16.000	20.0	15	85	18	22	3				
S19G- STWL15	●	0.750"	18.5	17	90	18	-	3	Fig.2	SB-3080TR	LTW-10S	TWFGL ○○○
S19K- STWL15	●	0.750"	18.5	17	120	18	-	3				
S20K- STWL15	●	20.000	19.5	18	120	18	-	3				
S22K- STWL15	●	22.000	21.5	20	125	22	-	3				
S25.0J- STWL15	●	25.000	24.5	23	110	22	-	3				
S25K- STWL15	●	1.000"	25.0	23	120	22	-	3				

• Dimension **CDX** shows the distance from the Toolholder to the cutting edge. See dimension **CDX** of insert table for available Groove Depth.

Twin Bars are sold in 5 piece boxes

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(Technical Support) 800.823.7284 - Option 2
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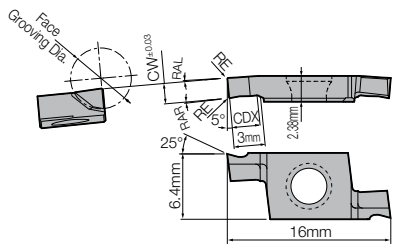
● : Standard Item △ : Phaseout Item (will be removed from next catalog)
Contact your local Kyocera sales engineer to upgrade old products to new technology

TWFGT (Vertical Type)





• Right-hand shown

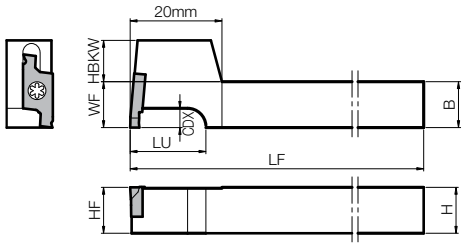
Part Number	Face Grooving Dia.		Dimensions (mm)				Angle (°)	Insert Grade		
	DAXN (MIN)	DAXX (MAX)	CW inch	CW mm	RE	CDX	RA	MEGA COAT NANO PR1535	PVD Coated Carbide PR1025	Carbide KW10
TWFGTR 050	6 (0)	∞ (∞)	0.020	0.50	0.05	1.0	1.5°	●	△	●
080			0.031	0.80	0.05	1.5	1.5°	●	△	●
100			0.039	1.00	0.05	2.2	2.0°	●	△	●
125			0.049	1.25	0.05	2.2	2.0°	●	△	●
150			0.059	1.50	0.05	2.2	2.0°	●	△	●
180			0.071	1.80	0.05	3.0	2.0°	●	△	●
200			0.079	2.00	0.05	3.0	2.0°	●	△	●

• Dimension **CDX** shows the available grooving depth

• Face grooving diameter **DAXN (0)** means that you can make the initial groove within **DAXN** (min) - **DAXX** (max) and then widen it to the center.

STWS (Square Shank for Vertical Type : L-Shape)





• Right-hand shown

Toolholder Dimensions

Part Number	Stock	Dimensions (mm) H	HF	B	LF	LU	WF	HBKW	CDX	Spare Parts: Clamp Screw	Spare Parts: Wrench	Applicable Inserts
STWSR 1010JX-15T	●	10	10	10	120	16	10	9	3	SB-3080TR	LTW-10S	TWFGTR ○○○
1212JX-15T	●	12	12	12	120	16	12	7				
1616JX-15T	●	16	16	16	120	20	16	3				
STWSR 1010F-15T	●	10	10	10	85	16	10	9				
1212F-15T	●	12	12	12	85	16	12	7				

• Dimension **CDX** shows the distance from the Toolholder to the cutting edge. See dimension **CDX** of insert table for available Groove Depth.

Recommended Cutting Conditions (TWFG / TWFGT)

Workpiece Material	Recommended Insert Grade (Vc sfm) MEGACOAT NANO PR1535	PVD Coated Carbide PR1025	Carbide KW10	TWFGL050 TWFGL080 TWFGL100 TWFGTR050 TWFGTR080 TWFGTR100	TWFGL125 TWFGL150 TWFGTR125 TWFGTR150	TWFGL180 TWFGL200 TWFGTR180 TWFGTR200	Notes
				Feed Rate (ipr)			
Carbon Steel / Alloy Steel	★ 100~330	☆ 100~330	-	~0.0008	~0.0012	~0.0016	
Stainless Steel	★ 100~260	☆ 100~260	-	~0.0004	~0.0008	~0.0008	Wet
Non-ferrous Metals	-	-	★ ~980	~0.0012	~0.0016	~0.0024	

★ : 1st Recommendation

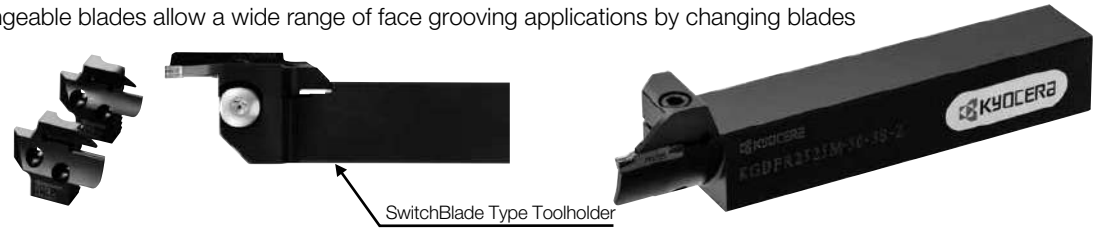
Twin Bars are sold in 5 piece boxes

● : Standard Item △ : Phaseout Item (will be removed from next catalog)
Contact your local Kyocera sales engineer to upgrade old products to new technology

Features

SwitchBlade type toolholder (toolholder + blade) and Integral type toolholder are available.

Interchangeable blades allow a wide range of face grooving applications by changing blades

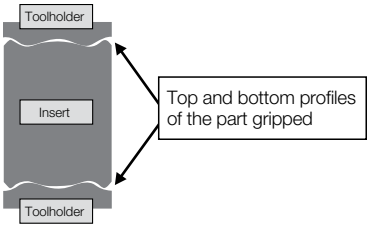


New insert clamping system "W Grip"

Unique "W Grip" (insert anti-slip structure) provides rigid clamping for stable machining quality

1) Prevents abnormal machining surface and / or insert breakage resulting from insert slippage.
2) Improves repeat accuracy of insert installation

GDFM and GDFMS inserts are not applicable to KGD external grooving and cut-off toolholders.



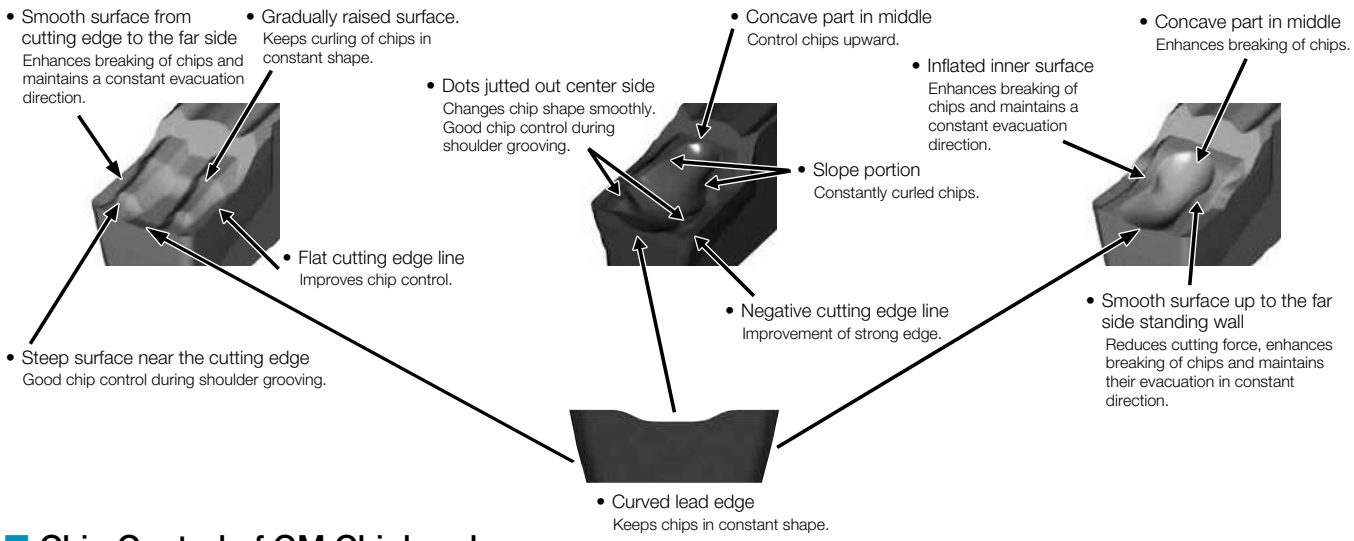
W Grip technology

Smooth chip control

GM chipbreaker for general purpose, GH chipbreaker for high speed grooving, and DM chipbreaker for deep grooving

Advantages of Chipbreaker

For General Purpose GM Chipbreaker	For High Feed Grooving GH Chipbreaker	For Deep Grooving DM Chipbreaker



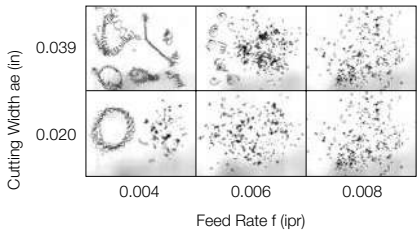
Chip Control of GM Chipbreaker

<Cutting Conditions>
Vc=490sfm f=0.002~0.008ipr GDFM5020N-040GM 4118 Wet

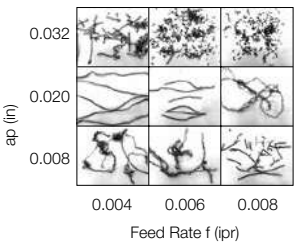
Face Grooving(Ø2.440" / Ø62)



Side Grooving



Turning



High precision edge preparation

High precision molding technology with tolerance ±0.03mm (Edge width 2, 3, 4mm types)

Highly-reputed MEGACOAT technology

Long tool life and high efficiency machining achieved by superior oxidation resistance and wear resistance.

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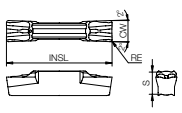
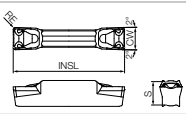
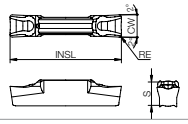
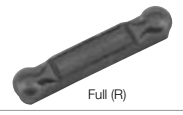
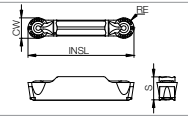
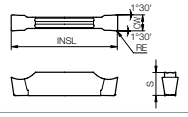
NEW ITEMS!

GDFM / GDFMS

Usage Classification
- ● : Light Interruption / 1st Choice
- ◔ : Light Interruption / 2nd Choice
- ● : Continuous / 1st Choice
- ○ : Continuous / 2nd Choice

P	Carbon Steel / Alloy Steel	●	○	●	◔	
M	Stainless Steel			●	◔	
K	Cast Iron				●	●
N	Non-ferrous Metals					◔
S	Titanium Alloy					
H	Hard materials (≤40HRC)					
	Hard materials (≥40HRC)					

Insert			Part Number	Dimensions (in) CW in	CW mm	CW Tolerance	RE	INSL	S	Cermet TN620	Cermet TN90	MEGA COAT PR1225	MEGA COAT PR1215	Carbide GW15	Ref. Page for Toolholder
Grooving and Turning			GDFM 2020N-020GM	0.079	2.0	±0.0012	0.008	0.827	0.154		●	●	●		
			3020N-030GM	0.118	3.0		0.012	0.787	0.169		●	●	●		
			4020N-040GM	0.157	4.0		0.016		0.177		●	●	●		
			5020N-040GM	0.197	5.0	±0.0016	0.016				●	●	●		
			5020N-080GM	0.197	5.0		0.031				●	●	●		
			6020N-040GM	0.236	6.0		0.016				●	●	●		
			6020N-080GM	0.236	6.0		0.031				●	●	●		
Grooving / Turning (High Feed)			GDFM 4020N-040GH	0.157	4.0	±0.0012	0.016	0.787	0.177			●	●		
			5020N-040GH	0.197	5.0	±0.0016	0.016					●	●		
			5020N-080GH	0.197	5.0		0.031					●	●		
			6020N-040GH	0.236	6.0		0.016					●	●		
			6020N-080GH	0.236	6.0		0.031					●	●		
Deep Grooving / Turning			GDFM 3020N-030DM	0.118	3.0	±0.0012	0.012	0.787	0.169		●	●	●		G106 ~ G126
			4020N-040DM	0.157	4.0		0.016		0.177		●	●	●		
			5020N-040DM	0.197	5.0	±0.0016	0.016				●	●	●		
			6020N-040DM	0.236	6.0		0.016				●	●	●		
	1-Edge		GDFMS 3020N-030DM	0.118	3.0	±0.0012	0.012	0.787	0.169		●	●	●		
			4020N-040DM	0.157	4.0		0.016		0.177		●	●	●		
			5020N-040DM	0.197	5.0	±0.0016	0.016				●	●	●		
			6020N-040DM	0.236	6.0		0.016				●	●	●		
Full Radius (R) Grooving			GDFM 3020N-150R-CM	0.118	3.0	±0.0012	0.059	0.787	0.169	●		●	●		
			4020N-200R-CM	0.157	4.0		0.079	*0.827	0.177	●		●	●		
			5020N-250R-CM	0.197	5.0	±0.0016	0.098	*0.827		●		●	●		
			6020N-300R-CM	0.236	6.0		0.118	*0.866		●		●	●		
Aluminum / Non-Ferrous	NEW 		GDFM 3020N-020GS	0.118	3.0	±0.0008	0.079	0.787	0.169					●	
			4020N-040GS	0.157	4.0		0.016		0.177					●	
			5020N-040GS	0.197	5.0									●	
			6020N-040GS	0.236	6.0									●	

*GDFM 40/50/60-CM (Full R) have different **INSL** dimensions than other models to prevent interference between the holder and the workpiece.

Recommended Cutting Conditions G128

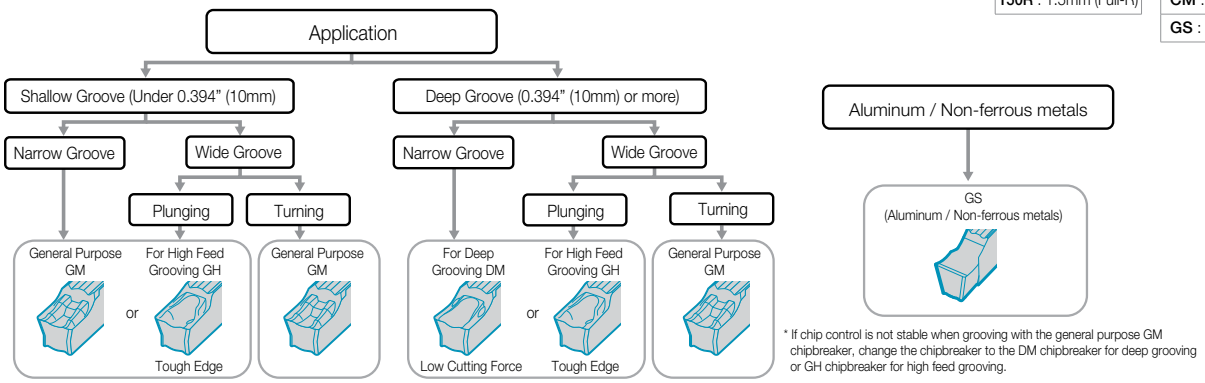
Inserts are sold in 10 piece boxes.

Inserts Identification System

GDF M S 30 20 N – 030 DM

Series	Tolerance Symbol	No. of edge	Width	Insert Length	Hand of Tool	Corner-R (rε)	Chipbreaker Symbol
	M : Class M	**No Indication** : 2-Edge	**20** : 2mm	**20** : 20mm	**N** : Neutral	**020** : 0.2mm	**GM** : Grooving and Turning
		S: 1-Edge	**30** : 3mm			**030** : 0.3mm	**DM** : Grooving
			:			**040** : 0.4mm	**GH** : High feed grooving
						150R : 1.5mm (Full-R)	**CM** : Full Radius
							GS : Aluminum / Non-ferrous

Chipbreaker Selection

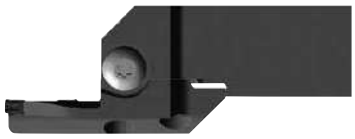
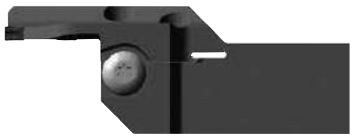


* If chip control is not stable when grooving with the general purpose GM chipbreaker, change the chipbreaker to the DM chipbreaker for deep grooving or GH chipbreaker for high feed grooving.

● : Standard Item △ : Phaseout Item (will be removed from next catalog)
Contact your local Kyocera sales engineer to upgrade old products to new technology

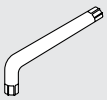
KGDF

Toolholder Assembly Identification

Unit Part Number (Unit Part Number is Not Printed)	Blade (Blade Part Number is Printed)	Toolholder (Toolholder Part Number is Printed)
Left-hand : KGDFL...S	Left-hand : KGDFL...-C	Right-hand : KGDR...-C
 • Left-hand shown	 • Left-hand shown	 • Right-hand shown
Right-hand : KGDFR...S	Right-hand : KGDFR...-C	Left-hand : KGDL...-C
 • Right-hand shown	 • Right-hand shown	 • Left-hand shown

- **Right-hand** Blade for **Left-hand** Toolholder, **Left-hand** Blade for **Right-hand** Toolholder.
- The Unit Part Number is not printed on the product. It is printed on the box label.
- Combination of the toolholder and blade (both sold separately) can make up the corresponding assembly.
- The insert clamping screw (BH6X10TR), blade fixing screw (SB-60120TR) and wrench (LTW-25) are included with the toolholder.

Spare Parts (Common with SwitchBlade Holders)

Unit Part Number	Clamp Bolt (for Insert Clamp)	Clamp Screw (for Blade)	Wrench
			
KGDF$^{R}_{L}$...S	BH6X10TR	SB-60120TR	LTW-25

* The spare parts above are included with the toolholder and unit.

Face Grooving Toolholder Assembly Identification System (Face Grooving - SwitchBlade)

Hand of Tool	Toolholder Shank Size	Toolholder Length	Width	Symbol of Assembly Toolholder
R:Right-hand	**2020** : □20	**X** : Special	**2** : 2mm	**S** : indicates the unit description
L:Left-hand	**2525** : □25		**3** : 3mm	
			:	

KGDF R 2020 X 25 – 3 A S

Series	Min. Diameter in Face Grooving		Grooving Depth	
KGDF Face Grooving	Indicates the minimum external diameter suitable for the initial face grooving plunge.	* For the maximum external diameter which can be applied to the initial face grooving, see the MAX. value of "Face Grooving Dia. DAXX" in the dimension tables of toolholders and blades.	**A** : 6~13mm **B** : 13~15mm	2-Edge Insert (1-Edge Insert can also be used.)
	25 : 25mm		**C** : 20~25mm **D** : 32mm	1-Edge Insert
	:			
	235 : 235mm			

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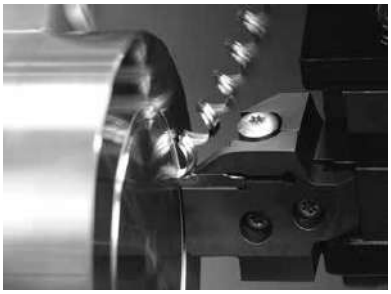
Face Grooving Dia. (DAXN / DAXX)

Face grooving diameter DAXN (min) ~ DAXX (max) is the suitable range for the initial grooving plunge on the unprocessed workpiece
(See Fig.1).
Then, you can widen it towards the inside or the outside within the tool's diameter range.



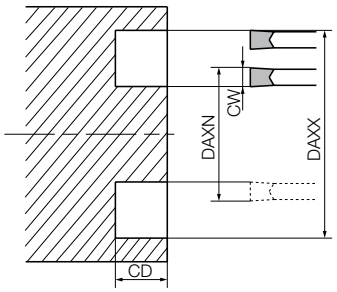
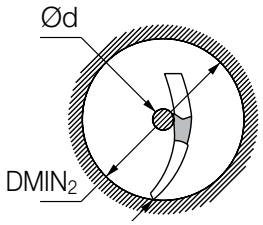


Fig.1

Limit of Turning toward Center

Turning towards the Center causes the toolholder to interfere with the groove wall depending on the initial cut's diameter.



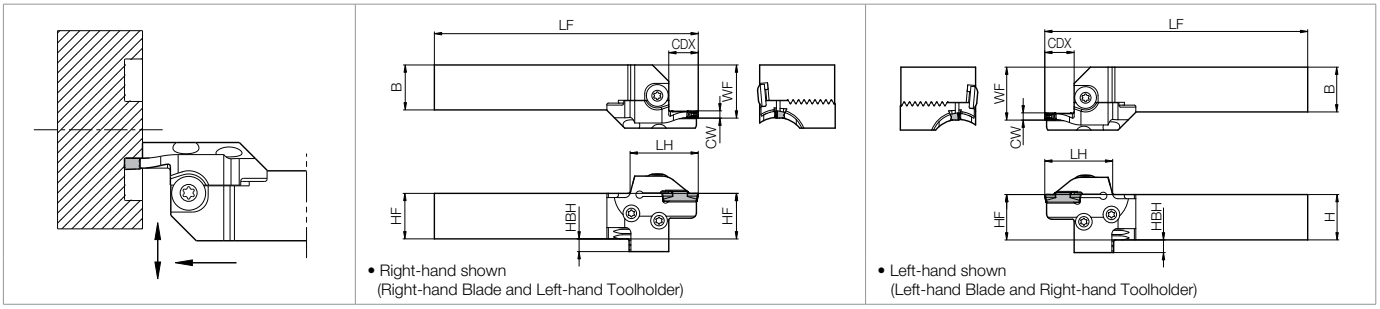
Remaining Boss Dia. Ød

Part Number		DMIN2 (mm)			
		25	26	27	28 and over
		Ød (mm)			
KGDFR/L	2020X25-3AS	4	2	0	(No Remaining Boss)
	2525X25-3AS				
KGDFR/L	2020X25-4AS	6	3	0	
	2525X25-4AS				
KGDFR/L	2020X25-5AS	7	4	1	
	2525X25-5AS				
KGDFR/L	2020X25-6AS	9	4	1	
	2525X25-6AS				

e.g.)
If a groove of external diameter Ø25mm is created using KGDFR2020X25-3AS and turning is made toward the inside, a Ø4mm portion will be left in the middle due to interference from toolholder.

KGDF Face Grooving 0° SwitchBlade Toolholders (Inch-Size)

0.079" Insert Width



• Right-hand shown
(Right-hand Blade and Left-hand Toolholder)

• Left-hand shown
(Left-hand Blade and Right-hand Toolholder)

Toolholder + Blade Dimensions

(Choose **Right-hand** Blade for **Left-hand** Toolholder and **Left-hand** Blade for **Right-hand** Toolholder)

Shank Angle	Insert Width CW (in)	Shank Size (in)	Max. Grooving Depth (in)	Face Grooving Dia. (in) DAXN (min)	Face Grooving Dia. (in) DAXX (max)	Unit Part Number (Toolholder + Blade)	Toolholder Part Number ➡ G41	Stock R	Stock L	Blade Part Number ➡ G127	Stock R	Stock L	Dimensions (in) H	HF	HBH	B	LF	LH	WF	CDX*
0°	0.079 (2mm)	□0.75	0.236 (6mm)	0.984	1.181	No Unit Part Number ➡	KGDL12-C		●	KGDFR -25-2A-C	●		0.750	0.750	0.510	0.750	4.528	1.299	0.927	0.236 (6mm)
				1.181	1.378					-30-2A-C	●									
				1.378	1.772					-35-2A-C	●									
				1.772	2.362					-45-2A-C	●									
				2.362	3.150					-60-2A-C	●									
				3.150	3.937					-80-2A-C	●									
				3.937	5.118					-100-2A-C	●									
			0.512 (13mm)	0.984	1.181					KGDFR -25-2B-C	●		0.750	0.750	0.510	0.750	4.646	1.417	0.927	0.512 (13mm)
			0.591 (15mm)	1.181	1.378					KGDFR -30-2B-C	●		0.750	0.750	0.510	0.750	4.724	1.496	0.927	0.591 (15mm)
				1.378	1.772					-35-2B-C	●									
				1.772	2.362					-45-2B-C	●									
				2.362	3.150					-60-2B-C	●									
				3.150	3.937					-80-2B-C	●									
				3.937	5.118					-100-2B-C	●									
		□1.00	0.236 (6mm)	0.984	1.181	No Unit Part Number ➡	KGDL16-C		●	KGDFR -25-2A-C	●		1.000	1.000	0.260	1.000	5.512	1.299	1.177	0.236 (6mm)
				1.181	1.378					-30-2A-C	●									
				1.378	1.772					-35-2A-C	●									
				1.772	2.362					-45-2A-C	●									
				2.362	3.150					-60-2A-C	●									
				3.150	3.937					-80-2A-C	●									
				3.937	5.118					-100-2A-C	●									
			0.512 (13mm)	0.984	1.181					KGDFR -25-2B-C	●		1.000	1.000	0.260	1.000	5.630	1.417	1.177	0.512 (13mm)
			0.591 (15mm)	1.181	1.378					KGDFR -30-2B-C	●		1.000	1.000	0.260	1.000	5.709	1.496	1.177	0.591 (15mm)
				1.378	1.772					-35-2B-C	●									
				1.772	2.362					-45-2B-C	●									
				2.362	3.150					-60-2B-C	●									
				3.150	3.937					-80-2B-C	●									
				3.937	5.118					-100-2B-C	●									

Note 1) If the unit part number is not listed (No Unit Part Number), please purchase toolholder and blade separately.
2) Dimension **CDX*** : Shows the maximum grooving depth. If the dimension **CDX** is 0.787" (20mm) or more, using a 2-edge insert, the maximum grooving depth is 0.709" (18mm).
3) Insert clamp bolt (BH6x10TR) and Blade fixing bolt (SB-60120TR) come with toolholder. For Spare Parts, see ➡ G104

Applicable Inserts ➡ G103

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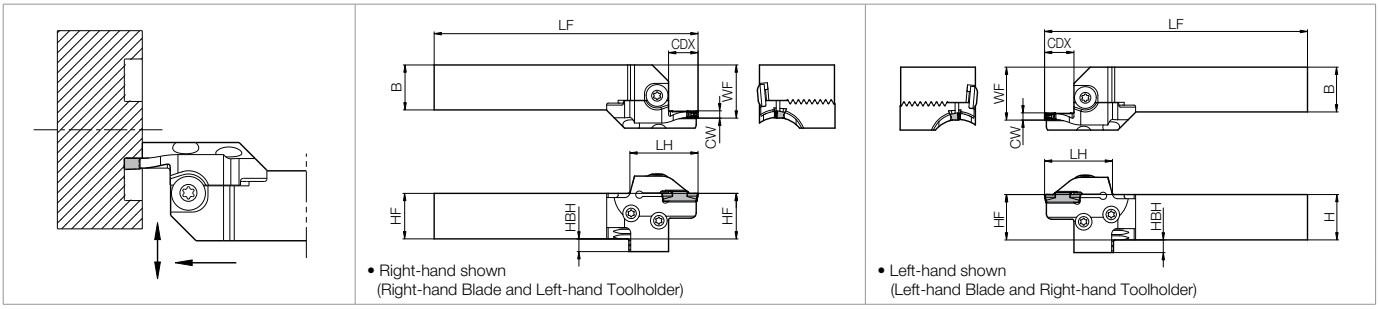
KGDF Face Grooving 0° SwitchBlade Toolholders (Inch-Size)

0.118" Insert Width



Toolholder + Blade Dimensions

(Choose **Right-hand** Blade for **Left-hand** Toolholder and **Left-hand** Blade for **Right-hand** Toolholder)

Shank Angle	Insert Width CW (in)	Shank Size (in)	Max. Grooving Depth (in)	Face Grooving Dia. (in) DAXN (min)	Face Grooving Dia. (in) DAXX (max)	Unit Part Number (Toolholder + Blade)	Toolholder Part Number G41	Stock R	Stock L	Blade Part Number G127	Stock R	Stock L	H	HF	HBH	B	LF	LH	WF	CDX*
0°	0.118 (3mm)	□0.75	0.512 (13mm)	0.984	1.181	No Unit Part Number ➡	KGDL12-C		●	KGDFR -25-3A-C	●		0.750	0.750	0.510	0.750	4.650	1.420	0.927	0.512 (13mm)
				1.181	1.575					-30-3A-C	●									
				1.575	1.969					-40-3A-C	●									
			0.591 (15mm)	1.969	2.559					-50-3B-C	●		0.750	0.750	0.510	0.750	4.720	1.500	0.927	0.591 (15mm)
				2.559	3.346					-65-3B-C	●									
				3.346	4.331					-85-3B-C	●									
				4.331	5.709					-110-3B-C	●									
			0.866 (22mm)	1.969	2.559					KGDFR -50-3C-C	●		0.750	0.750	0.510	0.750	5.000	1.770	0.927	0.866 (22mm)
				2.559	3.346					-65-3C-C	●									
			0.984 (25mm)	3.346	4.331					-85-3C-C	●		0.750	0.750	0.510	0.750	5.120	1.890	0.927	0.984 (25mm)
				4.331	5.709					-110-3C-C	●									
		□1.00	0.512 (13mm)	0.984	1.181	No Unit Part Number ➡	KGDL16-C		●	KGDFR -25-3A-C	●		1.000	1.000	0.260	1.000	5.630	1.420	1.177	0.512 (13mm)
				1.181	1.575					-30-3A-C	●									
				1.575	1.969					-40-3A-C	●									
			0.591 (15mm)	1.969	2.559					-50-3B-C	●		1.000	1.000	0.260	1.000	5.710	1.500	1.177	0.591 (15mm)
				2.559	3.346					-65-3B-C	●									
				3.346	4.331					-85-3B-C	●									
				4.331	5.709					-110-3B-C	●									
			0.866 (22mm)	1.969	2.559					KGDFR -50-3C-C	●		1.000	1.000	0.260	1.000	5.980	1.770	1.177	0.866 (22mm)
				2.559	3.346					-65-3C-C	●									
			0.984 (25mm)	3.346	4.331					-85-3C-C	●		1.000	1.000	0.260	1.000	6.100	1.890	1.177	0.984 (25mm)
				4.331	5.709					-110-3C-C	●									
0°	0.118 (3mm)	□0.75	0.512 (13mm)	0.984	1.181	No Unit Part Number ➡	KGDR12-C	●		KGDFL -25-3A-C		●	0.750	0.750	0.510	0.750	4.650	1.420	0.927	0.512 (13mm)
				1.181	1.575					-30-3A-C		●								
				1.575	1.969					-40-3A-C		●								
			0.591 (15mm)	1.969	2.559					-50-3B-C		●	0.750	0.750	0.510	0.750	4.720	1.500	0.927	0.591 (15mm)
				2.559	3.346					-65-3B-C		●								
				3.346	4.331					-85-3B-C		●								
				4.331	5.709					-110-3B-C		●								
			0.866 (22mm)	1.969	2.559					KGDFL -50-3C-C		●	0.750	0.750	0.510	0.750	5.000	1.770	0.927	0.866 (22mm)
				2.559	3.346					-65-3C-C		●								
			0.984 (25mm)	3.346	4.331					-85-3C-C		●	0.750	0.750	0.510	0.750	5.120	1.890	0.927	0.984 (25mm)
				4.331	5.709					-110-3C-C		●								
		□1.00	0.512 (13mm)	0.984	1.181	No Unit Part Number ➡	KGDR16-C	●		KGDFL -25-3A-C		●	1.000	1.000	0.260	1.000	5.630	1.420	1.177	0.512 (13mm)
				1.181	1.575					-30-3A-C		●								
				1.575	1.969					-40-3A-C		●								
			0.591 (15mm)	1.969	2.559					-50-3B-C		●	1.000	1.000	0.260	1.000	5.710	1.500	1.177	0.591 (15mm)
				2.559	3.346					-65-3B-C		●								
				3.346	4.331					-85-3B-C		●								
				4.331	5.709					-110-3B-C		●								
			0.866 (22mm)	1.969	2.559					KGDFL -50-3C-C		●	1.000	1.000	0.260	1.000	5.980	1.770	1.177	0.866 (22mm)
				2.559	3.346					-65-3C-C		●								
			0.984 (25mm)	3.346	4.331					-85-3C-C		●	1.000	1.000	0.260	1.000	6.100	1.890	1.177	0.984 (25mm)
				4.331	5.709					-110-3C-C		●								

Note 1) If the unit part number is not listed (No Unit Part Number), please purchase toolholder and blade separately.
2) Dimension **CDX*** : Shows the maximum grooving depth. If the dimension **CDX** is 0.787" (20mm) or more, using a 2-edge insert, the maximum grooving depth is 0.709" (18mm).
3) Insert clamp bolt (BH6x10TR) and Blade fixing bolt (SB-60120TR) come with toolholder. For Spare Parts, see G104

Applicable Inserts G103

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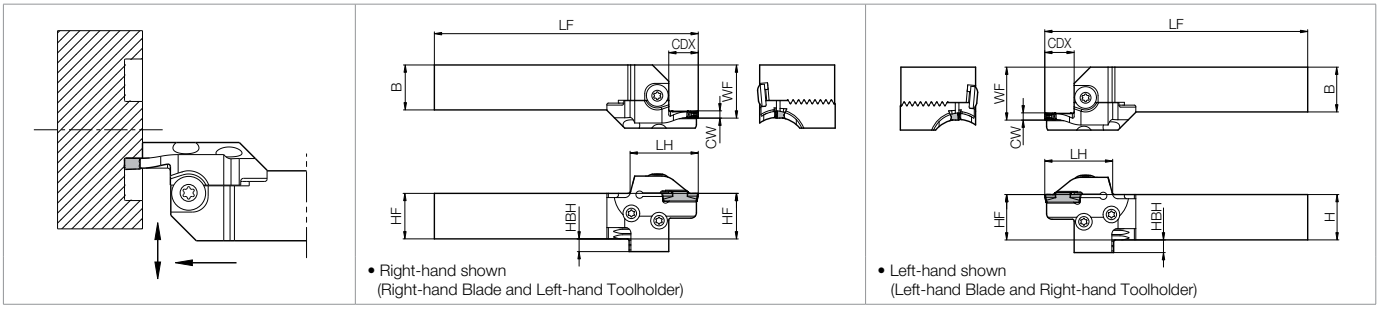
KGDF Face Grooving 0° SwitchBlade Toolholders (Inch-Size)

0.157" Insert Width



• Right-hand shown
(Right-hand Blade and Left-hand Toolholder)

• Left-hand shown
(Left-hand Blade and Right-hand Toolholder)

Toolholder + Blade Dimensions

(Choose **Right-hand** Blade for **Left-hand** Toolholder and **Left-hand** Blade for **Right-hand** Toolholder)

Shank Angle	Insert Width CW (in)	Shank Size (in)	Max. Grooving Depth (in)	Face Grooving Dia. (in) DAXN (min)	Face Grooving Dia. (in) DAXX (max)	Unit Part Number (Toolholder + Blade)	Toolholder Part Number ➡ G41	Stock R	Stock L	Blade Part Number ➡ G127	Stock R	Stock L	H	HF	HBH	B	LF	LH	WF	CDX*
0°	0.157 (4mm)	□0.75	0.512 (13mm)	0.984	1.378	No Unit Part Number ➡	KGDL12-C		●	KGDFR -25-4A-C	●		0.750	0.750	0.510	0.750	4.650	1.420	0.927	0.512 (13mm)
			0.591 (15mm)	1.378	1.969					-35-4B-C	●		0.750	0.750	0.510	0.750	4.720	1.500	0.927	0.591 (15mm)
				1.969	2.756					-50-4B-C	●									
				2.756	3.937					-70-4B-C	●									
				3.937	5.906					-100-4B-C	●									
				5.906	8.661					-150-4B-C	●									
				8.661	∞					-220-4B-C	●									
			0.984 (25mm)	1.378	1.969					KGDFR -35-4C-C	●		0.750	0.750	0.510	0.750	5.120	1.890	0.927	0.984 (25mm)
				1.969	2.756					-50-4C-C	●									
				2.756	3.937					-70-4C-C	●									
				3.937	5.906					-100-4C-C	●									
				5.906	8.661					-150-4C-C	●									
				8.661	∞					-220-4C-C	●									
		□1.00	0.512 (13mm)	0.984	1.378	No Unit Part Number ➡	KGDL16-C		●	KGDFR -25-4A-C	●		1.000	1.000	0.260	1.000	5.630	1.420	1.177	0.512 (13mm)
			0.591 (15mm)	1.378	1.969					-35-4B-C	●		1.000	1.000	0.260	1.000	5.710	1.500	1.177	0.591 (15mm)
				1.969	2.756					-50-4B-C	●									
				2.756	3.937					-70-4B-C	●									
				3.937	5.906					-100-4B-C	●									
				5.906	8.661					-150-4B-C	●									
				8.661	∞					-220-4B-C	●									
			0.984 (25mm)	1.378	1.969					KGDFR -35-4C-C	●		1.000	1.000	0.260	1.000	6.100	1.890	1.177	0.984 (25mm)
				1.969	2.756					-50-4C-C	●									
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				3.937	5.906					-100-4C-C	●									
				5.906	8.661					-150-4C-C	●									
				8.661	∞					-220-4C-C	●									
0°	0.157 (4mm)	□0.75	0.512 (13mm)	0.984	1.378	No Unit Part Number ➡	KGDR12-C	●		KGDFL -25-4A-C		●	0.750	0.750	0.510	0.750	4.650	1.420	0.927	0.512 (13mm)
			0.591 (15mm)	1.378	1.969					-35-4B-C		●	0.750	0.750	0.510	0.750	4.720	1.500	0.927	0.591 (15mm)
				1.969	2.756					-50-4B-C		●								
				2.756	3.937					-70-4B-C		●								
				3.937	5.906					-100-4B-C		●								
				5.906	8.661					-150-4B-C		●								
				8.661	∞					-220-4B-C		●								
			0.984 (25mm)	1.378	1.969					KGDFL -35-4C-C		●	0.750	0.750	0.510	0.750	5.120	1.890	0.927	0.984 (25mm)
				1.969	2.756					-50-4C-C		●								
				2.756	3.937					-70-4C-C		●								
				3.937	5.906					-100-4C-C		●								
				5.906	8.661					-150-4C-C		●								
				8.661	∞					-220-4C-C		●								
		□1.00	0.512 (13mm)	0.984	1.378	No Unit Part Number ➡	KGDR16-C	●		KGDFL -25-4A-C		●	1.000	1.000	0.260	1.000	5.630	1.420	1.177	0.512 (13mm)
			0.591 (15mm)	1.378	1.969					-35-4B-C		●	1.000	1.000	0.260	1.000	5.710	1.500	1.177	0.591 (15mm)
				1.969	2.756					-50-4B-C		●								
				2.756	3.937					-70-4B-C		●								
				3.937	5.906					-100-4B-C		●								
				5.906	8.661					-150-4B-C		●								
				8.661	∞					-220-4B-C		●								
			0.984 (25mm)	1.378	1.969					KGDFL -35-4C-C		●	1.000	1.000	0.260	1.000	6.100	1.890	1.177	0.984 (25mm)
				1.969	2.756					-50-4C-C		●								
				2.756	3.937					-70-4C-C		●								
				3.937	5.906					-100-4C-C		●								
				5.906	8.661					-150-4C-C		●								
				8.661	∞					-220-4C-C		●								

Note 1) If the unit part number is not listed (No Unit Part Number), please purchase toolholder and blade separately.
2) Dimension **CDX*** : Shows the maximum grooving depth. If the dimension **CDX** is 0.787" (20mm) or more, using a 2-edge insert, the maximum grooving depth is 0.709" (18mm).
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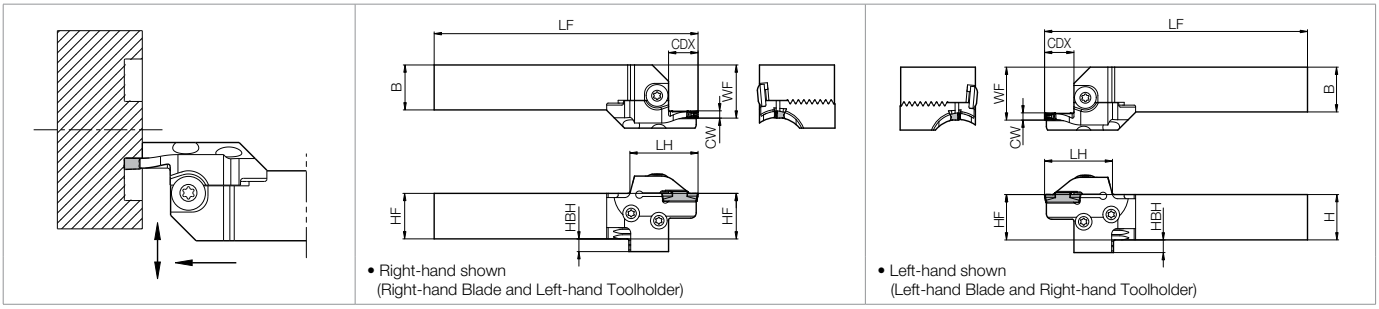
KGDF Face Grooving 0° SwitchBlade Toolholders (Inch-Size)

0.197" Insert Width



• Right-hand shown
(Right-hand Blade and Left-hand Toolholder)

• Left-hand shown
(Left-hand Blade and Right-hand Toolholder)

Toolholder + Blade Dimensions

(Choose **Right-hand** Blade for **Left-hand** Toolholder and **Left-hand** Blade for **Right-hand** Toolholder)

Shank Angle	Insert Width CW (in)	Shank Size (in)	Max. Grooving Depth (in)	Face Grooving Dia. (in) DAXN (min)	Face Grooving Dia. (in) DAXX (max)	Unit Part Number (Toolholder + Blade)	Toolholder Part Number ➡ G41	Stock R	Stock L	Blade Part Number ➡ G127	Stock R	Stock L	Dimensions (in) H	HF	HBH	B	LF	LH	WF	CDX*
0°	0.197 (5mm)	□0.75	0.591 (15mm)	0.984	1.378	No Unit Part Number ➡	KGDL12-C		●	KGDFR -25-5B-C	●		0.750	0.750	0.510	0.750	4.720	1.500	0.927	0.591 (15mm)
				1.378	1.969					-35-5B-C	●									
				1.969	2.953					-50-5B-C	●									
				2.953	4.528					-75-5B-C	●									
				4.528	7.087					-115-5B-C	●									
				7.087	9.252					-180-5B-C	●									
				9.252	∞					-235-5B-C	●									
			0.787 (20mm)	0.984	1.378					KGDFR -25-5C-C	●		0.750	0.750	0.510	0.750	4.920	1.690	0.927	0.787 (20mm)
			0.984 (25mm)	1.378	1.969					-35-5C-C	●		0.750	0.750	0.510	0.750	5.120	1.890	0.927	0.984 (25mm)
				1.969	2.953					-50-5C-C	●									
				2.953	4.528					-75-5C-C	●									
				4.528	7.087					-115-5C-C	●									
				7.087	9.252					-180-5C-C	●									
				9.252	∞					-235-5C-C	●									
		□1.00	0.591 (15mm)	0.984	1.378	No Unit Part Number ➡	KGDL16-C		●	KGDFR -25-5B-C	●		1.000	1.000	0.260	1.000	5.700	1.500	1.177	0.591 (15mm)
				1.378	1.969					-35-5B-C	●									
				1.969	2.953					-50-5B-C	●									
				2.953	4.528					-75-5B-C	●									
				4.528	7.087					-115-5B-C	●									
				7.087	9.252					-180-5B-C	●									
				9.252	∞					-235-5B-C	●									
			0.787 (20mm)	0.984	1.378					KGDFR -25-5C-C	●		1.000	1.000	0.260	1.000	5.900	1.690	1.177	0.787 (20mm)
			0.984 (25mm)	1.378	1.969					-35-5C-C	●		1.000	1.000	0.260	1.000	6.100	1.890	1.177	0.984 (25mm)
				1.969	2.953					-50-5C-C	●									
				2.953	4.528					-75-5C-C	●									
				4.528	7.087					-115-5C-C	●									
				7.087	9.252					-180-5C-C	●									
				9.252	∞					-235-5C-C	●									
0°	0.197 (5mm)	□0.75	0.591 (15mm)	0.984	1.378	No Unit Part Number ➡	KGDR12-C	●		KGDFL -25-5B-C		●	0.750	0.750	0.510	0.750	4.720	1.500	0.927	0.591 (15mm)
				1.378	1.969					-35-5B-C		●								
				1.969	2.953					-50-5B-C		●								
				2.953	4.528					-75-5B-C		●								
				4.528	7.087					-115-5B-C		●								
				7.087	9.252					-180-5B-C		●								
				9.252	∞					-235-5B-C		●								
			0.787 (20mm)	0.984	1.378					KGDFL -25-5C-C		●	0.750	0.750	0.510	0.750	4.920	1.690	0.927	0.787 (20mm)
			0.984 (25mm)	1.378	1.969					-35-5C-C		●	0.750	0.750	0.510	0.750	5.120	1.890	0.927	0.984 (25mm)
				1.969	2.953					-50-5C-C		●								
				2.953	4.528					-75-5C-C		●								
				4.528	7.087					-115-5C-C		●								
				7.087	9.252					-180-5C-C		●								
				9.252	∞					-235-5C-C		●								
		□1.00	0.591 (15mm)	0.984	1.378	No Unit Part Number ➡	KGDR16-C	●		KGDFL -25-5B-C		●	1.000	1.000	0.260	1.000	5.700	1.500	1.177	0.591 (15mm)
				1.378	1.969					-35-5B-C		●								
				1.969	2.953					-50-5B-C		●								
				2.953	4.528					-75-5B-C		●								
				4.528	7.087					-115-5B-C		●								
				7.087	9.252					-180-5B-C		●								
				9.252	∞					-235-5B-C		●								
			0.787 (20mm)	0.984	1.378					KGDFL -25-5C-C		●	1.000	1.000	0.260	1.000	5.900	1.690	1.177	0.787 (20mm)
			0.984 (25mm)	1.378	1.969					-35-5C-C		●	1.000	1.000	0.260	1.000	6.100	1.890	1.177	0.984 (25mm)
				1.969	2.953					-50-5C-C		●								
				2.953	4.528					-75-5C-C		●								
				4.528	7.087					-115-5C-C		●								
				7.087	9.252					-180-5C-C		●								
				9.252	∞					-235-5C-C		●								

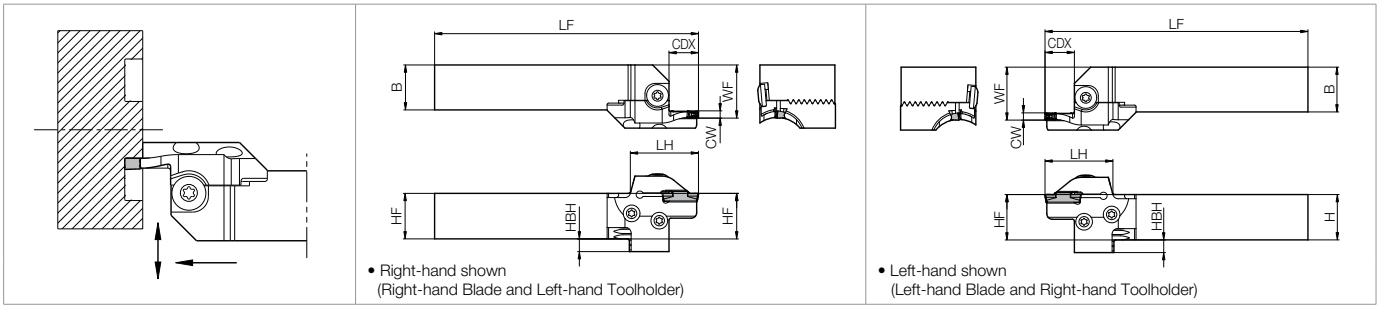
Note 1) If the unit part number is not listed (No Unit Part Number), please purchase toolholder and blade separately.
2) Dimension **CDX*** : Shows the maximum grooving depth. If the dimension **CDX** is 0.787" (20mm) or more, using a 2-edge insert, the maximum grooving depth is 0.709" (18mm).
3) Insert clamp bolt (BH6x10TR) and Blade fixing bolt (SB-60120TR) come with toolholder. For Spare Parts, see ➡ G104

Applicable Inserts ➡ G103

● : Standard Item △ : Phaseout Item (will be removed from next catalog)
Contact your local Kyocera sales engineer to upgrade old products to new technology

KGDF Face Grooving 0° SwitchBlade Toolholders (Inch-Size)

0.236" Insert Width



Toolholder + Blade Dimensions

(Choose **Right-hand** Blade for **Left-hand** Toolholder and **Left-hand** Blade for **Right-hand** Toolholder)

Shank Angle	Insert Width CW (in)	Shank Size (in)	Max. Grooving Depth (in)	Face Grooving Dia. (in) DAXN (min)	Face Grooving Dia. (in) DAXX (max)	Unit Part Number (Toolholder + Blade)	Toolholder Part Number → G41	Stock R	Stock L	Blade Part Number → G127	Stock R	Stock L	Dimensions (in) H	HF	HBH	B	LF	LH	WF	CDX*
0°	0.236 (6mm)	□0.75	0.591 (15mm)	0.984	1.378	No Unit Part Number ➡	KGDL12-C		●	KGDFR -25-6B-C	●		0.750	0.750	0.510	0.750	4.720	1.500	0.927	0.591 (15mm)
				1.378	1.969					-35-6B-C	●									
				1.969	2.953					-50-6B-C	●									
				2.953	4.528					-75-6B-C	●									
				4.528	7.087					-115-6B-C	●									
				7.087	9.252					-180-6B-C	●									
				9.252	∞					-235-6B-C	●									
			0.787 (20mm)	0.984	1.378					KGDFR -25-6C-C	●		0.750	0.750	0.510	0.750	4.920	1.690	0.927	0.787 (20mm)
			0.984 (25mm)	1.378	1.969					-35-6C-C	●		0.750	0.750	0.510	0.750	5.120	1.890	0.927	0.984 (25mm)
				1.969	2.953					-50-6C-C	●									
				2.953	4.528					-75-6C-C	●									
				4.528	7.087					-115-6C-C	●									
				7.087	9.252					-180-6C-C	●									
				9.252	∞					-235-6C-C	●									
		□1.00	0.591 (15mm)	0.984	1.378	No Unit Part Number ➡	KGDL16-C		●	KGDFR -25-6B-C	●		1.000	1.000	0.260	1.000	5.700	1.500	1.177	0.591 (15mm)
				1.378	1.969					-35-6B-C	●									
				1.969	2.953					-50-6B-C	●									
				2.953	4.528					-75-6B-C	●									
				4.528	7.087					-115-6B-C	●									
				7.087	9.252					-180-6B-C	●									
				9.252	∞					-235-6B-C	●									
			0.787 (20mm)	0.984	1.378					KGDFR -25-6C-C	●		1.000	1.000	0.260	1.000	5.900	1.690	1.177	0.787 (20mm)
			0.984 (25mm)	1.378	1.969					-35-6C-C	●		1.000	1.000	0.260	1.000	6.100	1.890	1.177	0.984 (25mm)
				1.969	2.953					-50-6C-C	●									
				2.953	4.528					-75-6C-C	●									
				4.528	7.087					-115-6C-C	●									
				7.087	9.252					-180-6C-C	●									
				9.252	∞					-235-6C-C	●									
0°	0.236 (6mm)	□0.75	0.591 (15mm)	0.984	1.378	No Unit Part Number ➡	KGDR12-C	●		KGDFL -25-6B-C		●	0.750	0.750	0.510	0.750	4.720	1.500	0.927	0.591 (15mm)
				1.378	1.969					-35-6B-C		●								
				1.969	2.953					-50-6B-C		●								
				2.953	4.528					-75-6B-C		●								
				4.528	7.087					-115-6B-C		●								
				7.087	9.252					-180-6B-C		●								
				9.252	∞					-235-6B-C		●								
			0.787 (20mm)	0.984	1.378					KGDFL -25-6C-C		●	0.750	0.750	0.510	0.750	4.920	1.690	0.927	0.787 (20mm)
			0.984 (25mm)	1.378	1.969					-35-6C-C		●	0.750	0.750	0.510	0.750	5.120	1.890	0.927	0.984 (25mm)
				1.969	2.953					-50-6C-C		●								
				2.953	4.528					-75-6C-C		●								
				4.528	7.087					-115-6C-C		●								
				7.087	9.252					-180-6C-C		●								
				9.252	∞					-235-6C-C		●								
		□1.00	0.591 (15mm)	0.984	1.378	No Unit Part Number ➡	KGDR16-C	●		KGDFL -25-6B-C		●	1.000	1.000	0.260	1.000	5.700	1.500	1.177	0.591 (15mm)
				1.378	1.969					-35-6B-C		●								
				1.969	2.953					-50-6B-C		●								
				2.953	4.528					-75-6B-C		●								
				4.528	7.087					-115-6B-C		●								
				7.087	9.252					-180-6B-C		●								
				9.252	∞					-235-6B-C		●								
			0.787 (20mm)	0.984	1.378					KGDFL -25-6C-C		●	1.000	1.000	0.260	1.000	5.900	1.690	1.177	0.787 (20mm)
			0.984 (25mm)	1.378	1.969					-35-6C-C		●	1.000	1.000	0.260	1.000	6.100	1.890	1.177	0.984 (25mm)
				1.969	2.953					-50-6C-C		●								
				2.953	4.528					-75-6C-C		●								
				4.528	7.087					-115-6C-C		●								
				7.087	9.252					-180-6C-C		●								
				9.252	∞					-235-6C-C		●								

Note 1) If the unit part number is not listed (No Unit Part Number), please purchase toolholder and blade separately.
2) Dimension **CDX*** : Shows the maximum grooving depth. If the dimension **CDX** is 0.787" (20mm) or more, using a 2-edge insert, the maximum grooving depth is 0.709" (18mm).
3) Insert clamp bolt (BH6x10TR) and Blade fixing bolt (SB-60120TR) come with toolholder. For Spare Parts, see → G104

Applicable Inserts → G103

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(Technical Support) 800.823.7284 - Option 2
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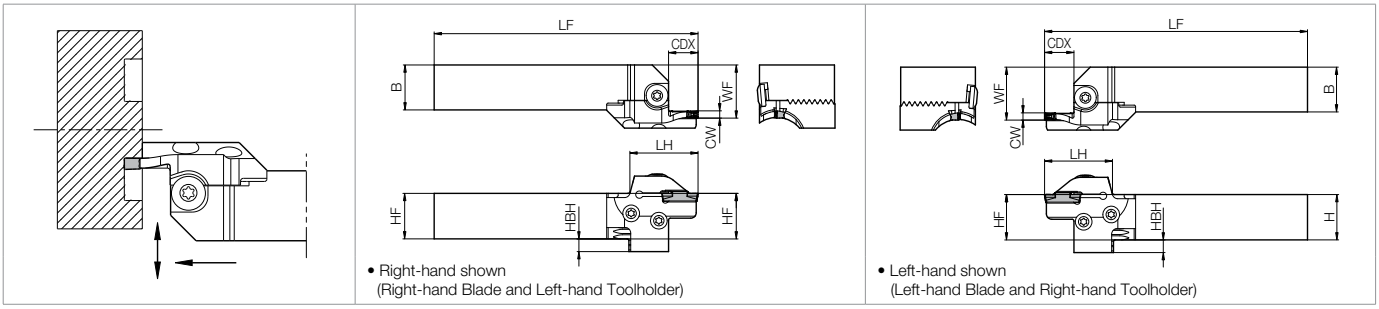
● : Standard Item △ : Phaseout Item (will be removed from next catalog)
Contact your local Kyocera sales engineer to upgrade old products to new technology

KGDF Face Grooving 0° SwitchBlade Toolholders (Metric-Size)

2mm Insert Width



• Right-hand shown
(Right-hand Blade and Left-hand Toolholder)

• Left-hand shown
(Left-hand Blade and Right-hand Toolholder)

Toolholder + Blade Dimensions

(Choose **Right-hand** Blade for **Left-hand** Toolholder and **Left-hand** Blade for **Right-hand** Toolholder)

Shank Angle	Insert Width CW (mm)	Shank Size (mm)	Max. Grooving Depth (mm)	Face Grooving Dia. (mm) DAXN (min)	Face Grooving Dia. (mm) DAXX (max)	Unit Part Number (Toolholder + Blade)	Stock R	Stock L	Toolholder Part Number → G41	Stock R	Stock L	Blade Part Number → G127	Stock R	Stock L	Dimensions (mm) H	HF	HBH	B	LF	LH	WF	CDX*
0°	2	□20	6	25	30	KGDFR 2020X25-2AS	●		KGDL2020-C		●	KGDFR -25-2A-C	●		20	20	12	20	115	33	24.5	6
				30	35							-30-2A-C	●									
				35	45							-35-2A-C	●									
				45	60							-45-2A-C	●									
				60	80							-60-2A-C	●									
				80	100							-80-2A-C	●									
				100	130							-100-2A-C	●									
			13	25	30	No Unit Part Number ➡						KGDFR -25-2B-C	●		20	20	12	20	118	36	24.5	13
			15	30	35							KGDFR -30-2B-C	●		20	20	12	20	120	38	24.5	15
				35	45							-35-2B-C	●									
				45	60							-45-2B-C	●									
				60	80							-60-2B-C	●									
				80	100							-80-2B-C	●									
				100	130							-100-2B-C	●									
		□25	6	25	30	KGDFR 2525X25-2AS	△		KGDL2525-C		●	KGDFR -25-2A-C	●		25	25	7	25	140	33	29.5	6
				30	35	2525X30-2AS	△					-30-2A-C	●									
				35	45	2525X35-2AS	△					-35-2A-C	●									
				45	60	2525X45-2AS	△					-45-2A-C	●									
				60	80	2525X60-2AS	△					-60-2A-C	●									
				80	100	2525X80-2AS	△					-80-2A-C	●									
				100	130	2525X100-2AS	△					-100-2A-C	●									
			13	25	30	No Unit Part Number ➡						KGDFR -25-2B-C	●		25	25	7	25	143	36	29.5	13
			15	30	35							KGDFR -30-2B-C	●		25	25	7	25	145	38	29.5	15
				35	45							-35-2B-C	●									
				45	60							-45-2B-C	●									
				60	80							-60-2B-C	●									
				80	100							-80-2B-C	●									
				100	130							-100-2B-C	●									
		□32	6	25	30	No Unit Part Number ➡			KGDL3232-C		●	KGDFR -25-2A-C	●		32	32	-	32	160	33	36.5	6
				30	35							-30-2A-C	●									
				35	45							-35-2A-C	●									
				45	60							-45-2A-C	●									
				60	80							-60-2A-C	●									
				80	100							-80-2A-C	●									
				100	130							-100-2A-C	●									
			13	25	30	No Unit Part Number ➡						KGDFR -25-2B-C	●		32	32	-	32	163	36	36.5	13
			15	30	35							KGDFR -30-2B-C	●		32	32	-	32	165	38	36.5	15
				35	45							-35-2B-C	●									
				45	60							-45-2B-C	●									
				60	80							-60-2B-C	●									
				80	100							-80-2B-C	●									
				100	130							-100-2B-C	●									

Note 1) If the unit part number is not listed (No Unit Part Number), please purchase toolholder and blade separately.
2) Dimension **CDX*** : Shows the maximum grooving depth. If the dimension **CDX** is 0.787" (20mm) or more, using a 2-edge insert, the maximum grooving depth is 0.709" (18mm).
3) Insert clamp bolt (BH6x10TR) and Blade fixing bolt (SB-60120TR) come with toolholder. For Spare Parts, see → **G104**

Applicable Inserts → **G103**

● : Standard Item △ : Phaseout Item (will be removed from next catalog)
Contact your local Kyocera sales engineer to upgrade old products to new technology

● Toolholder + Blade Dimensions

3mm Insert Width

(Choose **Right-hand** Blade for **Left-hand** Toolholder and **Left-hand** Blade for **Right-hand** Toolholder)

Shank Angle	Insert Width CW (mm)	Shank Size (mm)	Max. Grooving Depth (mm)	Face Grooving Dia. (mm) DAXN (min)	Face Grooving Dia. (mm) DAXX (max)	Unit Part Number (Toolholder + Blade)	Stock R	Stock L	Toolholder Part Number → G41	Stock R	Stock L	Blade Part Number → G127	Stock R	Stock L	Dimensions (mm) Diagram on Page → G105 H	HF	HBH	B	LF	LH	WF	CDX*
0°	3	□20	13	25	30	KGDF□ 2020X25-3AS	△	△	KGD□2020-C	●	●	KGDF□ -25-3A-C	●	●	20		12	20	118	36	24.5	13
				30	40	2020X30-3AS	△					-30-3A-C	●	●								
				40	50	No Unit Part Number ➡						-40-3A-C	●	●								
			15	50	65	KGDF□ 2020X50-3BS	△					-50-3B-C	●	●	20		12	20	120	38	24.5	15
				65	85	No Unit Part Number ➡						-65-3B-C	●	●								
				85	110							-85-3B-C	●	●								
				110	145							-110-3B-C	●	●								
			22	50	65	KGDF□ 2020X50-3CS	△					KGDF□ -50-3C-C	●	●	20		12	20	127	45	24.5	22
				65	85	No Unit Part Number ➡						-65-3C-C	●	●								
			25	85	110							-85-3C-C	●	●	20		12	20	130	48	24.5	25
				110	145							-110-3C-C	●	●								
		□25	13	25	30	KGDF□ 2525X25-3AS	△		KGD□2525-C	●	●	KGDF□ -25-3A-C	●	●	25		7	25	143	36	29.5	13
				30	40	2525X30-3AS	△					-30-3A-C	●	●								
				40	50	2525X40-3AS	△					-40-3A-C	●	●								
			15	50	65	2525X50-3BS	△	△				-50-3B-C	●	●	25		7	25	145	38	29.5	15
				65	85	2525X65-3BS	△	△				-65-3B-C	●	●								
				85	110	2525X85-3BS	△	△				-85-3B-C	●	●								
				110	145	2525X110-3BS	△					-110-3B-C	●	●								
			22	50	65	KGDF□ 2525X50-3CS	△					KGDF□ -50-3C-C	●	●	25		7	25	152	45	29.5	22
				65	85	No Unit Part Number ➡						-65-3C-C	●	●								
			25	85	110							-85-3C-C	●	●	25		7	25	155	48	29.5	25
				110	145	KGDF□ 2525X110-3CS	△					-110-3C-C	●	●								
		□32	13	25	30	No Unit Part Number ➡			KGD□3232-C	●	●	KGDF□ -25-3A-C	●	●	32		-	32	163	36	36.5	13
				30	40							-30-3A-C	●	●								
				40	50							-40-3A-C	●	●								
			15	50	65							-50-3B-C	●	●	32		-	32	165	38	36.5	15
				65	85							-65-3B-C	●	●								
				85	110							-85-3B-C	●	●								
				110	145							-110-3B-C	●	●								
			22	50	65							KGDF□ -50-3C-C	●	●	32		-	32	172	45	36.5	22
				65	85							-65-3C-C	●	●								
				85	110							-85-3C-C	●	●	32		-	32	175	48	36.5	25
				110	145							-110-3C-C	●	●								

Note 1) If the unit part number is not listed (No Unit Part Number), please purchase toolholder and blade separately.
2) Dimension **CDX*** : Shows the maximum grooving depth. If the dimension **CDX** is 0.787" (20mm) or more, using a 2-edge insert, the maximum grooving depth is 0.709" (18mm).
3) Insert clamp bolt (BH6x10TR) and Blade fixing bolt (SB-60120TR) come with toolholder. For Spare Parts, see → G104

Applicable Inserts → G103

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● : Standard Item △ : Phaseout Item (will be removed from next catalog)
Contact your local Kyocera sales engineer to upgrade old products to new technology

● Toolholder + Blade Dimensions

4mm Insert Width

(Choose **Right-hand** Blade for **Left-hand** Toolholder and **Left-hand** Blade for **Right-hand** Toolholder)

Shank Angle	Insert Width CW (mm)	Shank Size (mm)	Max. Grooving Depth (mm)	Face Grooving Dia. (mm) DAXN (min)	Face Grooving Dia. (mm) DAXX (max)	Unit Part Number (Toolholder + Blade)	Stock R	Stock L	Toolholder Part Number → G41	Stock R	Stock L	Blade Part Number → G127	Stock R	Stock L	Dimensions (mm) Diagram on Page → G105 H	HF	HBH	B	LF	LH	WF	CDX*
0°	4	□20	13	25	35	KGDF□ 2020X25-4AS	△		KGD□ 2020-C	●	●	KGDF□ -25-4A-C	●	●	20	20	12	20	118	36	24.5	13
			15	35	50	2020X35-4BS	△					-35-4B-C	●	●	20	20	12	20	120	38	24.5	15
				50	70	No Unit Part Number ➡						-50-4B-C	●	●								
				70	100							-70-4B-C	●	●								
				100	150							-100-4B-C	●	●								
				150	220							-150-4B-C	●	●								
				220	∞							-220-4B-C	●	●								
			25	35	50							KGDF□ -35-4C-C	●	●	20	20	12	20	130	48	24.5	25
				50	70							-50-4C-C	●	●								
				70	100							-70-4C-C	●	●								
				100	150							-100-4C-C	●	●								
				150	220							-150-4C-C	●	●								
				220	∞							-220-4C-C	●	●								
		□25	13	25	35	KGDF□ 2525X25-4AS	△		KGD□ 2525-C	●	●	KGDF□ -25-4A-C	●	●	25	25	7	25	143	36	29.5	13
			15	35	50	2525X35-4BS	△	△				-35-4B-C	●	●	25	25	7	25	145	38	29.5	15
				50	70	2525X50-4BS	△	△				-50-4B-C	●	●								
				70	100	2525X70-4BS	△					-70-4B-C	●	●								
				100	150	2525X100-4BS	△	△				-100-4B-C	●	●								
				150	220	2525X150-4BS	△					-150-4B-C	●	●								
				220	∞	2525X220-4BS	△	△				-220-4B-C	●	●								
			25	35	50	KGDF□ 2525X35-4CS	△					KGDF□ -35-4C-C	●	●	25	25	7	25	155	48	29.5	25
				50	70	2525X50-4CS	△					-50-4C-C	●	●								
				70	100	2525X70-4CS	△	△				-70-4C-C	●	●								
				100	150	2525X100-4CS	△					-100-4C-C	●	●								
				150	220	2525X150-4CS	△					-150-4C-C	●	●								
				220	∞	2525X220-4CS	△	△				-220-4C-C	●	●								
		□32	13	25	35	No Unit Part Number ➡			KGD□ 3232-C	●	●	KGDF□ -25-4A-C	●	●	32	32	-	32	163	36	36.5	13
			15	35	50							-35-4B-C	●	●	32	32	-	32	165	38	36.5	15
				50	70							-50-4B-C	●	●								
				70	100							-70-4B-C	●	●								
				100	150							-100-4B-C	●	●								
				150	220							-150-4B-C	●	●								
				220	∞							-220-4B-C	●	●								
			25	35	50							KGDF□ -35-4C-C	●	●	32	32	-	32	175	48	36.5	25
				50	70							-50-4C-C	●	●								
				70	100							-70-4C-C	●	●								
				100	150							-100-4C-C	●	●								
				150	220							-150-4C-C	●	●								
				220	∞							-220-4C-C	●	●								

Note 1) If the unit part number is not listed (No Unit Part Number), please purchase toolholder and blade separately.
2) Dimension **CDX*** : Shows the maximum grooving depth. If the dimension **CDX** is 0.787" (20mm) or more, using a 2-edge insert, the maximum grooving depth is 0.709" (18mm).
3) Insert clamp bolt (BH6x10TR) and Blade fixing bolt (SB-60120TR) come with toolholder. For Spare Parts, see → G104

Applicable Inserts → G103

● : Standard Item △ : Phaseout Item (will be removed from next catalog)
Contact your local Kyocera sales engineer to upgrade old products to new technology

● Toolholder + Blade Dimensions

5mm Insert Width

(Choose **Right-hand** Blade for **Left-hand** Toolholder and **Left-hand** Blade for **Right-hand** Toolholder)

Shank Angle	Insert Width CW (mm)	Shank Size (mm)	Max. Grooving Depth (mm)	Face Grooving Dia. (mm) DAXN (min)	Face Grooving Dia. (mm) DAXX (max)	Unit Part Number (Toolholder + Blade)	Stock R	Stock L	Toolholder Part Number → G41	Stock R	Stock L	Blade Part Number → G127	Stock R	Stock L	H	HF	HBH	B	LF	LH	WF	CDX*
0°	5	□20	15	25	35	No Unit Part Number ➡			KGD□2020-C	●	●	KGDF□-25-5B-C	●	●	20	20	12	20	120	38	24.5	15
				35	50							-35-5B-C	●	●								
				50	75							-50-5B-C	●	●								
				75	115							-75-5B-C	●	●								
				115	180							-115-5B-C	●	●								
				180	235							-180-5B-C	●	●								
				235	∞							-235-5B-C	●	●								
			20	25	35							KGDF□-25-5C-C	●	●	20	20	12	20	125	43	24.5	20
			25	35	50							-35-5C-C	●	●	20	20	12	20	130	48	24.5	25
				50	75							-50-5C-C	●	●								
				75	115							-75-5C-C	●	●								
				115	180							-115-5C-C	●	●								
				180	235							-180-5C-C	●	●								
				235	∞							-235-5C-C	●	●								
			32	75	115							KGDF□-75-5D-C	●	●	20	20	12	20	137	55	24.5	32
				115	180							-115-5D-C	●	●								
				180	235							-180-5D-C	●	●								
				235	∞							-235-5D-C	●	●								
		□25	15	25	35	KGDF□2525X25-5BS	△		KGD□2525-C	●	●	KGDF□-25-5B-C	●	●	25	25	7	25	145	38	29.5	15
				35	50	No Unit Part Number ➡						-35-5B-C	●	●								
				50	75	KGDF□2525X50-5BS	△					-50-5B-C	●	●								
				75	115	2525X75-5BS	△	△				-75-5B-C	●	●								
				115	180	No Unit Part Number ➡						-115-5B-C	●	●								
				180	235							-180-5B-C	●	●								
				235	∞	KGDF□2525X235-5BS	△					-235-5B-C	●	●								
			20	25	35	No Unit Part Number ➡						KGDF□-25-5C-C	●	●	25	25	7	25	150	43	29.5	20
			25	35	50	KGDF□2525X35-5CS	△					-35-5C-C	●	●	25	25	7	25	155	48	29.5	25
				50	75	2525X50-5CS	△					-50-5C-C	●	●								
				75	115	No Unit Part Number ➡						-75-5C-C	●	●	25	25	7	25	155	48	29.5	25
				115	180							-115-5C-C	●	●								
				180	235							-180-5C-C	●	●								
				235	∞							-235-5C-C	●	●								
			32	75	115	KGDF□2525X75-5DS	△					KGDF□-75-5D-C	●	●	25	25	7	25	162	55	29.5	32
				115	180	2525X115-5DS	△					-115-5D-C	●	●								
				180	235	2525X180-5DS	△					-180-5D-C	●	●								
				235	∞	2525X235-5DS	△					-235-5D-C	●	●								
		□32	15	25	35	No Unit Part Number ➡			KGD□3232-C	●	●	KGDF□-25-5B-C	●	●	32	32	-	32	165	38	36.5	15
				35	50							-35-5B-C	●	●								
				50	75							-50-5B-C	●	●								
				75	115							-75-5B-C	●	●								
				115	180							-115-5B-C	●	●								
				180	235							-180-5B-C	●	●								
				235	∞							-235-5B-C	●	●								
			20	25	35							KGDF□-25-5C-C	●	●	32	32	-	32	170	43	36.5	20
			25	35	50							-35-5C-C	●	●	32	32	-	32	175	48	36.5	25
				50	75							-50-5C-C	●	●								
				75	115							-75-5C-C	●	●								
				115	180							-115-5C-C	●	●								
				180	235							-180-5C-C	●	●								
				235	∞							-235-5C-C	●	●								
			32	75	115							KGDF□-75-5D-C	●	●	32	32	-	32	182	55	36.5	32
				115	180							-115-5D-C	●	●								
				180	235							-180-5D-C	●	●								
				235	∞							-235-5D-C	●	●								

Note 1) If the unit part number is not listed (No Unit Part Number), please purchase toolholder and blade separately.
2) Dimension **CDX*** : Shows the maximum grooving depth. If the dimension **CDX** is 0.787" (20mm) or more, using a 2-edge insert, the maximum grooving depth is 0.709" (18mm).
3) Insert clamp bolt (BH6x10TR) and Blade fixing bolt (SB-60120TR) come with toolholder. For Spare Parts, see → G104

Applicable Inserts → G103

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(Technical Support) 800.823.7284 - Option 2
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● : Standard Item △ : Phaseout Item (will be removed from next catalog)
Contact your local Kyocera sales engineer to upgrade old products to new technology

● Toolholder + Blade Dimensions

6mm Insert Width

(Choose **Right-hand** Blade for **Left-hand** Toolholder and **Left-hand** Blade for **Right-hand** Toolholder)

Shank Angle	Insert Width CW (mm)	Shank Size (mm)	Max. Grooving Depth (mm)	Face Grooving Dia. (mm) DAXN (min)	Face Grooving Dia. (mm) DAXX (max)	Unit Part Number (Toolholder + Blade)	Stock R	Stock L	Toolholder Part Number → G41	Stock R	Stock L	Blade Part Number → G127	Stock R	Stock L	H	HF	HBH	B	LF	LH	WF	CDX*
0°	6	□20	15	25	35	No Unit Part Number →			KGDR/L 2020-C	●	●	KGDFR/L -25-6B-C	●	●	20	20	12	20	120	38	24.5	15
				35	50							-35-6B-C	●	●								
				50	75							-50-6B-C	●	●								
				75	115							-75-6B-C	●	●								
				115	180							-115-6B-C	●	●								
				180	235							-180-6B-C	●	●								
				235	∞							-235-6B-C	●	●								
			20	25	35							KGDFR/L -25-6C-C	●	●	20	20	12	20	125	43	24.5	20
			25	35	50							-35-6C-C	●	●	20	20	12	20	130	48	24.5	25
				50	75							-50-6C-C	●	●								
				75	115							-75-6C-C	●	●								
				115	180							-115-6C-C	●	●								
				180	235							-180-6C-C	●	●								
				235	∞							-235-6C-C	●	●								
			32	75	115							KGDFR/L -75-6D-C	●	●	20	20	12	20	137	55	24.5	32
				115	180							-115-6D-C	●	●								
				180	235							-180-6D-C	●	●								
				235	∞							-235-6D-C	●	●								
		□25	15	25	35	No Unit Part Number →			KGDR/L 2525-C	●	●	KGDFR/L -25-6B-C	●	●	25	25	7	25	145	38	29.5	15
				35	50							-35-6B-C	●	●								
				50	75							-50-6B-C	●	●								
				75	115							-75-6B-C	●	●								
				115	180							-115-6B-C	●	●								
				180	235							-180-6B-C	●	●								
				235	∞							-235-6B-C	●	●								
			20	25	35							KGDFR/L -25-6C-C	●	●	25	25	7	25	150	43	29.5	20
			25	35	50							-35-6C-C	●	●	25	25	7	25	155	48	29.5	25
				50	75							-50-6C-C	●	●								
				75	115							-75-6C-C	●	●								
				115	180							-115-6C-C	●	●								
				180	235							-180-6C-C	●	●								
				235	∞							-235-6C-C	●	●								
			32	75	115							KGDFR/L -75-6D-C	●	●	25	25	7	25	162	55	29.5	32
				115	180							-115-6D-C	●	●								
				180	235							-180-6D-C	●	●								
				235	∞							-235-6D-C	●	●								
		□32	15	25	35	No Unit Part Number →			KGDR/L 3232-C	●	●	KGDFR/L -25-6B-C	●	●	32	32	-	32	165	38	36.5	15
				35	50							-35-6B-C	●	●								
				50	75							-50-6B-C	●	●								
				75	115							-75-6B-C	●	●								
				115	180							-115-6B-C	●	●								
				180	235							-180-6B-C	●	●								
				235	∞							-235-6B-C	●	●								
			20	25	35							KGDFR/L -25-6C-C	●	●	32	32	-	32	170	43	36.5	20
			25	35	50							-35-6C-C	●	●	32	32	-	32	175	48	36.5	25
				50	75							-50-6C-C	●	●								
				75	115							-75-6C-C	●	●								
				115	180							-115-6C-C	●	●								
				180	235							-180-6C-C	●	●								
				235	∞							-235-6C-C	●	●								
			32	75	115							KGDFR/L -75-6D-C	●	●	32	32	-	32	182	55	36.5	32
				115	180							-115-6D-C	●	●								
				180	235							-180-6D-C	●	●								
				235	∞							-235-6D-C	●	●								

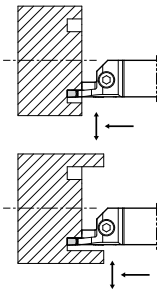
Note 1) If the unit part number is not listed (No Unit Part Number), please purchase toolholder and blade separately.
2) Dimension **CDX*** : Shows the maximum grooving depth. If the dimension **CDX** is 0.787" (20mm) or more, using a 2-edge insert, the maximum grooving depth is 0.709" (18mm).
3) Insert clamp bolt (BH6x10TR) and Blade fixing bolt (SB-60120TR) come with toolholder. For Spare Parts, see → G104

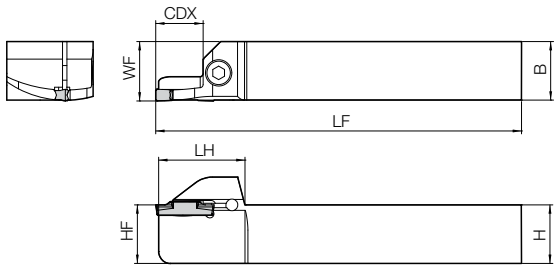
Applicable Inserts → G103

● : Standard Item △ : Phaseout Item (will be removed from next catalog)
Contact your local Kyocera sales engineer to upgrade old products to new technology

KGDF-Z

3mm / 4mm / 5mm Insert Width





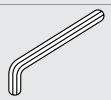
• Right-hand shown

Toolholder Dimensions

Insert Width CW (mm)	Shank Size (mm)	Max. Grooving Depth (mm)	Face Grooving Dia. (mm) DAXN (min)	Face Grooving Dia. (mm) DAXX (max)	Part Number	Stock R	Stock L	Dimensions (mm) H	HF	B	LF	LH	WF	CDX
3	□20	15	50	65	KGDF[R/L] 2020K50-3B-Z	●	●	20	20	20	125	30.5	20.3	15
			65	85	2020K65-3B-Z	●	●							
			85	110	2020K85-3B-Z	●	●							
			110	145	2020K110-3B-Z	●	●							
	□25		50	65	KGDF[R/L] 2525M50-3B-Z	●	●	25	25	25	150	30.5	25.3	15
			65	85	2525M65-3B-Z	●	●							
			85	110	2525M85-3B-Z	●	●							
			110	145	2525M110-3B-Z	●	●							
4	□20	15	50	70	KGDF[R/L] 2020K50-4B-Z	●	●	20	20	20	125	30.5	20.3	15
			70	100	2020K70-4B-Z	●	●							
			100	150	2020K100-4B-Z	●	●							
	□25		50	70	KGDF[R/L] 2525M50-4B-Z	●	●	25	25	25	150	30.5	25.3	15
			70	100	2525M70-4B-Z	●	●							
			100	150	2525M100-4B-Z	●	●							
5	□20	15	50	75	KGDF[R/L] 2020K50-5B-Z	●	●	20	20	20	125	30.5	20.3	15
			75	115	2020K75-5B-Z	●	●							
			115	180	2020K115-5B-Z	●	●							
	□25		50	75	KGDF[R/L] 2525M50-5B-Z	●	●	25	25	25	150	30.5	25.3	15
			75	115	2525M75-5B-Z	●	●							
			115	180	2525M115-5B-Z	●	●							

Applicable Inserts ➔ **G103**

Spare Parts

Part Number	Spare Parts: Clamp Bolt	Spare Parts: Wrench
		
KGDF[R/L]····-Z	HH5X16	LW-4

Toolholder Identification System (Integral Type)

KGDF | **R** | **2525** | **M** | **50** | **3** | **B** | **Z**

Series	Hand of Tool	Shank Size	Toolholder Length	Min. Face Groove Dia.	Width	Grooving Depth	Toolholder Type
KGDF Face Grooving	**R**:Right-hand **L**:Left-hand	**2020** : □20mm **2525** : □25mm	**K** : 125mm **M** : 150mm	**50** : 50mm : **115** : 115mm	**3** : 3mm **4** : 4mm **5** : 5mm	**B** : 15mm	**Z** : Integral Type

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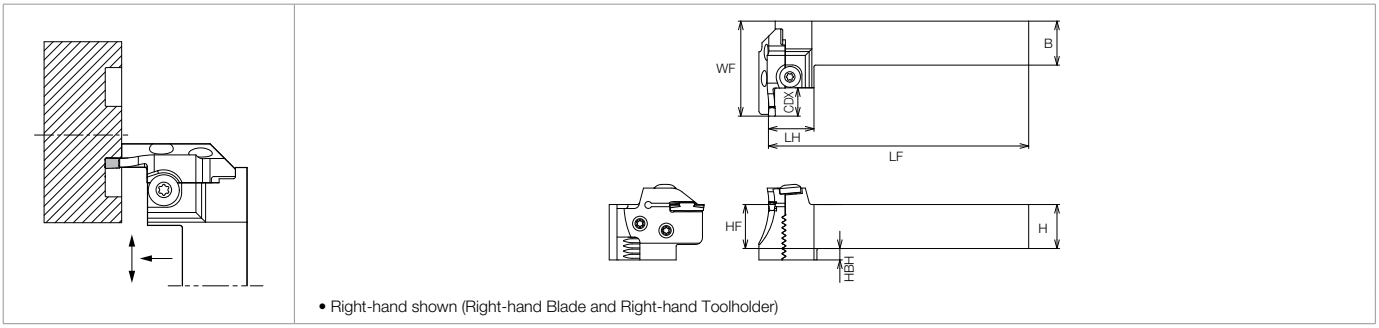
● : Standard Item △ : Phaseout Item (will be removed from next catalog)
Contact your local Kyocera sales engineer to upgrade old products to new technology

KGDF Face Grooving 90° SwitchBlade Toolholders (Inch-Size)

0.079" Insert Width



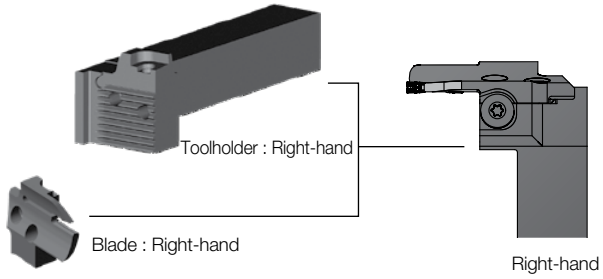
• Right-hand shown (Right-hand Blade and Right-hand Toolholder)

Toolholder + Blade Dimensions

(Choose **Right-hand** Blade for **Right-hand** Toolholder and **Left-hand** Blade for **Left-hand** Toolholder)

Shank Angle	Insert Width CW (in)	Shank Size (in)	Max. Grooving Depth (in)	Face Grooving Dia. (in) DAXN (min)	Face Grooving Dia. (in) DAXX (max)	Unit Part Number (Toolholder + Blade)	Toolholder Part Number G41	Stock R	Stock L	Blade Part Number G127	Stock R	Stock L	Dimensions (in) H	HF	HBH	B	LF	LH	WF	CDX
90°	0.079 (2mm)	□0.75	0.236 (6mm)	0.984	1.181	No Unit Part Number ➡	KGDSR12-C	●		KGDFR -25-2A-C	●		0.750	0.750	0.510	0.750	4.921	0.988	1.957	0.236 (6mm)
				1.181	1.378					-30-2A-C	●									
				1.378	1.772					-35-2A-C	●									
				1.772	2.362					-45-2A-C	●									
				2.362	3.150					-60-2A-C	●									
				3.150	3.937					-80-2A-C	●									
				3.937	5.118					-100-2A-C	●									
			0.512 (13mm)	0.984	1.181					KGDFR -25-2B-C	●		0.750	0.750	0.510	0.750	4.921	0.988	2.075	0.512 (13mm)
			0.591 (15mm)	1.181	1.378					KGDFR -30-2B-C	●		0.750	0.750	0.510	0.750	4.921	0.988	2.154	0.591 (15mm)
				1.378	1.772					-35-2B-C	●									
				1.772	2.362					-45-2B-C	●									
				2.362	3.150					-60-2B-C	●									
				3.150	3.937					-80-2B-C	●									
				3.937	5.118					-100-2B-C	●									
		□1.00	0.236 (6mm)	0.984	1.181	No Unit Part Number ➡	KGDSR16-C	●		KGDFR -25-2A-C	●		1.000	1.000	0.260	1.000	5.910	0.988	1.957	0.236 (6mm)
				1.181	1.378					-30-2A-C	●									
				1.378	1.772					-35-2A-C	●									
				1.772	2.362					-45-2A-C	●									
				2.362	3.150					-60-2A-C	●									
				3.150	3.937					-80-2A-C	●									
				3.937	5.118					-100-2A-C	●									
			0.512 (13mm)	0.984	1.181					KGDFR -25-2B-C	●		1.000	1.000	0.260	1.000	5.910	0.988	2.075	0.512 (13mm)
			0.591 (15mm)	1.181	1.378					KGDFR -30-2B-C	●		1.000	1.000	0.260	1.000	5.910	0.988	2.154	0.591 (15mm)
				1.378	1.772					-35-2B-C	●									
				1.772	2.362					-45-2B-C	●									
				2.362	3.150					-60-2B-C	●									
				3.150	3.937					-80-2B-C	●									
				3.937	5.118					-100-2B-C	●									

Applicable Inserts ➡ **G103**

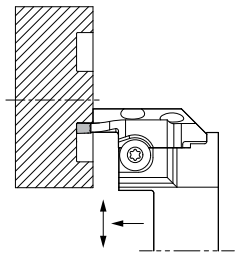


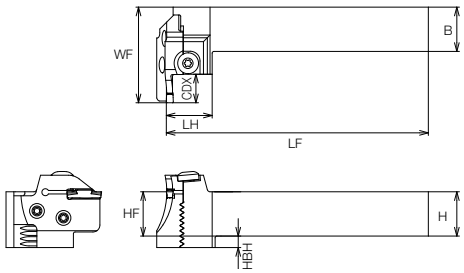
• KGDF 90° SwitchBlade type is not available as unit (toolholder + blade). Blade and toolholder are available to assemble when purchasing individually.
• **Right-hand** Blade for **Right-hand** Toolholder, **Left-hand** Blade for **Left-hand** Toolholder.
• Insert clamp screw (BH6X10TR), Blade fixing screw (SB-60120TR) and Wrench (LTW-25) come with toolholder.

● : Standard Item △ : Phaseout Item (will be removed from next catalog)
Contact your local Kyocera sales engineer to upgrade old products to new technology

KGDF Face Grooving 90° SwitchBlade Toolholders (Inch-Size)

0.118" Insert Width





• Right-hand shown (Right-hand Blade and Right-hand Toolholder)

Toolholder + Blade Dimensions (0.118" Insert Width)

(Choose **Right-hand** Blade for **Right-hand** Toolholder and **Left-hand** Blade for **Left-hand** Toolholder)

Shank Angle	Insert Width CW (in)	Shank Size (in)	Max. Grooving Depth (in)	Face Grooving Dia. (in) DAXN (min)	Face Grooving Dia. (in) DAXX (max)	Unit Part Number (Toolholder + Blade)	Toolholder Part Number → G41	Stock R	Stock L	Blade Part Number → G127	Stock R	Stock L	Dimensions (in) H	HF	HBH	B	LF	LH	WF	CDX
90°	0.118 (3mm)	□0.75	0.512 (13mm)	0.984	1.181	No Unit Part Number ➡	KGDS□12-C	●	●	KGDF□ -25-3A-C	●	●	0.750	0.750	0.510	0.750	4.921	0.988	2.075	0.512
				1.181	1.575					-30-3A-C	●	●								
				1.575	1.969					-40-3A-C	●	●								
			0.591 (15mm)	1.969	2.559					-50-3B-C	●	●	0.750	0.750	0.510	0.750	4.921	0.988	2.154	0.591
				2.559	3.346					-65-3B-C	●	●								
				3.346	4.331					-85-3B-C	●	●								
				4.331	5.709					-110-3B-C	●	●								
			0.866 (22mm)	1.969	2.559					KGDF□ -50-3C-C	●	●	0.750	0.750	0.510	0.750	4.921	0.988	2.350	0.866
				2.559	3.346					-65-3C-C	●	●								
			0.984 (25mm)	3.346	4.331					-85-3C-C	●	●	0.750	0.750	0.510	0.750	4.921	0.988	2.429	0.984
				4.331	5.709					-110-3C-C	●	●								
		□1.00	0.512 (13mm)	0.984	1.181	No Unit Part Number ➡	KGDS□16-C	●	●	KGDF□ -25-3A-C	●	●	1.000	1.000	0.260	1.000	5.906	0.988	2.075	0.512
				1.181	1.575					-30-3A-C	●	●								
				1.575	1.969					-40-3A-C	●	●								
			0.591 (15mm)	1.969	2.559					-50-3B-C	●	●	1.000	1.000	0.260	1.000	5.906	0.988	2.154	0.591
				2.559	3.346					-65-3B-C	●	●								
				3.346	4.331					-85-3B-C	●	●								
				4.331	5.709					-110-3B-C	●	●								
			0.866 (22mm)	1.969	2.559					KGDF□ -50-3C-C	●	●	1.000	1.000	0.260	1.000	5.906	0.988	2.350	0.866
				2.559	3.346					-65-3C-C	●	●								
			0.984 (25mm)	3.346	4.331					-85-3C-C	●	●	1.000	1.000	0.260	1.000	5.906	0.988	2.429	0.984
				4.331	5.709					-110-3C-C	●	●								

• KGDF 90° SwitchBlade type is not available as unit (toolholder + blade).
Blade and toolholder are available to assemble when purchasing individually.

Applicable Inserts → **G103**

• **Right-hand** Blade for **Right-hand** Toolholder, **Left-hand** Blade for **Left-hand** Toolholder.

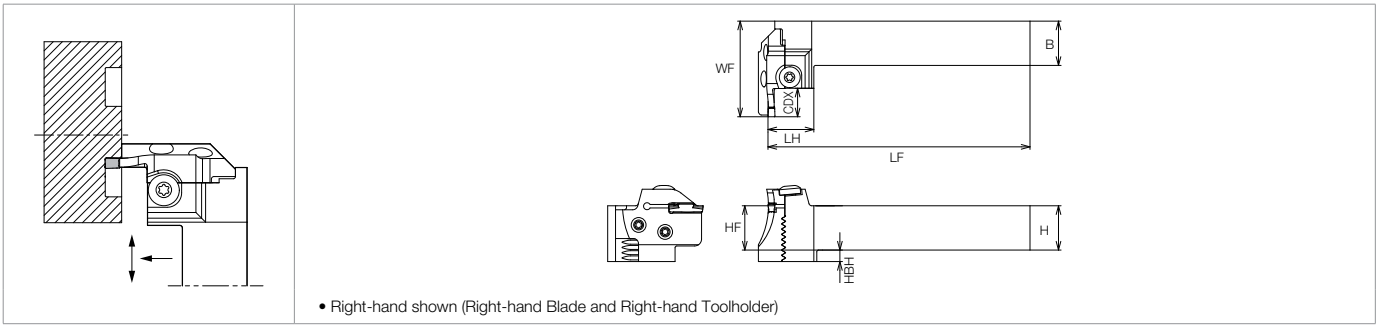
• Insert clamp bolt (BH6x10TR) and Blade fixing bolt (SB-60120TR) and Wrench (LTW-25) come with toolholder. For Spare Parts, see → **G104**

(Customer Service) **800.823.7284 - Option 1**
(Technical Support) **800.823.7284 - Option 2**
Visit us online at **KyoceraPrecisionTools.com**

● : Standard Item △ : Phaseout Item (will be removed from next catalog)
Contact your local Kyocera sales engineer to upgrade old products to new technology

KGDF Face Grooving 90° SwitchBlade Toolholders (Inch-Size)

0.157" Insert Width



• Right-hand shown (Right-hand Blade and Right-hand Toolholder)

Toolholder + Blade Dimensions (0.157" Insert Width)

(Choose **Right-hand** Blade for **Right-hand** Toolholder and **Left-hand** Blade for **Left-hand** Toolholder)

Shank Angle	Insert Width CW (in)	Shank Size (in)	Max. Grooving Depth (in)	Face Grooving Dia. (in) DAXN (min)	Face Grooving Dia. (in) DAXX (max)	Unit Part Number (Toolholder + Blade)	Toolholder Part Number G41	Stock R	Stock L	Blade Part Number G127	Stock R	Stock L	H	HF	HBH	B	LF	LH	WF	CDX
90°	0.157 (4mm)	□0.75	0.512 (13mm)	0.984	1.378	No Unit Part Number ➡	KGDS□12-C	●	●	KGDF□-25-4A-C	●	●	0.750	0.750	0.510	0.750	4.921	0.988	2.075	0.512
			0.591 (15mm)	1.378	1.969					KGDF□-35-4B-C	●	●	0.750	0.750	0.510	0.750	4.921	0.988	2.154	0.591
				1.969	2.756					-50-4B-C	●	●								
				2.756	3.937					-70-4B-C	●	●								
				3.937	5.906					-100-4B-C	●	●								
				5.906	8.661					-150-4B-C	●	●								
				8.661	∞					-220-4B-C	●	●								
			0.984 (25mm)	1.378	1.969					KGDF□-35-4C-C	●	●	0.750	0.750	0.510	0.750	4.921	0.988	2.550	0.984
				1.969	2.756					-50-4C-C	●	●								
				2.756	3.937					-70-4C-C	●	●								
				3.937	5.906					-100-4C-C	●	●								
				5.906	8.661					-150-4C-C	●	●								
				8.661	∞					-220-4C-C	●	●								
		□1.00	0.512 (13mm)	0.984	1.378	No Unit Part Number ➡	KGDS□16-C	●	●	KGDF□-25-4A-C	●	●	1.000	1.000	0.260	1.000	5.906	0.988	2.075	0.512
			0.591 (15mm)	1.378	1.969					KGDF□-35-4B-C	●	●	1.000	1.000	0.260	1.000	5.906	0.988	2.154	0.591
				1.969	2.756					-50-4B-C	●	●								
				2.756	3.937					-70-4B-C	●	●								
				3.937	5.906					-100-4B-C	●	●								
				5.906	8.661					-150-4B-C	●	●								
				8.661	∞					-220-4B-C	●	●								
			0.984 (25mm)	1.378	1.969					KGDF□-35-4C-C	●	●	1.000	1.000	0.260	1.000	5.906	0.988	2.550	0.984
				1.969	2.756					-50-4C-C	●	●								
				2.756	3.937					-70-4C-C	●	●								
				3.937	5.906					-100-4C-C	●	●								
				5.906	8.661					-150-4C-C	●	●								
				8.661	∞					-220-4C-C	●	●								

• KGDF 90° SwitchBlade type is not available as unit (toolholder + blade).
Blade and toolholder are available to assemble when purchasing individually.

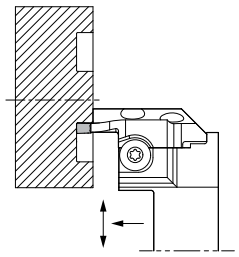
Applicable Inserts G103

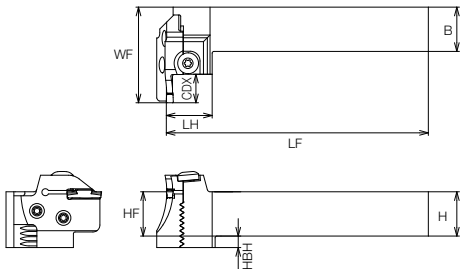
• **Right-hand** Blade for **Right-hand** Toolholder, **Left-hand** Blade for **Left-hand** Toolholder.

• Insert clamp bolt (BH6x10TR) and Blade fixing bolt (SB-60120TR) and Wrench (LTW-25) come with toolholder. For Spare Parts, see G104

KGDF Face Grooving 90° SwitchBlade Toolholders (Inch-Size)

0.197" Insert Width





• Right-hand shown (Right-hand Blade and Right-hand Toolholder)

Toolholder + Blade Dimensions

(Choose **Right-hand** Blade for **Right-hand** Toolholder and **Left-hand** Blade for **Left-hand** Toolholder)

Shank Angle	Insert Width CW (in)	Shank Size (in)	Max. Grooving Depth (in)	Face Grooving Dia. (in) DAXN (min)	Face Grooving Dia. (in) DAXX (max)	Unit Part Number (Toolholder + Blade)	Toolholder Part Number G41	Stock R	Stock L	Blade Part Number G127	Stock R	Stock L	H	HF	HBH	B	LF	LH	WF	CDX
90°	0.197 (5mm)	□0.75	0.591 (15mm)	0.984	1.378	No Unit Part Number ➡	KGDS□12-C	●	●	KGDF□ -25-5B-C	●	●	0.750	0.750	0.510	0.750	4.921	0.927	2.154	0.591
				1.378	1.969					-35-5B-C	●	●								
				1.969	2.953					-50-5B-C	●	●								
				2.953	4.528					-75-5B-C	●	●								
				4.528	7.087					-115-5B-C	●	●								
				7.087	9.252					-180-5B-C	●	●								
				9.252	∞					-235-5B-C	●	●								
			0.787 (20mm)	0.984	1.378					KGDF□ -25-5C-C	●	●	0.750	0.750	0.510	0.750	4.921	0.927	2.35	0.787
			0.984 (25mm)	1.378	1.969					-35-5C-C	●	●	0.750	0.750	0.510	0.750	4.921	0.927	2.547	0.984
				1.969	2.953					-50-5C-C	●	●								
				2.953	4.528					-75-5C-C	●	●								
				4.528	7.087					-115-5C-C	●	●								
				7.087	9.252					-180-5C-C	●	●								
				9.252	∞					-235-5C-C	●	●								
			1.260 (32mm)	2.953	4.528					KGDF□ -75-5D-C	●	●	0.750	0.750	0.510	0.750	4.921	0.927	2.823	1.26
				4.528	7.087					-115-5D-C	●	●								
				7.087	9.252					-180-5D-C	●	●								
				9.252	∞					-235-5D-C	●	●								
		□1.00	0.591 (15mm)	0.984	1.378	No Unit Part Number ➡	KGDS□16-C	●	●	KGDF□ -25-5B-C	●	●	1.000	1.000	0.260	1.000	5.906	1.177	2.154	0.591
				1.378	1.969					-35-5B-C	●	●								
				1.969	2.953					-50-5B-C	●	●								
				2.953	4.528					-75-5B-C	●	●								
				4.528	7.087					-115-5B-C	●	●								
				7.087	9.252					-180-5B-C	●	●								
				9.252	∞					-235-5B-C	●	●								
			0.787 (20mm)	0.984	1.378					KGDF□ -25-5C-C	●	●	1.000	1.000	0.260	1.000	5.906	1.177	2.35	0.787
			0.984 (25mm)	1.378	1.969					-35-5C-C	●	●	1.000	1.000	0.260	1.000	5.906	1.177	2.547	0.984
				1.969	2.953					-50-5C-C	●	●								
				2.953	4.528					-75-5C-C	●	●								
				4.528	7.087					-115-5C-C	●	●								
				7.087	9.252					-180-5C-C	●	●								
				9.252	∞					-235-5C-C	●	●								
			1.260 (32mm)	2.953	4.528					KGDF□ -75-5D-C	●	●	1.000	1.000	0.260	1.000	5.906	1.177	2.823	1.26
				4.528	7.087					-115-5D-C	●	●								
				7.087	9.252					-180-5D-C	●	●								
				9.252	∞					-235-5D-C	●	●								

• KGDF 90° SwitchBlade type is not available as unit (toolholder + blade).
Blade and toolholder are available to assemble when purchasing individually.

Applicable Inserts G103

• **Right-hand** Blade for **Right-hand** Toolholder, **Left-hand** Blade for **Left-hand** Toolholder.

• Insert clamp bolt (BH6x10TR) and Blade fixing bolt (SB-60120TR) and Wrench (LTW-25) come with toolholder. For Spare Parts, see G104

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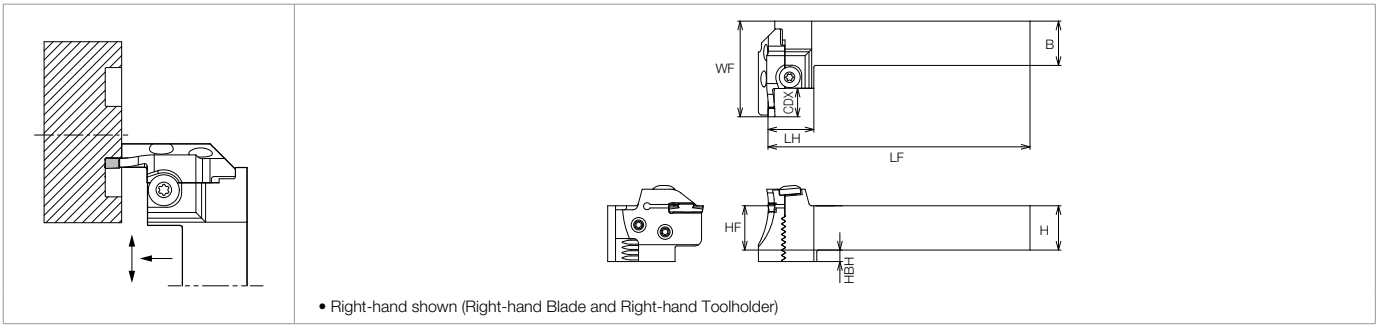
● : Standard Item △ : Phaseout Item (will be removed from next catalog)
Contact your local Kyocera sales engineer to upgrade old products to new technology

KGDF Face Grooving 90° SwitchBlade Toolholders (Inch-Size)

0.236" Insert Width



• Right-hand shown (Right-hand Blade and Right-hand Toolholder)

Toolholder + Blade Dimensions

(Choose **Right-hand** Blade for **Right-hand** Toolholder and **Left-hand** Blade for **Left-hand** Toolholder)

Shank Angle	Insert Width CW (in)	Shank Size (in)	Max. Grooving Depth (in)	Face Grooving Dia. (in) DAXN (min)	Face Grooving Dia. (in) DAXX (max)	Unit Part Number (Toolholder + Blade)	Toolholder Part Number G41	Stock R	Stock L	Blade Part Number G127	Stock R	Stock L	Dimensions (in) H	HF	HBH	B	LF	LH	WF	CDX
90°	0.236 (6mm)	□0.75	0.591 (15mm)	0.984	1.378	No Unit Part Number ➡	KGDS□12-C	●	●	KGDF□ -25-6B-C	●	●	0.750	0.750	0.510	0.750	4.921	0.988	2.154	0.591
				1.378	1.969					-35-6B-C	●	●								
				1.969	2.953					-50-6B-C	●	●								
				2.953	4.528					-75-6B-C	●	●								
				4.528	7.087					-115-6B-C	●	●								
				7.087	9.252					-180-6B-C	●	●								
				9.252	∞					-235-6B-C	●	●								
			0.787 (20mm)	0.984	1.378					KGDF□ -25-6C-C	●	●	0.750	0.750	0.510	0.750	4.921	0.988	2.350	0.787
			0.984 (25mm)	1.378	1.969					-35-6C-C	●	●	0.750	0.750	0.510	0.750	4.921	0.988	2.547	0.984
				1.969	2.953					-50-6C-C	●	●								
				2.953	4.528					-75-6C-C	●	●								
				4.528	7.087					-115-6C-C	●	●								
				7.087	9.252					-180-6C-C	●	●								
				9.252	∞					-235-6C-C	●	●								
			1.260 (32mm)	2.953	4.528					KGDF□ -75-6D-C	●	●	0.750	0.750	0.510	0.750	4.921	0.988	2.823	1.260
				4.528	7.087					-115-6D-C	●	●								
				7.087	9.252					-180-6D-C	●	●								
				9.252	∞					-235-6D-C	●	●								
		□1.00	0.591 (15mm)	0.984	1.378	No Unit Part Number ➡	KGDS□16-C	●	●	KGDF□ -25-6B-C	●	●	1.000	1.000	0.260	1.000	5.906	0.988	2.154	0.591
				1.378	1.969					-35-6B-C	●	●								
				1.969	2.953					-50-6B-C	●	●								
				2.953	4.528					-75-6B-C	●	●								
				4.528	7.087					-115-6B-C	●	●								
				7.087	9.252					-180-6B-C	●	●								
				9.252	∞					-235-6B-C	●	●								
			0.787 (20mm)	0.984	1.378					KGDF□ -25-6C-C	●	●	1.000	1.000	0.260	1.000	5.906	0.988	2.350	0.787
			0.984 (25mm)	1.378	1.969					-35-6C-C	●	●	1.000	1.000	0.260	1.000	5.906	0.988	2.547	0.984
				1.969	2.953					-50-6C-C	●	●								
				2.953	4.528					-75-6C-C	●	●								
				4.528	7.087					-115-6C-C	●	●								
				7.087	9.252					-180-6C-C	●	●								
				9.252	∞					-235-6C-C	●	●								
			1.260 (32mm)	2.953	4.528					KGDF□ -75-6D-C	●	●	1.000	1.000	0.260	1.000	5.906	0.988	2.823	1.260
				4.528	7.087					-115-6D-C	●	●								
				7.087	9.252					-180-6D-C	●	●								
				9.252	∞					-235-6D-C	●	●								

• KGDF 90° SwitchBlade type is not available as unit (toolholder + blade). Blade and toolholder are available to assemble when purchasing individually.

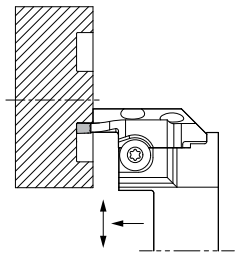
Applicable Inserts ➡ **G103**

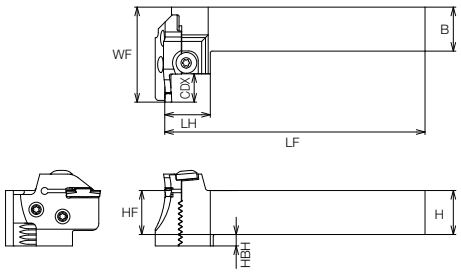
• **Right-hand** Blade for **Right-hand** Toolholder, **Left-hand** Blade for **Left-hand** Toolholder.

• Insert clamp bolt (BH6x10TR) and Blade fixing bolt (SB-60120TR) and Wrench (LTW-25) come with toolholder. For Spare Parts, see ➡ **G104**

KGDF Face Grooving 90° SwitchBlade Toolholders (Metric-Size)

2mm Insert Width





• Right-hand shown (Right-hand Blade and Right-hand Toolholder)

Toolholder + Blade Dimensions

(Choose **Right-hand** Blade for **Right-hand** Toolholder and **Left-hand** Blade for **Left-hand** Toolholder)

Shank Angle	Insert Width CW (mm)	Shank Size (mm)	Max. Grooving Depth (mm)	Face Grooving Dia. (mm) DAXN (min)	Face Grooving Dia. (mm) DAXX (max)	Unit Part Number (Toolholder + Blade)	Toolholder Part Number G41	Stock R	Stock L	Blade Part Number G127	Stock R	Stock L	H	HF	HBH	B	LF	LH	WF	CDX
90°	2	□20	6	25	30	No Unit Part Number ➡	KGDSR2020-C	●		KGDFR -25-2A-C	●		20	20	12	20	125	27.7	49.7	6
				30	35					-30-2A-C	●									
				35	45					-35-2A-C	●									
				45	60					-45-2A-C	●									
				60	80					-60-2A-C	●									
				80	100					-80-2A-C	●									
				100	130					-100-2A-C	●									
			13	25	30					KGDFR -25-2B-C	●		20	20	12	20	125	27.7	52.7	13
			15	30	35					KGDFR -30-2B-C	●		20	20	12	20	125	27.7	54.7	15
				35	45					-35-2B-C	●									
				45	60					-45-2B-C	●									
				60	80					-60-2B-C	●									
				80	100					-80-2B-C	●									
				100	130					-100-2B-C	●									
		□25	6	25	30	No Unit Part Number ➡	KGDSR2525-C	●		KGDFR -25-2A-C	●		25	25	7	25	150	27.7	49.7	6
				30	35					-30-2A-C	●									
				35	45					-35-2A-C	●									
				45	60					-45-2A-C	●									
				60	80					-60-2A-C	●									
				80	100					-80-2A-C	●									
				100	130					-100-2A-C	●									
			13	25	30					KGDFR -25-2B-C	●		25	25	7	25	150	27.7	52.7	13
			15	30	35					KGDFR -30-2B-C	●		25	25	7	25	150	27.7	54.7	15
				35	45					-35-2B-C	●									
				45	60					-45-2B-C	●									
				60	80					-60-2B-C	●									
				80	100					-80-2B-C	●									
				100	130					-100-2B-C	●									

• KGDF 90° SwitchBlade type is not available as unit (toolholder + blade).
Blade and toolholder are available to assemble when purchasing individually.

Applicable Inserts ➡ **G103**

• **Right-hand** Blade for **Right-hand** Toolholder, **Left-hand** Blade for **Left-hand** Toolholder.

• Insert clamp bolt (BH6x10TR) and Blade fixing bolt (SB-60120TR) and Wrench (LTW-25) come with toolholder. For Spare Parts, see ➡ **G104**

(Customer Service) **800.823.7284 - Option 1**
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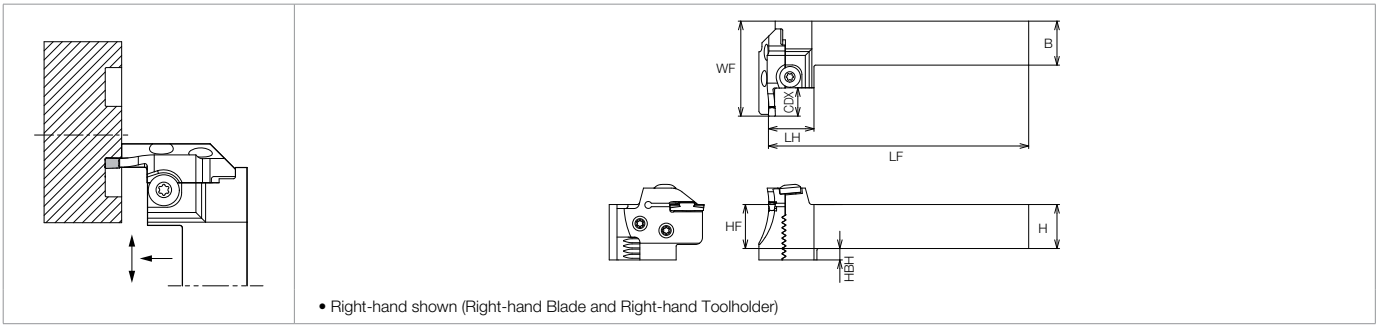
● : Standard Item △ : Phaseout Item (will be removed from next catalog)
Contact your local Kyocera sales engineer to upgrade old products to new technology

KGDF Face Grooving 90° SwitchBlade Toolholders (Metric-Size)

3mm Insert Width



• Right-hand shown (Right-hand Blade and Right-hand Toolholder)

Toolholder + Blade Dimensions

(Choose **Right-hand** Blade for **Right-hand** Toolholder and **Left-hand** Blade for **Left-hand** Toolholder)

Shank Angle	Insert Width CW (mm)	Shank Size (mm)	Max. Grooving Depth (mm)	Face Grooving Dia. (mm) DAXN (min)	Face Grooving Dia. (mm) DAXX (max)	Unit Part Number (Toolholder + Blade)	Toolholder Part Number G41	Stock R	Stock L	Blade Part Number G127	Stock R	Stock L	H	HF	HBH	B	LF	LH	WF	CDX
90°	3	□20	13	25	30	No Unit Part Number ➡	KGDS□2020-C	●	●	KGDF□-25-3A-C	●	●	20	20	12	20	125	27.7	52.7	13
				30	40					KGDF□-30-3A-C	●	●								
				40	50					KGDF□-40-3A-C	●	●								
			15	50	65					KGDF□-50-3B-C	●	●	20	20	12	20	125	27.7	54.7	15
				65	85					KGDF□-65-3B-C	●	●								
				85	110					KGDF□-85-3B-C	●	●								
				110	145					KGDF□-110-3B-C	●	●								
			22	50	65					KGDF□-50-3C-C	●	●	20	20	12	20	125	27.7	59.7	22
				65	85					KGDF□-65-3C-C	●	●								
			25	85	110					KGDF□-85-3C-C	●	●	20	20	12	20	125	27.7	61.7	25
				110	145					KGDF□-110-3C-C	●	●								
		□25	13	25	30	No Unit Part Number ➡	KGDS□2525-C	●	●	KGDF□-25-3A-C	●	●	25	25	7	25	150	27.7	52.7	13
				30	40					KGDF□-30-3A-C	●	●								
				40	50					KGDF□-40-3A-C	●	●								
			15	50	65					KGDF□-50-3B-C	●	●	25	25	7	25	150	27.7	54.7	15
				65	85					KGDF□-65-3B-C	●	●								
				85	110					KGDF□-85-3B-C	●	●								
				110	145					KGDF□-110-3B-C	●	●								
			22	50	65					KGDF□-50-3C-C	●	●	25	25	7	25	150	27.7	59.7	22
				65	85					KGDF□-65-3C-C	●	●								
			25	85	110					KGDF□-85-3C-C	●	●	25	25	7	25	150	27.7	61.7	25
				110	145					KGDF□-110-3C-C	●	●								

• KGDF 90° SwitchBlade type is not available as unit (toolholder + blade).
Blade and toolholder are available to assemble when purchasing individually.

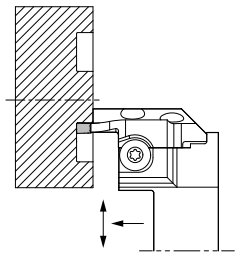
Applicable Inserts ➡ **G103**

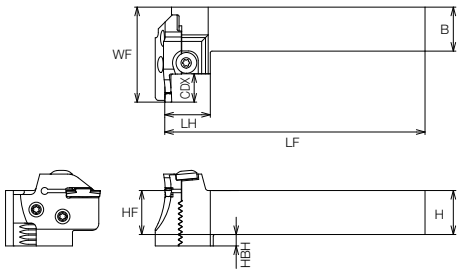
• **Right-hand** Blade for **Right-hand** Toolholder, **Left-hand** Blade for **Left-hand** Toolholder.

• Insert clamp bolt (BH6x10TR) and Blade fixing bolt (SB-60120TR) and Wrench (LTW-25) come with toolholder. For Spare Parts, see ➡ **G104**

KGDF Face Grooving 90° SwitchBlade Toolholders (Metric-Size)

4mm Insert Width





• Right-hand shown (Right-hand Blade and Right-hand Toolholder)

Toolholder + Blade Dimensions

(Choose **Right-hand** Blade for **Right-hand** Toolholder and **Left-hand** Blade for **Left-hand** Toolholder)

Shank Angle	Insert Width CW (mm)	Shank Size (mm)	Max. Grooving Depth (mm)	Face Grooving Dia. (mm) DAXN (min)	Face Grooving Dia. (mm) DAXX (max)	Unit Part Number (Toolholder + Blade)	Toolholder Part Number G41	Stock R	Stock L	Blade Part Number G127	Stock R	Stock L	Dimensions (mm) H	HF	HBH	B	LF	LH	WF	CDX
90°	4	□20	13	25	35	No Unit Part Number ➡	KGDS□2020-C	●	●	KGDF□-25-4A-C	●	●	20	20	12	20	125	27.7	52.7	13
			15	35	50					-35-4B-C	●	●	20	20	12	20	125	27.7	54.7	15
				50	70					-50-4B-C	●	●								
				70	100					-70-4B-C	●	●								
				100	150					-100-4B-C	●	●								
				150	220					-150-4B-C	●	●								
				220	∞					-220-4B-C	●	●								
			25	35	50					KGDF□-35-4C-C	●	●	20	20	12	20	125	27.7	64.7	25
				50	70					-50-4C-C	●	●								
				70	100					-70-4C-C	●	●								
				100	150					-100-4C-C	●	●								
				150	220					-150-4C-C	●	●								
				220	∞					-220-4C-C	●	●								
		□25	13	25	35	No Unit Part Number ➡	KGDS□2525-C	●	●	KGDF□-25-4A-C	●	●	25	25	7	25	150	27.7	52.7	13
			15	35	50					-35-4B-C	●	●	25	25	7	25	150	27.7	54.7	15
				50	70					-50-4B-C	●	●								
				70	100					-70-4B-C	●	●								
				100	150					-100-4B-C	●	●								
				150	220					-150-4B-C	●	●								
				220	∞					-220-4B-C	●	●								
			25	35	50					KGDF□-35-4C-C	●	●	25	25	7	25	150	27.7	64.7	25
				50	70					-50-4C-C	●	●								
				70	100					-70-4C-C	●	●								
				100	150					-100-4C-C	●	●								
				150	220					-150-4C-C	●	●								
				220	∞					-220-4C-C	●	●								

• KGDF 90° SwitchBlade type is not available as unit (toolholder + blade).
Blade and toolholder are available to assemble when purchasing individually.

Applicable Inserts ➡ **G103**

• **Right-hand** Blade for **Right-hand** Toolholder, **Left-hand** Blade for **Left-hand** Toolholder.

• Insert clamp bolt (BH6x10TR) and Blade fixing bolt (SB-60120TR) and Wrench (LTW-25) come with toolholder. For Spare Parts, see ➡ **G104**

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● : Standard Item △ : Phaseout Item (will be removed from next catalog)
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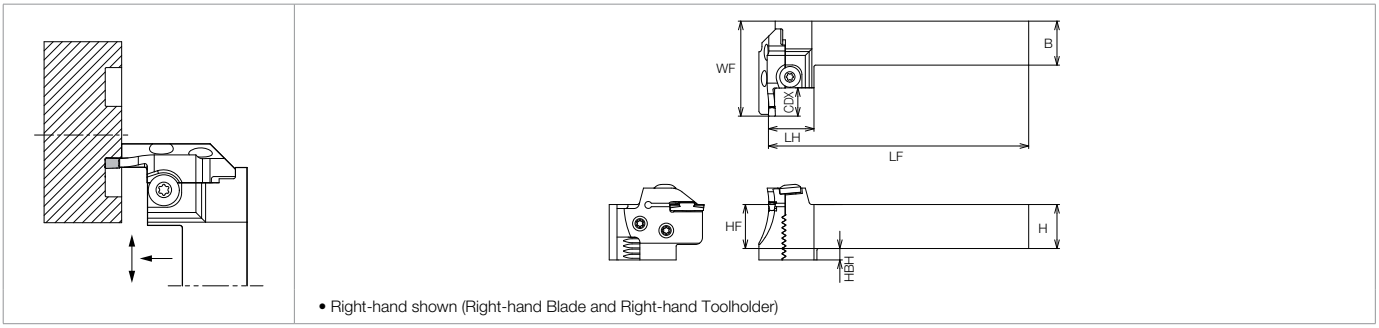
KGDF Face Grooving 90° SwitchBlade Toolholders (Metric-Size)

5mm Insert Width



• Right-hand shown (Right-hand Blade and Right-hand Toolholder)

Toolholder + Blade Dimensions

(Choose **Right-hand** Blade for **Right-hand** Toolholder and **Left-hand** Blade for **Left-hand** Toolholder)

Shank Angle	Insert Width CW (mm)	Shank Size (mm)	Max. Grooving Depth (mm)	Face Grooving Dia. (mm) DAXN (min)	Face Grooving Dia. (mm) DAXX (max)	Unit Part Number (Toolholder + Blade)	Toolholder Part Number → G41	Stock R	Stock L	Blade Part Number → G127	Stock R	Stock L	H	HF	HBH	B	LF	LH	WF	CDX
90°	5	□20	15	25	35	No Unit Part Number ➡	KGDS□2020-C	●	●	KGDF□-25-5B-C	●	●	20	20	12	20	125	27.7	54.7	15
				35	50					KGDF□-35-5B-C	●	●								
				50	75					KGDF□-50-5B-C	●	●								
				75	115					KGDF□-75-5B-C	●	●								
				115	180					KGDF□-115-5B-C	●	●								
				180	235					KGDF□-180-5B-C	●	●								
				235	∞					KGDF□-235-5B-C	●	●								
			20	25	35					KGDF□-25-5C-C	●	●	20	20	12	20	125	27.7	59.7	20
			25	35	50					KGDF□-35-5C-C	●	●	20	20	12	20	125	27.7	64.7	25
				50	75					KGDF□-50-5C-C	●	●								
				75	115					KGDF□-75-5C-C	●	●								
				115	180					KGDF□-115-5C-C	●	●								
				180	235					KGDF□-180-5C-C	●	●								
				235	∞					KGDF□-235-5C-C	●	●								
			32	75	115					KGDF□-75-5D-C	●	●	20	20	12	20	125	27.7	71.7	32
				115	180					KGDF□-115-5D-C	●	●								
				180	235					KGDF□-180-5D-C	●	●								
				235	∞					KGDF□-235-5D-C	●	●								
		□25	15	25	35	No Unit Part Number ➡	KGDS□2525-C	●	●	KGDF□-25-5B-C	●	●	25	25	7	25	150	27.7	54.7	15
				35	50					KGDF□-35-5B-C	●	●								
				50	75					KGDF□-50-5B-C	●	●								
				75	115					KGDF□-75-5B-C	●	●								
				115	180					KGDF□-115-5B-C	●	●								
				180	235					KGDF□-180-5B-C	●	●								
				235	∞					KGDF□-235-5B-C	●	●								
			20	25	35					KGDF□-25-5C-C	●	●	25	25	7	25	150	27.7	59.7	20
			25	35	50					KGDF□-35-5C-C	●	●	25	25	7	25	150	27.7	64.7	25
				50	75					KGDF□-50-5C-C	●	●								
				75	115					KGDF□-75-5C-C	●	●								
				115	180					KGDF□-115-5C-C	●	●								
				180	235					KGDF□-180-5C-C	●	●								
				235	∞					KGDF□-235-5C-C	●	●								
			32	75	115					KGDF□-75-5D-C	●	●	25	25	7	25	150	27.7	71.7	32
				115	180					KGDF□-115-5D-C	●	●								
				180	235					KGDF□-180-5D-C	●	●								
				235	∞					KGDF□-235-5D-C	●	●								

• KGDF 90° SwitchBlade type is not available as unit (toolholder + blade).
Blade and toolholder are available to assemble when purchasing individually.

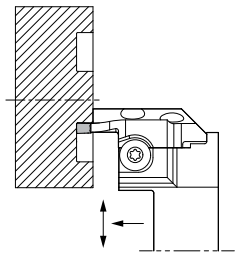
Applicable Inserts → **G103**

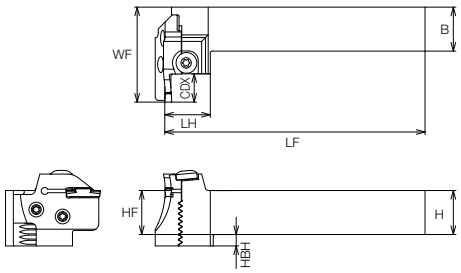
• **Right-hand** Blade for **Right-hand** Toolholder, **Left-hand** Blade for **Left-hand** Toolholder.

• Insert clamp bolt (BH6x10TR) and Blade fixing bolt (SB-60120TR) and Wrench (LTW-25) come with toolholder. For Spare Parts, see → **G104**

KGDF Face Grooving 90° SwitchBlade Toolholders (Metric-Size)

6mm Insert Width





• Right-hand shown (Right-hand Blade and Right-hand Toolholder)

Toolholder + Blade Dimensions

(Choose **Right-hand** Blade for **Right-hand** Toolholder and **Left-hand** Blade for **Left-hand** Toolholder)

Shank Angle	Insert Width CW (mm)	Shank Size (mm)	Max. Grooving Depth (mm)	Face Grooving Dia. (mm) DAXN (min)	Face Grooving Dia. (mm) DAXX (max)	Unit Part Number (Toolholder + Blade)	Toolholder Part Number → G41	Stock R	Stock L	Blade Part Number → G127	Stock R	Stock L	H	HF	HBH	B	LF	LH	WF	CDX
90°	6	□20	15	25	35	No Unit Part Number ➡	KGDS□2020-C	●	●	KGDF□-25-6B-C	●	●	20	20	12	20	125	27.7	54.7	15
				35	50					-35-6B-C	●	●								
				50	75					-50-6B-C	●	●								
				75	115					-75-6B-C	●	●								
				115	180					-115-6B-C	●	●								
				180	235					-180-6B-C	●	●								
				235	∞					-235-6B-C	●	●								
			20	25	35					KGDF□-25-6C-C	●	●	20	20	12	20	125	27.7	59.7	20
			25	35	50					-35-6C-C	●	●	20	20	12	20	125	27.7	64.7	25
				50	75					-50-6C-C	●	●								
				75	115					-75-6C-C	●	●								
				115	180					-115-6C-C	●	●								
				180	235					-180-6C-C	●	●								
				235	∞					-235-6C-C	●	●								
			32	75	115					KGDF□-75-6D-C	●	●	20	20	12	20	125	27.7	71.7	32
				115	180					-115-6D-C	●	●								
				180	235					-180-6D-C	●	●								
				235	∞					-235-6D-C	●	●								
		□25	15	25	35	No Unit Part Number ➡	KGDS□2525-C	●	●	KGDF□-25-6B-C	●	●	25	25	7	25	150	27.7	54.7	15
				35	50					-35-6B-C	●	●								
				50	75					-50-6B-C	●	●								
				75	115					-75-6B-C	●	●								
				115	180					-115-6B-C	●	●								
				180	235					-180-6B-C	●	●								
				235	∞					-235-6B-C	●	●								
			20	25	35					KGDF□-25-6C-C	●	●	25	25	7	25	150	27.7	59.7	20
			25	35	50					-35-6C-C	●	●	25	25	7	25	150	27.7	64.7	25
				50	75					-50-6C-C	●	●								
				75	115					-75-6C-C	●	●								
				115	180					-115-6C-C	●	●								
				180	235					-180-6C-C	●	●								
				235	∞					-235-6C-C	●	●								
			32	75	115					KGDF□-75-6D-C	●	●	25	25	7	25	150	27.7	71.7	32
				115	180					-115-6D-C	●	●								
				180	235					-180-6D-C	●	●								
				235	∞					-235-6D-C	●	●								

• KGDF 90° SwitchBlade type is not available as unit (toolholder + blade).
Blade and toolholder are available to assemble when purchasing individually.

Applicable Inserts → **G103**

• **Right-hand** Blade for **Right-hand** Toolholder, **Left-hand** Blade for **Left-hand** Toolholder.

• Insert clamp bolt (BH6x10TR) and Blade fixing bolt (SB-60120TR) and Wrench (LTW-25) come with toolholder. For Spare Parts, see → **G104**

Face Grooving Toolholder Assembly Identification System

Hand of Tool
R: Right-hand
L: Left-hand

Width	
2 : 2mm	**5** : 5mm
3 : 3mm	**6** : 6mm
4 : 4mm	

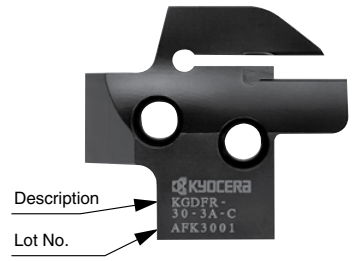
Blade Symbol
C : Applicable to toolholder with suffix "-C"

KGDF R – 25 – 3 A – C

Series
KGDF Face Grooving

Min. Diameter in Face Grooving
Indicates the minimum external diameter suitable for the initial face grooving.
25 : 25mm
:
235 : 235mm

Grooving Depth	
A : 13mm	2-Edge Insert
B : 15mm	(1-Edge Insert can also be used.)
C : 20~25mm	1-Edge Insert
D : 32mm	



Example of printing of blade number

(Customer Service) **800.823.7284 - Option 1**
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● : Standard Item △ : Phaseout Item (will be removed from next catalog)
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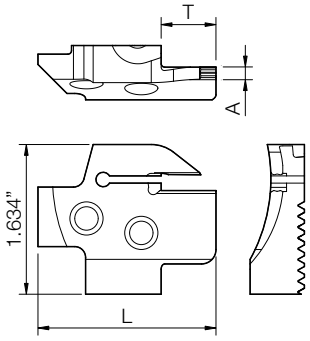
Blade Dimensions

Shape	Blade Part Number	Stock R	Stock L	Dimensions (in) L	Dimensions (in) T	Dimensions (in) A	Face Grooving Dia. (in) DAXN (min)	Face Grooving Dia. (in) DAXX (max)	Width (in) CW	Applicable Inserts ➔ G103	Toolholder Part Number ➔ G41
 Right-hand Shown	KGDFR -25-2A-C	●		1.746	0.236	0.059	0.984	1.181	0.079 (2mm)	GDFM 2020N-020GM	KGD℞/ℒ....-C KGDS℞/ℒ....-C
	-30-2A-C	●					1.181	1.378			
	-35-2A-C	●					1.378	1.772			
	-45-2A-C	●					1.772	2.362			
	-60-2A-C	●					2.362	3.150			
	-80-2A-C	●					3.150	3.937			
	-100-2A-C	●					3.937	5.118			
	-25-2B-C	●		1.864	0.512		0.984	1.181			
	-30-2B-C	●		1.943	0.591		1.181	1.378			
	-35-2B-C	●					1.378	1.772			
	-45-2B-C	●					1.772	2.362			
	-60-2B-C	●					2.362	3.150			
	-80-2B-C	●					3.150	3.937			
	-100-2B-C	●					3.937	5.118			
	KGDF℞/ℒ -25-3A-C	●	●	1.864	0.512	0.079	0.984	1.181	0.118 (3mm)	GDFM 3020N-030GM GDFM 3020N-030DM GDFMS 3020N-030DM GDFM 3020N-150R-CM	
	-30-3A-C	●	●				1.181	1.575			
	-40-3A-C	●	●				1.575	1.969			
	-50-3B-C	●	●	1.943	0.591		1.969	2.559			
	-65-3B-C	●	●				2.559	3.346			
	-85-3B-C	●	●				3.346	4.331			
	-110-3B-C	●	●				4.331	5.709			
	-50-3C-C	●	●	2.219	0.866		1.969	2.559			
	-65-3C-C	●	●				2.559	3.346			
	-85-3C-C	●	●	2.337	0.984		3.346	4.331			
	-110-3C-C	●	●				4.331	5.709			
	KGDF℞/ℒ -25-4A-C	●	●	1.864	0.512	0.118	0.984	1.378	0.157 (4mm)	GDFM 4020N-040GM GDFM 4020N-040GH GDFM 4020N-040DM GDFMS 4020N-040DM GDFM 4020N-200R-CM	
	-35-4B-C	●	●	1.943	0.591		1.378	1.969			
	-50-4B-C	●	●				1.969	2.756			
	-70-4B-C	●	●				2.756	3.937			
	-100-4B-C	●	●				3.937	5.906			
	-150-4B-C	●	●				5.906	8.661			
	-220-4B-C	●	●				8.661	∞			
	-35-4C-C	●	●	2.337	0.984		1.378	1.969			
	-50-4C-C	●	●				1.969	2.756			
	-70-4C-C	●	●				2.756	3.937			
	-100-4C-C	●	●				3.937	5.906			
	-150-4C-C	●	●				5.906	8.661			
	-220-4C-C	●	●				8.661	∞			
	KGDF℞/ℒ -25-5B-C	●	●	1.943	0.591	0.157	0.984	1.378	0.197 (5mm)	GDFM 5020N-040GM GDFM 5020N-080GM GDFM 5020N-040GH GDFM 5020N-080GH GDFM 5020N-040DM GDFMS 5020N-040DM GDFM 5020N-250R-CM	
	-35-5B-C	●	●				1.378	1.969			
	-50-5B-C	●	●				1.969	2.953			
	-75-5B-C	●	●				2.953	4.528			
	-115-5B-C	●	●				4.528	7.087			
	-180-5B-C	●	●				7.087	9.252			
	-235-5B-C	●	●				9.252	∞			
	-25-5C-C	●	●	2.140	0.787		0.984	1.378			
	-35-5C-C	●	●	2.337	0.984		1.378	1.969			
	-50-5C-C	●	●				1.969	2.953			
	-75-5C-C	●	●				2.953	4.528			
	-115-5C-C	●	●				4.528	7.087			
	-180-5C-C	●	●				7.087	9.252			
	-235-5C-C	●	●				9.252	∞			
	-75-5D-C	●	●	2.612	1.260		2.953	4.528			
	-115-5D-C	●	●				4.528	7.087			
	-180-5D-C	●	●				7.087	9.252			
	-235-5D-C	●	●				9.252	∞			
	KGDF℞/ℒ -25-6B-C	●	●	1.943	0.591	0.197	0.984	1.378	0.236 (6mm)	GDFM 6020N-040GM GDFM 6020N-080GM GDFM 6020N-040GH GDFM 6020N-080GH GDFM 6020N-040DM GDFMS 6020N-040DM GDFM 6020N-300R-CM	
	-35-6B-C	●	●				1.378	1.969			
	-50-6B-C	●	●				1.969	2.953			
	-75-6B-C	●	●				2.953	4.528			
	-115-6B-C	●	●				4.528	7.087			
	-180-6B-C	●	●				7.087	9.252			
	-235-6B-C	●	●				9.252	∞			
	-25-6C-C	●	●	2.140	0.787		0.984	1.378			
	-35-6C-C	●	●	2.337	0.984		1.378	1.969			
	-50-6C-C	●	●				1.969	2.953			
	-75-6C-C	●	●				2.953	4.528			
	-115-6C-C	●	●				4.528	7.087			
	-180-6C-C	●	●				7.087	9.252			
	-235-6C-C	●	●				9.252	∞			
	-75-6D-C	●	●	2.612	1.260		2.953	4.528			
	-115-6D-C	●	●				4.528	7.087			
	-180-6D-C	●	●				7.087	9.252			
	-235-6D-C	●	●				9.252	∞			

● : Standard Item △ : Phaseout Item (will be removed from next catalog)
Contact your local Kyocera sales engineer to upgrade old products to new technology

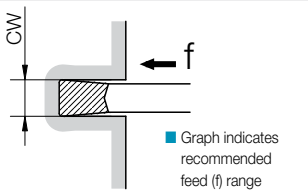
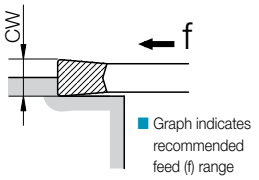
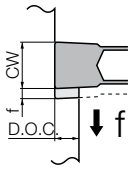
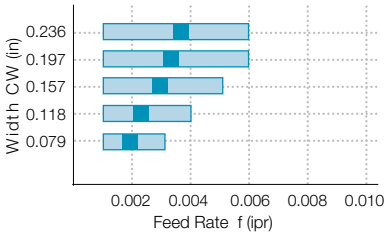
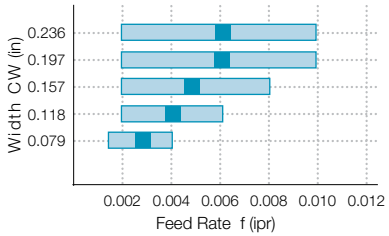
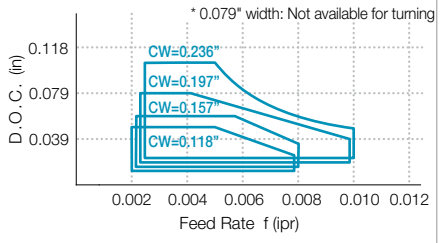
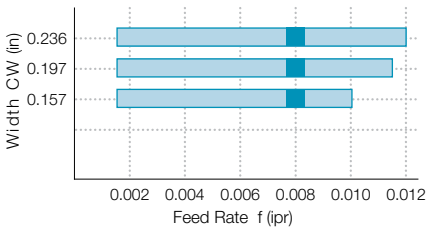
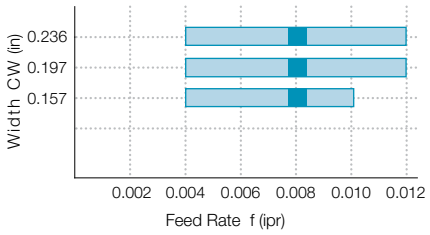
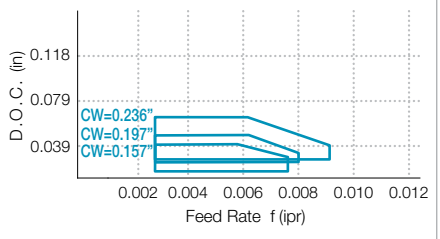
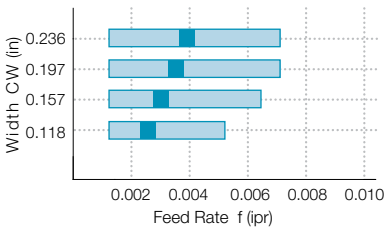
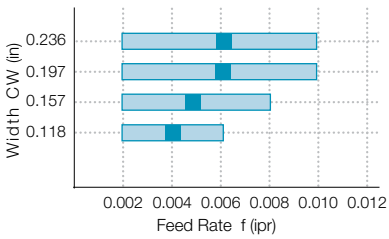
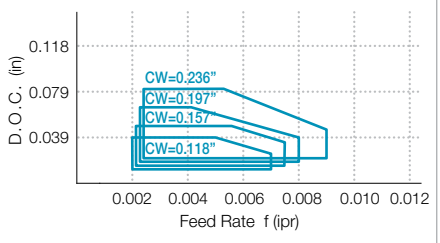
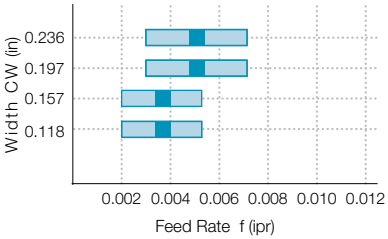
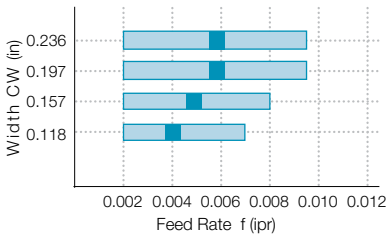
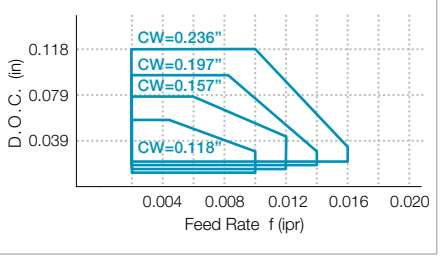
Recommended Cutting Conditions (Vc)

Workpiece Material	Recommended Insert Grade (Vc : sfm)					Notes
	Cermet		MEGACOAT		Carbide	
	TN620	TN90	PR1225	PR1215	GW15	
Carbon Steel	☆ 200~660	☆ 260~660	★ 200~520	☆ 260~520	-	Coolant
Alloy Steel	☆ 200~520	☆ 230~520	★ 200~490	☆ 200~490	-	
Stainless Steel	-	-	★ 160~390	☆ 160~390	-	
Cast Iron	-	-	-	★ 260~520	-	
Aluminum Alloy	-	-	-	-	★ 520~1,310	
Brass	-	-	-	-	★ 260~520	

★ : 1st Recommendation ☆ : 2nd Recommendation

Recommended Cutting Conditions (Feed Rate / D.O.C.)

(Workpiece Material : 1049)

Chipbreaker	Grooving	Shoulder Grooving (Side Grooving)	Turning
			
GM (Grooving and Turning)			
GH (Grooving, Turning and High Feed Grooving)			
DM (Deep Grooving and Turning)			
CM (Copying)			

When shouldering,
- If D.O.C. is set smaller, set feed higher.
- If D.O.C. is set larger, set feed lower.

1) The above values reflect a **CDX** dimension that is 0.591" (15mm) or less.
When **CDX** dimension is over 0.669" (17mm), set the values for turning to less than 90% of recommended cutting conditions above.

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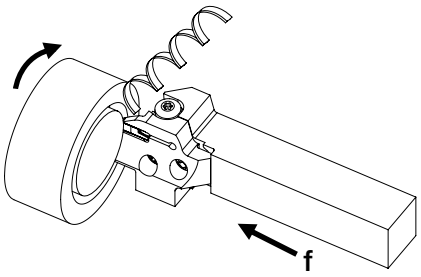
Face Grooving Guide

1 Toolholder Selection

Check the range of applicable "face grooving diameter" as well as the groove width and depth.

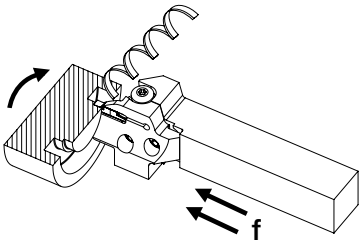
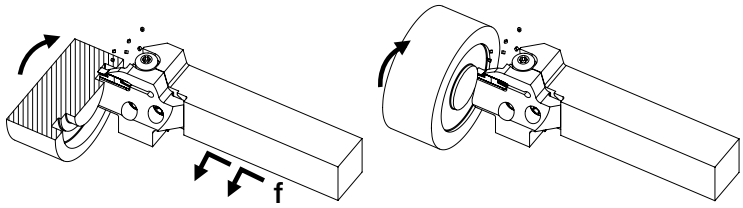
2 Cutting Conditions (Feed Rate : f)

When machining steel, set the feed rate (f) so that chips are created in a helical form when plunging.



3 Expanding Groove Width (Plunging and Turning)

Start machining from the outside and then proceed to the inside to improve chip control.

Plunging (Grooving + Side Grooving)	Turning
	

4 Guide for Turning

A. When the cutting amount (D.O.C.) is over 0.020" (0.5mm)

① Plunge
② Pull back tool by 0.004" (0.1mm)
(Failure to pull the tool back before turning will result in an unbalanced load applied on only one side of the cutting edge.)
③ Perform turning (see Fig.1)

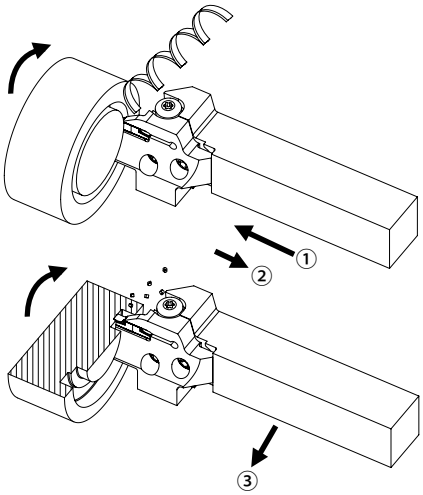
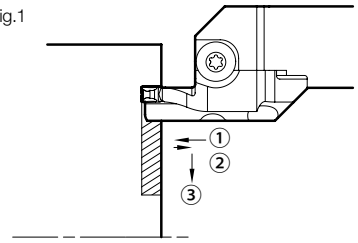


Fig.1

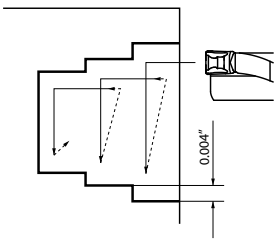


● **When Widening the Face Groove Width (see Fig.2)**

Use “Step Turning” as shown in Fig.2. This allows for the deflection that occurs during traversing.
To ensure perpendicularity of the side walls, two final shoulder plunges should be made.

Then perform finishing.

Fig.2



B. When the cutting amount (D.O.C.) is under 0.020"(0.5mm)

① Use plunging
② Perform turning
Machining without interruption is possible. (see **Fig.3**)

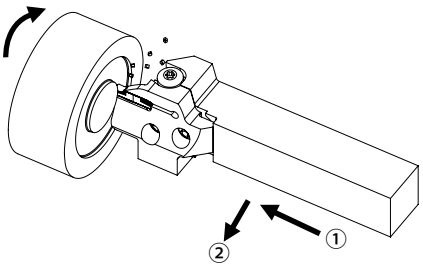
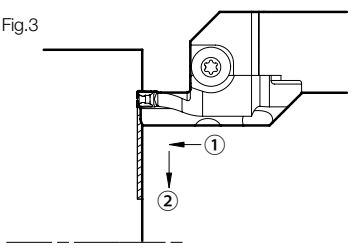
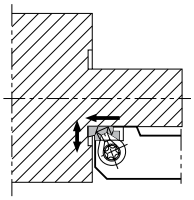
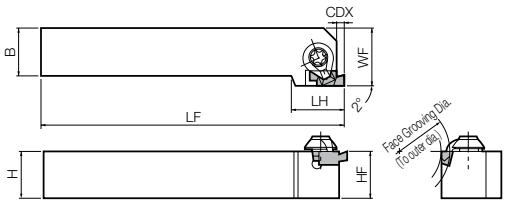


Fig.3

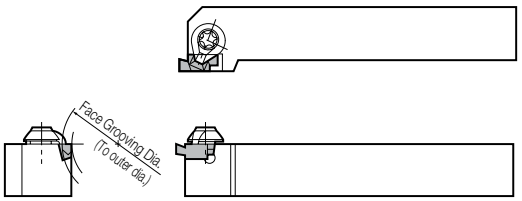


GFVS-AA





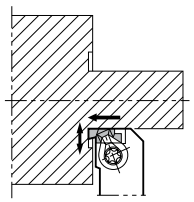
• Right-hand shown

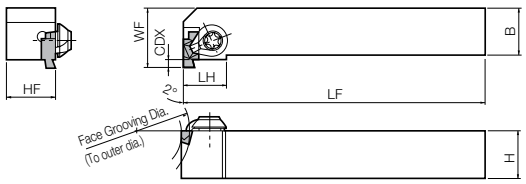


• Left-hand shown

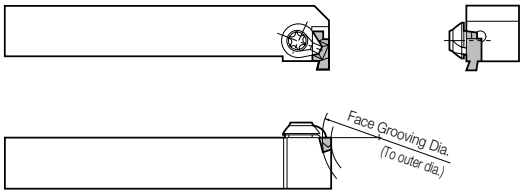
• Left-hand Insert for Right-hand Toolholder, Right-hand Insert for Left-hand Toolholder.

GFVT-AA





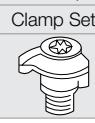
• Right-hand shown



• Left-hand shown

• Left-hand Insert for Right-hand Toolholder, Right-hand Insert for Left-hand Toolholder.

Toolholder Dimensions

Part Number		Stock		Dimensions (mm)							Face Grooving Dia.		Spare Parts		Applicable Inserts ➡ G131
													Clamp Set	Wrench	
		R	L	H	HF	B	LF	LH	WF	CDX	DAXN (min)	DAXX (max)			
GFVS R/L	2020K-08AA	●	●	20	20	20	125	18	25	2.2	8 (0)	∞ (∞)	CPS-5V	FT-15	GVF R/L 100-005AA ~ GVF R/L 300-005AA
	2525M-08AA	●	●	25	25	25	150	18	32	2.2					
GFVT R/L	2020K-08AA	●	●	20	20	20	125	14	25	2.2	8 (0)	∞ (∞)	CPS-5V	FT-15	GVF R/L 100-005AA ~ GVF R/L 300-005AA
	2525M-08AA	●	●	25	25	25	150	14	32	2.2					

Note 1. Dimension **CDX** shows available grooving depth.
2. The value ( ) of Face Grooving Dia. DAXX (max) in ( ) is the maximum outer diameter value after the initial groove between DAXN (min) ~ DAXX (max). It is possible to widen the groove to infinity ∞.
The value ( ) of Face Grooving Dia. DAXN (min) is the minimum diameter of the boss which remains in the center when widening the groove width to a smaller value after the initial groove between DAXN (min) ~ DAXX (max).

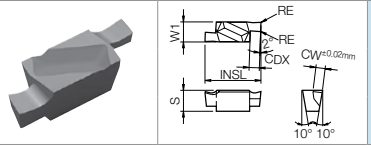
Applicable Inserts

(mm)

Part Number		W1	INSL	S
GVF□	100-…AA	4.3	12	4.5
	200-…AA	4.3	12	4.5
	300-…AA	4.3	12	4.5

P	Carbon Steel / Alloy Steel	●	○	
M	Stainless Steel	●	○	
K	Cast Iron			◕
N	Non-ferrous Metals			◕
S	Titanium Alloy			◕
H	Hard materials (≤40HRC)	●	○	
	Hard materials (≥40HRC)			

Classification of Usage
◕ : Light Interruption / 1st Choice
◴ : Light Interruption / 2nd Choice
● : Continuous / 1st Choice
○ : Continuous / 2nd Choice

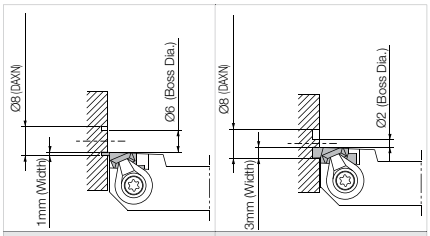
Insert (Right-handed Insert Shown)	Part Number	Previous Part Number	Dimensions (mm) CW	CDX	RE	MEGACOAT PR1225	PVD PR930	Carbide KW10	Applicable Toolholders	Ref. Page for Toolholder
	GVF□ 100-005AA	GVF□ 100AA	1.00	2.2	0.05	●	●	●	GFVS□…-08AA GFVT□…-08AA	G130
	200-005AA	200AA	2.00	2.2		●	●	●		
	300-005AA	300AA	3.00	2.2		●	●	●		

- Dimension **CDX** shows available grooving depth.
- GVF□…005AA inserts are not compatible with GVF□…–OOOA (Ref. to Page G128) inserts because their Side Relief Angle is 10°.

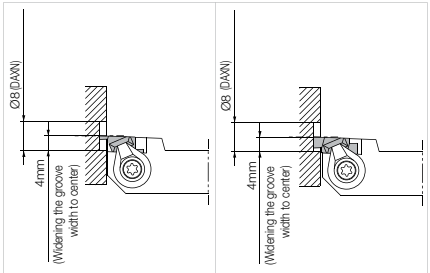
Face Grooving Diameter of GFVS-AA (also GFVT-AA)

Part Number		Face Grooving Dia. DAXN (min)	DAXX (max)	Applicable Inserts
GFVS□	2020K-08AA	ø8	∞	GVF□100-005AA ~ GVF□300-005AA
	2525M-08AA			
GFVT□	2020K-08AA	(0)	(∞)	
	2525M-08AA			

- Maximum diameter of initial groove plunge.
- When machining towards the outer diameter, there is no maximum limit to the groove diameter.
- Minimum Dia. of Initial Groove Plunge
  If the initial groove is made smaller than this, the toolholder interferes with the workpiece.
- When widening the groove to center, This is minimum diameter.



Installing GVFL100-005AA | Installing GVFL300-005AA



Installing GVFL100-005AA | Installing GVFL300-005AA

Recommended Cutting Conditions (GFVS-AA / GFVT-AA)

Workpiece Material	Recommended Insert Grade (Vc sfm) MEGACOAT PR1225	PVD PR930	Carbide KW10	Grooving Feed Rate (ipr)	Turning D.O.C.	Turning Feed Rate (ipr)	Notes
Carbon Steel / Alloy Steel	★ 160~330	☆ 160~330	-	0.0004~0.0020	Max 0.0197	0.0004~0.0020	Wet
Stainless Steel	★ 160~260	☆ 160~260	-	0.0004~0.0012	Max 0.0118	0.0004~0.0008	
Non-ferrous Metals	-	-	★ ~660	0.0004~0.0031	Max 0.0197	0.0004~0.0031	

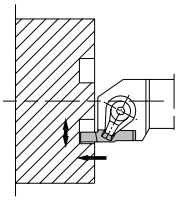
* D.O.C. has to be set for less than corner-R (RE) when turning with 0.039" edge (GVF□100-005AA).

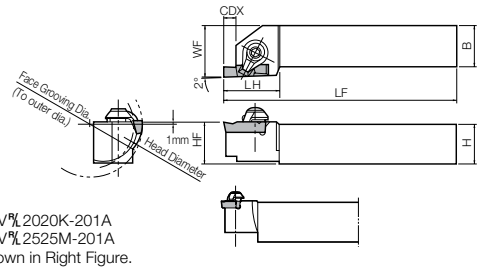
★ : 1st Recommendation ☆ : 2nd Recommendation

Inserts are sold in 10 piece boxes.

● : Standard Item △ : Phaseout Item (will be removed from next catalog)
Contact your local Kyocera sales engineer to upgrade old products to new technology

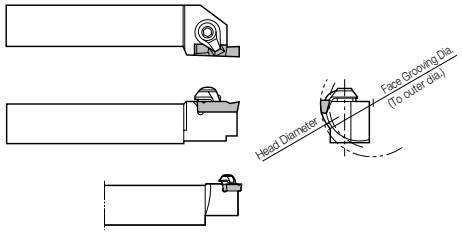
GFV





GVF□2020K-201A
GVF□2525M-201A
Shown in Right Figure.

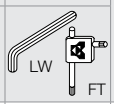
• Right-hand shown



• Left-hand shown

• Right-hand Insert for Right-hand Toolholder, Left-hand Insert for Left-hand Toolholder.

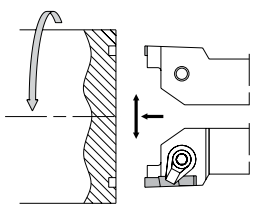
Toolholder Dimensions

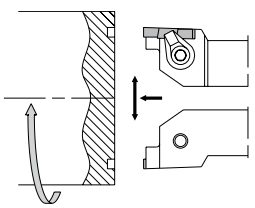
Part Number		Stock		Dimensions (mm)							Face Grooving Dia.		Spare Parts			Applicable Inserts G138
													Clamp Set		Wrench	
		R	L	H	HF	B	LF	LH	WF	CDX	DAXN (min)	DAXX (min)				
GVF□	2020K-201A	●	●	20	21	20	125	20	25	2.2	20 (12)	∞	CPS-5V	-	FT-15	GVF□200~340-020A GVF□200-…~300-…AR
	2525M-201A	●	●	25	26	25	150	23	32	2.2						
GVF□	2020K-351B	●	●	20	21	20	125	28	25	4.6	35 (25)	50 (∞)	-	CPS-6V	LW-3	GVF□250~350-020B GVF□300-150BR
	2525M-351B	●	●	25	26	25	150	30	32	4.6						
	2020K-352B	●	●	20	21	20	125	28	25	5.1						GVF□400~490-020B GVF□400-200BR
	2525M-352B	●	●	25	26	25	150	30	32	5.1						
	2020K-501B	●	●	20	21	20	125	28	25	4.6	50 (25)	70 (∞)	-	CPS-6V	LW-3	GVF□250~350-020B GVF□300-150BR
	2525M-501B	●	●	25	26	25	150	30	32	4.6						
	2020K-502B	●	●	20	21	20	125	28	25	5.1						GVF□400~490-020B GVF□400-200BR
	2525M-502B	●	●	25	26	25	150	30	32	5.1						
	2020K-701B	●	●	20	21	20	125	28	25	4.6	70 (25)	100 (∞)	-	CPS-6V	LW-3	GVF□250~350-020B GVF□300-150BR
	2525M-701B	●	●	25	26	25	150	30	32	4.6						
	2020K-702B	●	●	20	21	20	125	28	25	5.1						GVF□400~490-020B GVF□400-200BR
	2525M-702B	●	●	25	26	25	150	30	32	5.1						
GVF□	2525M-501C	●	●	25	26	25	150	35	32	6.6	50 (25)	70 (∞)	-	CPS-8V	LW-4	GVF□350~450-040C
	2525M-502C	●	●	25	26	25	150	35	32	8.1						GVF□500~600-040C
	2525M-701C	●	●	25	26	25	150	35	32	6.6	70 (25)	100 (∞)	-	CPS-8V	LW-4	GVF□350~450-040C
	2525M-702C	●	●	25	26	25	150	35	32	8.1						GVF□500~600-040C
	2525M-1001C	●	●	25	26	25	150	35	32	6.6	100 (25)	150 (∞)	-	CPS-8V	LW-4	GVF□350~450-040C
	2525M-1002C	●	●	25	26	25	150	35	32	8.1						GVF□500~600-040C
	2525M-1501C	●	●	25	26	25	150	35	32	6.6	150 (25)	250 (∞)	-	CPS-8V	LW-4	GVF□350~450-040C
	2525M-1502C	●	●	25	26	25	150	35	32	8.1						GVF□500~600-040C

Note 1. Dimension **CDX** shows available grooving depth.
2. The value ( ) of Face Grooving Dia. DAXX (max) in ( ) is the maximum outer diameter value after the initial groove between DAXN (min) ~ DAXX (max). It is possible to widen the groove to infinity ∞. The value ( ) of Face Grooving Dia. DAXN (min) is the minimum diameter of the boss which remains in the center when widening the groove width to a smaller value after the initial groove between DAXN (min) ~ DAXX (max).
3. Standard toolholders are designed with the edge position 1.0mm above the center. When using non-standard Toolholders, set the Edge position 1.0mm above the center.

Selection of Toolholder & Insert

Toolholder	Right-hand (R)		Toolholder	Left-hand (L)
Insert	Right-hand (R)		Insert	Left-hand (L)





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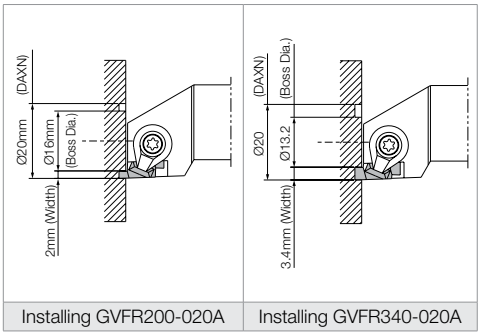
● : Standard Item △ : Phaseout Item (will be removed from next catalog)
Contact your local Kyocera sales engineer to upgrade old products to new technology

Face Grooving Diameter of GFV

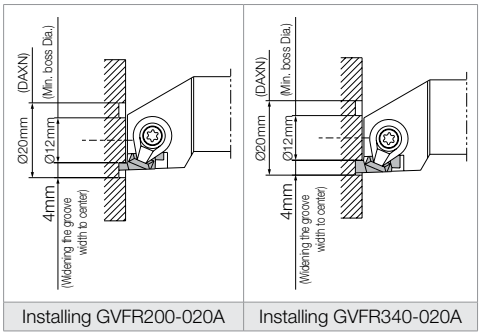
(1) e.g.) GFV[R/L]…-201A

Part Number	Face Grooving Dia. DAXN (min)	Face Grooving Dia. DAXX (min)	Applicable Inserts
GFV[R/L] 2020K-201A	20	∞	GVF[R/L]200~340-020A
2525M-201A	(12)	(∞)	GVF[R/L]200-…~300-…AR

- Maximum diameter (DAXX) of initial groove plunge.
- When machining towards the outer diameter, there is no maximum limit to the grooving diameter.
- When widening the groove to center, this is no minimum diameter.
- Minimum Dia. (DAXN: Ø20mm) of Initial Groove Plunge
  If the initial groove is made smaller than this, the toolholder interferes with the workpiece.



Installing GVFR200-020A | Installing GVFR340-020A

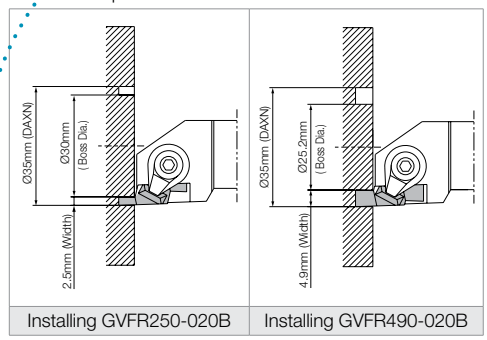


Installing GVFR200-020A | Installing GVFR340-020A

(2) e.g.) GFV[R/L]…-351B/352B (same as GFV[R/L]…-○○○B or GFV[R/L]…-○○○C)

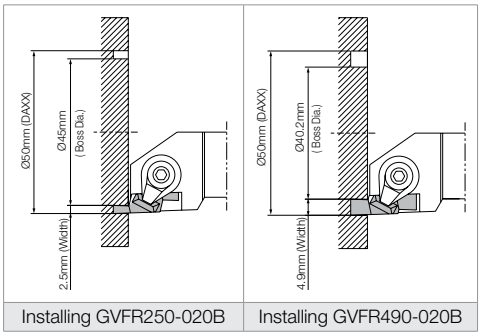
Part Number	Face Grooving Dia. DAXN (min)	Face Grooving Dia. DAXX (min)	Applicable Inserts
GFV[R/L] 2020K-351B	35	50	GVF[R/L]200~340-020A
2525M-351B	(25)	(∞)	GVF[R/L]200-…~300-…AR
2020K-352B			
2525M-352B			

- It is possible to widen the groove to infinity ∞ when machining the initial groove within DAXN ~ DAXX and then widening to outer diameter.
- When machining the initial groove on the face at (DAXN: Ø35mm)
  If the initial groove is made smaller than this, the toolholder interferes with the workpiece.
  Boss Dia. depends on insert width.



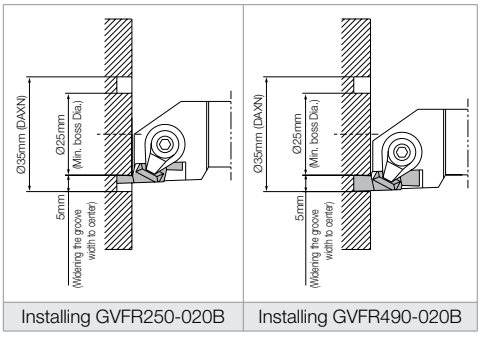
Installing GVFR250-020B | Installing GVFR490-020B

- When machining the initial groove on the face at (DAXX: Ø50mm).
  If the initial groove is made smaller than this, the toolholder interferes with the workpiece.
  Boss Dia. depends on insert width.

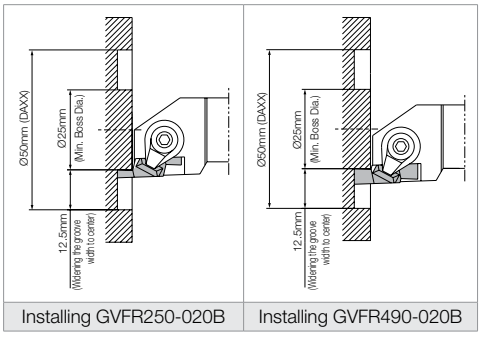


Installing GVFR250-020B | Installing GVFR490-020B

- When widening the groove width to inner diameter.
  Face Grooving Dia. (Ø25mm Boss Dia.) is the limitation regardless of insert width, even widening the groove width to the center from the initial groove at (DAXN: Ø35mm) or (DAXX: Ø50mm). The toolholder interferes with the workpiece when closer to the center.



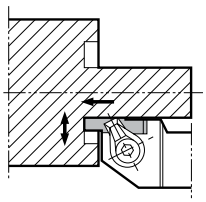
Installing GVFR250-020B | Installing GVFR490-020B

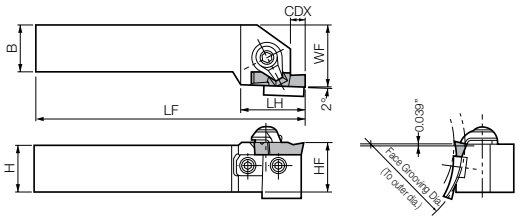


Installing GVFR250-020B | Installing GVFR490-020B

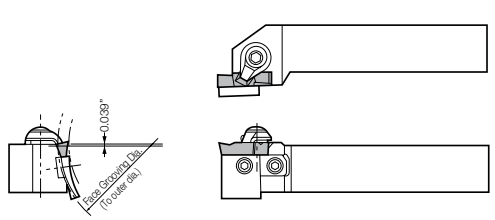
GFVS

This toolholder can machine various face grooving diameters by replacing the Blade.





• Right-hand shown

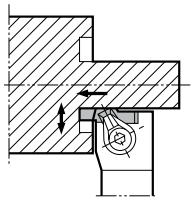


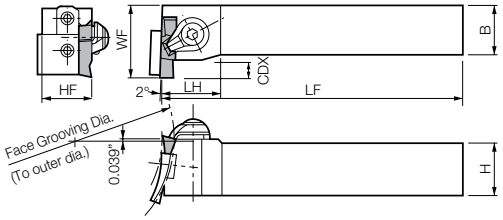
• Left-hand shown

• Left-hand Insert for Right-hand Toolholder, Right-hand Insert for Left-hand Toolholder.

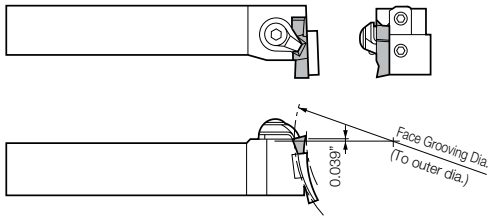
GFVT

This toolholder can machine various face grooving diameters by replacing the Blade.





• Right-hand shown

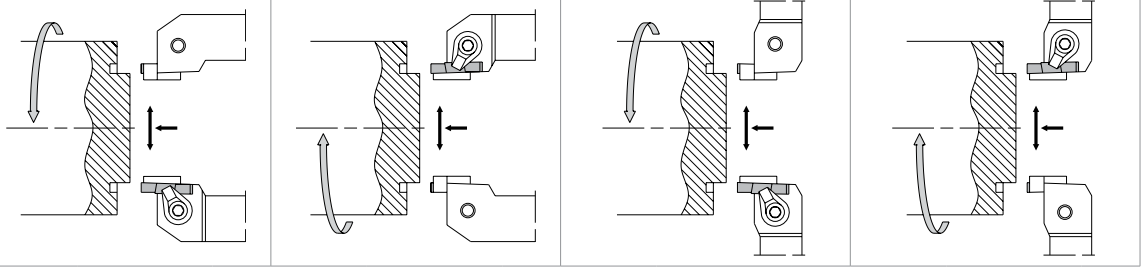


• Left-hand shown

• Left-hand Insert for Right-hand Toolholder, Right-hand Insert for Left-hand Toolholder.

Selection of Toolholder & Insert

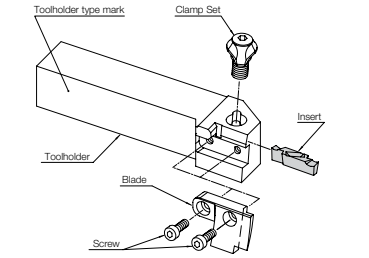
GFVS				GFVT			
Toolholder	Right-hand (R)	Toolholder	Left-hand (L)	Toolholder	Right-hand (R)	Toolholder	Left-hand (L)
Insert	Left-hand (L)	Insert	Right-hand (R)	Insert	Left-hand (L)	Insert	Right-hand (R)

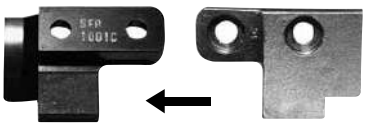


Combination of Base-Holder & Blade (Inch Size)

Part Number of Toolholder (Stamped Below)	Stock R	Stock L	Blade Part Number	Toolholder Part Number (Integrated Tool)
GFVSR/L12-HB **GFVTR/L12-HB**	●	●	**SFR/L -351B**	**GFVSR/L12 -351B** **GFVTR/L12 -352B**
	●	●	**-352B**	**-501B**
			-501B	**-502B**
			-502B	**-701B**
			-701B	**-702B**
			-702B	
GFVSR/L16-HB **GFVTR/L16-HB**	●	●	**SFR/L -351B**	**GFVSR/L16 -351B** **GFVTR/L16 -352B**
	●	●	**-352B**	**-501B**
			-501B	**-502B**
			-502B	**-701B**
			-701B	**-702B**
			-702B	
GFVSR/L16-HC **GFVTR/L16-HC**	●	●	**SFR/L -501C**	**GFVSR/L16 -501C** **GFVTR/L16 -502C**
	●	●	**-502C**	**-701C**
			-701C	**-702C**
			-702C	**-1001C**
			-1001C	**-1002C**
			-1002C	**-1501C**
			-1501C	**-1502C**
			-1502C	

Example of Installation (GFVS)





Blade (Back side) (With Blade Description)

Blade (Face side)

How to refer to the face grooving toolholder and blade

Q: Though "GFVSR16-HC" is marked on the face grooving toolholder, the size of cutting dia. is unknown. How can it be found out?

A: Take off the blade. Description of the blade is listed on the back of the blade. Using the description, check the description of the toolholder in the catalog. If "SFR-1001C" is installed with "GFVSR16-HC", the description of the toolholder is "GVFSR16-1001C"

- Right-hand Blade for Right-hand Toolholder, Left-hand Blade for Left-hand Toolholder.
- Installation of GFVT type follows installation example of GFVS type.

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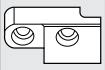
Toolholder Dimensions (Inch Size)

Part Number	Stock		Dimensions (in)							Face Grooving Dia.		Spare Parts				Applicable Inserts
												Clamp Set	Wrench	Blade	Screw	
	R	L	H	HF	B	LF	LH	WF	CDX	DAXN (min)	DAXX (max)					G138
GFVS□ 12-351B	●	●	0.75	0.79	0.75	5.00	1.18	1.00	0.20	1.378 (0.984)	1.969 (∞)	CPS-6V	LW-3	SF□-351B	HH4X12	GVF□250~350-020B GVF□300-150BR
16-351B	●	●	1.00	1.04	1.00	6.00	1.26	1.25	(0.18)							
12-352B	●	●	0.75	0.79	0.75	5.00	1.18	1.00	0.20					SF□-352B		GVF□400~490-020B GVF□400-200BR
16-352B	●	●	1.00	1.04	1.00	6.00	1.26	1.25	(0.20)							
12-501B	●	●	0.75	0.79	0.75	5.00	1.18	1.00	0.20	1.969 (0.984)	2.756 (∞)			SF□-501B		GVF□250~350-020B GVF□300-150BR
16-501B	●	●	1.00	1.04	1.00	6.00	1.26	1.25	(0.18)							
12-502B	●	●	0.75	0.79	0.75	5.00	1.18	1.00	0.20					SF□-502B		GVF□400~490-020B GVF□400-200BR
16-502B	●	●	1.00	1.04	1.00	6.00	1.26	1.25	(0.20)							
12-701B	●	●	0.75	0.79	0.75	5.00	1.18	1.00	0.20	2.756 (0.984)	3.937 (∞)			SF□-701B		GVF□250~350-020B GVF□300-150BR
16-701B	●	●	1.00	1.04	1.00	6.00	1.26	1.25	(0.18)							
12-702B	●	●	0.75	0.79	0.75	5.00	1.18	1.00	0.20					SF□-702B		GVF□400~490-020B GVF□400-200BR
16-702B	●	●	1.00	1.04	1.00	6.00	1.26	1.25	(0.20)							
GFVS□ 16-501C	●	●	1.00	1.04	1.00	6.00	1.38	1.25	0.32 (0.26)	1.969 (0.984)	2.756 (∞)	CPS-8V	LW-4	SF□-501C	HH4X12	GVF□350~450-040C
16-502C	●	●							0.32 (0.32)					SF□-502C		GVF□500~600-040C
16-701C	●	●							0.32 (0.26)	2.756 (0.984)	3.937 (∞)			SF□-701C		GVF□350~450-040C
16-702C	●	●							0.32 (0.32)					SF□-702C		GVF□500~600-040C
16-1001C	●	●							0.32 (0.26)	3.937 (0.984)	5.906 (∞)			SF□-1001C		GVF□350~450-040C
16-1002C	●	●							0.32 (0.32)					SF□-1002C		GVF□500~600-040C
16-1501C	●	●							0.32 (0.26)	5.906 (0.984)	9.843 (∞)			SF□-1501C		GVF□350~450-040C
16-1502C	●	●							0.32 (0.32)					SF□-1502C		GVF□500~600-040C
GFVT□ 12-351B	●	●	0.75	0.79	0.75	5.00	0.87	1.18	0.20	1.378 (0.984)	1.969 (∞)	CPS-6V	LW-3	SF□-351B	HH4X12	GVF□250~350-020B GVF□300-150BR
16-351B	●	●	1.00	1.04	1.00	6.00	0.98	1.38	(0.18)							
12-352B	●	●	0.75	0.79	0.75	5.00	0.87	1.18	0.20					SF□-352B		GVF□400~490-020B GVF□400-200BR
16-352B	●	●	1.00	1.04	1.00	6.00	0.98	1.38	(0.20)							
12-501B	●	●	0.75	0.79	0.75	5.00	0.87	1.18	0.20	1.969 (0.984)	2.756 (∞)			SF□-501B		GVF□250~350-020B GVF□300-150BR
16-501B	●	●	1.00	1.04	1.00	6.00	0.98	1.38	(0.18)							
12-502B	●	●	0.75	0.79	0.75	5.00	0.87	1.18	0.20					SF□-502B		GVF□400~490-020B GVF□400-200BR
16-502B	●	●	1.00	1.04	1.00	6.00	0.98	1.38	(0.20)							
12-701B	●	●	0.75	0.79	0.75	5.00	0.87	1.18	0.20	2.756 (0.984)	3.937 (∞)			SF□-701B		GVF□250~350-020B GVF□300-150BR
16-701B	●	●	1.00	1.04	1.00	6.00	0.98	1.38	(0.18)							
12-702B	●	●	0.75	0.79	0.75	5.00	0.87	1.18	0.20					SF□-702B		GVF□400~490-020B GVF□400-200BR
16-702B	●	●	1.00	1.04	1.00	6.00	0.98	1.38	(0.20)							
GFVT□ 16-501C	●	●	1.00	1.04	1.00	6.00	1.06	1.50	0.32(0.26)	1.969 (0.984)	2.756 (∞)	CPS-8V	LW-4	SF□-501C	HH4X12	GVF□350~450-040C
16-502C	●	●							0.32(0.32)					SF□-502C		GVF□500~600-040C
16-701C	●	●							0.32(0.26)	2.756 (0.984)	3.937 (∞)			SF□-701C		GVF□350~450-040C
16-702C	●	●							0.32(0.32)					SF□-702C		GVF□500~600-040C
16-1001C	●	●							0.32(0.26)	3.937 (0.984)	5.906 (∞)			SF□-1001C		GVF□350~450-040C
16-1002C	●	●							0.32(0.32)					SF□-1002C		GVF□500~600-040C
16-1501C	●	●							0.32(0.26)	5.906 (0.984)	9.843 (∞)			SF□-1501C		GVF□350~450-040C
16-1502C	●	●							0.32(0.32)					SF□-1502C		GVF□500~600-040C

Note 1. Dimension **CDX** shows the distance from the Toolholder to the cutting edge. The grooving depth is shown in ( ).

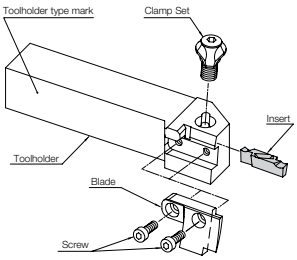
2. The value ( ) of Face Grooving diameter. (DAXX) is the maximum outer diameter value after the initial groove between DAXN - DAXX (It is possible to widen the groove to infinity ∞).
   The value ( ) of Face Grooving diameter. (DAXN) is the minimum diameter of the boss which remains in the center when widening the groove width to a smaller value after the initial groove between DAXN - DAXX.
3. Standard toolholders are designed with the edge position 0.039" above the center.
   When using non-standard Toolholders, set the Edge position 0.039" above the center.
4. GFVS and GFVT are composed of a base body and a blade.
   If the blade should be damaged, replace it with a new blade as listed in the left table.
   (e.g.) GFVSR12-HB+SFR-351B = GFVSR12-351B
   (e.g.) GFVTR12-HB+SFR-351B = GFVTR12-351B

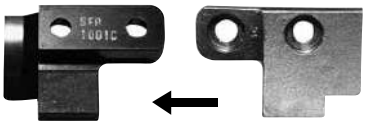
● : Standard Item △ : Phaseout Item (will be removed from next catalog)
Contact your local Kyocera sales engineer to upgrade old products to new technology

Combination of Base-Holder & Blade (Metric Size)

Part Number of Toolholder (Stamped Below)	Stock R	Stock L	Blade Part Number	Toolholder Part Number (Integrated Tool)
GFVS□2020K-HB GFVT□2020K-HB	● ●	● ●	SF□-351B	GFVS□2020K-351B GFVT□2020K-352B
			-352B	
			-501B	-501B
			-502B	-502B
			-701B	-701B
			-702B	-702B
GFVS□2525M-HB GFVT□2525M-HB	● ●	● ●	SF□-351B	GFVS□2525M-351B GFVT□2525M-352B
			-352B	
			-501B	-501B
			-502B	-502B
			-701B	-701B
			-702B	-702B
GFVS□2525M-HC GFVT□2525M-HC	● ●	● ●	SF□-501C	GFVS□2525M-501C GFVT□2525M-502C
			-502C	
			-701C	-701C
			-702C	-702C
			-1001C	-1001C
			-1002C	-1002C
			-1501C	-1501C
			-1502C	-1502C

Example of Installation (GFVS)





Blade (Back side) (With Blade Description)

Blade (Face side)

How to refer to the face grooving toolholder and blade

Q: Though "GFVSR2525M-HC" is marked on the face grooving toolholder, the size of cutting dia. is unknown. How can it be found out?

A: Take off the blade. Description of the blade is listed on the back of the blade. Using the description, check the description of the toolholder in the catalog. If "SFR-1001C" is integrated to "GFVSR2525M-HC", the description of the toolholder is "GVFSR2525M-1001C"

- Right-hand Blade for Right-hand Toolholder, Left-hand Blade for Left-hand Toolholder.
- Installation of GFVT type follows example installation of GFVS type.

Toolholder Dimensions (Metric Size)

Part Number	Stock R	Stock L	H	HF	B	LF	LH	WF	CDX	Face Grooving Dia. DAXN (min)	Face Grooving Dia. DAXX (max)	Spare Parts: Clamp Set	Spare Parts: Wrench	Spare Parts: Blade	Spare Parts: Screw	Applicable Inserts
GFVS□2020K-351B	●	●	20	21	20	125	30	25	5.1	35 (25)	50 (∞)	CPS-6V	LW-3	SF□-351B	HH4X12	GVF□250~350-020B GVF□300-150BR
2525M-351B	●	●	25	26	25	150	32	32	(4.6)							
2020K-352B	●	●	20	21	20	125	30	25	5.1					SF□-352B		GVF□400~490-020B GVF□400-200BR
2525M-352B	●	●	25	26	25	150	32	32	(5.1)							
2020K-501B	●	●	20	21	20	125	30	25	5.1	50 (25)	70 (∞)			SF□-501B		GVF□250~350-020B GVF□300-150BR
2525M-501B	●	●	25	26	25	150	32	32	(4.6)							
2020K-502B	●	●	20	21	20	125	30	25	5.1					SF□-502B		GVF□400~490-020B GVF□400-200BR
2525M-502B	●	●	25	26	25	150	32	32	(5.1)							
2020K-701B	●	●	20	21	20	125	30	25	5.1	70 (25)	100 (∞)			SF□-701B		GVF□250~350-020B GVF□300-150BR
2525M-701B	●	●	25	26	25	150	32	32	(4.6)							
2020K-702B	●	●	20	21	20	125	30	25	5.1					SF□-702B		GVF□400~490-020B GVF□400-200BR
2525M-702B	●	●	25	26	25	150	32	32	(5.1)							
GFVS□2525M-501C	●	●	25	26	25	150	32	32	8.1 (6.6)	50 (25)	70 (∞)	CPS-8V	LW-4	SF□-501C	HH4X12	GVF□350~450-040C
2525M-502C	●	●	25	26	25	150	32	32	8.1 (8.1)					SF□-502C		GVF□500~600-040C
2525M-701C	●	●	25	26	25	150	32	32	8.1 (6.6)	70 (25)	100 (∞)			SF□-701C		GVF□350~450-040C
2525M-702C	●	●	25	26	25	150	32	32	8.1 (8.1)					SF□-702C		GVF□500~600-040C
2525M-1001C	●	●	25	26	25	150	32	32	8.1 (6.6)	100 (25)	150 (∞)			SF□-1001C		GVF□350~450-040C
2525M-1002C	●	●	25	26	25	150	32	32	8.1 (8.1)					SF□-1002C		GVF□500~600-040C
2525M-1501C	●	●	25	26	25	150	32	32	8.1 (6.6)	150 (25)	250 (∞)			SF□-1501C		GVF□350~450-040C
2525M-1502C	●	●	25	26	25	150	32	32	8.1 (8.1)					SF□-1502C		GVF□500~600-040C
GFVT□2020K-351B	●	●	20	21	20	125	22	30	5.1	35 (25)	50 (∞)	CPS-6V	LW-3	SF□-351B	HH4X12	GVF□250~350-020B GVF□300-150BR
2525M-351B	●	●	25	26	25	150	25	35	(4.6)							
2020K-352B	●	●	20	21	20	125	22	30	5.1					SF□-352B		GVF□400~490-020B GVF□400-200BR
2525M-352B	●	●	25	26	25	150	25	35	(5.1)							
2020K-501B	●	●	20	21	20	125	22	30	5.1	50 (25)	70 (∞)			SF□-501B		GVF□250~350-020B GVF□300-150BR
2525M-501B	●	●	25	26	25	150	25	35	(4.6)							
2020K-502B	●	●	20	21	20	125	22	30	5.1					SF□-502B		GVF□400~490-020B GVF□400-200BR
2525M-502B	●	●	25	26	25	150	25	35	(5.1)							
2020K-701B	●	●	20	21	20	125	22	30	5.1	70 (25)	100 (∞)			SF□-701B		GVF□250~350-020B GVF□300-150BR
2525M-701B	●	●	25	26	25	150	25	35	(4.6)							
2020K-702B	●	●	20	21	20	125	22	30	5.1					SF□-702B		GVF□400~490-020B GVF□400-200BR
2525M-702B	●	●	25	26	25	150	25	35	(5.1)							
GFVT□2525M-501C	●	●	25	26	25	150	27	38	8.1 (6.6)	50 (25)	70 (∞)	CPS-8V	LW-4	SF□-501C	HH4X12	GVF□350~450-040C
2525M-502C	●	●	25	26	25	150	27	38	8.1 (8.1)					SF□-502C		GVF□500~600-040C
2525M-701C	●	●	25	26	25	150	27	38	8.1 (6.6)	70 (25)	100 (∞)			SF□-701C		GVF□350~450-040C
2525M-702C	●	●	25	26	25	150	27	38	8.1 (8.1)					SF□-702C		GVF□500~600-040C
2525M-1001C	●	●	25	26	25	150	27	38	8.1 (6.6)	100 (25)	150 (∞)			SF□-1001C		GVF□350~450-040C
2525M-1002C	●	●	25	26	25	150	27	38	8.1 (8.1)					SF□-1002C		GVF□500~600-040C
2525M-1501C	●	●	25	26	25	150	27	38	8.1 (6.6)	150 (25)	250 (∞)			SF□-1501C		GVF□350~450-040C
2525M-1502C	●	●	25	26	25	150	27	38	8.1 (8.1)					SF□-1502C		GVF□500~600-040C

Applicable Inserts → G138

Note 1. Dimension **CDX** shows the distance from the Toolholder to the cutting edge. The grooving depth is shown in ( ).
2. The value ( ) of Face Grooving diameter. (DAXX) is the maximum outer diameter value after the initial groove between DAXN - DAXX (It is possible to widen the groove to infinity ∞).
The value ( ) of Face Grooving diameter. (DAXN) is the minimum diameter of the boss which remains in the center when widening the groove width to a smaller value after the initial groove between DAXN - DAXX.
3. Standard toolholders are designed with the edge position 1.0mm above the center.
When using non-standard Toolholders, set the Edge position 1.0mm above the center.
4. GFVS and GFVT are composed of a base body and a blade.
If the blade should be damaged, replace it with a new blade as listed in the left table.
(e.g.) GFVSR2020K-HB+SFR-351B = GFVSR2020K-351B
(e.g.) GFVTR2020K-HB+SFR-351B = GFVTR2020K-351B

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(Technical Support) 800.823.7284 - Option 2
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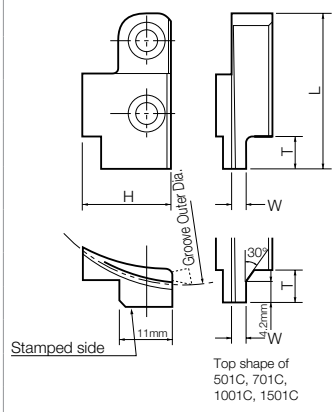
● : Standard Item △ : Phaseout Item (will be removed from next catalog)
Contact your local Kyocera sales engineer to upgrade old products to new technology

Blade Dimensions

Shape	Blade Part Number	Stock R	Stock L	Dimensions (mm) L	H	T	W	Face Grooving Dia. DAXN (min)	DAXX (max)	Applicable Inserts	Applicable Toolholders
 Right-hand shown	SF□ -351B	●	●	30.5	11	4.7	2.0	35	50	GVF□ 250~350-020B GVF□ 300-150BR	GFV(S/T)□ ○○○○□ -○○○B (Toolholder Stamp (GFV(S/T)□ ○○○○□-HB))
	-352B	●	●	30.5	11	4.7	3.4	35	50	GVF□ 400~490-020B GVF□ 400-200BR	
	SF□ -501B	●	●	30.5	15	4.7	2.0	50	70	GVF□ 250~350-020B GVF□ 300-150BR	
	-502B	●	●	30.5	15	4.7	3.4	50	70	GVF□ 400~490-020B GVF□ 400-200BR	
	SF□ -701B	●	●	30.5	17	4.7	2.0	70	100	GVF□ 250~350-020B GVF□ 300-150BR	
	-702B	●	●	30.5	17	4.7	3.4	70	100	GVF□ 400~490-020B GVF□ 400-200BR	
	SF□ -501C	●	●	35.0	15	7.5	2.8	50	70	GVF□ 350~450-040C	GFV(S/T)□ ○○○○□ -○○○C (Toolholder Stamp (GFV(S/T)□ ○○○○□-HC))
	-502C	●	●	35.0	15	7.5	4.3	50	70	GVF□ 500~600-040C	
	SF□ -701C	●	●	35.0	20	7.5	2.8	70	100	GVF□ 350~450-040C	
	-702C	●	●	35.0	20	7.5	4.3	70	100	GVF□ 500~600-040C	
	SF□ -1001C	●	●	35.0	23	7.5	2.8	100	150	GVF□ 350~450-040C	
	-1002C	●	●	35.0	23	7.5	4.3	100	150	GVF□ 500~600-040C	
• Right-hand Blade for Right-hand Toolholder, Left-hand Blade for Left-hand Toolholder.	SF□ -1501C	●	●	35.0	23	7.5	2.8	150	250	GVF□ 350~450-040C	
	-1502C	●	●	35.0	23	7.5	4.3	150	250	GVF□ 500~600-040C	

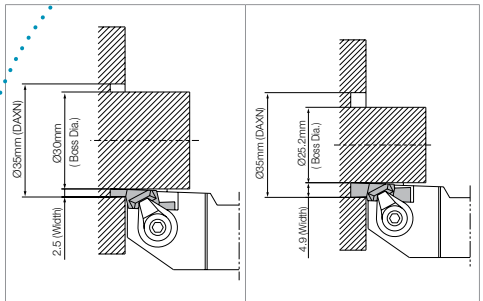
Face Groove Diameter of GFVS / GFVT

e.g.) GFVS□…-351B/352B
(same as GFVS□…-○○○B, …-○○○C G135~G136
GFVT□…-○○○B, …-○○○C G135~G136

Part Number	Face Grooving Dia. DAXN (min)	Face Grooving Dia. DAXX (min)	Applicable Inserts
GFVS□ 2020K-351B 2525M-351B	35 (25)	50 (∞)	GVF□ 250~350-020B GVF□ 300-150BR
2020K-352B 2525M-352B			GVF□ 400~490-020B GVF□ 400-200BR

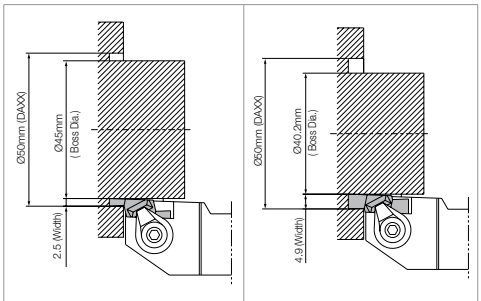
- It is possible to widen the groove to infinity ∞ when machining the initial groove within DAXN ~ DAXX and then widening to outer diameter.

- When machining the initial groove on the face at (DAXN: Ø35mm)
  If the initial groove is made smaller than this, the toolholder interferes with the workpiece.
  Boss Dia. depends on insert width.



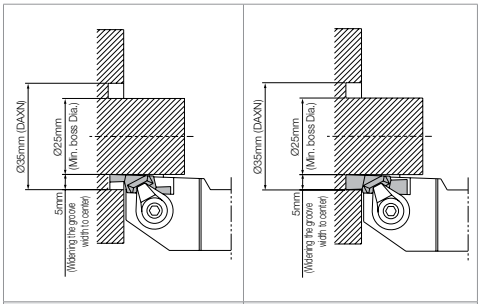
Installing GVFL250-020B | Installing GVFL490-020B

- When machining the initial groove on the face at (DAXX: Ø50mm).
  If the initial groove is made smaller than this, the toolholder interferes with the workpiece.
  Boss Dia. depends on insert width.

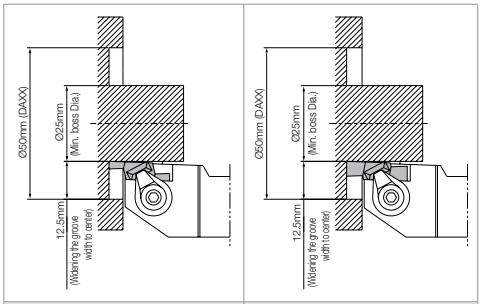


Installing GVFL250-020B | Installing GVFL490-020B

- When widening the groove width to inner diameter.
  Face Grooving Dia. (Ø25mm Boss Dia.) is the limitation regardless of insert width,
  even widening the groove width to the center from the initial groove at (DAXN: Ø35mm) or (DAXX: Ø50mm).
  The toolholder interferes with the workpiece when closer to the center.



Installing GVFL250-020B | Installing GVFL490-020B



Installing GVFL250-020B | Installing GVFL490-020B

Applicable Inserts

(mm)

Part Number	W1	INSL	S
GVF[R/L] ...-○○○A	4.3	12	4.5
...-○○○B	5.8	20	5.0
...-○○○C	7.0	27	7.0
····-○○○AR	4.3	12	4.5
····-○○○BR	5.8	20	5.0

		Cermet			MEGA	PVD	Carbide	PCD
P	Carbon Steel / Alloy Steel				●	◔		
M	Stainless Steel				●	◔		
K	Cast Iron						●	
N	Non-ferrous Metals						●	●
S	Titanium Alloy						●	●
H	Hard materials (≤40HRC)				●	○		
	Hard materials (≥40HRC)							

Classification of Usage
● : Light Interruption / 1st Choice
◔ : Light Interruption / 2nd Choice
● : Continuous / 1st Choice
○ : Continuous / 2nd Choice

Insert (Right-handed Insert Shown)	Part Number	Previous Part Number	Dimensions (in) CW in	CW mm	CDX	RE	TN90 R	TN90 L	TC40 R	TC40 L	TC60 R	TC60 L	MEGA PR1225 R	MEGA PR1225 L	PVD PR930 R	PVD PR930 L	Carbide KW10 R	Carbide KW10 L	PCD KPD010 R	PCD KPD010 L	Applicable Toolholders	Ref. Page for Toolholder
	GVF[R/L] 200-020A	GVF[R/L] 200A	0.079	2.00	0.091	0.008	△	△	●	●	●	●	●	●	●	●	●	●			GFV[R/L] ...-201A GIFV[R/L] ...-201A	G132 G134
	230-020A	230A	0.091	2.30	0.091				●				●	●	△		●	●				
	250-020A	250A	0.098	2.50	0.091				●	●	●		●	●	●	●	●	●				
	270-020A	270A	0.106	2.70	0.091								●	●	△	△	●	●				
	290-020A	290A	0.114	2.90	0.091				●	●			●	●	●		●	●				
	340-020A	340A	0.134	3.40	0.091				●				●	●	●	●	●	●				
	GVF[R/L] 250-020B	GVF[R/L] 250B	0.098	2.50	0.189	0.008	△	△	●	●	●	●	●	●	●	●	●	●	●		GFV[R/L] ...-○○1B GFVS[R/L] ...-○○1B GFVT[R/L] ...-○○1B GIFV[R/L] ...-○○1B	
	300-020B	300B	0.118	3.00	0.189		△	△	●	●	●	●	●	●	●	●	●	●	●	●		
	350-020B	350B	0.138	3.50	0.189		△	△	●	●	●	●	●	●	●	●	●	●				
	400-020B	400B	0.157	4.00	0.209		△	△	●	●	●	●	●	●	●	●	●	●			GFV[R/L] ...-○○2B GFVS[R/L] ...-○○2B GFVT[R/L] ...-○○2B GIFV[R/L] ...-○○2B	
	430-020B	430B	0.169	4.30	0.209				●	●	●	●	●	●		●	●	●				
	460-020B	460B	0.181	4.60	0.209				●	●			●	●	△	△	●	●				
	490-020B	490B	0.193	4.90	0.209				●	●	●	●	●	●	●	●	●	●				
	GVF[R/L] 350-040C	GVF[R/L] 350C	0.138	3.50	0.268	0.016	△	△	●	●	●	●	●	●	●	●	●	●			GFV[R/L] ...-○○1C GFVS[R/L] ...-○○1C GFVT[R/L] ...-○○1C GIFV[R/L] ...-○○1C	
	400-040C	400C	0.157	4.00	0.268		△	△	●	●	●	●	●	●	●	●	●	●				
	450-040C	450C	0.177	4.50	0.268				●	●	●	●	●	●	●	●	●	●				
	500-040C	500C	0.197	5.00	0.327		△	△	●	●	●	●	●	●	●	●	●	●			GFV[R/L] ...-○○2C GFVS[R/L] ...-○○2C GFVT[R/L] ...-○○2C GIFV[R/L] ...-○○2C	G132 G135 G136 G144
	550-040C	550C	0.217	5.50	0.327						●	●	●	●	●	●	●	●				
	600-040C	600C	0.236	6.00	0.327				●	●			●	●		●	●	●				
 1-Edge	GVF[R/L] 250-020B	GVF[R/L] 250B	0.098	2.50	0.189	0.008									●	●	●	●	●	●	GFV[R/L] ...-○○1B GFVS[R/L] ...-○○1B GFVT[R/L] ...-○○1B GIFV[R/L] ...-○○1B	
	300-020B	300B	0.118	3.00	0.189										●	●	●	●	●	●		
	400-020B	400B	0.157	4.00	0.209										●	●	●	●	□	□	GFV[R/L] ...-○○2B GFVS[R/L] ...-○○2B GFVT[R/L] ...-○○2B GIFV[R/L] ...-○○2B	
	GVF[R/L] 350-020C	-	0.138	3.50	0.268	0.008													□		GFV[R/L] ...-○○1C GFVS[R/L] ...-○○1C GFVT[R/L] ...-○○1C GIFV[R/L] ...-○○1C	
	400-020C	-	0.157	4.00	0.268														□			
	GVF[R/L] 350-040C	GVF[R/L] 350C	0.138	3.50	0.268	0.016													□			
	400-040C	400C	0.157	4.00	0.268														□			
 Full-R	GVF[R/L] 200-100AR	GVF[R/L] 100AR	0.079	2.00	0.091	0.039							●	●	●	●	●	●			GFV[R/L] ...-201A GIFV[R/L] ...-201A	G132 G134
	250-125AR	125AR	0.098	2.50	0.091	0.049							●	●	●		●	●				
	300-150AR	150AR	0.118	3.00	0.091	0.059							●	●	●	●	●	●				
	GVF[R/L] 300-150BR	GVF[R/L] 150BR	0.118	3.00	0.189	0.059							●	●	●	●	●	●			GFV[R/L] ...-○○1B GFVS[R/L] ...-○○1B GFVT[R/L] ...-○○1B GIFV[R/L] ...-○○1B	G132 G135
	400-200BR	200BR	0.157	4.00	0.209	0.079							●	●	●	●	●	●			GFV[R/L] ...-○○2B GFVS[R/L] ...-○○2B GFVT[R/L] ...-○○2B GIFV[R/L] ...-○○2B	G136 G144

- Dimension **CDX** shows available Grooving Depth.
- MEGA indicates MEGACOAT

Recommended Cutting Conditions ➔ **G145**

Inserts are sold in 10 piece boxes.

CBN & PCD Inserts are sold in 1 piece boxes.

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● : Standard Item □ : Made to Order △ : Phaseout Item (will be removed from next catalog)
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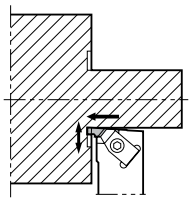
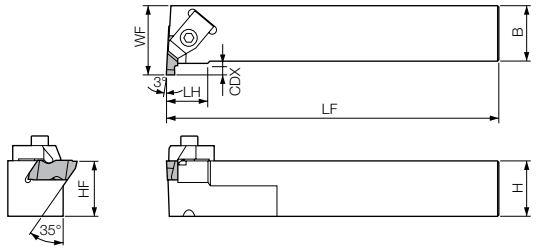
KKCE





• Right-hand shown

• Left-hand Insert for Right-hand Toolholder, Right-hand Insert for Left-hand Toolholder

Toolholder Dimensions

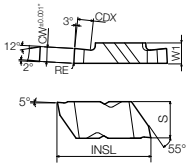
Part Number	Stock		Dimensions (in)							Spare Parts		
										Clamp	Clamp Screw	Wrench
	R	L	H	HF	B	LF	LH	WF	CDX			
KKCER/L **12-3B**	●	●	0.750	0.750	0.750	4.500	0.750	1.125	0.210	CKC-3R/L	SKC-3	LW-156
16-3D	●		1.000	1.000	1.000	6.000	0.750	1.250	0.210			

Applicable Inserts

Application	Face Grooving
Ref. Page	**Below**
Insert / Toolholder	
KKCER/L**...3**	KCFP_3...

Face Grooving Limits		
Insert Part Number	Maximum Groove Depth	Minimum Groove Diameter
KCFP3...	0.060	0.940
	0.094	1.200
	0.125	1.420
	0.150	1.630

KCFP Inserts

Insert Right-handed Insert Shown		Part Number	Unit	Dimensions (in)							Insert Grade					
				CW		CDX	RE	W1	INSL	S	Cermet		PVD		Carbide	Ceramic
				(in)	(mm)						TC40	TC60	PR630	PR930	KW10	A65
		**KCFP 3125**R/L	inch	0.125	3.15	0.150	0.008	0.195	0.886	0.344				●		
		3156R/L		0.156	3.97	0.150	0.008	0.195	0.886	0.344				●		
		3189R/L		0.189	4.80	0.150	0.023	0.195	0.886	0.344				●		

• Dimension **CDX** shows available Grooving Depth.

Recommended Cutting Conditions (Cera-Notch)

Workpiece Material	Cermet Feeds (ipr)	Carbide Feeds (ipr)	Recommended Insert Grade (Vc : sfm)						
			Cermet		MEGACOAT	Carbide			Ceramic
			TC40	**TC60**	**PR1215**	**PR660**	**PR930**	**KW10**	**A65**
Carbon Steel	0.002~0.005	0.002~0.010	300~900	250~900	300~800	200~550	250~650	-	-
Alloy Steel	0.002~0.005	0.002~0.010	250~800	250~800	300~750	100~500	150~550	-	-
Stainless Steel	0.002~0.005	0.002~0.010	-	200~600	300~600	100~550	100~550	-	-
Tool Steel	0.002~0.005	0.002~0.010	200~650	200~650	300~600	-	100~550	-	-
Hardened Steel (>45Rc)	-	-	-	-	-	-	-	-	250~500*
Gray Cast Iron	0.003~0.006	0.002~0.012	200~700	-	300~700	-	-	-	500~1000
Ductile Iron	0.003~0.006	0.002~0.012	-	150~600	300~600	-	-	-	500~1000
Aluminum	0.002~0.008	0.002~0.012	150~1600	-	-	-	-	500~1600	-

Speeds & Feeds listed are for external grooving. Reduce parameters by 10% for internal grooving.
*Feeds = 0.003~0.008 ipr

● : Standard Item △ : Phaseout Item (will be removed from next catalog)
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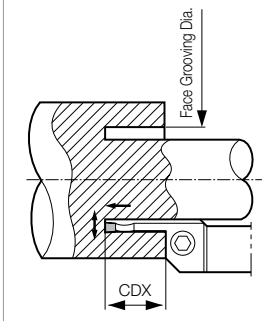
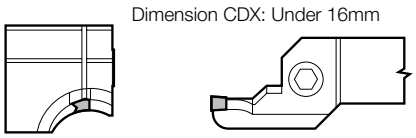
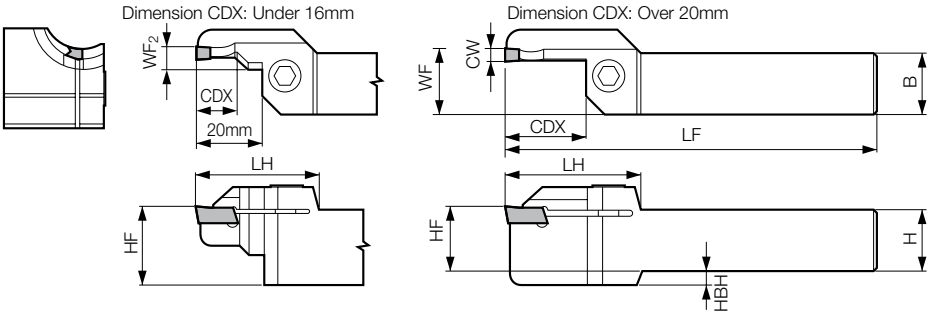
KFMS (will be phased out and switched to **KGDF** ➔ **G100~G120**)





• Left-hand shown



• Right-hand shown

Toolholder Dimensions

Part Number		Stock R	Stock L	Unit	H	HF	HBH	B	LF	LH	WF	WF_2	CDX	CW	Face Grooving Dia. DAXN (min)	Face Grooving Dia. DAXX (min)	Spare Parts: Clamp Bolt	Spare Parts: Wrench	Spare Parts: Washer
KFMS□	16-3-4050	●		inch	1.000	1.000	-	1.000	6.000	1.539	1.027	0.240	0.512	0.118	1.575	1.969	HH5X25	LW-4	-
	16-3-5065	●								1.618		-	0.866		1.969	2.559			
KFMS□	2020K2530-3	●		mm	20	20	-	20	125	39	20.7	6.1	13	3	25	30	HH5X20	LW-4	-
	2020K3040-3	●													30	40			
	2020K4050-3	●													40	50			
	2020K5065-3	●								41		-	22		50	65			
	2020K6585-3	●													65	85			
	2020K85110-3	●					5			44			25		85	110			
	2020K110145-3	●													110	145			
	2525M2530-3	●	●		25	25	-	25	150	39	25.7	6.1	13		25	30	HH5X25	LW-4	-
	2525M3040-3	●	●												30	40			
	2525M4050-3	●	●												40	50			
	2525M5065-3	●	●							41		-	22		50	65			
	2525M6585-3	●	●												65	85			
	2525M85110-3	●	●										25		85	110			
	2525M110145-3	●	●												110	145			
KFMS□	2020K2535-4	●		mm	20	20	-	20	125	39	20.7	7.1	12	4	25	35	HH5X20	LW-4	-
	2020K3550-4	●										-	20		35	50			
	2020K5070-4	●								44			25		50	70			
	2020K70100-4	●													70	100			
	2020K100150-4	●													100	150			
	2020K150220-4	●													150	220			
	2020K220800-4	●													220	∞			
	2525M2535-4	●	●		25	25	-	25	150	39	25.7	7.1	12		25	35	HH5X25	LW-4	-
	2525M3550-4	●	●									-	20		35	50			
	2525M5070-4	●	●							44			25		50	70			
	2525M70100-4	●	●												70	100			
	2525M100150-4	●	●												100	150			
	2525M150220-4	●	●												150	220			
	2525M220800-4	●	●												220	∞			

- Dimension **CDX** shows available grooving depth.
- Face Grooving Dia. ØD: The diameter range of the initial groove.
- For KFMS□····5 toolholder can hold a 0.236" width insert. ( ) value shows the dimension of a 0.236" width insert.

Applicable Inserts ➔ **G141**

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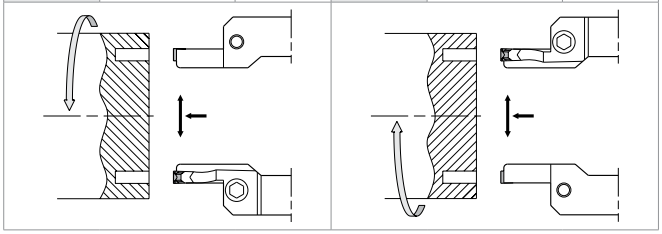
Toolholder Dimensions

Part Number	Stock R	Stock L	Unit	H	HF	HBH	B	LF	LH	WF	WF_2	CDX	Width CW	Face Grooving Dia. DAXN (min)	Face Grooving Dia. DAXX (min)	Spare Parts: Clamp Bolt	Spare Parts: Wrench
KFMS®L 16-5-75115	●		inch	1.000		-	1.000	6.000	2.012	1.027 (1.047)	-	1.260	0.197 (0.236)	2.953	4.528	HH5X25	LW-4
16-5-115180	●													4.528	7.087		
16-5-180235	●													7.087	9.252		
KFMS®L 2020K2535-5	●		mm	20		-	20	125	39	20.7 (21.2)	-	20	5 (6)	25	35	HH5X20	LW-4
2020K3550-5	●													35	50		
2020K5075-5	●							125	44			25		50	75		
2020K75115-5	●					5								75	115		
2020K115180-5	●													115	180		
2020K180235-5	●													180	235		
2020K235800-5	●													235	∞		
2525M2535-5	●	●		25		-	25	150	39	25.7 (26.2)	-	20	5 (6)	25	35	HH5X25	LW-4
2525M3550-5	●	●												35	50		
2525M5075-5	●	●							44			25		50	75		
2525M75115-5	●	●												75	115		
2525M115180-5	●	●							51			32		115	180		
2525M180235-5	●	●												180	235		
2525M235800-5	●	●												235	∞		

- Dimension **CDX** shows available grooving depth.
- Face Grooving Dia.: The diameter range of the initial groove.
- For KFMS®L...-5 toolholder can hold a 0.236" width insert. ( ) value shows the dimension of a 0.236" width insert.

Selection of Toolholder & Insert

Toolholder	Right-hand (R)	Toolholder	Left-hand (L)
Insert	(No Hand)	Insert	(No Hand)



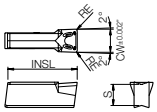
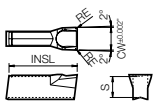
Applicable Inserts

(in)

Part Number	INSL	S
FMM30-03 FMM60-04	0.472	0.138
FMN3 FMN6	0.472	0.138

P	Carbon Steel / Alloy Steel				●			
M	Stainless Steel				●			
K	Cast Iron					●	◔	
N	Non-ferrous Metals						●	
S	Titanium Alloy						●	
H	Hard materials (≤40HRC)				○			

Classification of Usage
● : Light Interruption / 1st Choice
◔ : Light Interruption / 2nd Choice
● : Continuous / 1st Choice
○ : Continuous / 2nd Choice

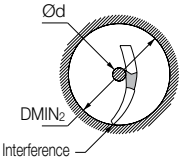
Insert		Part Number	Dimensions (in) CW inch	CW mm	RE	Cermet TN90	CVD Coated Carbide CR9025	PVD Coated Carbide PR915	PR930	PR905	Carbide KW10	Applicable Toolholders
 Face Grooving Chip Control Oriented / M Class		FMM 30-03	0.118	3.0	0.012	●	●	●	●	●	●	KFMS®L...-3(...)
		40-04	0.157	4.0	0.016	●	●	●	●	●	●	KFMS®L...-4(...)
		50-04	0.197	5.0	0.016	●	●	●	●	●	●	KFMS®L...-5(...)
		60-04	0.236	6.0	0.016	●	●		●	●	●	
 Face Grooving Sharp-Cutting Oriented / M Class		FMN 3	0.118	3.0	0.010	●	●		●		●	KFMS®L...-3(...)
		4	0.157	4.0	0.010	●			●		●	KFMS®L...-4(...)
		5	0.197	5.0	0.010	●	●		●		●	KFMS®L...-5(...)
		6	0.236	6.0	0.010		●		●		●	

- FMN type inserts are only for Deep Grooving and not applicable for Turning.

Recommended Cutting Conditions ➔ G150

Limit of Turning Toward Center

It causes the toolholder to interfere with the groove wall depending on the initial cut's diameter.



Remaining Boss Dia. Ød

Part Number	$DMIN_2$ Ød (mm) 25	26	27	28 and over
KFMS®L 2020K2530-3	4	2	0	0
KFMS®L 2525M2530-3				
KFMS®L 2020K2535-4	6	3	0	
KFMS®L 2525M2535-4				
KFMS®L 2020K2535-5	7 *(5)	4 *(2)	1 *(0)	No remaining boss
KFMS®L 2525M2535-5				

e.g.) KFMSR 2525M2530-3 with Ø25 as first cut towards the center, it will cause a rubbing with the toolholder cartridge if Ød is 4.0mm.

*( ) value shows the Dimension using FMM60-04 Insert.

Inserts are sold in 10 piece boxes.

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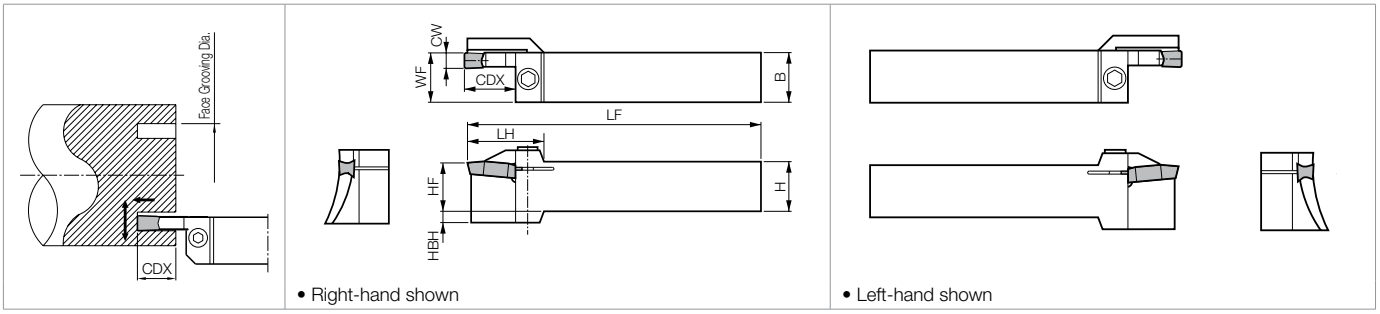
KFMS-8



• Right-hand shown

• Left-hand shown

Toolholder Dimensions

Part Number		Stock R	Stock L	H	HF	HBH	B	LF	LH	WF	CDX	CW	Face Grooving Dia. DAXN (min)	Face Grooving Dia. DAXX (min)	Spare Parts: Clamp Bolt	Spare Parts: Wrench
KFMS□L	2525M5464-8	●	●	25	25	-	25	150	41	26	25	8	54 (0)	64 (∞)	HH6X25	LW-5
	2525M6382-8	●	●	25	25	2.4	25	150	41	26	25	8	63 (0)	82 (∞)		
	2525M80115-8	●	●	25	25	6.0	25	150	40	26	25	8	80 (0)	115 (∞)		
	2525M105160-8	●	●	25	25	6.0	25	150	40	26	25	8	105 (0)	160 (∞)		
	2525M155510-8	●	●	25	25	6.0	25	150	43	26	25	8	155 (0)	510 (∞)		
	3232P155510-8	●		32	32	-	32	170	43	33	25	8				

- Dimension **CDX** shows available grooving depth.
- The value ( ) of Face Grooving Dia. DAXX (max) is the maximum outer diameter value after the initial groove between DAXN (min) ~ DAXX (max) (It is possible to widen the groove to infinity ∞).
  The value ( ) of Face Grooving Dia. DAXN (min) is the minimum diameter of the boss which remains in the center when widening the groove width to a smaller value after the initial groove between DAXN (min) ~ DAXX (max).

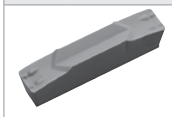
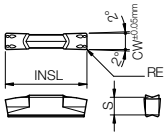
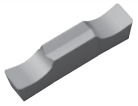
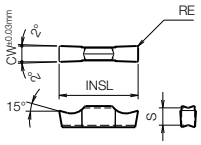
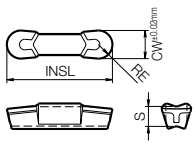
Applicable Inserts

(mm)

Part Number		INSL	S
GMM	8030-080MW	30	5.5
GMG	8030-050MG	30	5.5
GMGA	8030-400R	30	5.5

P	Carbon Steel / Alloy Steel				●			
M	Stainless Steel				◔			
K	Cast Iron					●	◔	
N	Non-ferrous Metals						●	
S	Titanium Alloy						●	
H	Hard materials (≤40HRC)				●			
	Hard materials (≥40HRC)							

Classification of Usage
● : Light Interruption / 1st Choice
◔ : Light Interruption / 2nd Choice
● : Continuous / 1st Choice
○ : Continuous / 2nd Choice

Insert		Part Number	Dimensions (mm) CW	Dimensions (mm) RE	Cermet TN90	CVD Coated Carbide CR9025	PVD Coated Carbide PR915	PVD Coated Carbide PR930	PVD Coated Carbide PR905	Carbide KW10	Applicable Toolholders
 Chip Control Oriented / M Class		GMM 8030-080MW	8.0	0.8		●		●	●	●	KFMS□L…8
 Sharp-Cutting Oriented / Precision Class Ground Chipbreaker		GMG 8030-050MG	8.0	0.5	●	●		●	●	●	
 Sharp-Cutting Oriented / Precision Class Full-R / Copying		GMGA 8030-400R	8.0	4.0						●	

- If using a full-R insert with KIGM-8 type toolholder, you need to modify the corner of insert adapter of toolholder.

Recommended Cutting Conditions ➔ G153

Inserts are sold in 10 piece boxes.

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● : Standard Item △ : Phaseout Item (will be removed from next catalog)
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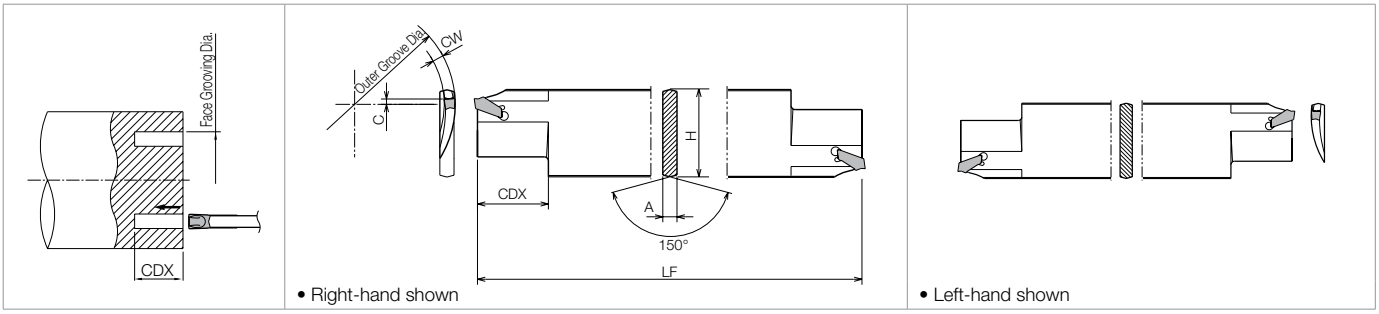
KFTB-S



• Right-hand shown

• Left-hand shown

Toolholder Dimensions

Part Number		Stock R	Stock L	Dimensions (mm) *H	LF	A	CDX	C	CW	Face Grooving Dia. DAXN (min)	DAXX (min)	Spare Parts Releasing Wrench	Applicable Inserts	Applicable Tool Block H51
KFTB□	65100-4S	●	●	32	150	5.2	25	4	4.0	65	100	LTK-5	FTK4	KTKTB 20-32, 25-32, 32-32
	90150-4S	●	●	32	150	5.2	30	0	4.0	90	150			KTKTBF 25-32, 32-32
	150250-4S	●	●	32	150	5.2	30	0	4.0	140	250			
	250800-4S	●	●	32	150	3.2	30	0	4.0	230	∞			
KFTB□	90150-5S	●	●	32	150	5.2	30	0	5.0	90	150	LTK-5	FTK5	
	150250-5S	●	●	32	150	5.2	32	0	5.0	150	250			
	250800-5S	●	●	32	150	4.0	38	0	5.0	250	∞			

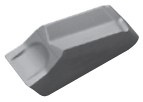
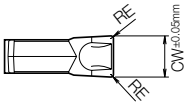
- Dimension **CDX** shows available grooving depth.
- Face Grooving Dia.: The diameter range of the initial groove.
- The insert has a Self-Clamping system and it is not suitable for tight tolerance grooves (tolerance ± 0.05mm).
- KFTB□65100-4S toolholder is designed with the edge position 4mm above the Center.

* Dimension H shows the length between virtual tops.

Applicable Inserts

P	Carbon Steel / Alloy Steel	●
M	Stainless Steel	●
K	Cast Iron	●
N	Non-ferrous Metals	●
S	Titanium Alloy	●
H	Hard materials (≤40HRC)	○
	Hard materials (≥40HRC)	

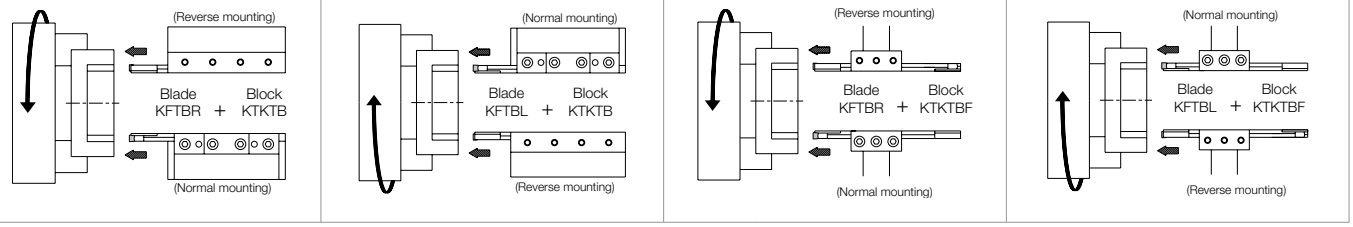
Classification of Usage
● : Light Interruption / 1st Choice
◔ : Light Interruption / 2nd Choice
● : Continuous / 1st Choice
○ : Continuous / 2nd Choice

Insert		Part Number		Dimensions (mm) CW	RE	Cermet TN90	CVD Coated Carbide CR9025	PVD Coated Carbide PR660	PVD Coated Carbide PR930	Carbide KW10	Applicable Toolholders
		FTK	4	4.0	0.25	△	●		●	●	KFTB□ 65100-4S KFTB□ 90150-4S KFTB□ 150250-4S KFTB□ 250800-4S
			5	5.0		△	●		●	●	KFTB□ 90150-5S KFTB□ 150250-5S KFTB□ 250800-5S

Recommended Cutting Conditions G152

Selection of Blade and Insert

Combination of Blade + KTKTB			Combination of Blade + KTKTBF		
Blade	Right-hand (R)		Blade	Right-hand (R)	
Insert	Neutral		Insert	Neutral	
Blade	Left-hand (L)		Blade	Left-hand (L)	
Insert	Neutral		Insert	Neutral	



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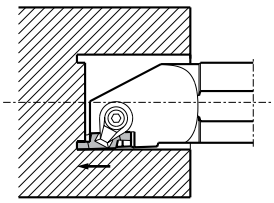
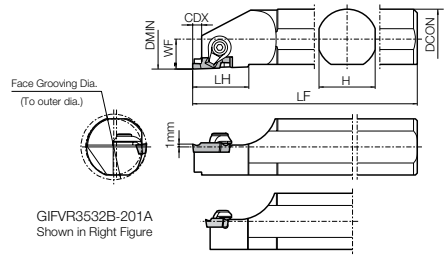
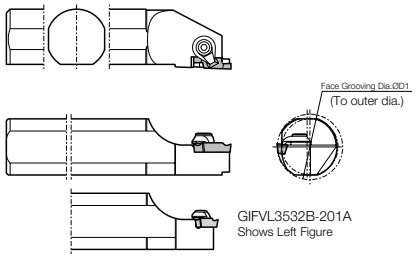
GIFV





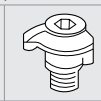
• Right-hand shown



• Left-hand shown

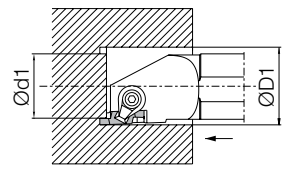
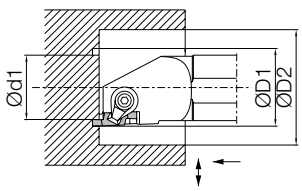
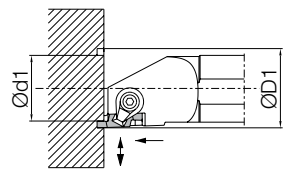
• Right-hand Insert for Right-hand Toolholder, Left-hand Insert for Left-hand Toolholder.

Toolholder Dimensions

Part Number	Stock		Dimensions (mm)							Face Grooving Dia.		Spare Parts				Applicable Inserts
												Clamp Set		Wrench		
	R	L	DMIN	DCON	H	LF	LH	WF	CDX	DAXN (min)	DAXX (min)					G138
GIFVR/L 3532B-201A	●	●	35	32	30	250	23	16	2.2	35 (12)	∞	CPS-5V	-	FT-15	-	GVFR/L...-...A GVFR/L...-...AR
GIFVR/L 3532B-351B	●	●	35	32	30	250	30	16	4.6	35 (25)	50 (∞)	-	CPS-6V	-	LW-3	GVFR/L250~350-020B GVFR/L300-150BR
3532B-352B	●	●	35	32	30	250	30	16	5.1	35 (25)	50 (∞)					GVFR/L400~490-020B GVFR/L400-200BR
5032B-501B	●	●	50	32	30	250	30	16	4.6	50 (25)	70 (∞)					GVFR/L250~350-020B GVFR/L300-150BR
5032B-502B	●		50	32	30	250	30	16	5.1	50 (25)	70 (∞)					GVFR/L400~490-020B GVFR/L400-200BR
GIFVR/L 5032B-501C	●	●	50	32	30	250	35	16	6.6	50 (25)	70 (∞)	-	CPS-8V	-	LW-4	GVFR/L350~450-040C
5032B-502C	●	●	50	32	30	250	35	16	8.1	50 (25)	70 (∞)					GVFR/L500~600-040C

Note 1. Dimension **CDX** shows available grooving depth.
2. Standard toolholders are designed with the edge position 1.0mm above the center.

Face Grooving Dia. ØD1 depends on the application.

Applications	Part Number	Face Grooving Dia. Ød1 (mm)	Face Grooving Dia. ØD (mm)			Notes
		(MIN)	MIN	MAX	(MAX)	
	**GIFVR/L 3532B-201A**	-	35	∞	∞	-
	GIFVR/L 3532B-351B			50		
	3532B-352B		50	70		
	5032B-501B					
	5032B-502B					
	GIFVR/L 5032B-501C					
	5032B-502C					
	**GIFVR/L 3532B-201A**	12	35	∞	∞	If ØD2 ≧ 58-2W, the Face Grooving Dia. can be expanded to Ød1 (MIN.) toward the Center. W = Edge Width If ØD2 ≧ 75-2W, the Face Grooving Dia. can be expanded to Ød1 (MIN.) toward the Center. W = Edge Width
	GIFVR/L 3532B-351B	25		50		
	3532B-352B		50	70		
	5032B-501B					
	5032B-502B					
	GIFVR/L 5032B-501C					
	5032B-502C					
	**GIFVR/L 3532B-201A**	12	35	∞	∞	-
	GIFVR/L 3532B-351B	25		50		
	3532B-352B		50	70		
	5032B-501B					
	5032B-502B					
	GIFVR/L 5032B-501C					
	5032B-502C					

- The value ( ) of Face Grooving Dia. DAXX (max) is the maximum outer diameter value after the initial groove between DAXN (min) ~ DAXX (max) (It is possible to widen the groove to infinity ∞)
- The value ( ) of Face Grooving Dia. DAXN (min) is the minimum diameter of the boss which remains in the center when widening the groove width to a smaller value after the initial groove between DAXN (min) ~ DAXX (max)

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GBA (Ground Chipbreaker)

Workpiece Material	Recommended Insert Grade (Vc sfm)												① f (feed) during Grooving (ipr) / ② f (feed) during Traversing (ipr) / ③ D.O.C. during Traversing (in)					Notes
	MC*	Cermet			M*	MN*	PVD			Carbide	CBN	PCD	GBA○○% 033 ~ 100 031N ~ 041N	GBA○○% 125 ~ 200 047N ~ 078N	GBA○○% 230 ~ 300 094N ~ 109N	GBA○○% 330 ~ 400 125N ~ 156N	GBA○○% 400 ~ 480 172N ~ 188N	
	PV7040	TN620	TC40	TN90	PR1215	PR1625	PR930	PR1115	PR905	KW10	KBN510 KBN525	KPD001 (KPD010)						
Carbon Steel	☆ 490~790	★ 260~720	☆ 490~720	☆ 490~720	★ 260~660	★ 260~590	☆ 260~590	☆ 260~590	-	-	-	-	① 0.0012~0.0031 ② Traversing N/A ③ Traversing N/A	① 0.0016~0.0035 ② 0.0016~0.0035 ③ MAX 0.012	① 0.0020~0.0039 ② 0.0020~0.0039 ③ MAX 0.020	① 0.0020~0.0047 ② 0.0020~0.0039 ③ MAX 0.020	① 0.0020~0.0047 ② 0.0020~0.0039 ③ MAX 0.031	
Alloy Steel	☆ 430~720	★ 260~660	☆ 430~660	☆ 430~660	★ 260~590	★ 260~520	☆ 260~520	☆ 260~520	-	-	-	-	① 0.0012~0.0028 ② Traversing N/A ③ Traversing N/A	① 0.0016~0.0031 ② 0.0016~0.0031 ③ MAX 0.012	① 0.0020~0.0035 ② 0.0020~0.0035 ③ MAX 0.020	① 0.0020~0.0039 ② 0.0020~0.0039 ③ MAX 0.020	① 0.0020~0.0039 ② 0.0020~0.0039 ③ MAX 0.031	
Stainless Steel	-		-	☆ 230~490	☆ 200~490	★ 200~430	☆ 200~430	★ 200~430	-	-	-	-	① 0.0012~0.0028 ② Traversing N/A ③ Traversing N/A	① 0.0016~0.0031 ② 0.0016~0.0031 ③ MAX 0.012	① 0.0020~0.0035 ② 0.0020~0.0035 ③ MAX 0.020	① 0.0020~0.0039 ② 0.0020~0.0039 ③ MAX 0.020	① 0.0020~0.0039 ② 0.0020~0.0039 ③ MAX 0.031	
Cast Iron	-		-	-	-		-	-	★ 260~590	☆ 200~390	★ 490~1310	-	① 0.0012~0.0031 ② Traversing N/A ③ Traversing N/A	① 0.0016~0.0035 ② 0.0016~0.0035 ③ MAX 0.012	① 0.0020~0.0039 ② 0.0020~0.0039 ③ MAX 0.020	① 0.0020~0.0047 ② 0.0020~0.0039 ③ MAX 0.020	① 0.0020~0.0047 ② 0.0020~0.0039 ③ MAX 0.031	Wet
Aluminum	-		-	-	-		-	-	-	★ 490~1310	-	★ 490~6560	① 0.0020~0.0047 ② Traversing N/A ③ Traversing N/A	① 0.0020~0.0059 ② 0.0020~0.0059 ③ MAX 0.020	① 0.0020~0.0059 ② 0.0020~0.0059 ③ MAX 0.031	① 0.0031~0.0059 ② 0.0031~0.0059 ③ MAX 0.031	① 0.0031~0.0059 ② 0.0031~0.0059 ③ MAX 0.031	
Brass	-		-	-	-		-	-	-	★ 490~980	-	★ 660~2620	① 0.0020~0.0047 ② Traversing N/A ③ Traversing N/A	① 0.0020~0.0059 ② 0.0020~0.0059 ③ MAX 0.020	① 0.0020~0.0059 ② 0.0020~0.0059 ③ MAX 0.031	① 0.0031~0.0059 ② 0.0031~0.0059 ③ MAX 0.031	① 0.0031~0.0059 ② 0.0031~0.0059 ③ MAX 0.031	
Hardened Materials	-		-	-	-		-	-	-	-	★ 260~390	-	① - ② - ③ -	① 0.0008~0.0020 ② Traversing N/A ③ Traversing N/A	① 0.0012~0.0028 ② 0.0004~0.0016 ③ MAX 0.004	① - ② - ③ -	① - ② - ③ -	

• Above cutting condition is for external grooving. Set both cutting speed and feed 10% lower for internal grooving.

★ : 1st Recommendation ☆ : 2nd Recommendation

* **MC**: MEGACOAT Cermet, **M**: MEGACOAT PVD, **MN**: MEGACOAT NANO PVD.

GBA (GM Chipbreaker)

Workpiece Material	Recommended Insert Grade (Vc sfm)			① f (feed) during Grooving (ipr) / ② f (feed) during Traversing (ipr) / ③ D.O.C. during Traversing (in)					Notes
	Cermet	MEGACOAT NANO	MEGACOAT						
	TN620	**PR1625**	**PR1215**	GBA43℀ 140-010GM	GBA43℀ 150-020GM	GBA43℀ 175-020GM~ 230-020GM	GBA43℀ 250-030GM~ 350-030GM	GBA43℀ 400-040GM	
Carbon Steel	★ 260~790	★ 260~720	☆ 260~720	① 0.0012~0.0039 ② 0.0012~0.0031 ③ MAX 0.008	① 0.0012~0.0047 ② 0.0012~0.0031 ③ MAX 0.012	① 0.0012~0.0047 ② 0.0012~0.0035 ③ MAX 0.012	① 0.0016~0.0059 ② 0.0020~0.0039 ③ MAX 0.020	① 0.0020~0.0059 ② 0.0020~0.0039 ③ MAX 0.031	
Alloy Steel	★ 260~720	★ 260~660	☆ 260~660	① 0.0012~0.0039 ② 0.0012~0.0031 ③ MAX 0.008	① 0.0012~0.0047 ② 0.0012~0.0031 ③ MAX 0.012	① 0.0012~0.0047 ② 0.0012~0.0035 ③ MAX 0.012	① 0.0016~0.0059 ② 0.0020~0.0039 ③ MAX 0.020	① 0.0020~0.0059 ② 0.0020~0.0039 ③ MAX 0.031	Wet
Stainless Steel	-	★ 200~490	★ 200~490	① 0.0012~0.0039 ② 0.0012~0.0031 ③ MAX 0.008	① 0.0012~0.0039 ② 0.0012~0.0031 ③ MAX 0.012	① 0.0012~0.0039 ② 0.0012~0.0035 ③ MAX 0.012	① 0.0016~0.0047 ② 0.0020~0.0039 ③ MAX 0.020	① 0.0016~0.0047 ② 0.0020~0.0039 ③ MAX 0.031	

• Above cutting condition is for external grooving. Set both cutting speed and feed 20% lower for internal grooving.

★ : 1st Recommendation ☆ : 2nd Recommendation

GBA (MY Chipbreaker)

Workpiece Material	Recommended Insert Grade (Vc sfm)								① f (feed) during Grooving (ipr) / ② f (feed) during Traversing (ipr) / ③ D.O.C. during Traversing (in)					Notes
	Cermet		M	PVD		Carbide	CBN	PCD	GBA43℀ 175MY~ 200MY GBA43℀ 078MYN~ 200MY	GBA43℀ 230MY~ 265MY GBA43℀ 094MYN	GBA43℀ 300MY	GBA43℀ 330MY~ 350MY GBA43℀ 125MYN	GBA43℀ 400MY GBA43℀ 156MYN	
	TN6020	TC40	PR1215	PR930	PR1115	KW10	KBN510	KPD001 (KPD010)						
Carbon Steel	☆ 490~720	-	★ 260~660	☆ 260~660	☆ 260~660	-	-	-	① 0.0012~0.0031 ② 0.0012~0.0031 ③ MAX 0.012	① 0.0016~0.0035 ② 0.0016~0.0035 ③ MAX 0.012	① 0.0020~0.0039 ② 0.0020~0.0039 ③ MAX 0.020	① 0.0020~0.0047 ② 0.0020~0.0039 ③ MAX 0.020	① 0.0020~0.0047 ② 0.0020~0.0039 ③ MAX 0.031	
Alloy Steel	☆ 430~660	-	★ 260~590	☆ 260~590	☆ 260~590	-	-	-	① 0.0012~0.0028 ② 0.0012~0.0039 ③ MAX 0.012	① 0.0016~0.0031 ② 0.0016~0.0031 ③ MAX 0.012	① 0.0020~0.0035 ② 0.0020~0.0035 ③ MAX 0.020	① 0.0020~0.0039 ② 0.0020~0.0039 ③ MAX 0.020	① 0.0020~0.0039 ② 0.0020~0.0039 ③ MAX 0.031	Wet
Stainless Steel	☆ 230~490	-	☆ 200~490	☆ 200~490	★ 200~490	-	-	-	① 0.0012~0.0028 ② 0.0012~0.0039 ③ MAX 0.012	① 0.0016~0.0031 ② 0.0016~0.0031 ③ MAX 0.012	① 0.0020~0.0035 ② 0.0020~0.0035 ③ MAX 0.020	① 0.0020~0.0039 ② 0.0020~0.0039 ③ MAX 0.020	① 0.0020~0.0039 ② 0.0020~0.0039 ③ MAX 0.031	

• Above cutting condition is for external grooving. Set both cutting speed and feed 10% lower for internal grooving.

★ : 1st Recommendation ☆ : 2nd Recommendation

* **M**: MEGACOAT PVD

GBF Insert

Workpiece Material	Recommended Insert Grade (Vc sfm)			① f (feed) during Grooving (ipr)				Notes
	MEGACOAT	MEGACOAT NANO	Carbide	② f (feed) during Traversing (ipr)				
				③ D.O.C. during Traversing (in)				
	PR1215	**PR1535**	**KW10**	GBF32R025... ~ GBF32R053...	GBF32R065... ~ GBF32R095...	GBF32R100... ~ GBF32R145...	GBF32R150... ~ GBF32R300...	
Carbon Steel	★ 260~590	☆ 230~530	-	① 0.0004~0.0020 ② Traversing N/A ③ Traversing N/A	① 0.0008~0.0028 ② Traversing N/A ③ Traversing N/A	① 0.0012~0.0031 ② 0.0012~0.0024 ③ MAX 0.008	① 0.0012~0.0031 ② 0.0012~0.0024 ③ MAX 0.008	Wet
Alloy Steel	★ 260~590	☆ 230~530	-	① 0.0004~0.0016 ② Traversing N/A ③ Traversing N/A	① 0.0008~0.0024 ② Traversing N/A ③ Traversing N/A	① 0.0012~0.0028 ② 0.0008~0.0020 ③ MAX 0.008	① 0.0012~0.0028 ② 0.0008~0.0020 ③ MAX 0.008	
Stainless Steel	☆ 200~430	★ 160~390	-	① 0.0004~0.0016 ② Traversing N/A ③ Traversing N/A	① 0.0008~0.0024 ② Traversing N/A ③ Traversing N/A	① 0.0012~0.0028 ② 0.0008~0.0020 ③ MAX 0.008	① 0.0012~0.0028 ② 0.0008~0.0020 ③ MAX 0.008	
Cast Iron	-	-	★ 200~330	① 0.0004~0.0020 ② Traversing N/A ③ Traversing N/A	① 0.0008~0.0028 ② Traversing N/A ③ Traversing N/A	① 0.0012~0.0031 ② 0.0012~0.0024 ③ MAX 0.008	① 0.0012~0.0031 ② 0.0012~0.0024 ③ MAX 0.008	
Aluminum Alloys	-	-	★ 490~1,310	① 0.0004~0.0020 ② Traversing N/A ③ Traversing N/A	① 0.0008~0.0028 ② Traversing N/A ③ Traversing N/A	① 0.0012~0.0031 ② 0.0012~0.0024 ③ MAX 0.008	① 0.0012~0.0031 ② 0.0012~0.0024 ③ MAX 0.008	
Brass	-	-	★ 490~980	① 0.0004~0.0016 ② Traversing N/A ③ Traversing N/A	① 0.0008~0.0024 ② Traversing N/A ③ Traversing N/A	① 0.0012~0.0028 ② 0.0008~0.0020 ③ MAX 0.008	① 0.0012~0.0028 ② 0.0008~0.0020 ③ MAX 0.008	

★ : 1st Recommendation ☆ : 2nd Recommendation

GBF-GL Insert

Workpiece Material	Recommended Insert Grade (Vc sfm)		① f (feed) during Grooving (ipr)				Notes
	MEGACOAT	MEGACOAT NANO	② f (feed) during Traversing (ipr)				
			③ D.O.C. during Traversing (in)				
	PR1215	**PR1535**	GBF32R075-005GL	GBF32R095-005GL ~ GBF32R100-005GL	GBF32R150-010GL ~ GBF32R200-010GL	GBF32R300-010GL	
Carbon Steel	★ 260~590	☆ 230~530	① 0.0004~0.0020 ② Traversing N/A ③ Traversing N/A	① 0.0008~0.0028 ② Traversing N/A ③ Traversing N/A	① 0.0012~0.0031 ② 0.0012~0.0024 ③ MAX 0.008	① 0.0012~0.0031 ② 0.0012~0.0024 ③ MAX 0.008	Wet
Alloy Steel	★ 260~590	☆ 230~530	① 0.0004~0.0016 ② Traversing N/A ③ Traversing N/A	① 0.0008~0.0024 ② Traversing N/A ③ Traversing N/A	① 0.0012~0.0028 ② 0.0008~0.0020 ③ MAX 0.008	① 0.0012~0.0028 ② 0.0008~0.0020 ③ MAX 0.008	
Stainless Steel	☆ 200~430	★ 160~390	① 0.0004~0.0016 ② Traversing N/A ③ Traversing N/A	① 0.0008~0.0024 ② Traversing N/A ③ Traversing N/A	① 0.0012~0.0028 ② 0.0008~0.0020 ③ MAX 0.008	① 0.0012~0.0028 ② 0.0008~0.0020 ③ MAX 0.008	

★ : 1st Recommendation ☆ : 2nd Recommendation

TGF (Ground Chipbreaker)

Workpiece Material	Recommended Insert Grade (Vc sfm)							① f (feed) during Grooving (ipr)				Notes
	Cermet	MEGA	PVD		Carbide	CBN	PCD	② f (feed) during Traversing (ipr)				
								③ D.O.C. during Traversing (in)				
	TC40	PR1215	PR930	PR1115	KW10	KBN510	KPD001 (KPD010)	TGF32R 033~050-005	TGF32R 075~095-010	TGF32R 100~145-010	TGF32R 150~250-010	
Carbon Steel	☆ 490~720	★ 260~590	☆ 260~590	☆ 260~590	-	-	-	① 0.0004~0.0020 ② Traversing N/A ③ Traversing N/A	① 0.0008~0.0028 ② Traversing N/A ③ Traversing N/A	① 0.0012~0.0031 ② 0.0012~0.0024 ③ MAX 0.008	① 0.0012~0.0031 ② 0.0012~0.0024 ③ MAX 0.008	Wet
Alloy Steel	☆ 430~660	★ 260~520	☆ 260~520	☆ 260~520	-	-	-	① 0.0004~0.0016 ② Traversing N/A ③ Traversing N/A	① 0.0008~0.0024 ② Traversing N/A ③ Traversing N/A	① 0.0012~0.0028 ② 0.0008~0.0020 ③ MAX 0.008	① 0.0012~0.0028 ② 0.0008~0.0020 ③ MAX 0.008	
Stainless Steel	-	☆ 200~430	☆ 200~430	★ 200~430	-	-	-	① 0.0004~0.0016 ② Traversing N/A ③ Traversing N/A	① 0.0008~0.0024 ② Traversing N/A ③ Traversing N/A	① 0.0012~0.0028 ② 0.0008~0.0020 ③ MAX 0.008	① 0.0012~0.0028 ② 0.0008~0.0020 ③ MAX 0.008	
Cast Iron	-	-	-	-	★ 200~330	-	-	① 0.0004~0.0020 ② Traversing N/A ③ Traversing N/A	① 0.0008~0.0028 ② Traversing N/A ③ Traversing N/A	① 0.0012~0.0031 ② 0.0012~0.0024 ③ MAX 0.008	① 0.0012~0.0031 ② 0.0012~0.0024 ③ MAX 0.008	
Aluminum	-	-	-	-	★ 490~1310	-	★ 490~6560	① 0.0004~0.0020 ② Traversing N/A ③ Traversing N/A	① 0.0008~0.0028 ② Traversing N/A ③ Traversing N/A	① 0.0012~0.0031 ② 0.0012~0.0024 ③ MAX 0.008	① 0.0012~0.0031 ② 0.0012~0.0024 ③ MAX 0.008	
Brass	-	-	-	-	★ 490~980	-	★ 660~2620	① 0.0004~0.0016 ② Traversing N/A ③ Traversing N/A	① 0.0008~0.0024 ② Traversing N/A ③ Traversing N/A	① 0.0012~0.0028 ② 0.0008~0.0020 ③ MAX 0.008	① 0.0012~0.0028 ② 0.0008~0.0020 ③ MAX 0.008	

* MEGA indicates MEGACOAT.

★ : 1st Recommendation ☆ : 2nd Recommendation

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GH (Ground Chipbreaker)

Workpiece Material	Recommended Insert Grade (Vc sfm)								① f (feed) during Grooving (ipr) / ② f (feed) during Traversing (ipr) / ③ D.O.C. during Traversing (in)				Notes
	Cermet			PVD	Carbide	Ceramic			GH 40~50...	GH 55~70...	GH 75~80...	GH 100~120...	
	TN90	TC40	TC60	PR930	KW10	A65	A66N	PT600M					
Carbon Steel	☆ 490~720	☆ 490~720	☆ 330~490	★ 260~590	-	-	-	-	① 0.0028~0.0079 ② 0.0028~0.0059 ③ MAX 0.039	① 0.0028~0.0079 ② 0.0028~0.0059 ③ MAX 0.039	① 0.0039~0.0098 ② 0.0039~0.0079 ③ MAX 0.059	① 0.0059~0.0118 ② 0.0059~0.0098 ③ MAX 0.079	Wet
Alloy Steel	☆ 430~660	☆ 430~660	☆ 260~430	★ 260~520	-	-	-	-	① 0.0028~0.0071 ② 0.0028~0.0051 ③ MAX 0.039	① 0.0028~0.0071 ② 0.0028~0.0051 ③ MAX 0.039	① 0.0039~0.0091 ② 0.0039~0.0071 ③ MAX 0.059	① 0.0059~0.0106 ② 0.0059~0.0087 ③ MAX 0.079	
Stainless Steel	☆ 230~490	-	☆ 200~330	★ 200~430	-	-	-	-	① 0.0028~0.0063 ② 0.0028~0.0051 ③ MAX 0.039	① 0.0028~0.0063 ② 0.0028~0.0051 ③ MAX 0.039	① 0.0039~0.0083 ② 0.0039~0.0071 ③ MAX 0.059	① 0.0059~0.0098 ② 0.0059~0.0087 ③ MAX 0.079	
Cast Iron	-	-	-	-	★ 200~330	☆ 490~980	☆ 490~980	☆ 490~980	**KW10** ① 0.0028~0.0079 ② 0.0028~0.0059 ③ MAX 0.039 **A65 / A66N** ① 0.0012~0.0028 ② Traversing N/A ③ Traversing N/A	**KW10** ① 0.0028~0.0079 ② 0.0028~0.0059 ③ MAX 0.039 **A65 / A66N** ① 0.0012~0.0028 ② Traversing N/A ③ Traversing N/A	**KW10** ① 0.0039~0.0098 ② 0.0039~0.0079 ③ MAX 0.059 **A65 / A66N** ① 0.002~0.0035 ② Traversing N/A ③ Traversing N/A	**KW10** ① 0.0059~0.0118 ② 0.0059~0.0098 ③ MAX 0.079 **A65 / A66N** ① 0.002~0.0035 ② Traversing N/A ③ Traversing N/A	
Aluminum	-	-	-	-	★ 490~1310	-	-	-	① 0.0028~0.0079 ② 0.0028~0.0059 ③ MAX 0.039	① 0.0028~0.0079 ② 0.0028~0.0059 ③ MAX 0.039	① 0.0039~0.0098 ② 0.0039~0.0079 ③ MAX 0.059	① 0.0059~0.0118 ② 0.0059~0.0098 ③ MAX 0.079	
Brass	-	-	-	-	★ 490~980	-	-	-	① 0.0028~0.0079 ② 0.0028~0.0059 ③ MAX 0.039	① 0.0028~0.0079 ② 0.0028~0.0059 ③ MAX 0.039	① 0.0039~0.0098 ② 0.0039~0.0079 ③ MAX 0.059	① 0.0059~0.0118 ② 0.0059~0.0098 ③ MAX 0.079	
Hardened Materials	-	-	-	-	-	☆ 130~260	☆ 130~260	☆ 130~260	① 0.0008~0.0020 ② 0.0004~0.0012 ③ MAX 0.004	① 0.0008~0.0020 ② 0.0004~0.0012 ③ MAX 0.008	① 0.0008~0.002 ② 0.0004~0.0016 ③ MAX 0.008	① - ② - ③ -	

* Above cutting condition is for external grooving. Set both cutting speed and feed 10% lower for internal grooving.

★ : 1st Recommendation ☆ : 2nd Recommendation

GHU (Molded Chipbreaker)

Workpiece Material	Recommended Insert Grade (Vc sfm)								① f (feed) during Grooving (ipr) / ② f (feed) during Traversing (ipr) / ③ D.O.C. during Traversing (in)			Notes
	Cermet			CVD	PVD		Ceramic		GHU 40~20	GHU 50~20	GHU 60~20	
	TN60	TC40	TC60	CR9025	PR630	PR930	A65	A66N				
Carbon Steel	☆ 430~660	-	-	☆ 260~590	-	-	-	-	① 0.0024~0.0047 ② 0.0020~0.0039 ③ MAX 0.039	① 0.0024~0.0047 ② 0.0020~0.0039 ③ MAX 0.039	① 0.0024~0.0059 ② 0.0020~0.0047 ③ MAX 0.059	Wet
Alloy Steel	☆ 330~590	-	-	☆ 260~520	-	-	-	-	① 0.0024~0.0047 ② 0.0020~0.0039 ③ MAX 0.039	① 0.0024~0.0047 ② 0.0020~0.0039 ③ MAX 0.039	① 0.0024~0.0059 ② 0.0020~0.0047 ③ MAX 0.059	
Stainless Steel	-	-	-	☆ 200~430	-	-	-	-	① 0.0024~0.0039 ② 0.0020~0.0031 ③ MAX 0.031	① 0.0024~0.0039 ② 0.0020~0.0031 ③ MAX 0.031	① 0.0024~0.0047 ② 0.0020~0.0039 ③ MAX 0.047	

* Above cutting condition is for external grooving. Set both cutting speed and feed 10% lower for internal grooving.

★ : 1st Recommendation ☆ : 2nd Recommendation

GA (Molded Chipbreaker)

Workpiece Material	Recommended Insert Grade (Vc sfm)							① f (feed) during Grooving (ipr) / ② f (feed) during Traversing (ipr) / ③ D.O.C. during Traversing (in)			Notes
	Cermet				CVD	PVD	Carbide	GA 30	GA 40	GA 50	
	TN60	TN90	TC40	TC60	CR9025	PR630	PR930	KW10				
Carbon Steel	☆ 430~660	-	-	-	★ 260~590	-	-	-	① 0.0024~0.0071 ② 0.0020~0.0059 ③ MAX 0.031	① 0.0024~0.0083 ② 0.0020~0.0067 ③ MAX 0.039	① 0.0024~0.0098 ② 0.0020~0.0079 ③ MAX 0.051	Wet
Alloy Steel	☆ 330~590	-	-	-	★ 260~520	-	-	-	① 0.0024~0.0059 ② 0.0020~0.0047 ③ MAX 0.012	① 0.0024~0.0071 ② 0.0020~0.0059 ③ MAX 0.020	① 0.0024~0.0087 ② 0.0020~0.0071 ③ MAX 0.031	
Stainless Steel	-	-	-	-	★ 200~430	-	-	-	① 0.0024~0.0039 ② 0.0020~0.0031 ③ MAX 0.031	① 0.0024~0.0039 ② 0.0020~0.0031 ③ MAX 0.031	① 0.0024~0.0047 ② 0.0020~0.0039 ③ MAX 0.047	

★ : 1st Recommendation ☆ : 2nd Recommendation

SIGC

Workpiece	Recommended Insert Grade (Vc : sfm)		(1) Feed Rate for Grooving (ipr) / (2) Feed Rate for Traversing (ipr) / (3) D.O.C. for Traversing (in)			Notes
	MEGACOAT NANO PLUS	MEGACOAT NANO				
	PR1725	**PR1535**	**GC08R... **	**GC10R, GC12R 100 ~ 200...**	**GC10R, GC12R 250 ~ 300...**	
Carbon Steel	★ 160 - 260	☆ 160 - 260	(1) 0.0004 ~ 0.0012	(1) 0.0008 ~ 0.0016	(1) 0.0008 ~ 0.0016	Coolant
			(2) 0.0004 ~ 0.0012	(2) 0.0008 ~ 0.0016	(2) 0.0008 ~ 0.0016	
			(3) Max. 0.0020	(3) Max. 0.0020	(3) Max. 0.0039	
Alloy Steel	★ 160 - 260	☆ 160 - 260	(1) 0.0004 ~ 0.0012	(1) 0.0008 ~ 0.0016	(1) 0.0008 ~ 0.0016	
			(2) 0.0004 ~ 0.0012	(2) 0.0008 ~ 0.0016	(2) 0.0008 ~ 0.0016	
			(3) Max. 0.0020	(3) Max. 0.0020	(3) Max. 0.0039	
Stainless Steel	☆ 160 - 260	★ 160 - 260	(1) 0.0004 ~ 0.0012	(1) 0.0004 ~ 0.0012	(1) 0.0004 ~ 0.0012	
			(2) 0.0004 ~ 0.0012	(2) 0.0004 ~ 0.0012	(2) 0.0004 ~ 0.0012	
			(3) Max. 0.0020	(3) Max. 0.0020	(3) Max. 0.0039	

★ : 1st Recommendation ☆ : 2nd Recommendation

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◆ SIGE (Ground Chipbreaker : GE□...A(R), GE□...B(R))

Workpiece Material	Recommended Insert Grade (Vc sfm)				① f (feed) during Grooving (ipr) ② f (feed) during Traversing (ipr) ③ D.O.C. during Traversing (in)			Notes
	Cermet	MEGACOAT	PVD	Carbide	GE□031-002A ~ GE□078-004A GE□100-005A ~ GE□200-010A GER100-050AR ~ GER200-100AR	GE□031-002B ~ GE□088-004B GE□100-005B ~ GE□200-010B GER100-050BR ~ GER200-100BR	GE□094-004B ~ GE□122-008B GE□250-020B ~ GE□300-020B	
	TN6020	**PR1225**	**PR1025**	**KW10**				
Carbon Steel	☆ 160~260	★ 160~260	☆ 160~260	-	① 0.0004~0.0012 ② 0.0004~0.0012 ③ Max. 0.0020	① 0.0008~0.0016 ② 0.0008~0.0016 ③ Max. 0.0020	① 0.0008~0.0016 ② 0.0008~0.0016 ③ Max. 0.0039	Wet
Alloy Steel	☆ 160~260	★ 160~260	☆ 160~260	-	① 0.0004~0.0012 ② 0.0004~0.0012 ③ Max. 0.0020	① 0.0008~0.0016 ② 0.0008~0.0016 ③ Max. 0.0020	① 0.0008~0.0016 ② 0.0008~0.0016 ③ Max. 0.0039	
Stainless Steel	-	★ 160~260	☆ 160~260	-	① 0.0004~0.0012 ② 0.0004~0.0012 ③ Max. 0.0020	① 0.0004~0.0012 ② 0.0004~0.0012 ③ Max. 0.0020	① 0.0004~0.0012 ② 0.0004~0.0012 ③ Max. 0.0039	
Cast Iron	-	-	-	★ 160~260	① 0.0004~0.0012 ② 0.0004~0.0012 ③ Max. 0.0020	① 0.0008~0.0016 ② 0.0008~0.0016 ③ Max. 0.0020	① 0.0008~0.0016 ② 0.0008~0.0016 ③ Max. 0.0039	
Aluminum	-	-	-	★ 160~330	① 0.0004~0.0012 ② 0.0004~0.0012 ③ Max. 0.0039	① 0.0008~0.0016 ② 0.0008~0.0016 ③ Max. 0.0039	① 0.0008~0.0016 ② 0.0008~0.0016 ③ Max. 0.0079	
Brass	-	-	-	★ 160~330	① 0.0004~0.0012 ② 0.0004~0.0012 ③ Max. 0.0039	① 0.0008~0.0016 ② 0.0008~0.0016 ③ Max. 0.0039	① 0.0008~0.0016 ② 0.0008~0.0016 ③ Max. 0.0079	

• Use PVD coated grade or uncoated carbide for traversing with edge width 0.0394"(1mm). (GE□100-005A/100-005B)

★ : 1st Recommendation ☆ : 2nd Recommendation

◆ SIGE (Ground Chipbreaker : GE□...C(R),GE□...D(R),GE□...E)

Workpiece Material	Recommended Insert Grade (Vc sfm)				① f (feed) during Grooving (ipr) ② f (feed) during Traversing (ipr) ③ D.O.C. during Traversing (in)						Notes
	Cermet	MEGA-COAT	PVD	Carbide	GE□ 100~200-010C 200-100CR	GE□ 250~350-020C 250~300-150CR					
	TN6020	**PR1225**	**PR1025**	**GW15**	GE□ 100~145-010D	GE□ 150~195-010D	GE□ 200~280-020D 200-100DR		GE□ 300~400-020D 300-150DR		
					GE□ 100-010E	GE□ 150~195-010E	GE□ 200~225-010E 230-020E	GE□ 250~330-020E		GE□ 350~430-020E	GE□ 450~500-020E
Carbon Steel	☆ 390~590	★ 200~460	☆ 200~460	-	① 0.0012~0.0031 ② 0.0012~0.0031 ③ Max. 0.0118	① 0.0012~0.0031 ② 0.0012~0.0031 ③ Max. 0.0118	① 0.0016~0.0035 ② 0.0016~0.0035 ③ Max. 0.0118	① 0.0016~0.0035 ② 0.0016~0.0035 ③ Max. 0.0118	① 0.0020~0.0047 ② 0.0020~0.0039 ③ Max. 0.0197	① 0.0020~0.0047 ② 0.0020~0.0039 ③ Max. 0.0197	① 0.0020~0.0047 ② 0.0020~0.0039 ③ Max. 0.0197	Wet
Alloy Steel	☆ 330~520	★ 200~390	☆ 200~390	-	① 0.0012~0.0028 ② 0.0012~0.0039 ③ Max. 0.0118	① 0.0012~0.0028 ② 0.0012~0.0039 ③ Max. 0.0118	① 0.0016~0.0031 ② 0.0016~0.0031 ③ Max. 0.0118	① 0.0016~0.0031 ② 0.0016~0.0031 ③ Max. 0.0118	① 0.0020~0.0039 ② 0.0020~0.0039 ③ Max. 0.0197	① 0.0020~0.0039 ② 0.0020~0.0039 ③ Max. 0.0197	① 0.0020~0.0039 ② 0.0020~0.0039 ③ Max. 0.0197	
Stainless Steel	☆ 230~430	★ 200~360	☆ 200~360	-	① 0.0012~0.0028 ② 0.0012~0.0039 ③ Max. 0.0118	① 0.0012~0.0028 ② 0.0012~0.0039 ③ Max. 0.0118	① 0.0016~0.0031 ② 0.0016~0.0031 ③ Max. 0.0118	① 0.0016~0.0031 ② 0.0016~0.0031 ③ Max. 0.0118	① 0.0020~0.0039 ② 0.0020~0.0039 ③ Max. 0.0197	① 0.0020~0.0039 ② 0.0020~0.0039 ③ Max. 0.0197	① 0.0020~0.0039 ② 0.0020~0.0039 ③ Max. 0.0197	
Cast Iron	-	-	-	★ 200~330	① 0.0012~0.0031 ② 0.0012~0.0031 ③ Max. 0.0118	① 0.0012~0.0031 ② 0.0012~0.0031 ③ Max. 0.0118	① 0.0016~0.0035 ② 0.0016~0.0035 ③ Max. 0.0118	① 0.0016~0.0035 ② 0.0016~0.0035 ③ Max. 0.0118	① 0.0020~0.0047 ② 0.0020~0.0039 ③ Max. 0.0197	① 0.0020~0.0047 ② 0.0020~0.0039 ③ Max. 0.0197	① 0.0020~0.0047 ② 0.0020~0.0039 ③ Max. 0.0197	
Aluminum	-	-	-	★ 490~980	① 0.0020~0.0047 ② 0.0020~0.0047 ③ Max. 0.0197	① 0.0020~0.0047 ② 0.0020~0.0047 ③ Max. 0.0197	① 0.0020~0.0059 ② 0.0020~0.0059 ③ Max. 0.0197	① 0.0020~0.0059 ② 0.0020~0.0059 ③ Max. 0.0197	① 0.0031~0.0059 ② 0.0031~0.0059 ③ Max. 0.0315	① 0.0031~0.0059 ② 0.0031~0.0059 ③ Max. 0.0315	① 0.0031~0.0059 ② 0.0031~0.0059 ③ Max. 0.0315	
Brass	-	-	-	★ 330~820	① 0.0020~0.0047 ② 0.0020~0.0047 ③ Max. 0.0197	① 0.0020~0.0047 ② 0.0020~0.0047 ③ Max. 0.0197	① 0.0020~0.0059 ② 0.0020~0.0059 ③ Max. 0.0197	① 0.0020~0.0059 ② 0.0020~0.0059 ③ Max. 0.0197	① 0.0031~0.0059 ② 0.0031~0.0059 ③ Max. 0.0315	① 0.0031~0.0059 ② 0.0031~0.0059 ③ Max. 0.0315	① 0.0031~0.0059 ② 0.0031~0.0059 ③ Max. 0.0315	

• Use PVD coated grade or uncoated carbide for traversing with edge width 0.0394" (1mm). (GE□100-010C / 100-010D / 100-010E)

★ : 1st Recommendation ☆ : 2nd Recommendation

◆ SIGE (Molded Chipbreaker : GER...CM, GER...DM, GER...EM)

Workpiece Material	Recommended Insert Grade (Vc sfm)				① f (feed) during Grooving (ipr) ② f (feed) during Traversing (ipr) ③ D.O.C. during Traversing (in)						Notes
	Cermet	MEGA COAT	PVD	Carbide	GER 150~200-010CM GER 150~200-010DM GER 150~200-010EM	GER 250~350-020CM	GER 230~250-020DM	GER 300~400-020DM GER 250~350-020EM	GER 350~400-020EM	GER 450~500-020CM	
	TN6020	**PR1225**	**PR1025**	**GW15**							
Carbon Steel	-	★ 200~520	☆ 200~520	-	① 0.0012~0.0039 ② 0.0012~0.0039 ③ Max. 0.0394	① 0.0012~0.0047 ② 0.0012~0.0039 ③ Max. 0.0591	① 0.0016~0.0047 ② 0.0016~0.0039 ③ Max. 0.0591	① 0.0020~0.0047 ② 0.0020~0.0039 ③ Max. 0.0591	① 0.0020~0.0047 ② 0.0020~0.0039 ③ Max. 0.0591	① 0.0020~0.0047 ② 0.0020~0.0039 ③ Max. 0.0591	Wet
Alloy Steel	-	★ 200~460	☆ 200~460	-	① 0.0012~0.0039 ② 0.0012~0.0039 ③ Max. 0.0394	① 0.0012~0.0039 ② 0.0012~0.0039 ③ Max. 0.0591	① 0.0016~0.0047 ② 0.0016~0.0039 ③ Max. 0.0591	① 0.0020~0.0047 ② 0.0020~0.0039 ③ Max. 0.0591	① 0.0020~0.0047 ② 0.0020~0.0039 ③ Max. 0.0591	① 0.0020~0.0047 ② 0.0020~0.0039 ③ Max. 0.0591	
Stainless Steel	-	★ 200~360	☆ 200~360	-	① 0.0012~0.0031 ② 0.0012~0.0039 ③ Max. 0.0394	① 0.0012~0.0031 ② 0.0012~0.0039 ③ Max. 0.0591	① 0.0016~0.0031 ② 0.0016~0.0039 ③ Max. 0.0591	① 0.0020~0.0039 ② 0.0020~0.0039 ③ Max. 0.0591	① 0.0020~0.0039 ② 0.0020~0.0039 ③ Max. 0.0591	① 0.0020~0.0039 ② 0.0020~0.0039 ③ Max. 0.0591	

★ : 1st Recommendation ☆ : 2nd Recommendation

GIA (Molded Chipbreaker)

Workpiece Material	Recommended Insert Grade (Vc sfm)								① f (feed) during Grooving (ipr)			Notes
	Cermet				CVD	PVD		Carbide	② f (feed) during Traversing (ipr)			
	TN60	TN90	TC40	TC60	CR9025	PR630	PR930	KW10	③ D.O.C. during Traversing (in)			
									GIA 30	GIA 40	GIA 50	
Carbon Steel	☆ 200~390	-	-	-	★ 200~390	-	-	-	① 0.0016~0.0031 ② 0.0008~0.0031 ③ MAX 0.012	① 0.0016~0.0035 ② 0.0008~0.0031 ③ MAX 0.016	① 0.0020~0.0039 ② 0.0020~0.0031 ③ MAX 0.020	Wet
Alloy Steel	☆ 200~330	-	-	-	★ 200~330	-	-	-	① 0.0016~0.0028 ② 0.0008~0.0028 ③ MAX 0.012	① 0.0016~0.0028 ② 0.0008~0.0028 ③ MAX 0.016	① 0.0020~0.0031 ② 0.0020~0.0031 ③ MAX 0.020	
Stainless Steel	-	-	-	-	★ 200~260	-	-	-	① 0.0016~0.0028 ② 0.0008~0.0028 ③ MAX 0.012	① 0.0016~0.0028 ② 0.0008~0.0028 ③ MAX 0.016	① 0.0020~0.0031 ② 0.0020~0.0031 ③ MAX 0.020	

★ : 1st Recommendation ☆ : 2nd Recommendation

FMM / FMN

Workpiece Material	Recommended Insert Grade (Vc sfm)						Face Grooving (FMM / FMN)			Traversing (FMM)			Notes
	Cermet	CVD	PVD			Carbide	Edge Width (in)			Edge Width (in)			
	TN90	CR9025	PR915	PR930	PR905	KW10	0.1181	0.1575	0.1969 / 0.2362	0.1181	0.1575	0.1969 / 0.2362	
							Feed Rate (ipr)			Feed Rate (ipr)			
Carbon Steel	☆ 330~720	☆ 260~660	☆ 260~660	★ 260~660	-	-	0.0012~0.0020	0.0012~0.0031	0.0020~0.0039	0.0020~0.0039	0.0020~0.0098	0.0039~0.0118	Wet
Alloy Steel	☆ 260~660	☆ 230~590	☆ 230~590	★ 230~590	-	-	0.0012~0.0020	0.0012~0.0031	0.0020~0.0039	0.0020~0.0039	0.0020~0.0098	0.0039~0.0118	
Stainless Steel	☆ 230~520	☆ 200~490	★ 200~490	☆ 200~490	-	-	0.0012~0.0020	0.0012~0.0031	0.0020~0.0039	0.0020~0.0039	0.0020~0.0098	0.0039~0.0118	
Cast Iron	-	-	-	-	★ 260~590	☆ 230~490	0.0012~0.0020	0.0012~0.0031	0.0020~0.0039	0.0020~0.0039	0.0020~0.0098	0.0039~0.0118	
Aluminum	-	-	-	-	-	★ 660~1640	0.0012~0.0020	0.0012~0.0031	0.0020~0.0039	0.0020~0.0039	0.0020~0.0098	0.0039~0.0118	
Brass	-	-	-	-	-	★ 330~660	0.0012~0.0020	0.0012~0.0031	0.0020~0.0039	0.0020~0.0039	0.0020~0.0098	0.0039~0.0118	

- Set the feed rate 1/100 of edge width on the first groove and check chip evacuation.
- FMN type Inserts are only for Deep Grooving, and when used for turning, set to D.O.C. = 0.079" and under.

★ : 1st Recommendation ☆ : 2nd Recommendation

Turning Conditions

① **FMM Toolholder**

	Recommended Cutting Conditions	
D.O.C. (MAX) (in)	Under 50% of Edge Width	D.O.C. ≤ 0.0197CW
f (MAX) (ipr)	Under 3~5% of Edge Width	f≤ [0.0012(Min.) ~ 0.0020(Max.)]CW

- (D.O.C.) x (f) should be as follows.

Edge Width (in) / Load (in^2)	0.1181	0.1575	0.1969	0.2362
D.O.C. x Feed Rate (f)	~0.004	~0.006	~0.010	~0.014

- D.O.C. x f ≤ $0.0004CW^2$

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GV (Ground Chipbreaker)

Workpiece Material	Recommended Insert Grade (Vc sfm)						① f (feed) during Grooving (ipr)						Notes
	Cermet			MEGA	PVD	Carbide	② f (feed) during Turning (ipr)						
							③ D.O.C. during Turning (in)						
	TN90	TC40	TC60	PR1225	PR930	KW10	GV™ 100~300-...SS 100~300-...S GV™ 100~340-...A 200~300-...AR	GV™ 145~185-...B	GV™ 200~280-...B GV™ 200-100BR	GV™ 300~400-...B GV™ 300-150BR	GV™ 280~300-...C	GV™ 340~400-...C GV™ 430~500-...C	
Carbon Steel	☆ 390~590	☆ 390~590	☆ 260~390	★ 260~520	☆ 260~460	-	① 0.0012~0.0031 ② 0.0012~0.0031 ③ MAX 0.012	① 0.0012~0.0031 ② 0.0012~0.0031 ③ MAX 0.012	① 0.0016~0.0035 ② 0.0016~0.0035 ③ MAX 0.012	① 0.0020~0.0047 ② 0.0020~0.0039 ③ MAX 0.020	① 0.0016~0.0035 ② 0.0020~0.0039 ③ MAX 0.012	① 0.0020~0.0047 ② 0.0020~0.0039 ③ MAX 0.020	① 0.0020~0.0047 ② 0.0020~0.0039 ③ MAX 0.020	Wet
Alloy Steel	☆ 330~520	☆ 330~520	☆ 260~330	★ 260~460	☆ 260~390	-	① 0.0012~0.0028 ② 0.0012~0.0039 ③ MAX 0.012	① 0.0012~0.0028 ② 0.0012~0.0039 ③ MAX 0.012	① 0.0016~0.0031 ② 0.0016~0.0031 ③ MAX 0.012	① 0.0020~0.0039 ② 0.0020~0.0039 ③ MAX 0.020	① 0.0016~0.0031 ② 0.0020~0.0039 ③ MAX 0.012	① 0.0020~0.0039 ② 0.0020~0.0039 ③ MAX 0.020	① 0.0020~0.0039 ② 0.0020~0.0039 ③ MAX 0.020	
Stainless Steel	☆ 230~430	-	☆ 200~330	★ 200~430	☆ 200~360	-	① 0.0012~0.0028 ② 0.0012~0.0039 ③ MAX 0.012	① 0.0012~0.0028 ② 0.0012~0.0039 ③ MAX 0.012	① 0.0016~0.0031 ② 0.0016~0.0031 ③ MAX 0.012	① 0.0020~0.0039 ② 0.0020~0.0039 ③ MAX 0.020	① 0.0016~0.0031 ② 0.0020~0.0039 ③ MAX 0.012	① 0.0020~0.0039 ② 0.0020~0.0039 ③ MAX 0.020	① 0.0020~0.0039 ② 0.0020~0.0039 ③ MAX 0.020	
Cast Iron	-	-	-	-	-	★ 200~330	① 0.0012~0.0031 ② 0.0012~0.0031 ③ MAX 0.012	① 0.0012~0.0031 ② 0.0012~0.0031 ③ MAX 0.012	① 0.0016~0.0035 ② 0.0016~0.0035 ③ MAX 0.012	① 0.0020~0.0047 ② 0.0020~0.0039 ③ MAX 0.020	① 0.0016~0.0035 ② 0.0020~0.0039 ③ MAX 0.012	① 0.0020~0.0047 ② 0.0020~0.0039 ③ MAX 0.020	① 0.0020~0.0047 ② 0.0020~0.0039 ③ MAX 0.020	
Aluminum	-	-	-	-	-	★ 490~980	① 0.0020~0.0047 ② 0.0020~0.0047 ③ MAX 0.020	① 0.0020~0.0047 ② 0.0020~0.0047 ③ MAX 0.020	① 0.0020~0.0059 ② 0.0020~0.0059 ③ MAX 0.020	① 0.0031~0.0059 ② 0.0031~0.0059 ③ MAX 0.031	① 0.0020~0.0059 ② 0.0020~0.0059 ③ MAX 0.020	① 0.0031~0.0059 ② 0.0031~0.0059 ③ MAX 0.031	① 0.0031~0.0059 ② 0.0031~0.0059 ③ MAX 0.031	
Brass	-	-	-	-	-	★ 330~820	① 0.0020~0.0047 ② 0.0020~0.0047 ③ MAX 0.020	① 0.0020~0.0047 ② 0.0020~0.0047 ③ MAX 0.020	① 0.0020~0.0059 ② 0.0020~0.0059 ③ MAX 0.020	① 0.0031~0.0059 ② 0.0031~0.0059 ③ MAX 0.031	① 0.0020~0.0059 ② 0.0020~0.0059 ③ MAX 0.020	① 0.0031~0.0059 ② 0.0031~0.0059 ③ MAX 0.031	① 0.0031~0.0059 ② 0.0031~0.0059 ③ MAX 0.031	

* Use MEGACOAT, PVD coated grade or carbide for turning with edge width 0.0394" (1mm) (GV™100SS/100S/100A)

★ : 1st Recommendation ☆ : 2nd Recommendation

GVF (Ground Chipbreaker)

Workpiece Material	Recommended Insert Grade (Vc sfm)							① f (feed) during Grooving (ipr)					Notes
	Cermet				MEGA	PVD	Carbide	② f (feed) during Traversing (ipr)					
								③ D.O.C. during Traversing (in)					
	TN60	TN90	TC40	TC60	PR1225	PR930	KW10	GVF™ 200~340...A GVF™ 200-100AR ~300-150AR	GVF™ 250~350...B GVF™ 300-150BR	GVF™ 400~490...B GVF™ 400-200BR	GVF™ 350~450...C	GVF™ 500~600...C	
Carbon Steel	-	☆ 490~720	☆ 490~720	☆ 330~490	★ 260~660	☆ 260~590	-	① 0.0012~0.0031 ② 0.0012~0.0031 ③ MAX 0.012	① 0.0016~0.0035 ② 0.0016~0.0035 ③ MAX 0.012	① 0.0020~0.0039 ② 0.0020~0.0039 ③ MAX 0.020	① 0.0020~0.0047 ② 0.0020~0.0039 ③ MAX 0.020	① 0.0020~0.0047 ② 0.0020~0.0039 ③ MAX 0.031	Wet
Alloy Steel	-	☆ 430~660	☆ 430~660	☆ 260~430	★ 260~590	☆ 260~520	-	① 0.0012~0.0028 ② 0.0012~0.0039 ③ MAX 0.012	① 0.0016~0.0031 ② 0.0016~0.0031 ③ MAX 0.012	① 0.0020~0.0035 ② 0.0020~0.0035 ③ MAX 0.020	① 0.0020~0.0039 ② 0.0020~0.0039 ③ MAX 0.020	① 0.0020~0.0039 ② 0.0020~0.0039 ③ MAX 0.031	
Stainless Steel	-	☆ 230~490	-	☆ 200~330	★ 260~490	☆ 200~430	-	① 0.0012~0.0028 ② 0.0012~0.0039 ③ MAX 0.012	① 0.0016~0.0031 ② 0.0016~0.0031 ③ MAX 0.012	① 0.0020~0.0035 ② 0.0020~0.0035 ③ MAX 0.020	① 0.0020~0.0039 ② 0.0020~0.0039 ③ MAX 0.020	① 0.0020~0.0039 ② 0.0020~0.0039 ③ MAX 0.031	
Cast Iron	-	-	-	-	-	-	★ 200~330	① 0.0012~0.0031 ② 0.0012~0.0031 ③ MAX 0.012	① 0.0016~0.0035 ② 0.0016~0.0035 ③ MAX 0.012	① 0.0020~0.0039 ② 0.0020~0.0039 ③ MAX 0.020	① 0.0020~0.0047 ② 0.0020~0.0039 ③ MAX 0.020	① 0.0020~0.0047 ② 0.0020~0.0039 ③ MAX 0.031	
Aluminum	-	-	-	-	-	-	★ 490~1310	① 0.0020~0.0047 ② 0.0020~0.0047 ③ MAX 0.020	① 0.0020~0.0059 ② 0.0020~0.0059 ③ MAX 0.020	① 0.0020~0.0059 ② 0.0020~0.0059 ③ MAX 0.031	① 0.0031~0.0059 ② 0.0031~0.0059 ③ MAX 0.031	① 0.0031~0.0059 ② 0.0031~0.0059 ③ MAX 0.031	
Brass	-	-	-	-	-	-	★ 490~980	① 0.0020~0.0047 ② 0.0020~0.0047 ③ MAX 0.020	① 0.0020~0.0059 ② 0.0020~0.0059 ③ MAX 0.020	① 0.0020~0.0059 ② 0.0020~0.0059 ③ MAX 0.031	① 0.0031~0.0059 ② 0.0031~0.0059 ③ MAX 0.031	① 0.0031~0.0059 ② 0.0031~0.0059 ③ MAX 0.031	

- Apply a sufficient amount of coolant.
- The D.O.C. should be under 0.020" (0.5mm) if a good surface finish is required.

★ : 1st Recommendation ☆ : 2nd Recommendation

FTK

	Recommended Insert Grade (Vc sfm)					Edge Width (in)		Notes
	Cermet	CVD	PVD		Carbide	0.1575	0.1969	
	TN90	**CR9025**	**PR660**	**PR930**	**KW10**	Feed Rate (ipr)		
Carbon Steel	☆ 390~660	★ 260~590	☆ 200~430	☆ 200~430	-	0.0020~0.0059	0.0020~0.0059	Wet
Alloy Steel	☆ 330~520	★ 230~490	☆ 200~430	☆ 200~430	-	0.0020~0.0059	0.0020~0.0059	
Stainless Steel	☆ 260~490	☆ 200~460	★ 160~390	☆ 160~390	-	0.0020~0.0059	0.0020~0.0059	
Cast Iron	-	-	-	-	★ 160~330	0.0039~0.0118	0.0039~0.0118	
Aluminum	-	-	-	-	★ 660~1480	0.0020~0.0098	0.0020~0.0098	
Brass	-	-	-	-	★ 330~660	0.0020~0.0098	0.0020~0.0098	

★ : 1st Recommendation ☆ : 2nd Recommendation

GMN (CBN / PCD)

Workpiece Material	Recommended Insert Grade (Vc sfm)		① f (feed) during Grooving (ipr) ② f (feed) during Traversing (ipr) ③ D.O.C. during Traversing (in)				Notes
	CBN	PCD					
	KBN510 KBN525	**KPD001 (KPD010)**	GMN2	GMN3	GMN4 GMN5	GMN6	
Aluminum	-	★ 490~6560	① 0.0020~0.0059 ② 0.0020~0.0059 ③ MAX 0.020	① 0.0020~0.0059 ② 0.0020~0.0059 ③ MAX 0.031	① 0.0031~0.0071 ② 0.0031~0.0071 ③ MAX 0.031	① 0.0039~0.0079 ② 0.0039~0.0079 ③ MAX 0.031	Wet
Brass	-	★ 660~2620	① 0.0020~0.0059 ② 0.0020~0.0059 ③ MAX 0.020	① 0.0020~0.0059 ② 0.0020~0.0059 ③ MAX 0.031	① 0.0031~0.0071 ② 0.0031~0.0071 ③ MAX 0.031	① 0.0039~0.0079 ② 0.0039~0.0079 ③ MAX 0.031	
Cast Iron	★ 490~1310	-	① 0.0016~0.0035 ② 0.0016~0.0035 ③ MAX 0.012	① 0.0020~0.0039 ② 0.0020~0.0039 ③ MAX 0.020	① 0.0020~0.0047 ② 0.0020~0.0047 ③ MAX 0.020	① 0.0020~0.0059 ② 0.0020~0.0059 ③ MAX 0.031	
Hardened Materials	★ 260~390	-	① 0.0008~0.0020 ② 0.0004~0.0012 ③ MAX 0.004	① 0.0012~0.0028 ② 0.0004~0.0020 ③ MAX 0.008	① 0.0012~0.0031 ② 0.0012~0.0031 ③ MAX 0.012	① 0.0020~0.0039 ② 0.0020~0.0039 ③ MAX 0.016	

★ : 1st Recommendation ☆ : 2nd Recommendation

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GMG / GMM / GMN / GMGA

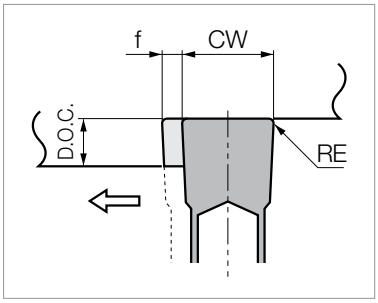
Workpiece Material	Recommended Insert Grade (Vc sfm)						Grooving				Traversing				Notes
	Cermet	CVD	PVD			Carbide	Edge Width (in)				Edge Width (in)				
	TN90	CR9025	PR915	PR930	PR905	KW10	0.0787~0.1181	0.1575	0.1969	0.2362/0.3150	0.0787~0.1181	0.1575	0.1969	0.2362/0.3150	
							Feed Rate (ipr)				Feed Rate (ipr)				
Carbon Steel	☆ 330~720	☆ 260~660	☆ 260~660	★ 260~660	-	-	0.0020~0.0059	0.0039~0.0098	0.0059~0.0138	0.0079~0.0138	0.0039~0.0079	0.0059~0.0118	0.0079~0.0157	0.0098~0.0157	Wet
Alloy Steel	☆ 260~660	☆ 230~590	☆ 230~590	★ 230~590	-	-	0.0020~0.0059	0.0039~0.0098	0.0059~0.0138	0.0079~0.0138	0.0039~0.0079	0.0059~0.0118	0.0079~0.0157	0.0098~0.0157	
Stainless Steel	☆ 230~520	☆ 200~490	★ 200~490	☆ 200~490	-	-	0.0020~0.0059	0.0039~0.0079	0.0059~0.0138	0.0079~0.0138	0.0039~0.0079	0.0059~0.0098	0.0079~0.0157	0.0098~0.0157	
Cast Iron	-	-	-	-	★ 330~660	☆ 230~490	0.0020~0.0079	0.0039~0.0118	0.0059~0.0157	0.0079~0.0157	0.0039~0.0098	0.0059~0.0138	0.0079~0.0177	0.0098~0.0177	
Aluminum	-	-	-	-	-	★ 660~1640	0.0020~0.0079	0.0031~0.0098	0.0039~0.0098	0.0047~0.0118	0.0039~0.0079	0.0039~0.0098	0.0039~0.0098	0.0059~0.0118	
Brass	-	-	-	-	-	★ 330~660	0.0020~0.0059	0.0031~0.0079	0.0039~0.0098	0.0047~0.0118	0.0039~0.0079	0.0039~0.0098	0.0039~0.0098	0.0059~0.0118	

★ : 1st Recommendation ☆ : 2nd Recommendation

Traversing Conditions

① **KGM Toolholder**

	Recommended Cutting Conditions	
D.O.C.(MAX) (in)	Under 80% of Edge Width	D.O.C.≤0.0315CW
f (MAX) (ipr)	Under 10% of Edge Width	f≤0.0039CW



• (D.O.C.) x (f) should not exceed ½ of D.O.C.(MAX) x f(MAX)

Edge Width (in) / Load (in²)	0.0787~0.0984	0.1181	0.1575	0.1969	0.2362	0.3150
D.O.C. x Feed Rate (f)	~0.0079	~0.0142	~0.0252	~0.0394	~0.0567	~0.1008

• D.O.C. x f ≤ ½ x 0.0315w x 0.0039w = 0.0016w²

② **KGM-T Toolholder** (Deep Grooving)

Use KGM-T toolholder under 90% lower cutting conditions than the KGM Toolholder

③ **KGMM / KGMS / KFMS-8 Toolholder**

	Recommended Cutting Conditions	
D.O.C.(MAX) (in)	Under 50% of Edge Width	D.O.C.≤0.0197CW
f (MAX) (ipr)	Under 4% of Edge Width	f≤0.0016CW

• (D.O.C.) x (f) should not exceed ½ of D.O.C.(MAX) x f(MAX)

Edge Width (in) / Load (in²)	0.0787~0.0984	0.1181	0.1575	0.1969	0.2362	0.3150
D.O.C. x Feed Rate (f)	~0.0039	~0.0071	~0.0126	~0.0197	~0.0283	~0.0504

• D.O.C. x f ≤ 0.0008w²

④ **KIGM Toolholder**

	Recommended Cutting Conditions	
D.O.C.(MAX) (in)	Under 70% of Edge Width	D.O.C.≤0.0276CW
f (MAX) (ipr)	Under 8% of Edge Width	f≤0.0031CW

• (D.O.C.) x (f) should be as follows. (under 70% of KGM)

Edge Width (in) / Load (in²)	0.1181	0.1575	0.1969
D.O.C. x Feed Rate (f)	~0.0098	~0.0173	~0.0276

• D.O.C. x f ≤ 0.0016CW²

GMG / GMM / GMGA 8030 (Face Grooving)

Workpiece Material	Recommended Insert Grade (Vc sfm)						Face Grooving	Traversing	Notes
	Cermet	CVD	PVD			Carbide	Edge Width (in)	Edge Width (in)	
	TN90	CR9025	PR915	PR930	PR905	KW10	0.3150	0.3150	
							Feed Rate (ipr)	Feed Rate (ipr)	
Carbon Steel	☆ 330~720	☆ 260~520	☆ 260~520	★ 260~520	-	-	0.0039~0.0079	0.0039~0.0098	Wet
Alloy Steel	☆ 260~520	☆ 230~520	☆ 230~520	★ 230~520	-	-	0.0039~0.0079	0.0039~0.0098	
Stainless Steel	☆ 230~460	☆ 200~430	★ 200~430	☆ 200~430	-	-	0.0039~0.0079	0.0039~0.0098	
Cast Iron	-	-	-	-	★ 260~590	☆ 230~430	0.0039~0.0118	0.0039~0.0138	
Aluminum	-	-	-	-	-	★ 660~980	0.0031~0.0098	0.0031~0.0118	
Brass	-	-	-	-	-	★ 330~490	0.0031~0.0098	0.0031~0.0118	

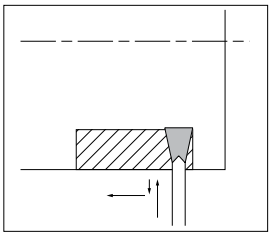
★ : 1st Recommendation ☆ : 2nd Recommendation

Guide for External Grooving

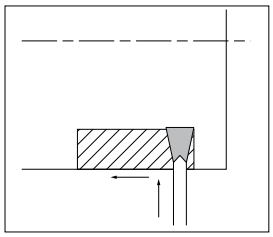
Point (I) (Traversing after Grooving)

1) Grooving Depth Over 0.5mm: At roughing (Refer to Fig.1)
Before Traversing, pull the tool back about 0.1mm after grooving.
(Failure to pull the tool back before traverse machining will result in an unbalanced load applied on only one side of the cutting edge.)

2) Grooving Depth under 0.5mm: At finishing (Refer to Fig.2)
Traversing subsequent to grooving is possible because shallow groove depths relate a small load on the cutting edge.
(Dwell time is not necessary.)



Before Traversing, pull the tool back about 0.1mm after grooving.
(Grooving Depth Over 0.5mm: At roughing)
Fig.1



Traversing subsequent to grooving is possible because there is only a small force on the cutting edge.
(Grooving Depth under 0.5mm: At finishing)
Fig.2

Point (II)

1) When widening the groove width
(Refer to Fig.3), apply the “Step Traversing” as shown in Fig.3.

2) The side walls should be finished with a plunging pass.
(For better chip control, ap over 0.5mm is recommended.)

Note) If the workpiece is not supported at the center, reduce the feed rate when grooving towards center.

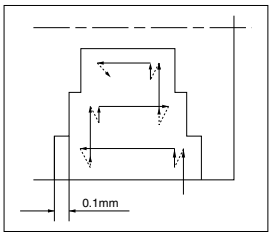


Fig.3

Guide for Face Grooving

<Toolholder Selection>

(1) Choose the best tool depending on the groove width.
The Cutting Dia. ØD listed in the catalog indicates the depth of the first plunge of face grooving as shown in Fig.1.

(2) Confirm Grooving Depth (dimension CDX)

(3) It is recommended to install the toolholder in the reverse position. (Fig. 2)
(This will provide smooth chip flow and chip clearance.)

<Guide for Traversing>

Traversing direction should be from the outer diameter to the inner diameter as shown in Fig.3
This improves chip evacuation.

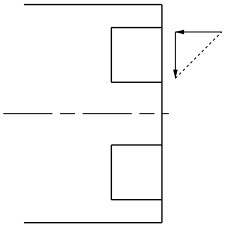


Fig.3

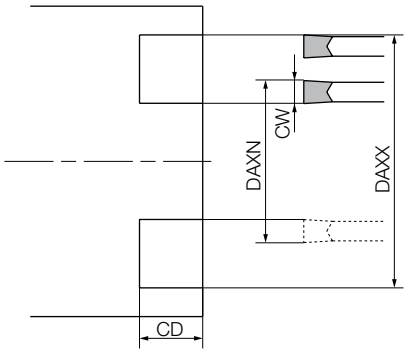


Fig.1

Toolholder	Right-hand (R)	Toolholder	Left-hand (L)
Insert	(No Hand)	Insert	(No Hand)

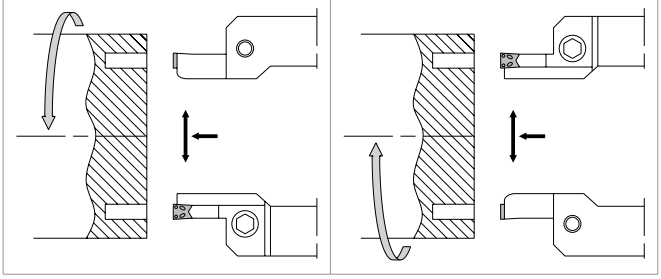


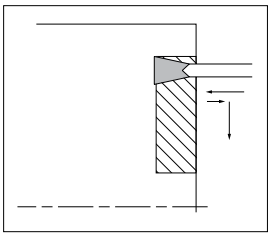
Fig.2 Toolholder's Hand and Rotation

800.823.7284
Visit us online at KyoceraPrecisionTools.com

Guide for External Grooving (Continued)

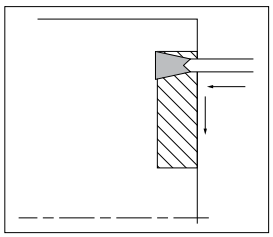
Point (I) (Traversing after Grooving)

1) Grooving Depth Over 0.5mm: At roughing (Refer to Fig.4)
Before Traversing, pull the tool back about 0.1mm after grooving.
(Failure to pull the tool back before traverse machining will result in an unbalanced load applied on only one side of the cutting edge.)



Before Traversing, pull the tool back about 0.1mm after grooving.
(Grooving Depth Over 0.5mm: At roughing)
Fig.4

2) Grooving Depth under 0.5mm: At finishing (Refer to Fig.5)
Traversing subsequent to grooving is possible because shallow groove depths relate a small load on the cutting edge.
(Dwell time is not necessary.)



Traversing subsequent to grooving is possible because there is only a small force on the cutting edge.
(Grooving Depth under 0.5mm: At finishing)
Fig.5

Point (II)

1) When widening the groove width, apply the “Step Traversing” as shown in Fig. 6.
2) The side walls should be finished with a plunging pass.
(For better chip control, D.O.C. over 0.5mm is recommended.)

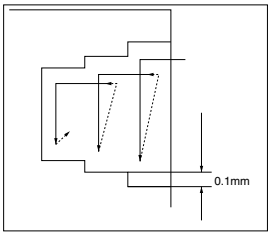


Fig.6

Troubleshooting

Trouble	Countermeasures
Whitish trace remains at the groove bottom.	(1) Increase the cutting speed for finishing process only. (This can handle most of the cases.) If the method is not successful, try (2) as follows. (2) Check the insert edge's parallelness. [Adjustment: Apply the insert edge to the work face and adjust the toolholder within the angle of ±5'. (Fig.7)]
Chips are entangled.	(1) Install the toolholder in the reverse position. Adjust the coolant flow to the cutting edge. (2) When widening the groove, do not machine one deep groove. Instead, repeat shallow grooving and Traversing.
Insert cracks when Traversing.	Reverse the facing direction.
Groove is not straight.	Check the edge's parallelness. Decrease the feed rate.

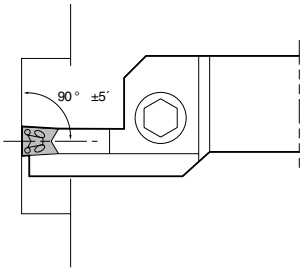


Fig.7

Guide for Grooving with Cermet Insert (Steel)

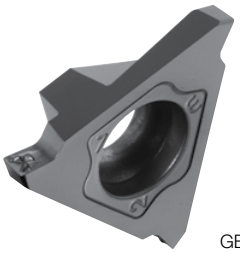
1. Set the feed under 0.0047" ipr (0.0020"~0.0039" ipr normally).
2. Coolant is recommended.
3. Set the cutting speed Vc = 490~720 sfm.
4. Set the toolholder overhang as short as possible.

How to Improve Surface Finish (when surface roughness below 3µm Rz is required)

1. Increase the cutting speed (Vc = 720 sfm MAX.)
2. Program retention time at the groove bottom.
3. Apply a light hone to the cutting edge.

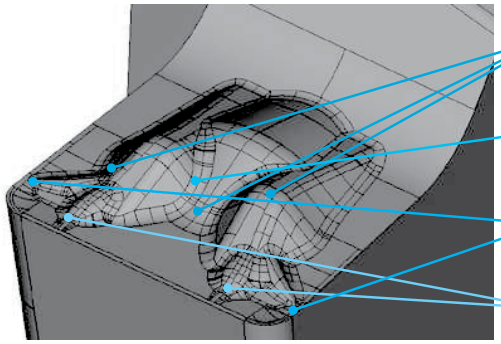
Chip Control of Grooving Insert with Molded Chipbreaker

1. Good chip control to cover a wide application range of stable chip control at high cutting speed, covering wide range of feed rates
2. Improved chip control and excellent surface finish
   Superior chip control performance
3. Chip control improvement with automated production line.
   (prevents frequent machine stops)



GBA type GM chipbreaker

Multi Bump Design



Center bump and dent squeeze chips for better control.

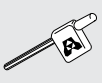
Helps modifying chip shape.

Stable chip control during shouldering and chamfering.

Front Bump: Stabilize chip control at low feed rates.

Smooth chip control due to optimized bump design of the chipbreaker

Alternative Toolholder Reference Table for Grooving Toolholder

Conventional Toolholder						Alternative Toolholder			
Part Number	Overall Length (mm)	Spare Parts: Clamp Screw	Spare Parts: Wrench	Spare Parts: Wrench	Part Number	Overall Length (mm)	Notes	Reference Page
								
KTGF 1010K-16F	125	SB-4070TRW	FT-8	-	KTGF 1010JX-16F	120		G20
1212M-16F	150				1212JX-16F	120		
1616M-16F	150				1616JX-16F	120		
KGM 0810K-1.5-125	125	SE-40120TR	-	LTW-15S	-	-	No replacement	G52
1010K-1.5-125	125				KGM 1010JX-1.5	120		
1212M-1.5-150	150				1212JX-1.5	120		
KGM 0810K-2-125	125	SE-40120TR	-	LTW-15S	-	-	No replacement	
1010K-2-125	125				KGM 1010JX-2	120		
1212M-2-150	150				1212JX-2	120		
1616M-2-150	150	SE-50125TR	-	LTW-20	1616JX-2	120		
KGM 1010K-2.5-125	125	SE-40120TR	-	LTW-15S	KGM 1010JX-2.5	120		
1212M-2.5-150	150				1212JX-2.5	120		
1616M-2.5-150	150	SE-50125TR	-	LTW-20	1616JX-2.5	120		
KGM 1616M-3-150	150	SE-50125TR	-	LTW-20	KGM 1616JX-3	120		

Note) The corresponding replacements may be different from the conventional parts in insert clamping system or insert size.
Make sure their specifications referring to the catalog or other documents.

CUT-OFF

H1 - H62

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SUMMARY OF CUT-OFF TOOLS		H4 - H5
SMALL DIAMETER CUT-OFF TOOLHOLDERS		H6 - H23
KTKF	Lateral Side Screw Clamp Holder	H8
KTKF-S (Sub Spindle)	Lateral Side Screw Clamp Holder	H10
KTKF-JCT (Coolant-Through)	Lateral Side Screw Clamp Holder	H13
KTKF-JCTM (Coolant-Through)	Lateral Side Screw Clamp Holder	H17
KTKF-Y (Y-Axis Holder)	Lateral Side Screw Clamp Holder	H20
KTKFS (Sub Spindle)	Lateral Side Screw Clamp Holder	H22
CUT-OFF TOOLHOLDERS (2-EDGE INSERT, KGD)		H24 - H39
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KGD-JCT (Small Parts Coolant-Through)	Integral Toolholder	H29
KGD-JCTM (Small Parts Coolant-Through)	Integral Toolholder	H30
KGD	Integral Toolholder	H32
KGD-JCT (Coolant-Through)	Integral Toolholder	H35
KGD-S	SwitchBlade Toolholder	H36
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KGM (Small Parts)	Integral Toolholder	H42
KGM	Integral Toolholder	H42
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CUT-OFF TOOLHOLDERS (1-EDGE INSERT)		H46 - H59
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KPKH-JCT / KPKH	Integral Toolholder	H52
KTKB-SS / KTKB-S	Blade	H57
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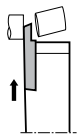
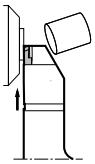
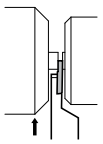
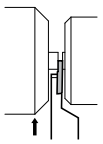
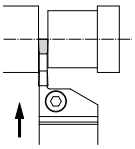
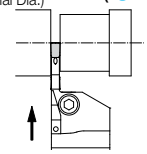
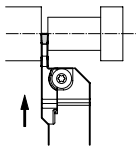
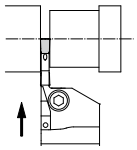
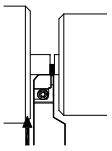
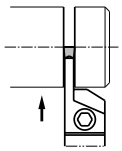
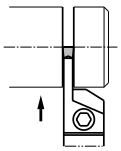
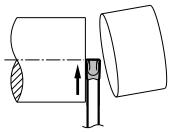
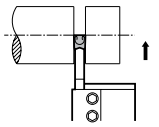
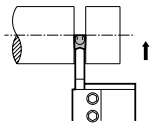
RECOMMENDED CUTTING CONDITIONS		H60 - H61
ALTERNATIVE CUT-OFF TOOLHOLDER REFERENCE		H62

Product Lineup

Small Diameter Cut-Off *Cut-Off Diameter* Ø0.197"~Ø0.472" ~Ø0.630" (Ø5mm~Ø12mm) (~Ø16mm)	**KTKF** (H8)  Width : (0.020"~0.079") Width : (0.5mm~2.0mm)	**KTKF-JCTM** (H17)  Width : (0.020"~0.079") Width : (0.5mm~2.0mm)		Sub Spindle Tooling **KTKF-S** (H10)  Width : (0.039"~0.079") Width : (1.0mm~2.0mm)	**KTKFS** (H22)  Width : (0.039"~0.079") Width : (1.0mm~2.0mm)
KGD (Bolt Clamp) *Cut-Off Diameter* Ø0.472"~Ø1.575" (Ø12mm~Ø50mm)	**KGD** (H26, H32)  Width : (0.079"~0.158") Width : (1.3mm~4.0mm)	**KGD-JCTM** (Smal Dia.) (H30)  Width : (0.079"~0.158") Width : (1.3mm~4.0mm)	**KGD-S** (H36)  Width : (0.079"~0.158") Width : (1.3mm~4.0mm)	**KGD-JCT** (H35)  Width : (0.079"~0.158") Width : (3mm~4.0mm)	Sub Spindle Tooling **KGDS** (H27)  Width : (1.3mm~3.0mm)
KGM (Bolt Clamp) *Cut-Off Diameter* Ø0.709"~Ø1.575" (Ø18mm~Ø60mm)	**KGM** (H42)  Width : 0.059"~0.158",0.118"~0.236" Width : (1.5mm~4mm, 3mm~8mm)	**KGM-T** (H43)  Width : 0.079"~0.197" Width : (2mm~6mm)			
KPKB **KTKB / KTKH** (1-edge Insert)	**Toolholders** *Cut-Off Diameter* Ø1.181"~Ø2.441" (Ø30mm~Ø79mm)	**KTKH-S** (H58)  Width : (0.020"~0.079") Width : (2.2mm~5.1mm)	**Blade Type** *Cut-Off Diameter* Ø0.551"~Ø0.630" (Ø32mm~Ø120mm)	**KPK-Series** (H46)  Width : (0.0.079"~0.157") Width : (1.6~6.0mm)	**KTKB-S(S)** (H57)  Width : (0.063"~0.378") Width : (1.6mm~9.6mm)

Cut-Off Tools

Series Name	Shape	Advantage	Applications
For Small Diameter Cut-Off		1) Insert clamp is side screw type from the side 2) 2-edge insert 3) Max. Cut-off Dia. : Ø0.630" (Ø16mm)	1) For cut-off and grooving of small workpieces 2) For small parts machining
KGD-JCT **KGD**		1) Insert is clamped from top side 2) 1-edge and 2-edge inserts available 3) Integral type and separate type are available 4) Max. Cut-off Dia. : Ø1.969" (Ø50mm) 5) JCT jet coolant-through styles available	1) PM Chipbreaker ··· For Cut-Off 2) PH Chipbreaker ··· For Cut-Off (High Feed Rate) / For Grooving 3) PG Chipbreaker ··· For Cut-Off (for Small Parts Machining) / Sharp-Cutting Oriented 4) PF Chipbreaker ··· For Cut-Off (for Small Parts Machining) / Low Feed 5) PQ Chipbreaker ··· For Cut-Off (for Small Parts Machining) / Medium Feed
KGM		1) Insert is clamped from top side 2) 1-edge and 2-edge inserts available 3) Max. Cut-off Dia. : Ø2.362" (Ø60mm)	1) For cut-off and grooving of small workpieces 2) For automatic lathe, small machine 3) TMR-Chipbreaker provides stable chip control up to high feed rate ranges
KPKB-JCT **KPKB**		1) Easy self-clamping insert replacement (no hammer required) 2) Firm insert clamp ensures safety and security 3) Max. Cut-off Dia. : Ø3.937" (Ø100mm)	1) For cut-off in Steel, Stainless, Cast Iron, and Non-ferrous 2) PM Chipbreaker ··· General Purpose Cut-Off (Lead angle styles available) 3) PH Chipbreaker ··· Tough Edge
KPKH-JCT **KPKH**	NEW 		
KTKB **KTKH**		1) Self-Clamping System Tap the insert lightly with a plastic hammer to set it in the pocket 2) 1-edge insert 3) Blade type and Integral Shank type 4) Max. Cut-off Dia. : Ø4.724" (Ø120mm)	1) For cut-off and deep grooving 2) Standard chipbreaker is general cut-off type Feed rate: over 0.004ipr P-Chipbreaker is for cut-off at low feed rates Feed rate: 0.001~0.003ipr 

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Tool Selection

		Small Diameter Cut-Off	KGD	KGM	KPKB / KPKH KTKB / KTKH
Insert	1. Insert's Edge Number 1-edge Insert··· For Larger Dia. Workpiece (Max. 4.724" / Ø120mm)	-	-	-	✓
	2-edge Insert··· For Smaller Dia. Workpiece Cost per corner is reduced	✓	✓	✓	-
	2. Use a neutral angle insert if there is no restriction to the size of boss left on part. (See **Fig.3** Below)	TKF...S TKF...NB TKFS...S	GDM GDMS	GMM	PKM TKN
	3. Use an angled insert to reduce the size of the remaining boss.	TKF...DR	GDM-R/L (Fig. 2)	GMM-R/L (Fig. 2)	PKMR/L / TKR/L (Fig. 1)
	4. Use a sharp-cornered lead-angled insert to make the remaining boss much smaller when machining small parts and thin parts.	TKF...DR	-	GMM-R/L (Fig. 2)	-
	5. Use the minimum width insert suitable for the machining.	✓	✓	✓	✓
Tololholder	1. Use a suitable toolholder (blade) for the workpiece dia.	✓	✓	✓	✓
	2. Use a more rigid toolholder (blade).	✓	✓	✓	✓
	3. Use a side screw or self clamp toolholder if there is no space for clamping tools from top side (for small tools).	✓	-	-	-

How to Select Cut-Off Inserts with or without Lead Angle

1) Use a neutral angle insert, when remaining boss is not a concern. (See **Fig.1**)

2) Use an angled insert to reduce the remaining boss. (See **Fig.2**)

3) Use a sharp-edged insert with lead angle to minimize the remaining boss when cutting small parts and thin parts. (See **Fig.3**)

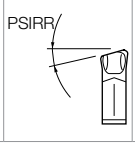
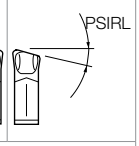
Lead Angle Hand	N (Neutral)	R (Right-Hand)	L (Left-Hand)
			
	• Angled insert can reduce burr when cutting off. • When using a larger lead angle, cutting resistance becomes smaller. The feed rate should be reduced.		

Fig.1

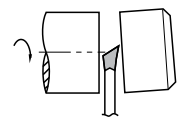
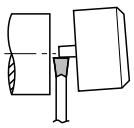
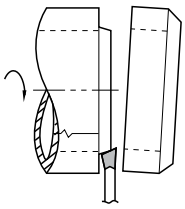
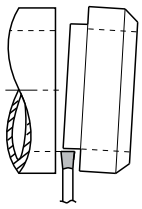
Lead Angle Hand	With Lead Angle (Right-Hand)	Without Lead Angle (Neutral)
		
		

Fig.2

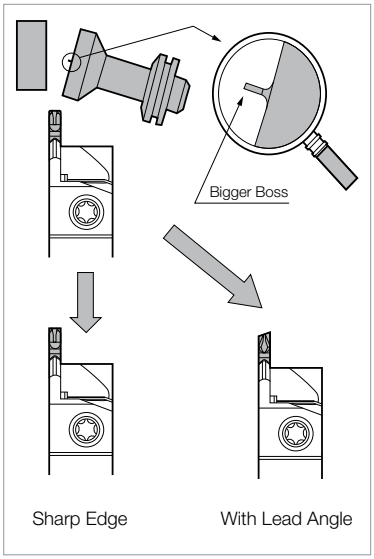


Fig.3

Caution

1) Set the cutting edge height 0.004"-0.008" above the center height
2) Always apply sufficient coolant to the cutting edge
3) Constant spindle revolution is recommended to obtain stable tool life
4) Cut-off as close to the chuck as possible
5) Decrease the feed rate from 1/2 to 1/3 when diameter is same as cut-off width
• Overuse of insert and toolholder (blade) may cause insert breakage and toolholder (blade) damage. • Do not rework the insert and toolholder (blade) to prevent damage • Clean the insert pocket well with compressed air when replacing insert

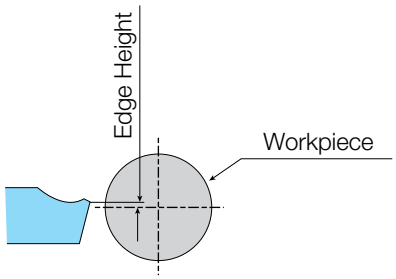
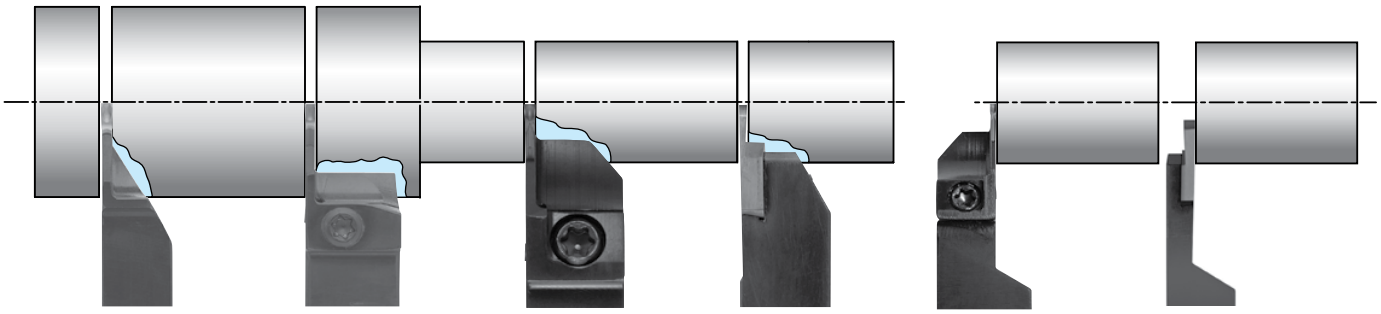


Fig.4

Small Diameter Cut-Off ~Ø1.653" / ~45mm

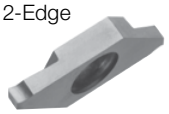
Small Shank



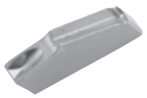
KTKH-S		KGM		KGD / KGD-JCT(M)		KTKF / KTKF-JCT(M)		KGDS		KTKF-S/KTKFS	
Cut-Off Dia.	~Ø1.300"	Cut-Off Dia.	~Ø0.984"	Cut-Off Dia.	~Ø1.653"	Cut-Off Dia.	~Ø0.625"	Cut-Off Dia.	~Ø24mm	Cut-Off Dia.	~Ø0.630"
	~Ø45mm		~Ø32mm		~Ø42mm		~Ø16mm				~Ø16mm
Shank	0.375"~0.500"	Shank	0.375"~0.500"	Shank	0.0.375"~0.750"	Shank	0.375"~0.625"	Shank	16mm	Shank	0.375"~0.500"
	10mm~25mm		10mm~16mm		10mm~20mm		10mm~25mm				10mm~12mm
Edge Width	0.063"~0.094"	Edge Width	0.079"~0.118"	Edge Width	0.059"~0.157"	Edge Width	0.020"~0.079"	Edge Width	1.3mm~3.0mm	Edge Width	0.5mm~2.0mm (KTKF-S)
	2.2mm~4.1mm		1.5mm~4.0mm		1.3mm~4.0mm		0.5mm~2.0mm				0.059"~0.098" (KTKFS)
											1.0mm~2.0mm (KTKFS)
Self Clamp		Top Clamp		Top Clamp		Side Screw Clamp		Top Clamp		Side Screw Clamp	
H58 ~ H59		H42		H26 ~ H30		H8		H27		H10, H22	

KTKF / KTKF-S KTKFS

2-Edge



Low Resistance Cut-Off Chipbreaker



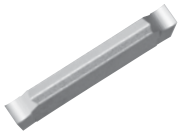
Chipbreaker for General Cut-Off



Chipbreaker for Low Feed Cut-Off

Chipbreaker Edge Shape	Cut-Off (Self Clamp) H56		
	General Cut-Off		Low Feed Cut-Off
	Chamfer + Honed	Sharp Edge	R Honed
			

2-Edge



Sharp Cutting **PG Chipbreaker**



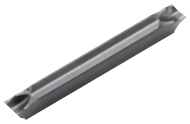
Low Feed **PF Chipbreaker**



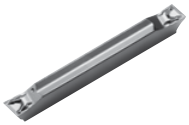
Medium Feed **PQ Chipbreaker**



(15° Lead Angle)



(15° Lead Angle)



(15° Lead Angle)



KTKH-S H58
(Self Clamp)



KGD H26
(Top Clamp)



KTKF H8
(Side Screw Clamp)

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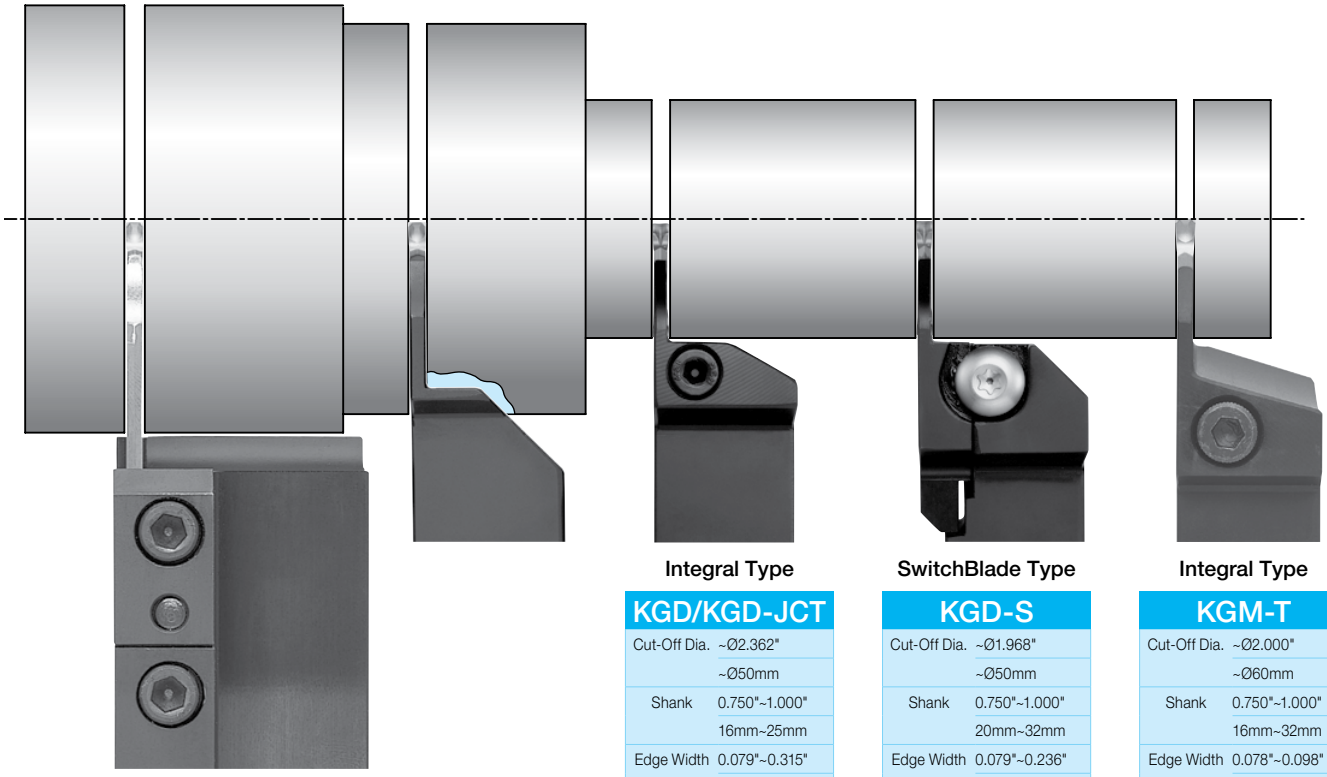
General Cut-Off ~Ø3.100" / ~120mm



Integral Type

KGD/KGD-JCT	
Cut-Off Dia.	~Ø2.362"
	~Ø50mm
Shank	0.750"~1.000"
	16mm~25mm
Edge Width	0.079"~0.315"
	2.0mm~4.0mm
Top Clamp	

H32 / H35

SwitchBlade Type

KGD-S	
Cut-Off Dia.	~Ø1.968"
	~Ø50mm
Shank	0.750"~1.000"
	20mm~32mm
Edge Width	0.079"~0.236"
	2.0mm~4.0mm
Top Clamp	

H36 ~ H37

Integral Type

KGM-T	
Cut-Off Dia.	~Ø2.000"
	~Ø60mm
Shank	0.750"~1.000"
	16mm~32mm
Edge Width	0.078"~0.098"
	2.0mm~6.0mm
Top Clamp	

H43

Blade + Toolblock

KPKB / KPKB-JCT	
Cut-Off Dia.	~Ø100mm
Block Shank	20mm~25mm
Edge Width	2.0mm~4.0mm
Self Clamp	

H49



Chipbreaker for General Cut-Off

Chipbreaker for Tough Edge

Blade + Toolblock

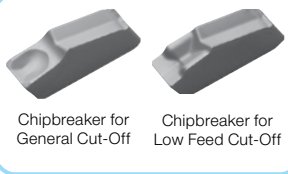
KTKB	
Cut-Off Dia.	~Ø120mm
Block Shank	0.750"~1.000" 16mm~32mm
Edge Width	1.6mm~9.6mm
Self Clamp	

H57

Integral Type

KTKH-S	
Cut-Off Dia.	~Ø3.100"
	~Ø79mm
Shank	0.750"~1.000"
	20mm~25mm
Edge Width	0.087"~0.201"
	3.1mm~5.1mm
Self Clamp	

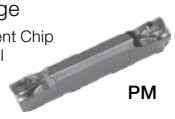
H58 ~ H59



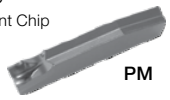
Chipbreaker for General Cut-Off

Chipbreaker for Low Feed Cut-Off

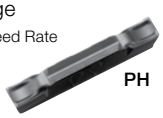
2-Edge
Excellent Chip Control
PM



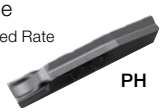
1-Edge
Excellent Chip Control
PM



2-Edge
High Feed Rate
PH



1-Edge
High Feed Rate
PH



2-Edge
Chipbreaker for Sharp Cutting



2-Edge
Chipbreaker for Stability



1-Edge
Chipbreaker for Stability

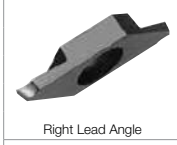


Blade + Toolblock		SwitchBlade Type	Integral Type			
						
KPKB ➡ H49	KTKB ➡ H57	KGD-S ➡ H36	KPKH ➡ H52	KTKH-S ➡ H58	KGD ➡ H32	KGM ➡ H42

TKF12

Classification of Usage
- ● : Light Interruption / 1st Choice
- ◔ : Light Interruption / 2nd Choice
- ● : Continuous / 1st Choice
- ○ : Continuous / 2nd Choice

		MEGA COAT NANO PLUS	MEGACOAT NANO		MEGACOAT	PVD Coated Carbide	DLC	Carbide
P	Carbon Steel / Alloy Steel	●	◔	◔	◔	◔		
M	Stainless Steel	◔	◔	●	◔	◔		
K	Cast Iron							●
N	Non-ferrous Metals						●	◔

Insert (Right-handed Insert Shown)	Part Number	CW inch	CW mm	CUTDIA	RE	W1	S	D1	PSIRR	PR1725 R	PR1725 L	PR1425 R	PR1425 L	PR1535 R	PR1535 L	PR1225 R	PR1225 L	PR1025 R	PR1025 L	PDL025 R	PDL025 L	KW10 R	KW10 L	Ref. Page for Toolholder
 Right Lead Angle	TKF12R/L 050-S-16DR	0.020	0.50	0.197	0.001	0.118	0.343	0.197	16°	●	●	△	△	●	●	△		△	△			●	●	
	070-S-16DR	0.028	0.70	0.315	0.001	0.118	0.343	0.197	16°	●	●	△	△	●	●	●		△	△			●	●	
	100-S-16DR	0.039	1.00	0.472	0.001	0.118	0.343	0.197	16°	●	●	△	△	●	●	●	●	△	△	●	●	●	●	
	125-S-16DR	0.049	1.25	0.472	0.001	0.118	0.343	0.197	16°	●	●	△	△	●	●	●				●	●			
	150-S-16DR	0.059	1.50	0.472	0.001	0.118	0.343	0.197	16°	●	●	△	△	●	●	●	●	△	△	●	●	●	●	
	200-S-16DR	0.079	2.00	0.472	0.001	0.118	0.343	0.197	16°	●	●	△	△	●	●	●		△	△	●	●	●	●	
	TKF12R/L 050-S	0.020	0.50	0.197	0.001	0.118	0.343	0.197	0°	●	●	△	△	●	●			△		●	●	●	●	
	070-S	0.028	0.70	0.315	0.001	0.118	0.343	0.197	0°	●	●	△	△	●	●			△		●	●	●	●	
	100-S	0.039	1.00	0.472	0.001	0.118	0.343	0.197	0°	●	●	△	△	●	●	●		△	△	●	●	●	●	
	125-S	0.049	1.25	0.472	0.001	0.118	0.343	0.197	0°	●	●	△	△	●	●					●	●			
	150-S	0.059	1.50	0.472	0.001	0.118	0.343	0.197	0°	●	●	△	△	●	●	●		△	△	●	●	●	●	
	200-S	0.079	2.00	0.472	0.001	0.118	0.343	0.197	0°	●	●	△	△	●	●	●		△	△	●	●	●	●	
 Right Lead Angle Tough Edge	TKF12R/L 100-T-16DR	0.039	1.00	0.472	0.003	0.118	0.343	0.197	16°	●	●	△	△	●	●	●	●							H8 H10 H13 H17 H20
	150-T-16DR	0.059	1.50	0.472	0.003	0.118	0.343	0.197	16°	●	●	△	△	●	●	●	●							
	200-T-16DR	0.079	2.00	0.472	0.003	0.118	0.343	0.197	16°	●	●	△	△	●	●	●								
 Tough Edge	TKF12R/L 100-T	0.039	1.00	0.472	0.003	0.118	0.343	0.197	0°	●	●	△	△	●	●	●	●							
	150-T	0.059	1.50	0.472	0.003	0.118	0.343	0.197	0°	●	●	△	△	●	●	●	●							
	200-T	0.079	2.00	0.472	0.003	0.118	0.343	0.197	0°	●	●	△	△	●	●	●								
 Right Lead Angle	TKF12R/L 050-NB-20DR	0.020	0.50	0.197	0.000	0.118	0.343	0.197	20°	●	●	△	△	●	●			△				●	●	
	070-NB-20DR	0.028	0.70	0.315	0.000	0.118	0.343	0.197	20°	●	●	△	△	●	●			△				●	●	
	100-NB-20DR	0.039	1.00	0.472	0.000	0.118	0.343	0.197	20°	●	●	△	△	●	●			△	△			●	●	
	150-NB-20DR	0.059	1.50	0.472	0.000	0.118	0.343	0.197	20°	●	●	△	△	●	●			△	△			●	●	
	200-NB-20DR	0.079	2.00	0.472	0.000	0.118	0.343	0.197	20°	●	●	△	△	●	●			△	△			●	●	
 Without Chipbreaker	TKF12R/L 050-NB	0.020	0.50	0.197	0.000	0.118	0.343	0.197	0°	●	●	△	△	●	●			△				●	●	
	070-NB	0.028	0.70	0.315	0.000	0.118	0.343	0.197	0°	●	●	△	△	●	●			△	△			●	●	
	100-NB	0.039	1.00	0.472	0.000	0.118	0.343	0.197	0°	●	●	△	△	●	●			△	△			●	●	
	150-NB	0.059	1.50	0.472	0.000	0.118	0.343	0.197	0°	●	●	△	△	●	●			△	△			●	●	
	200-NB	0.079	2.00	0.472	0.000	0.118	0.343	0.197	0°	●	●	△	△	●	●			△	△			●	●	

- Lead angle shows the angle when installed in the toolholder.
- As Fig.1 of H8 shows, the cutting diameter of the insert is measured when the lead edge passes 0.039" past the center line of part.

Recommended Cutting Conditions H60

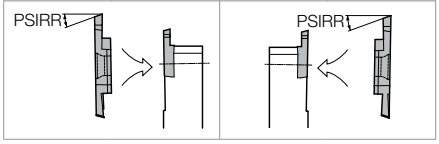
Indication of Description

TKF 12 R 050 - S - 16D R

- TKF: Insert Name
- 12: Insert Size
- R: Insert Hand — R: Right-Hand; L: Left-Hand
- 050: Width
- S: Name of Chipbreaker — S: S-Chipbreaker; T: T-Chipbreaker (Tough Edge); NB: Without Chipbreaker
- 16D: Lead Angle (PSIRR) (Front Cutting Edge Angle)
- R: Lead Angle Hand — R: R-Hand; L: L-Hand

Table 1

Toolholder	R-Hand (R)	Toolholder	L-Hand (L)
Insert	R-Hand (R)	Insert	L-Hand (L)
Lead Angle	R-Hand (R)	Lead Angle	R-Hand (R)



Inserts are sold in 10 piece boxes

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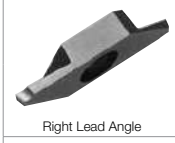
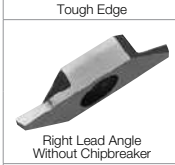
(Technical Support) 800.823.7284 - Option 2
Visit us online at KyoceraPrecisionTools.com

● : Standard Item △ : Phaseout Item (will be removed from next catalog)
Contact your local Kyocera sales engineer to upgrade old products to new technology

TKF16

Classification of Usage
● : Light Interruption / 1st Choice
◌ : Light Interruption / 2nd Choice
● : Continuous / 1st Choice
○ : Continuous / 2nd Choice

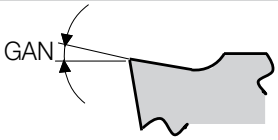
P	Carbon Steel / Alloy Steel	●	◌	◌	◌	◌			
M	Stainless Steel	◌	◌	●	◌	◌			
K	Cast Iron								●
N	Non-ferrous Metals						●	◌	

Insert (Right-handed Insert Shown)	Part Number	Dimensions (in) CW inch	CW mm	CUTDIA	RE	W1	S	D1	PSIRR	Angle (°)	MEGA COAT NANO PLUS PR1725 R	PR1725 L	MEGACOAT NANO PR1425 R	PR1425 L	PR1535 R	PR1535 L	MEGACOAT PR1225 R	PR1225 L	PVD Coated Carbide PR1025 R	PR1025 L	DLC PDL025 R	PDL025 L	Carbide KW10 R	KW10 L	Ref. Page for Toolholder
 Right Lead Angle	TKF16R/L 150-S-16DR	0.059	1.5	0.630	0.002	0.157	0.374	0.197	16°		●	●	△	△	●	●	●	●	△	△	●	●	●	●	
	200-S-16DR	0.079	2.0	0.630	0.002	0.157	0.374	0.197	16°		●	●	△	△	●	●	●	●	△	△	●	●	●	●	
	TKF16R/L 150-S	0.059	1.5	0.630	0.002	0.157	0.374	0.197	0°		●	●	△	△	●	●	●	●	△	△	●	●	●	●	
	200-S	0.079	2.0	0.630	0.002	0.157	0.374	0.197	0°		●	●	△	△	●	●	●	●	△	△	●	●	●	●	
 Right Lead Angle Tough Edge	TKF16R/L 150-T-16DR	0.059	1.5	0.630	0.003	0.157	0.374	0.197	16°		●	●	△	△	●	●	●	●							
	200-T-16DR	0.079	2.0	0.630	0.003	0.157	0.374	0.197	16°		●	●	△	△	●	●	●	●							H8 H10 H13 H17 H20
 Tough Edge	TKF16R/L 150-T	0.059	1.5	0.630	0.003	0.157	0.374	0.197	0°		●	●	△	△	●	●	●	●							
	200-T	0.079	2.0	0.630	0.003	0.157	0.374	0.197	0°		●	●	△	△	●	●	●	●							
 Right Lead Angle Without Chipbreaker	TKF16R/L 150-NB-20DR	0.059	1.5	0.630	0.000	0.157	0.374	0.197	20°		●	●	△	△	●	●			△	△			●	●	
	200-NB-20DR	0.079	2.0	0.630	0.000	0.157	0.374	0.197	20°		●	●	△	△	●	●			△	△			●	●	
 Without Chipbreaker	TKF16R/L 150-NB	0.059	1.5	0.630	0.000	0.157	0.374	0.197	0°		●	●	△	△	●	●			△	△			●	●	
	200-NB	0.079	2.0	0.630	0.000	0.157	0.374	0.197	0°		●	●	△	△	●	●			△	△			●	●	

• Lead angle shows the angle when installed in the toolholder.
• As Fig.1 of H8 shows, the cutting diameter of the insert is measured when the lead edge passes 0.039" past the center line of part.

Recommended Cutting Conditions H60

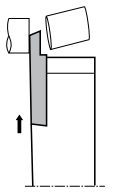
Descriptions of Chipbreaker Edge Shape

Edge Shape \ Chipbreaker	S-Chipbreaker GAN	S-Chipbreaker Part Number	T-Chipbreaker (Tough Edge) GAN	T-Chipbreaker (Tough Edge) Part Number	NB Chipbreaker GAN	NB Chipbreaker Part Number
	15°	TKF12...-S	12°	TKF...-T TKF...-T-16DR	0°	TKF...-NB TKF...-NB-20DR
	20°	TKF16...-S TKF16...-S-16DR				
	25°	TKF12...-S-16DR				

Inserts are sold in 10 piece boxes

● : Standard Item △ : Phaseout Item (will be removed from next catalog)
Contact your local Kyocera sales engineer to upgrade old products to new technology

KTKF / KTKF Goose-neck Holder



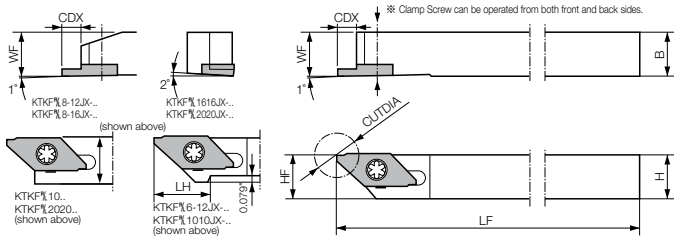
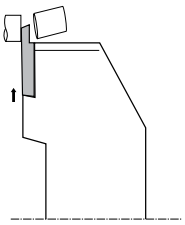


Fig.1

• Right-hand shown

Right-hand Insert for Right-hand Toolholder, Left-hand Insert for Left-hand Toolholder



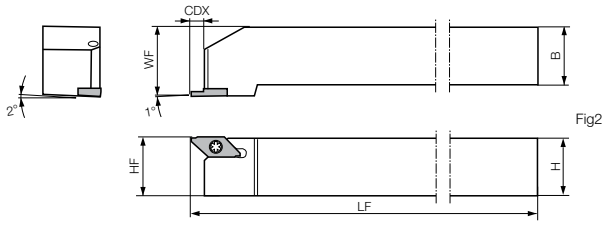
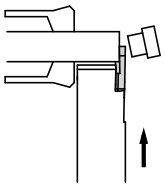


Fig2

• Right-hand shown

Right-hand Insert for Right-hand Toolholder



(Goose-neck Holder)

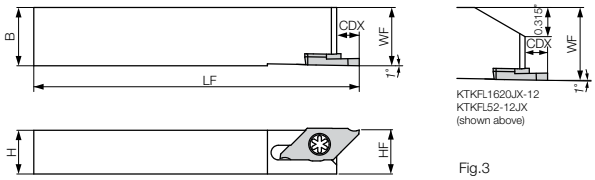


Fig.3

• Left-hand Shown

Left-hand Insert for Left-hand Toolholder

Toolholder Dimensions

Part Number		Stock R	Stock L	Unit	Dimensions H	HF	B	LF	LH	WF	CDX	Drawing	Spare Parts: Clamp Screw	Spare Parts: Wrench	Applicable Inserts
KTKF□	6-12JX	●	●	inch	0.375	0.375	0.375	4.750	0.590	0.375	0.236	Fig.1	SB-4590TRWN	LTW-10S	TKF12□...
	8-12JX	●	●		0.500	0.500	0.500	4.750	-	0.500	0.236				
	10-12JX	●	●		0.625	0.625	0.625	4.750	-	0.625	0.236				
KTKF□	6-16JX	●	●		0.375	0.375	0.375	4.750	0.787	0.375	0.315	Fig.1	SB-4590TRWN	LTW-10S	TKF16□...
	8-16JX	●	●		0.500	0.500	0.500	4.750	-	0.500	0.315				
	10-16JX	●	●		0.625	0.625	0.625	4.750	-	0.625	0.315				
KTKF□	1010JX-12	●	●	mm	10	10	10	120	15	10	6	Fig.1	SB-4590TRWN	LTW-10S	TKF12□...
	1212JX-12	●	●		12	12	12	120	-	12	6				
	1616JX-12	●	●		16	16	16	120	-	16	6				
	2020JX-12	●	●		20	20	20	120	-	20	6				
KTKF□	1010JX-16	●	●		10	10	10	120	20	10	8	Fig.1	SB-4590TRWN	LTW-10S	TKF16□...
	1212JX-16	●	●		12	12	12	120	-	12	8				
	1616JX-16	●	●		16	16	16	120	-	16	8				
	2020JX-16	●	●		20	20	20	120	-	20	8				
KTKF□	1212F-12	●	●		12	12	12	85	-	12	6	Fig.1	SB-4590TRWN	LTW-10S	TKF12R...
	1212F-16	●	●		12	12	12	85	-	12	8				TKF16R...
KTKFR	2525M-12	●			25	25	25	150	-	30	6	Fig.2	SB-4590TRWN	LTW-10S	TKF12R...
	2525M-16	●			25	25	25	150	-	30	8				TKF16R...
KTKFL	52-12JX		●	inch	0.500	0.500	0.625	4.750	-	0.625	0.236	Fig.3	SB-4590TRWN	LTW-10S	TKF12L...
	62.5-12JX		●		0.625	0.625	0.750	4.750	-	0.750	0.236				
KTKFL	1216JX-12		●	mm	12	12	16	120	-	16	6	Fig.3	SB-4590TRWN	LTW-10S	
	1620JX-12		●		16	16	20	120	-	20	6				

- Dimension **CDX** shows the distance from the toolholder to the cutting edge.
- See Page ➡ **H6~H7** for actual cutting diameter.

Note : Cutting diameter of -12 type toolholder (CUTDIA) depends on the insert grooving width.

Recommended Cutting Conditions ➡ **H60**

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How to Use

1) When using main spindle only

Workpiece maximum CUTDIA (**Fig.1**) = CUTDIA in toolholder table
Even if the cutting edge runs beyond the center line, the insert does not contact the workpiece, since the workpiece falls off.
(The clearance between the insert and the workpiece is 0.008")

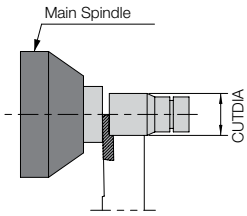


Fig.1
(When the edge is at the center)

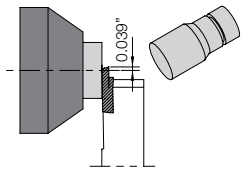


Fig.2
(When the edge is 0.008" beyond the center)

2) When using both Main and Sub spindles

In this case, when the cutting edge runs beyond the center line, the insert will contact the workpiece, since the workpiece does not fall off.
Therefore the programmed distance beyond the center must be considered.
e.g. When the cutting edge is programmed to run 1mm beyond the center.
Workpiece maximum, CUTDIA2 (**Fig.4**) = [CUTDIA - 0.039"×2] (in)
(The clearance between the insert and the workpiece is 0.008")

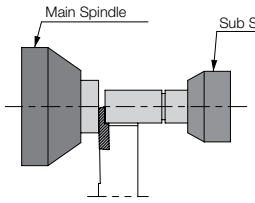


Fig.3
(When the edge is at the center)

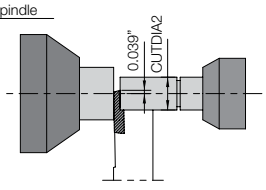
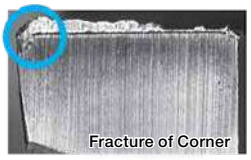


Fig.4
(When the edge is 0.008" beyond the center)

Tough Edge Type T Chipbreaker

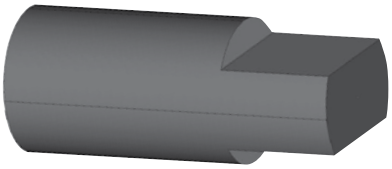
Fracture Resistance Comparison (Interrupted Machining)

Tough Edge Type T Chipbreaker (PR1225) 3,000 Passes	Competitor A 700 Passes	Competitor B 3,000 Passes
	 Fracture of Corner	 Fracture of Corner

	1,000 Passes	2,000 Passes	3,000 Passes
Tough Edge Type T Chipbreaker (PR1225)	→	→	→
Competitor A	→ X		
Competitor B	→	→	→ X

Compared to Competitor A and B, Tough Edge "T Chipbreaker" achieves superior fracture resistance during interrupted cutting.

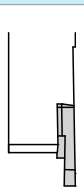
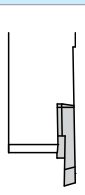
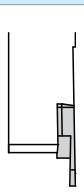
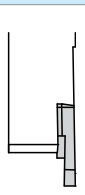
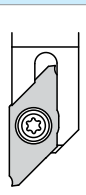
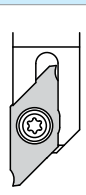
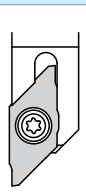
Cutting Conditions
Vc=250 f=0.0020ipr (Cut-Off 0.0006ipr)
Wet W1-9 (with flat cuts on two sides)
TKF12R200-T-16DR (PR1225)



Worpiece (with flat cuts on two sides)

How to Select Edge Preparation

Troubleshooting

Problems	Countermeasures	Countermeasures						
		Lead Angle (PSIRR)		Edge Width		Name of Chipbreaker		
		No (0°)	Yes	Narrower	Wider	S	T	NB
								
Insert Fracture	Insert Fracture Prevention	Effective			Effective		Effective	Effective
Long Cutting Time	Cutting Time Reduction	Effective			Effective		Effective	Effective
Entangled Chips	Chip Entanglement Prevention	Effective		Effective		Effective		
Large Boss Remains	Small Boss Remains		Effective	Effective		Effective		
Ring Remains (Hollow Workpiece)	Prevention of Ring		Effective	Effective		Effective		
Deformation of thin walled workpiece (pipe)	Preventing Deformation		Effective	Effective		Effective		

KTKF-S

Cut-Off Holders for Small Parts Machining and Sub-Spindle Operations

1 Recommended for Cut-off with Small Sub-Spindle Clearance

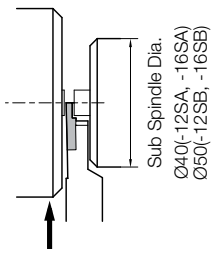
Thin holder head is great for when minimal clearance exists between the main spindle and sub spindle

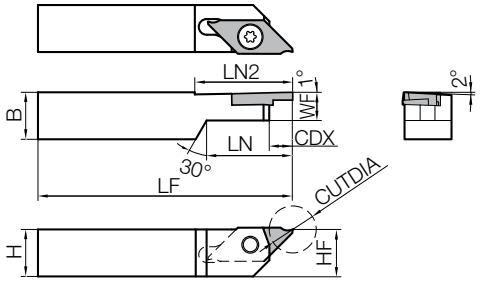
2 Wide Selection of Inserts for Various Applications

Available Chipbreakers : Right lead angle, S Chipbreaker, T Chipbreaker, Without Chipbreaker

Available Insert Grades : PR1425 for Steel Machining, PR1535 for Stainless Steel Machining, and PDL025 for Aluminum Machining

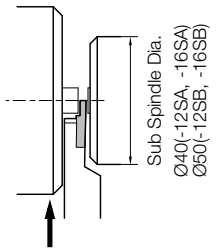
KTKF-S (For Small Diameter Cut-Off / Sub-Spindle)

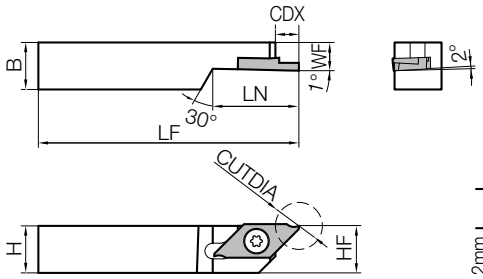


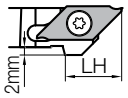


Right-hand Shown

Right-hand Insert for Right-hand Toolholder







KTKF□1010JX-12SA
KTKF□1010JX-16SA
shown in left figure

Left-hand Shown

Left-hand Insert for Left-hand Toolholder

Toolholder Dimensions

Part Number	Stock		Cut-Off Dia.	Dimensions (mm)									Spare Parts		Applicable Inserts ➡ H6~H7
													Clamp Screw	Wrench	
	R	L	CUTDIA	H	HF	B	LF	LH	LN	*LN2	WF	CDX			
KTKF□ 1010JX-12SA	●	●	5~12	10	10	10	120	15	22	26	7.2	6	SB-4570TRN	LTW-10S	TKF12□...
1212F-12SA	●	●		12	12	12	85	-							
KTKF□ 1212JX-12SB	●	●					120		26						
KTKF□ 1010JX-16SA	●	●	16	10	10	10	120	20	22	30	7.2	8			TKF16□...
1212F-16SA	●	●		12	12	12	85	-							
KTKF□ 1212JX-16SB	●	●					120		26						

- Dimension **CDX** shows the distance from the toolholder to the cutting edge.
- **CUTDIA** dimension differs depending on insert edge width. See Page ➡ **H6~H7** for actual cutting diameter.

*LN2 dimension only applies to right-hand toolholders

Recommended Cutting Conditions ➡ **H60**

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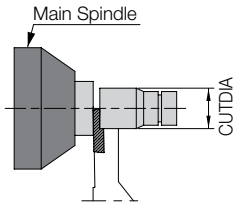


Fig.1
(When the edge is at the center)

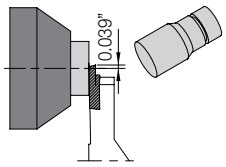


Fig.2
(When the edge is 0.008" beyond the center)

2) When using both Main and Sub spindles

In this case, when the cutting edge runs beyond the center line, the insert will contact the workpiece, since the workpiece does not fall off.
Therefore, the programmed distance beyond the center must be considered.
e.g. When the cutting edge is programmed to run 1mm beyond the center.
Workpiece maximum, CUTDIA2 (**Fig.4**) = [CUTDIA - 0.039"×2] (in)
(The clearance between the insert and the workpiece is 0.008")

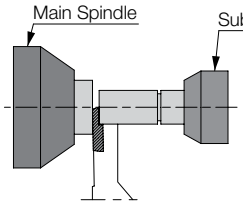


Fig.3
(When the edge is at the center)

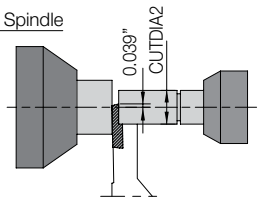


Fig.4
(When the edge is 0.008" beyond the center)

KTKF-JCT

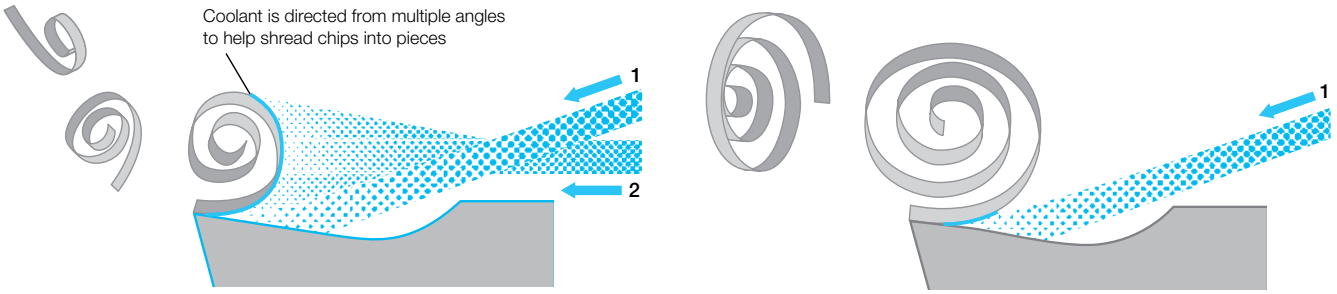
Cut-Off Holders for Small Parts Machining, Great for High Pressure Coolant

KTKF-JCT holders break chips evenly into small pieces with excellent chip control performance when machining difficult-to-cut material and stainless steel.

1 Excellent Chip Control Performance

The KTKF-JCT discharges coolant in two directions toward rake surface of insert and breaks chips into small pieces.

Coolant Discharge Structure Comparison



KTKF-JCT　　Competitor A

Chip Control Comparison (Internal Evaluation)

304

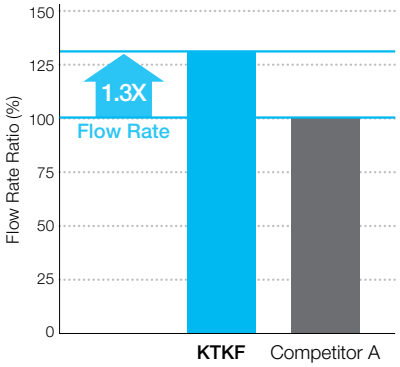
f (ipr)	0.0004	0.0008	0.0012
KTKF -JCT			
Competitor A			

Ti-6Al-4V

f (ipr)	0.0004	0.0008	0.0012
KTKF -JCT			
Competitor A			

Cutting Conditions: Vc = 260 sfm, Wet (Oil-based) Coolant Pressure: 218 psi (Internal)
Workpiece : Ø0.472"

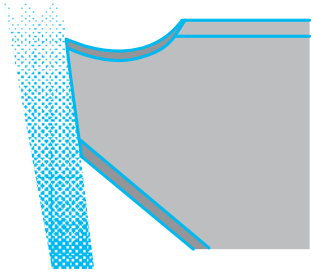
Coolant Flow Rate Comparison (Internal Evaluation)



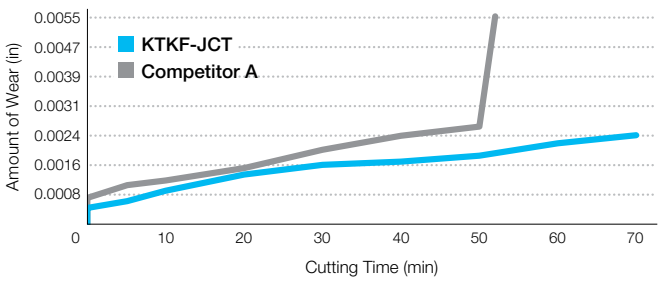
Coolant Pressure: 218 psi (Internal)

2 Superior Coolant Action Improves Tool Life

Coolant is also directed from the flank face of the insert to supply an ample amount of coolant to the tool edge area to help further suppress insert wear.



Wear Resistance Comparison (Internal Evaluation)

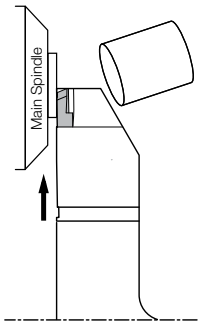


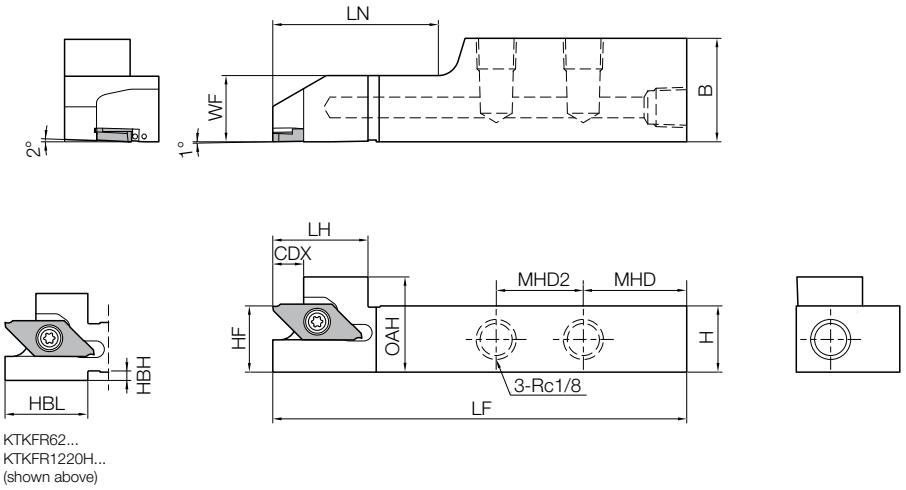
Cutting Conditions: Vc = 330 sfm, f = 0.0008 ipr, Wet (Oil-based)
Lubricating Pressure: 218 psi (Internal) Workpiece: Ti-6Al-4v Ø0.472"

KTKF-JCT

KTKF-JCT holders are being phased out.
Switch to KTKF-JCTM style ➡ H17

Right-hand (R)



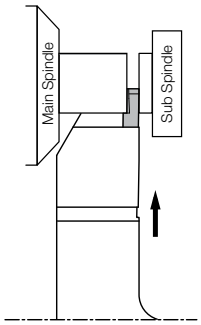


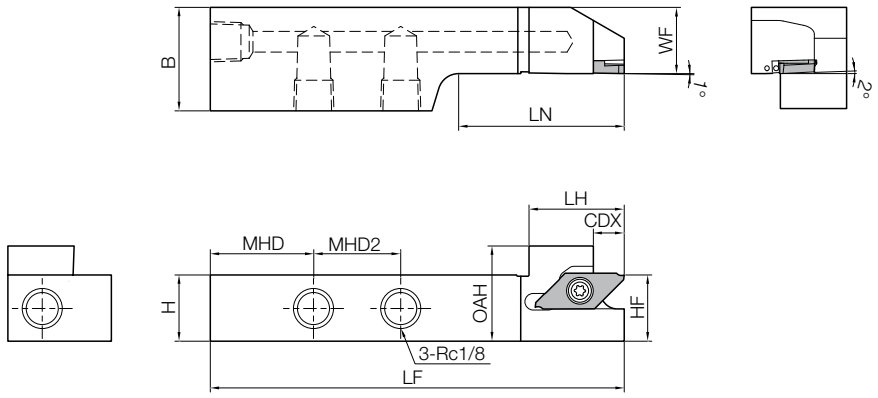
KTKFR62...
KTKFR1220H...
(shown above)

Right-hand Shown

Right-hand Insert for Right-hand Toolholder

Left-hand (L)





Left-hand Shown

Left-hand Insert for Left-hand Toolholder

Toolholder Dimensions

Part Number	Stock R	Stock L	Unit	Dimensions H=HF	OAH	B	LF	HBH	HBL	LH	LN	WF	CDX	MHD	MHD2	Spare Parts: Clamp Screw	Spare Parts: Wrench	Spare Parts: Plug	Applicable Inserts ➡ H6~H7
KTKFR 62-12JCT	△		inch	0.500	0.775	0.750	4.750	-	0.783	0.783	1.110	0.500	0.295	1.417	-	SB-4590TRWN	FT-10	GP-1	TKF12R...
82.5-12JCT	△		inch	0.625	0.900	1.000	4.750	-	-	0.901	1.582	0.625	0.295	0.984	1.811	SB-4590TRWN	FT-10	GP-1	TKF12R...
KTKFR 82.5-16JCT	△		inch	0.625	0.900	1.000	4.750	-	-	0.901	1.582	0.625	0.378	0.984	1.811	SB-4590TRWN	FT-10	GP-1	TKF16R...
KTKFR 1220H-12JCT	△		mm	12	19	20	100	2	20	20	28	12	7.5	35	-	SB-4590TRWN	FT-10	GP-1	TKF12R...
KTKF[R/L] 1625H-12JCT	△	△	mm	16	23	25	100	-	-	23	40	16	7.5	25	46	SB-4590TRWN	FT-10	GP-1	TKF12[R/L]...
2025H-12JCT	△	△	mm	20	27	25	100	-	-	23	40	20	7.5	25	46	SB-4590TRWN	FT-10	GP-1	TKF12[R/L]...
KTKF[R/L] 1625H-16JCT	△	△	mm	16	23	25	100	-	-	23	40	16	9.6	25	46	SB-4590TRWN	FT-10	GP-1	TKF16[R/L]...
2025H-16JCT	△	△	mm	20	27	25	100	-	-	23	41	20	9.6	25	46	SB-4590TRWN	FT-10	GP-1	TKF16[R/L]...

Recommended Cutting Conditions ➡ **H60**

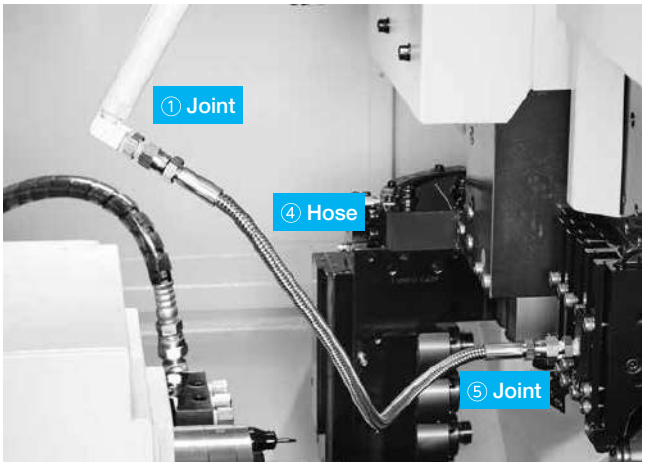
● : Standard Item △ : Phaseout Item (will be removed from next catalog)
Contact your local Kyocera sales engineer to upgrade old products to new technology

Coolant Pipe Parts

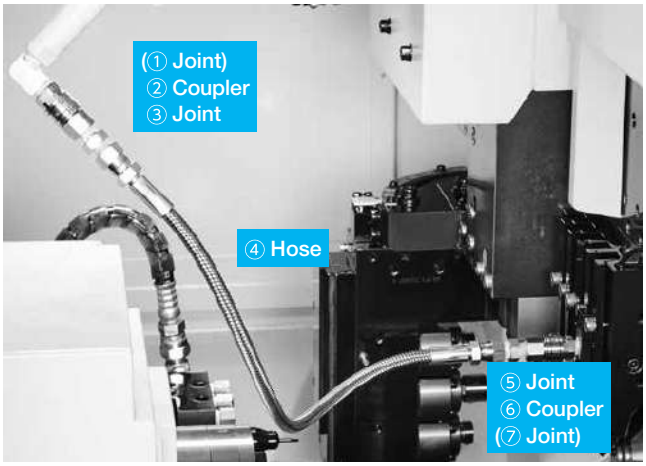
Pipe parts will be required separately if internal coolant is used.

Pump Pressure: up to 2,900 psi
Pump Pressure: up to 1,088 psi if couplers are used

Without Coupler (Pump Pressure: up to 2,900 psi)



With Coupler (Pump Pressure: up to 1,088 psi)



Combination Part Description Example

Part	Part Number
① Joint	J-ST-R1/8-G1/8
④ Hose	HS-G1/8-G1/8-500
⑤ Joint	J-ST-R1/8-G1/8

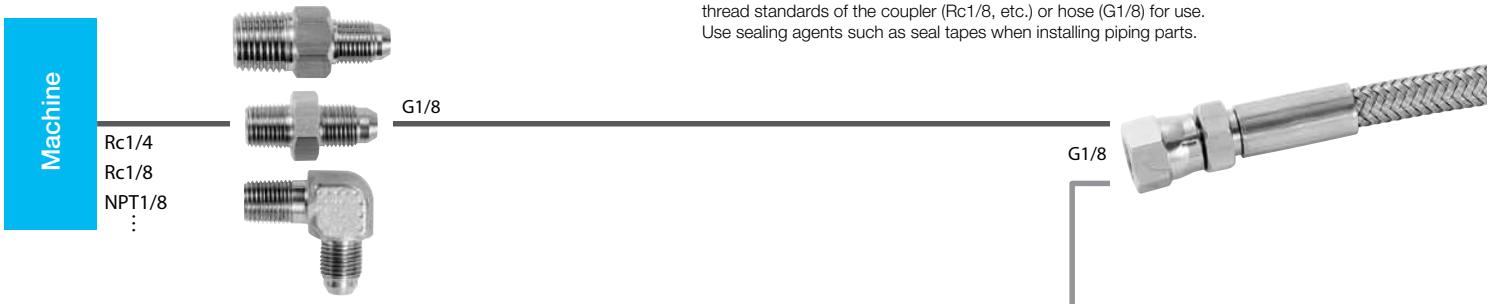
Convert the thread standards on the machine's side (Rc1/4, Rc1/8, NPT1/8, etc.) to the thread standard on the hose side (G1/8) for use.
Use sealing agents such as seal tapes when installing piping parts.

Combination Part Description Example

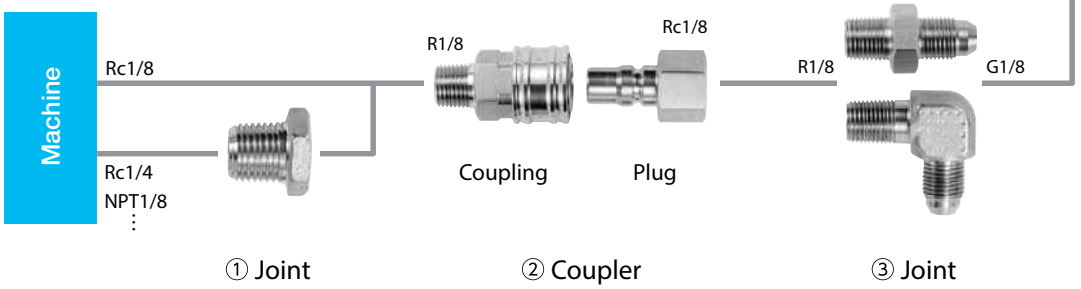
Part	Part Number
(① Joint)	-
② Coupler	CP-ST-R1/8, P-ST-RC1/8
③ Joint	J-ST-R1/8-G1/8
④ Hose	HS-G1/8-G1/8-500
⑤ Joint	J-ST-R1/8-G1/8
⑥ Coupler	P-ST-RC1/8, CP-ST-R1/8
(⑦ Joint)	-

Convert the thread standards on the machine's side (Rc1/4, Rc1/8, NPT1/8, etc.) to thread standards of the coupler (Rc1/8, etc.) or hose (G1/8) for use.
Use sealing agents such as seal tapes when installing piping parts.

Without Coupler (Pump Pressure: up to 2,900 psi)



With Coupler (Pump Pressure: up to 1,088 psi)



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Piping Installation Parts Description

Joint (① ③ ⑤ ⑦)

Pressure Resistance: up to 2,900 psi

Exterior	Part Number	Thread Standard	Stock
	**J-ST-R1/4-G1/8**	R1/4 ⇔ G1/8	●
	J-ST-NPT1/8-G1/8	NPT1/8 ⇔ G1/8	●
	**J-ST-R1/8-G1/8**	R1/8 ⇔ G1/8	●
	**J-AN-R1/8-G1/8**		●
	**J-ST-R1/4-RC1/8**	R1/4 ⇔ Rc1/8	●
	J-ST-NPT1/8-RC1/8	NPT1/8 ⇔ Rc1/8	●
	J-ST-R1/8-RC1/8	Rc1/8 ⇔ R1/8 (Extension Joint)	●

● : U.S. Stock

Coupler (② ⑥)

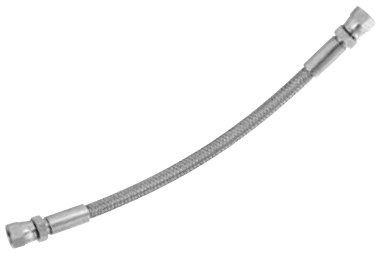
Pressure Resistance: up to 1,088 psi

Exterior	Part Number	Thread Standard	Stock
	**CP-ST-R1/8**	R1/8	●
	**P-ST-RC1/8**	Rc1/8	●

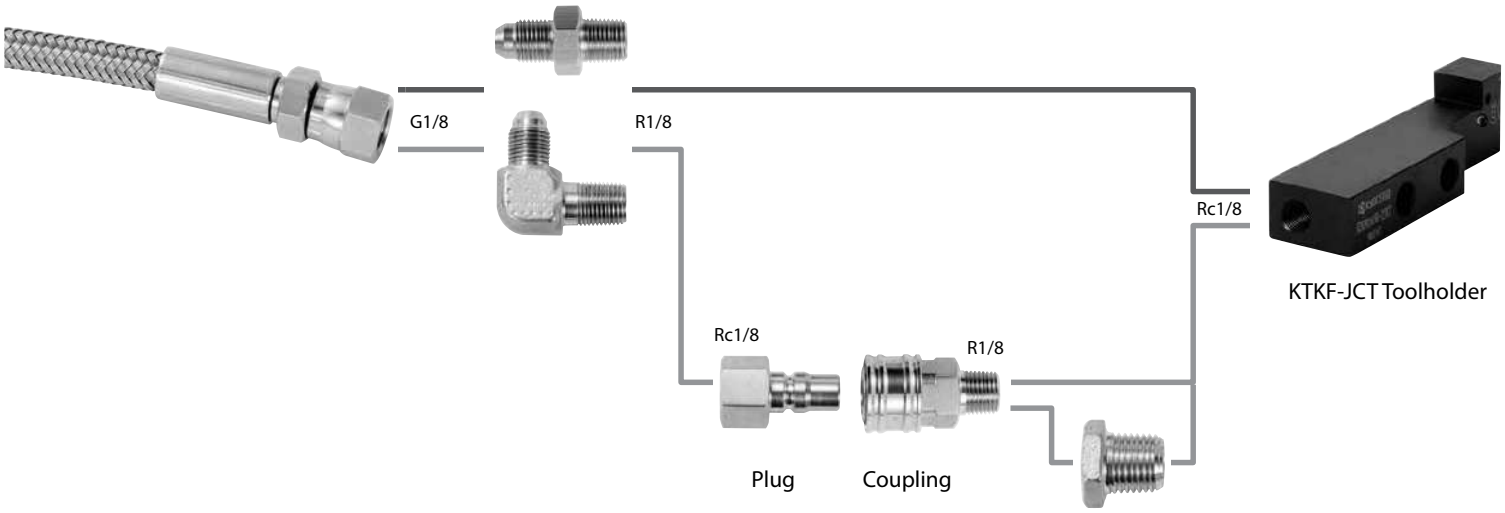
● : U.S. Stock

Hose (④)

Pressure Resistance: up to 2,900 psi

Exterior	Part Number	Thread Standard	Total Length (mm)	Stock
	**HS-G1/8-G1/8-200**	G1/8	200	●
	HS-G1/8-G1/8-300		300	●
	HS-G1/8-G1/8-400		400	●
	HS-G1/8-G1/8-500		500	●
	HS-G1/8-G1/8-600		600	●
	HS-G1/8-G1/8-800		800	●

● : U.S. Stock



④ Hose ⑤ Joint ⑥ Coupler ⑦ Joint (Extension Joint)

● : Standard Item △ : Phaseout Item (will be removed from next catalog)
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KTKF-JCTM NEW

Direct from Turret High-Pressure Coolant-Through Cut-Off Holders

Supports Internal Coolant with or without Piping Systems

Internal Coolant without Piping

*When the tool turret supports direct coolant

Coolant is supplied directly from the tool turret into the holder without the need to install piping

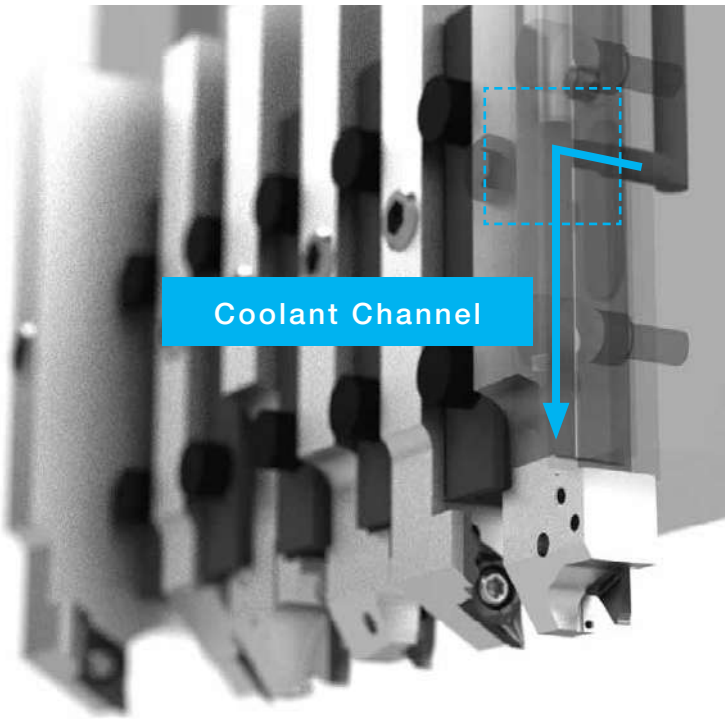
Applicable to Wide Range of Machines

The tool turret is optional. Please contact our company sales representative for details.

CITIZEN MACHINERY CO., LTD. (L20, D25, M32)
STAR MICRONICS CO., LTD. (SB-R series, SR series, SV series)
TSUGAMI CORPORATION (S205/206-Ⅱ □16 type, S205A/206A-Ⅱ □16 type)

(Random order)
Based on Kyocera Survey in January 2021

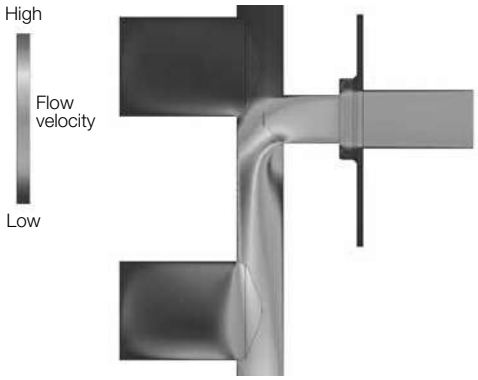
Compatible with various machine including the above.Toolholders can be customized as well.



Optimized Coolant Supply

Supply hole designed to reduce energy loss based on extensive flow analysis

Analysis Image (Internal Evaluation)

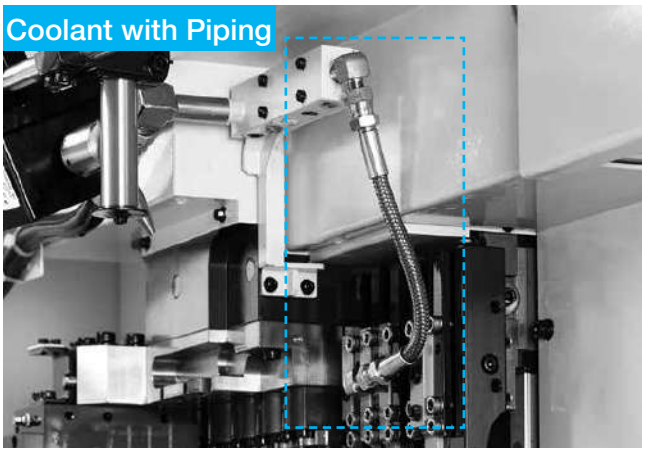


Internal Coolant with Piping

*Piping parts: See pages **H18** and **H19**

Compatible with internal coolant on any machine with standard piping parts

Commercial piping parts are available when using at normal pressure



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● : Standard Item △ : Phaseout Item (will be removed from next catalog)
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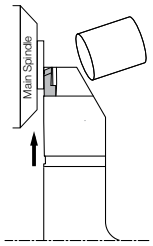
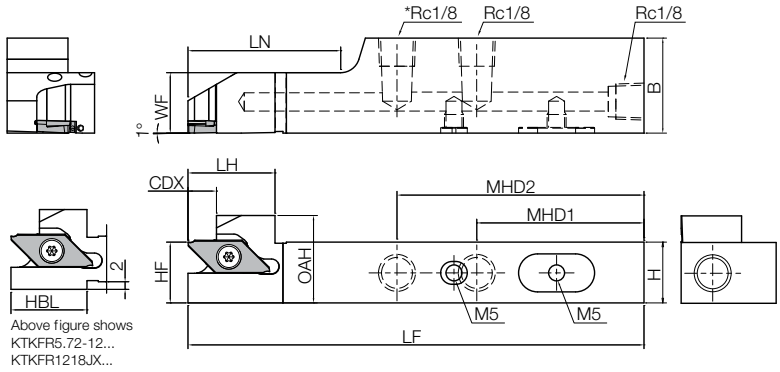
NEW ITEMS!

KTKF-JCTM NEW

Right-hand (R)



*KTKFR5.72··· : 2-Rc1/8
*KTKFR12··· : 2-Rc1/8

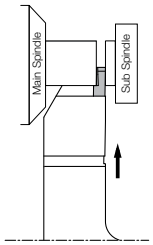


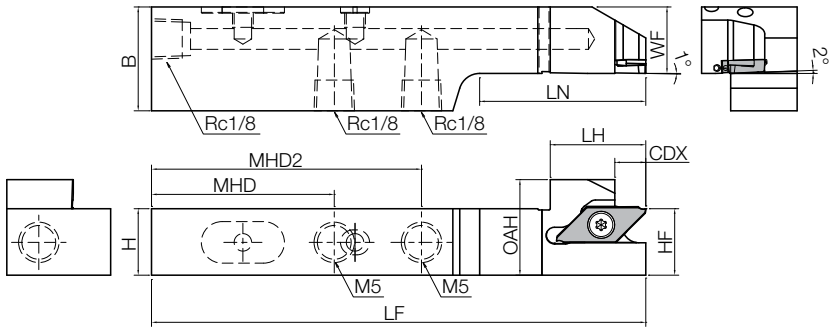
Above figure shows
KTKFR5.72-12...
KTKFR1218JX...

Right-hand Shown

Right-hand Insert for Right-hand Toolholder

Left-hand (L)





Left-hand Shown

Left-hand Insert for Left-hand Toolholder

Toolholder Dimensions

Part Number	Stock		Unit	Dimensions												Spare Parts				Applicable Inserts ➔ H6~H7
																Clamp Screw	Wrench	Plug 1	Plug 2	
	R	L		H=HF	OAH	B	LF	HBH	HBL	LH	LN	WF	CDX	MHD	MHD2					
KTKFR 5.72-12JCTM	●		inch	0.500	0.500	0.775	0.709	4.750	0.790	0.790	1.110	0.500	0.295	2.125	-	SB-4590TRWN	FT-10	GP-1	HS5X4LP	TKF12R... TKFT12R...
KTKFL 82.5-12JCTM	●	●		0.625	0.625	0.900	1.000	4.750	-	0.905	1.585	0.625	0.295	1.730	2.560					TKF12L... TKFT12L...
82.5-16JCTM	●	●											0.377							
KTKFR 1218JX-12JCTM	●		mm	12	12	19	18	120	20	20	28	12	7.5	54	-	SB-4590TRWN	FT-10	GP-1	HS5X4LP	TKF12R... TKFT12R...
KTKFL 1625JX-12JCTM	●	●		16	16	23	25		-	23	40	16		44	65					TKF12L... TKFT12L...
2025JX-12JCTM	●	●		20	20	27						20							-	
KTKFL 1625JX-16JCTM	●	●		16	16	23	25	120	-	23	40	16	9.6	44	65	SB-4590TRWN	FT-10	GP-1	HS5X4LP	TKF16L... TKFT16L...
2025JX-16JCTM	●	●		20	20	27					41	20								

Recommended Cutting Conditions ➔ H60

● : Standard Item △ : Phaseout Item (will be removed from next catalog)
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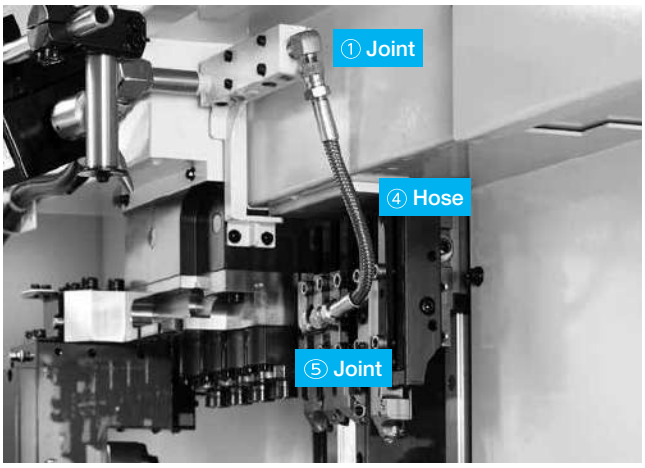
Coolant Pipe Parts

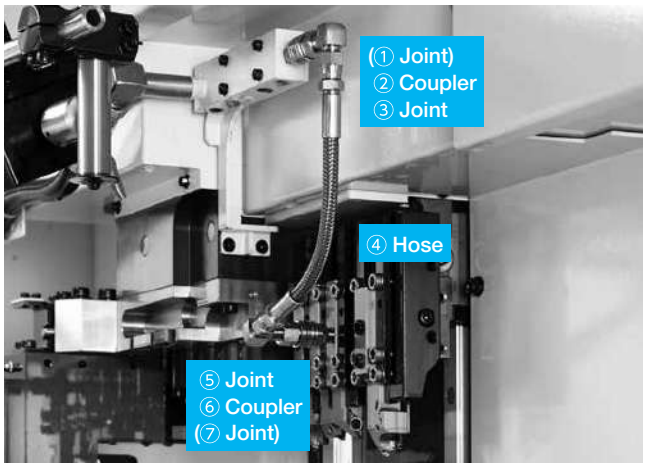
Pipe parts will be required separately if internal coolant is used.

Pump Pressure: up to 2,900 psi
Pump Pressure: up to 1,088 psi if couplers are used

Without Coupler (Pump Pressure: up to 2,900 psi)



With Coupler (Pump Pressure: up to 1,088 psi)



Combination Part Description Example

Part	Part Number
① Joint	J-ST-R1/8-G1/8
④ Hose	HS-G1/8-G1/8-500
⑤ Joint	J-ST-R1/8-G1/8

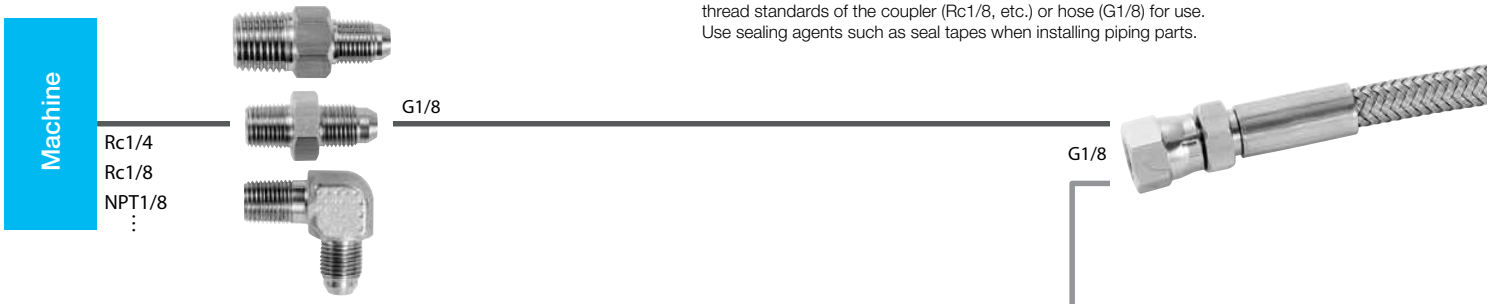
Convert the thread standards on the machine's side (Rc1/4, Rc1/8, NPT1/8, etc.) to the thread standard on the hose side (G1/8) for use.
Use sealing agents such as seal tapes when installing piping parts.

Combination Part Description Example

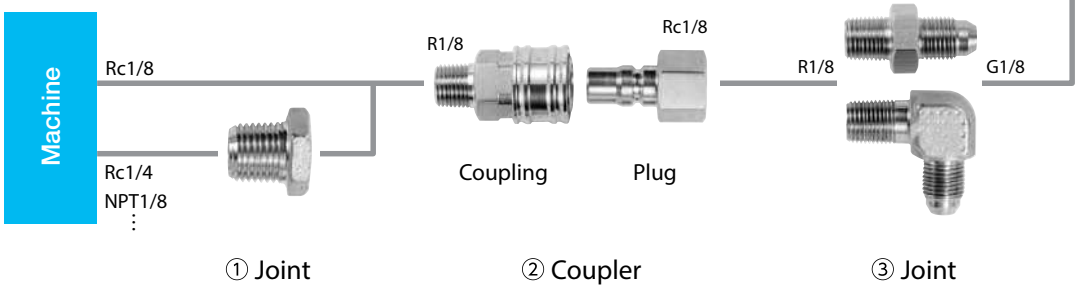
Part	Part Number
(① Joint)	-
② Coupler	CP-ST-R1/8, P-ST-RC1/8
③ Joint	J-AN-R1/8-G1/8
④ Hose	HS-G1/8-G1/8-200
⑤ Joint	J-AN-R1/8-G1/8
⑥ Coupler	P-ST-RC1/8, CP-ST-R1/8
(⑦ Joint)	-

Convert the thread standards on the machine's side (Rc1/4, Rc1/8, NPT1/8, etc.) to thread standards of the coupler (Rc1/8, etc.) or hose (G1/8) for use.
Use sealing agents such as seal tapes when installing piping parts.

Without Coupler (Pump Pressure: up to 2,900 psi)



With Coupler (Pump Pressure: up to 1,088 psi)



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● : Standard Item △ : Phaseout Item (will be removed from next catalog)
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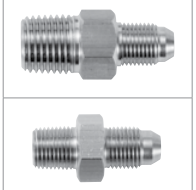
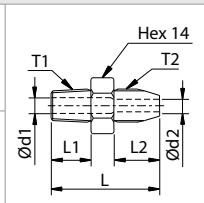
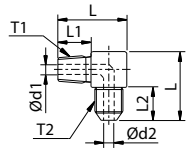
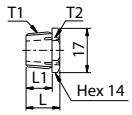
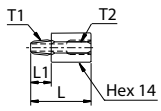
Piping Installation Parts Description

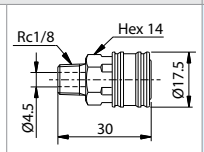
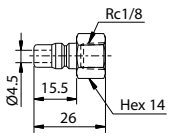
Joint (① ③ ⑤ ⑦)

Pressure Resistance: up to 2,900 psi
(Unit: mm)

Shape	Part Number	Stock	Ød1	Ød2	L	L1	L2	T1	T2
 	J-ST-R1/4-G1/8	●	5.5	4.0	34	13	13	R1/4	G1/8
	J-ST-NPT1/8-G1/8	●	3.5	3.5	29	10	13	NPT1/8	G1/8
	J-ST-R1/8-G1/8	●	4.0	4.0	29	10	13	R1/8	G1/8
 	J-AN-R1/8-G1/8	●	4.0	4.0	27	14	13	R1/8	G1/8
 	J-ST-R1/4-RC1/8	●	–	–	17	12	–	R1/4	Rc1/8
	J-ST-NPT1/8-RC1/8	●	3.5	–	30	10	–	NPT1/8	Rc1/8
	J-ST-R1/8-RC1/8	●	3.5	–	33	13	–	R1/8	Rc1/8

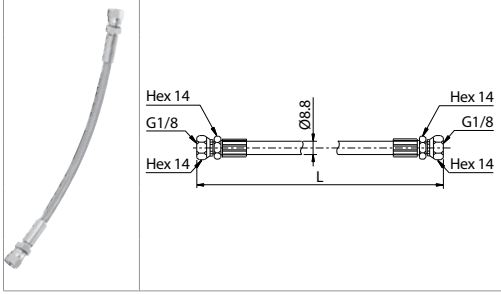
Coupler (② ⑥)

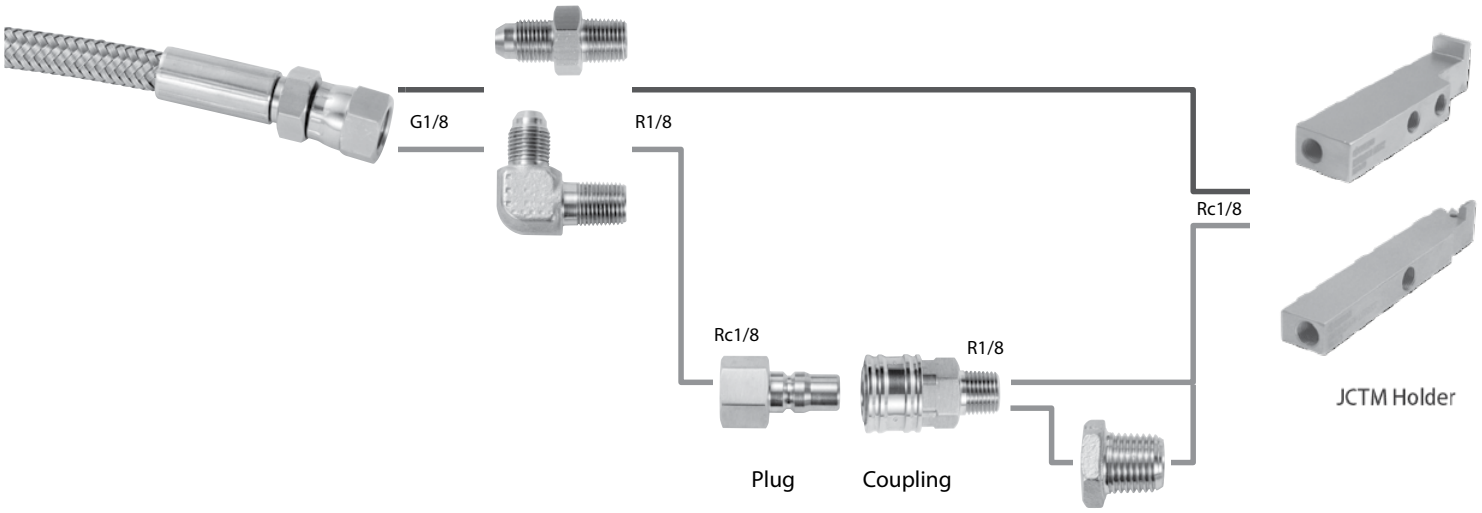
Pressure Resistance: up to 1,088 psi
(Unit: mm)

Shape	Part Number	Stock
 	CP-ST-R1/8	●
 	P-ST-RC1/8	●

Hose (④)

Pressure Resistance: up to 2,900 psi
(Unit: mm)

Shape	Part Number	Stock	L
	HS-G1/8-G1/8-200	●	200
	HS-G1/8-G1/8-300	●	300
	HS-G1/8-G1/8-400	●	400
	HS-G1/8-G1/8-500	●	500
	HS-G1/8-G1/8-600	●	600
	HS-G1/8-G1/8-800	●	800



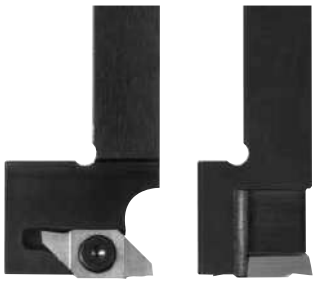
④ Hose ⑤ Joint ⑥ Coupler ⑦ Joint (Extension Joint)

● : Standard Item △ : Phaseout Item (will be removed from next catalog)
Contact your local Kyocera sales engineer to upgrade old products to new technology

Y-axis Toolholders

Improved Chip Control

New Toolholder Designs for Better Chip Evacuation in Small Parts Machining

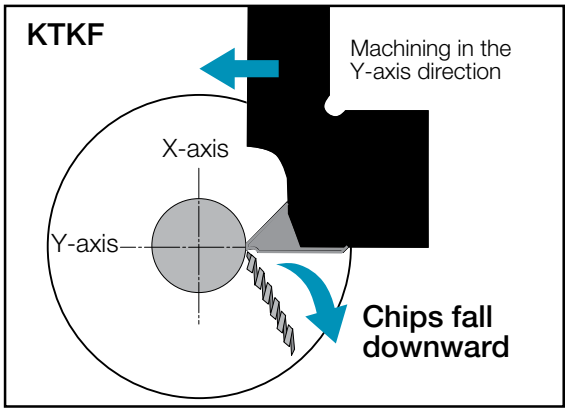


KTKFR-Y

SDJCR-Y
E30

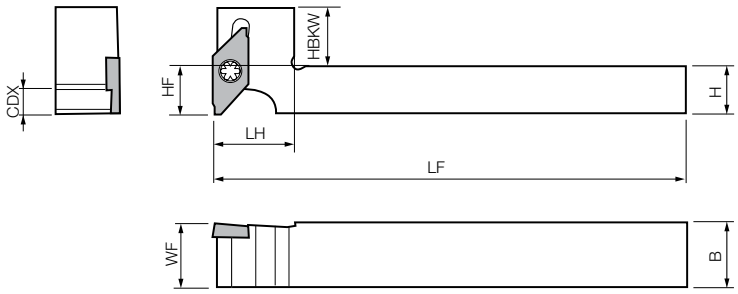
1 Controlled Chip Evacuation for Stable Machining





The Y-axis machining direction allows the chips to fall down and away from the workpiece, improving chip evacuation.

KTKF-Y (Y-axis Holder) NEW



• Right-hand shown

Right-hand Insert for Right-hand Toolholder, Left-hand Insert for Left-hand Toolholder

Toolholder Dimensions

Part Number		Stock		Dimensions (mm)								Spare Parts		Applicable Inserts
												Clamp Screw	Wrench	
		R	L	H	HF	B	LF	LH	WF	LU	HBKW			
KTKFR	1216JX-12-Y	●		12	12	16	120	20	16	6	15	SB-4590TRWN	FT-10	TKF12R...
	1616JX-12-Y	●		16	16	16		25	16		11			

• Dimensions LU shows the distance from the toolholder to the cutting edge

Recommended Cutting Conditions H60

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(Technical Support) 800.823.7284 - Option 2
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● : Standard Item △ : Phaseout Item (will be removed from next catalog)
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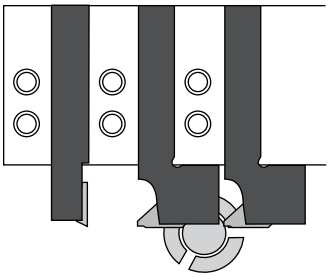
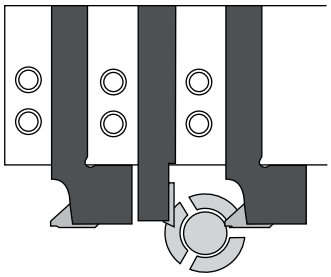
Precautions

Do not use Y-axis toolholders side-by-side to prevent interference (Only two Y-axis holders can be used at the same time)

Interference

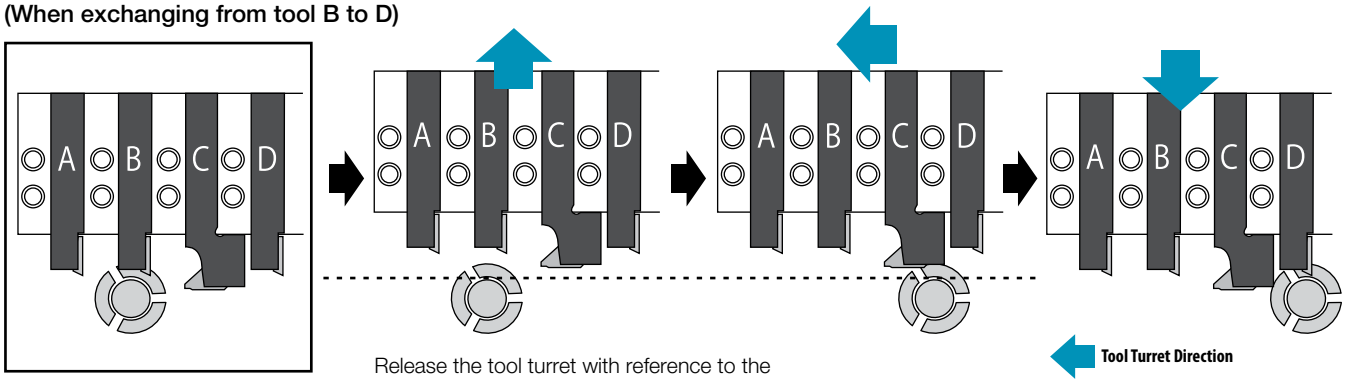


Without Interference



Standard toolholders may be mounted between two Y-axis toolholders

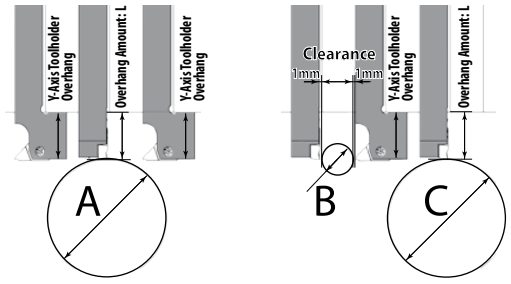
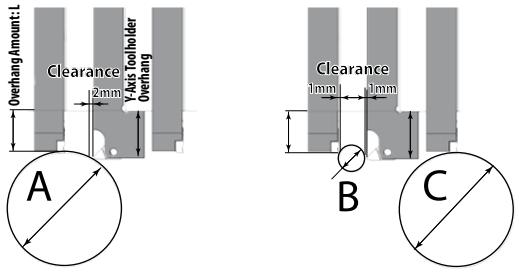
When changing the tool, set the retracted position with reference to the cutting edge of the Y-axis holder (When exchanging from tool B to D)



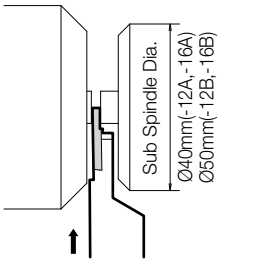
Release the tool turret with reference to the overhang amount of the Y-axis toolholder

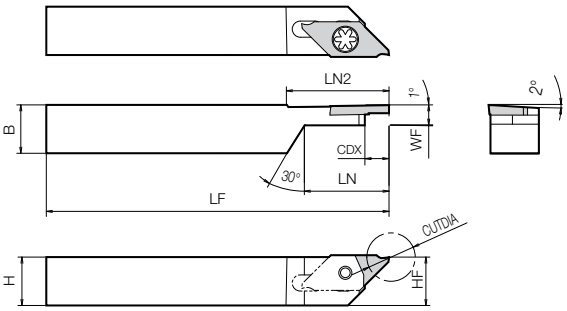
Note that using other toolholder styles together will result in different outside diameters

(Unit: mm)

Y-axis Toolholder Overhang	Examples	Overhang Amount : L / Available Outside Cutting Dia. (Ø)	20	22	25
20		A	Without Restriction	Without Restriction	Without Restriction
		B	13.0	13.0	13.0
		C	Without Restriction	Without Restriction	Without Restriction
25		A	38.0	58.0	Without Restriction
		B	14.9	13.6	13.0
		C	45.0	60.0	Without Restriction

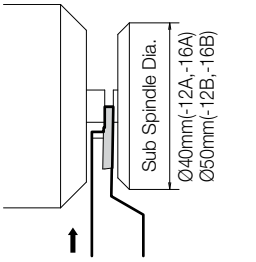
KTKFS (Small Diameter Cut-Off / Sub Spindle)

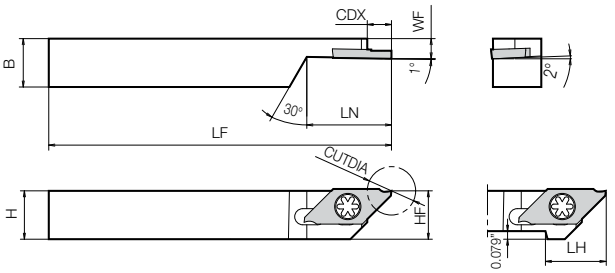




Right-hand Shown

Right-hand Insert for Right-hand Toolholder





KTKFSR/L 6-12JX
KTKFSR/L 6-16JX
KTKFSR/L 1010K-12A
KTKFSR/L 1010K-16A
only for left shape

Left-hand Shown

Left-hand Insert for Left-hand Toolholder

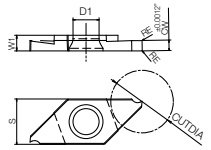
Toolholder Dimensions

Part Number	Stock		Unit	Cut-Off Dia.	Dimensions									Spare Parts		Applicable Inserts ➡ H23
														Clamp Screw	Wrench	
	R	L		CUTDIA	H	HF	B	LF	LH	LN	*LN2	WF	CDX			
KTKFSR/L 6-12JX	△	△	inch	0.236~0.472	0.375	0.375	0.375	4.750	0.590	0.866	1.024	0.197	0.236	SB-4050TRN	LTW-10S	TKFS12R/L
8-12JX	△	△		0.236~0.472	0.500	0.500	0.500	4.750	-	1.024	1.024	0.197	0.236			
KTKFSR/L 6-16JX	△	△		0.551~0.630	0.375	0.375	0.375	4.750	0.787	0.866	1.181	0.197	0.315	SB-4050TRN	LTW-10S	TKFS16R/L
8-16JX	△	△		0.551~0.630	0.500	0.500	0.500	4.750	-	1.024	1.181	0.197	0.315			
KTKFSR/L 1010K-12A	△	△	mm	6~12	10	10	10	120	15	22	26	5	6	SB-4050TRN	LTW-10S	TKFS12R/L
1212F-12A	△	△		6~12	12	12	12	85	-	22	26	5	6			
1212K-12B	△	△		6~12	12	12	12	120	-	26	26	5	6			
KTKFSR/L 1010K-16A	△	△		14~16	10	10	10	120	20	22	30	5	8	SB-4050TRN	LTW-10S	TKFS16R/L
1212F-16A	△	△		14~16	12	12	12	85	-	22	30	5	8			
1212K-16B	△	△		14~16	12	12	12	120	-	26	30	5	8			

- Dimension **CDX** shows the distance from the toolholder to the cutting edge.
- **CUTDIA** dimension differs depending on insert edge width. See Page ➡ **H23** for actual cutting diameter.
  *LN2 dimension only applies to right-hand toolholders

Recommended Cutting Conditions ➡ **H23**

TKFS (CUTDIA)

Insert (Right-handed Insert Shown)		Part Number		Dimensions CW inch	Dimensions CW mm	CUTDIA (in)
		TKFS12R/L	100-S	0.039	1.00	0.236
			150-S	0.059	1.50	0.354
			200-S	0.079	2.00	0.472
		TKFS16R/L	150-S	0.059	1.50	0.551
			200-S	0.079	2.00	0.630

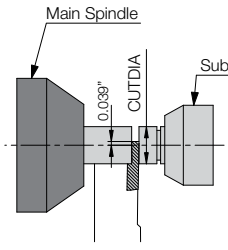


Fig.1

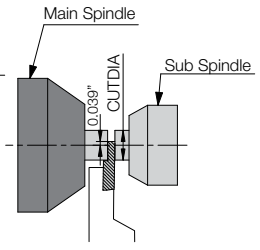


Fig.2

As **Fig.2** shows, the cutting diameter of the insert is measured when the lead edge passes 0.039" past the center line of part.

- As **Fig.1** shows, use KTKFL (Left-hand) when the distance between main spindle and sub spindle are long.
- As **Fig.2** shows, KTKFS is recommended when the workpiece diameters are small and the distance between the main spindle and sub spindle are short

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Applicable Inserts

Classification of Usage
● : Light Interruption / 1st Choice
◔ : Light Interruption / 2nd Choice
● : Continuous / 1st Choice
○ : Continuous / 2nd Choice

P	Carbon Steel / Alloy Steel	●	◔	◔	◔	◔		
M	Stainless Steel	◔	◔	●	◔	◔		
K	Cast Iron							●
N	Non-ferrous Metals							●

Insert (Right-handed Insert Shown)	Part Number	CW inch	CW mm	CUTDIA	RE	W1	S	D1	MEGACOAT NANO PR1725 R	PR1725 L	PR1425 R	PR1425 L	PR1535 R	PR1535 L	MEGACOAT PR1225 R	PR1225 L	PVD Coated Carbide PR1025 R	PR1025 L	Carbide KW10 R	KW10 L
	TKFS12R/L 100-S	0.039	1.0	0.236	0.002	0.087	0.343	0.173	△	△	△	△	△	△	△	△	△	△	△	△
	150-S	0.059	1.5	0.354					△	△	△	△	△	△	△	△	△	△	△	△
	200-S	0.079	2.0	0.472					△	△	△	△	△	△	△		△	△	△	△
	TKFS16R/L 150-S	0.059	1.5	0.551	0.002	0.087	0.374	0.173	△	△	△	△	△	△	△	△	△	△	△	△
	200-S	0.079	2.0	0.630					△	△	△	△	△	△	△	△	△	△	△	△

• Lead angle shows the angle when installed in the toolholder.
• As Fig.1 of ◔ **H22** shows, the cutting diameter of the insert is measured when the lead edge passes 0.039" past the center line of part.

Recommended Cutting Conditions

Workpiece Material	Recommended Grade (Vc sfm) MEGACOAT NANO PLUS	MEGACOAT NANO	MEGACOAT NANO	MEGA COAT	Carbide	TKFS12 Width 0.039" (1.0mm)	TKFS12 Width 0.059" (1.5mm)	TKFS12 Width 0.079" (2.0mm)	TKFS16 Width 0.059" (1.5mm)	TKFS16 Width 0.079" (2.0mm)	Notes
	PR1725	**PR1425**	**PR1535**	**PR1225**	**KW10**	Feed Rate (ipr)			Feed Rate (ipr)		
Carbon Steel	★ 230~560	☆ 225~550	☆ 230~490	☆ 225~500	-	0.0004~0.0012	0.0004~0.0012	0.0004~0.0012	0.0004~0.0012	0.0004~0.0012	Wet
Alloy Steel	★ 230~560	☆ 225~550	☆ 230~490	☆ 225~500	-	0.0004~0.0012	0.0004~0.0012	0.0004~0.0012	0.0004~0.0012	0.0004~0.0012	
Stainless Steel	☆ 200~460	☆ 200~450	★ 200~400	☆ 200~400	-	0.0004~0.0008	0.0004~0.0008	0.0004~0.0012	0.0004~0.0008	0.0004~0.0012	
Cast Iron	-	-		-	★ 175~325	0.0004~0.0012	0.0004~0.0012	0.0004~0.0012	0.0004~0.0012	0.0004~0.0012	
Aluminum	-	-		-	★ 650~1475	0.0004~0.0012	0.0004~0.0012	0.0004~0.0012	0.0004~0.0012	0.0004~0.0012	
Brass	-	-		-	★ 325~650	0.0004~0.0016	0.0004~0.0016	0.0004~0.0016	0.0004~0.0016	0.0004~0.0016	

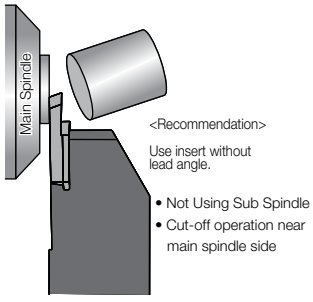
★ : 1st Recommendation ☆ : 2nd Recommendation

KTKF / KTKFS Selection Reference

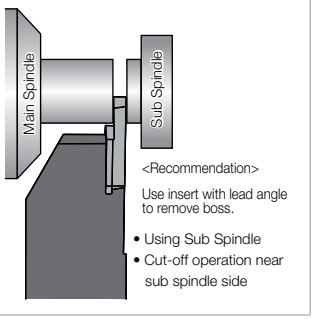
KTKF

• Both Right-hand and Left-hand types are applicable to gang tool post
• Left-hand type is used during cut-off operations using sub spindle

KTKFR Right-Hand Toolholder



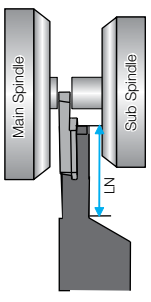
KTKFL Left-Hand Toolholder



KTKFS

• When machining workpiece with small diameter, use KTKFS to reduce overhang distance from the main spindle

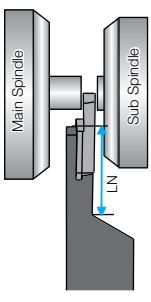
KTKFSR Right-Hand Toolholder



<How to Select> R-Hand
• Long workpiece and more rigidity
• Cut-off operation near main spindle side

<How to Select> LN Dimension
• Sub Spindle Dia. Ø40mm→22 (A type) Ø50mm→26 (B type)

KTKFSL Left-Hand Toolholder



<How to Select> L-Hand
• Short workpiece and less rigidity
• Cut-off operation near main spindle side

<How to Select> LN Dimension
• Sub Spindle Dia. Ø40mm→22 (A type) Ø50mm→26 (B type)

Inserts are sold in 10 piece boxes

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GDM / GDG

Usage Classification
● : Light Interruption / 1st Choice
◔ : Light Interruption / 2nd Choice
● : Continuous / 1st Choice
○ : Continuous / 2nd Choice

		MEGACOAT NANO	MEGA COAT		DLC	Carbide	
P	Carbon Steel / Alloy Steel	◔	●	◔			
M	Stainless Steel	●	◔	◔			
N	Non-ferrous Metals				●	◔	

Insert (Right-handed Insert Shown)			Part Number	Dimensions (in) CW inch	CW mm	CW Tolerance	RE	INSL	S	Lead Angle PSIR℞	PR1535	PR1225	PR1215	PDL025	GW15	Ref. Page for Toolholder
Cut-off / Low Feed	Low Feed 2-edge		GDM 1316N-003PF	0.051	1.3	±0.0016	0.0012	0.630	0.146	-	●	●	●			H26 H27
			1316N-015PF	0.051	1.3		0.0059				●	●	●			
			1516N-003PF	0.059	1.5		0.0012				●	●	●			
			1516N-015PF	0.059	1.5		0.0059				●	●	●			
			2020N-003PF	0.079	2.0		0.0012	0.787	0.169		●	●	●			H29 ~ H37
			2020N-015PF	0.079	2.0		0.0059				●	●	●			
			2520N-003PF	0.098	2.5		0.0012				●	●	●			
			2520N-015PF	0.098	2.5		0.0059				●	●	●			
			3020N-003PF	0.118	3.0		0.0012				●	●	●			
			3020N-015PF	0.118	3.0		0.0059				●	●	●			
	15° Lead Angle Low Feed / 2-edge		GDM 1316℞-003PF-15D	0.051	1.3		0.0012	0.630	0.146		●	●	●			H26 H27
			1516℞-003PF-15D	0.059	1.5		0.0012				●	●	●			
			1516R-015PF-15D	0.059	1.5		0.0059				Ⓡ	Ⓡ	Ⓡ			
			2020℞-003PF-15D	0.079	2.0		0.0012	0.787	0.169		●	●	●			
			2020R-015PF-15D	0.079	2.0	±0.0016	0.0059			15°	Ⓡ	Ⓡ	Ⓡ			
			2520℞-003PF-15D	0.098	2.5		0.0012				●	●	●			
			2520R-015PF-15D	0.098	2.5		0.0059				Ⓡ	Ⓡ	Ⓡ			
			3020℞-003PF-15D	0.118	3.0		0.0012				●	●	●			
			3020R-015PF-15D	0.118	3.0		0.0059				Ⓡ	Ⓡ	Ⓡ			
Cut-off / Medium Feed	Medium Feed 2-edge		GDM 2020N-010PQ	0.079	2.0	±0.0012	0.0039	0.787	0.169	-	●	●	●			
			2520N-010PQ	0.098	2.5						●	●	●			
			3020N-010PQ	0.118	3.0						●	●	●			
	15° Lead Angle Medium Feed / 2-edge		GDM 2020R-010PQ-15D	0.079	2.0						●	●	●			H29 ~ H37
			2520R-010PQ-15D	0.098	2.5	±0.0012	0.0039	0.787	0.169	15°	●	●	●			
			3020R-010PQ-15D	0.118	3.0						●	●	●			
Cut-off / Low Cutting Force	2-edge		GDG 2020N-005PG	0.079	2.0						●	●		●	●	
			2520N-005PG	0.098	2.5	±0.0008	0.0020	0.787	0.169	-	●	●		●	●	
			3020N-005PG	0.118	3.0						●	●		●	●	
	15° Lead Angle 2-edge		GDG 2020R-005PG-15D	0.079	2.0						●	●		●	●	
			2520R-005PG-15D	0.098	2.5	±0.0008	0.0020	0.787	0.169	15°	●	●		●	●	
			3020R-005PG-15D	0.118	3.0						●	●		●	●	

Using PM/PF Chipbreaker (designed for cut-off) for grooving will not create a flat bottom (See Fig.)



Recommended Cutting Conditions ➡ **H38~H39**

Inserts are sold in 10 piece boxes

(Customer Service) **800.823.7284 - Option 1**
(Technical Support) **800.823.7284 - Option 2**
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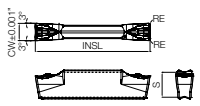
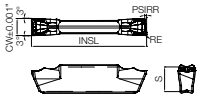
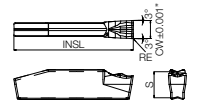
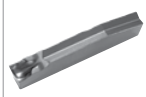
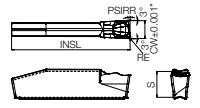
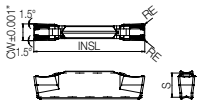
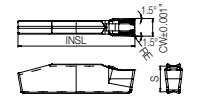
● : Standard Item △ : Phaseout Item (will be removed from next catalog)
Contact your local Kyocera sales engineer to upgrade old products to new technology

GDM / GDMS

Classification of Usage
● : Light Interruption / 1st Choice
◔ : Light Interruption / 2nd Choice
● : Continuous / 1st Choice
○ : Continuous / 2nd Choice

P	Carbon Steel / Alloy Steel	◔	●	◔
M	Stainless Steel	●	◔	◔
K	Cast Iron			

Insert (Right-handed Insert Shown)			Part Number	Dimensions (in) CW inch	CW mm	CW Tolerance	RE	INSL	S	Lead Angle PSIR°	MEGA COAT NANO PR1535	MEGACOAT PR1225	MEGACOAT PR1215	Ref. Page for Toolholder
Cut-off / General Purpose	 2-edge		GDM 2020N-020PM	0.079	2.0	±0.0012	0.008	0.787	0.169	-	●	●	●	
			2520N-020PM	0.098	2.5		0.008				●	●	●	
			3020N-025PM	0.118	3.0		0.010				●	●	●	
			4020N-030PM	0.157	4.0		0.012				●	●	●	
	 2-edge		GDM 2020R-020PM-6D	0.079	2.0	±0.0012	0.008	0.787	0.169	6°	●	●	●	
			2520R-020PM-6D	0.098	2.5		0.008				●	●	●	
			3020R-025PM-6D	0.118	3.0		0.010				●	●	●	
	 1-edge		GDMS 2020N-020PM	0.079	2.0	±0.0012	0.008	0.787	0.169	-	●	●	●	
			3020N-025PM	0.118	3.0		0.010				●	●	●	
			4020N-030PM	0.157	4.0		0.012				●	●	●	
	 1-edge		GDMS 2020R-020PM-6D	0.079	2.0	±0.0012	0.008	0.787	0.169	6°	●	●	●	H29 ~ H37
			3020R-025PM-6D	0.118	3.0		0.010				●	●	●	
			4020R-030PM-6D	0.157	4.0		0.012				●	●	●	
Grooving & Cut-Off / High Feed Rate	 High feed 2-edge		GDM 2020N-020PH	0.079	2.0	±0.0012	0.008	0.787	0.169	-	●	●	●	
			3020N-030PH	0.118	3.0		0.012				●	●	●	
			4020N-030PH	0.157	4.0		0.012				●	●	●	
	 High feed 1-edge		GDMS 2020N-020PH	0.079	2.0	±0.0012	0.008	0.787			●	●	●	
			3020N-030PH	0.118	3.0		0.012				●	●	●	
			4020N-030PH	0.157	4.0		0.012				●	●	●	

Using PM/PF Chipbreaker (designed for cut-off) for grooving will not create a flat bottom (See Fig.)



Recommended Cutting Conditions ➔ H38~H39

Inserts are sold in 10 piece boxes

Insert Identification System

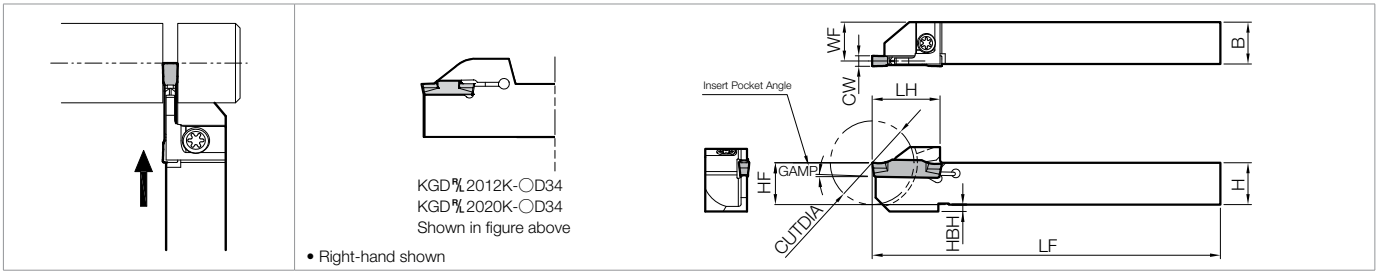
① Series	② Tolerance Symbol	③ No. of Edges	④ Width	⑤ Insert Length	⑥ Hand of Tool	⑦ Corner-R (RE)	⑧ Chipbreaker Symbol	⑨ Lead Angle
Grooving / Cut-off GD Series	G: Ground Insert M: M Class	(No Indication) : 2-edge S : 1-edge	13 : 1.3mm 15 : 1.5mm 20 : 2mm 25 : 2.5mm 30 : 3mm 40 : 4mm	16 : 16mm 20 : 20mm	R : Right-hand L : Left-hand N : Neutral	003 : 0.03mm 005 : 0.05mm 010 : 0.1mm 015 : 0.15mm 020 : 0.2mm 025 : 0.25mm 030 : 0.3mm	PF : Cut-Off (Low Feed) PQ : Cut-Off (Medium Feed) PG : Cut-Off (Low Cutting Force) PM : Cut-Off (General Purpose) PH : Grooving and Cut-off (High Feed Rate)	No Indication : 0° 6D : 6° 15D : 15°

G	D	M	S	30	20	R	-	025	PM	-	6D

● : Standard Item △ : Phaseout Item (will be removed from next catalog)
Contact your local Kyocera sales engineer to upgrade old products to new technology

KGD (for Small Parts Machining)

Insert Width: 0.059"~0.157" / 1.3mm~4.0mm



Toolholder Dimensions (Inch Size)

Part Number	Stock R	Stock L	Cut-Off Dia. CUTDIA	Dimensions (in) H	HF	HBH	B	LF	LH	WF	GAMP	Insert Width CW (in) MIN	MAX	Spare Parts Clamp Bolt	Wrench
KGD□ 6-1.3JX	●	●	0.787	0.375	0.375	0.098	0.375	4.75	0.709	0.356	1°	-	0.051	SB-40120TR	LTW-15S
8-1.3JX	●	●	0.944	0.500	0.500	0.051	0.500	4.75	0.768	0.481					
KGD□ 6-1.5JX	●	●	0.787	0.375	0.375	0.098	0.375	4.75	0.709	0.351	1°	-	0.059		
8-1.5JX	●	●	0.944	0.500	0.500	0.051	0.500	4.75	0.768	0.476					
KGD□ 6-2JX	●	●	0.787	0.375	0.375	0.098	0.375	4.75	0.709	0.342	1°	0.079	0.118		
8-2JX	●	●	0.944	0.500	0.500	0.051	0.500	4.75	0.768	0.467					
10-2JX	●	●	1.259	0.625	0.625	-	0.625	4.75	0.965	0.592					
KGD□ 6-2.4JX	●	●	0.787	0.375	0.375	0.098	0.375	4.75	0.709	0.336	1°	0.094	0.118		
8-2.4JX	●	●	0.944	0.500	0.500	0.051	0.500	4.75	0.768	0.461					
10-2.4JX	●	●	1.259	0.625	0.625	-	0.625	4.75	0.965	0.586					
KGD□ 8-3JX	●	●	0.944	0.500	0.500	0.051	0.500	4.75	0.768	0.453	1°	0.118	0.118		
10-3JX	●	●	1.259	0.625	0.625	-	0.625	4.75	0.965	0.578			0.157		
KGD□ 10-3D38JX	●	●	1.496	0.625	0.625	-	0.625	4.75	1.142	0.578	1°	0.118	0.157	SE-50125TR	LTW-20
12-3D42JX	●	●	1.653	0.750	0.750	-	0.750	4.75	1.220	0.703					
43-3D42JX	●	●	1.653	0.750	0.750	-	0.500	4.75	1.220	0.453					

Toolholder Dimensions (Metric Size)

Part Number	Stock R	Stock L	Cut-Off Dia. CUTDIA	Dimensions (mm) H	HF	HBH	B	LF	LH	WF	GAMP	Insert Width CW (mm) MIN	MAX	Spare Parts Clamp Bolt/Screw	Wrench
KGD□ 1010JX-1.3D16	●	●	16	10	10	2	10	120	18.0	9.9	5°	1.3	1.3	SB-40120TR	LTW-15S
1010JX-1.3	●	●	20	10	10	2	10	120	18.0	9.5					
1212F-1.3D16	●	●	16	12	12	2	12	85	19.5	11.9					
1212JX-1.3D16	●	●	16	12	12	2	12	120	19.5	11.9					
1212F-1.3	●	●	24	12	12	2	12	85	19.5	11.5					
1212JX-1.3	●	●	24	12	12	2	12	120	19.5	11.5					
KGD□ 1010JX-1.5D16	●	●	16	10	10	2	10	120	18.0	9.7	5°	1.5	1.5	SB-40120TR	LTW-15S
1010JX-1.5	●	●	20	10	10	2	10	120	18.0	9.4					
1212F-1.5D16	●	●	16	12	12	2	12	85	19.5	11.7					
1212JX-1.5D16	●	●	16	12	12	2	12	120	19.5	11.7					
1212F-1.5	●	●	24	12	12	2	12	85	19.5	11.4					
1212JX-1.5	●	●	24	12	12	2	12	120	19.5	11.4					
KGD□ 1010JX-2	●	●	20	10	10	2	10	120	18.0	9.2	1°	2.0	3.0	SB-40120TR	LTW-15S
1212F-2	●	●	24	12	12	2	12	85	19.5	11.2					
1212JX-2	●	●	24	12	12	2	12	120	19.5	11.2					
1616JX-2	●	●	32	16	16	-	16	120	24.5	15.2					
2012K-2D34	●	●	34	20	20	-	12	125	32.5	11.2	0°			HH5X16	LW-4
2020K-2D34	●	●	34	20	20	-	20	125	32.5	19.2					
KGD□ 1010JX-2.4	●	●	20	10	10	2	10	120	18.0	9.0	1°	2.4	3.0	SB-40120TR	LTW-15S
1212F-2.4	●	●	24	12	12	2	12	85	19.5	11.0					
1212JX-2.4	●	●	24	12	12	2	12	120	19.5	11.0					
1616JX-2.4	●	●	32	16	16	-	16	120	24.5	15.0					
2012K-2.4D34	●	●	34	20	20	-	12	125	32.5	11	0°			HH5X16	LW-4
2020K-2.4D34	●	●	34	20	20	-	20	125	32.5	19					
KGD□ 1212JX-3	●	●	24	12	12	2	12	120	19.5	10.8	1°	3.0	3.0	SB-40120TR	LTW-15S
1212JX-3W	●	●	24	12	12	2	12	120	19.5	10.8			4.0		
1616JX-3	●	●	32	16	16	-	16	120	24.5	14.8					
1616JX-3D38	●	●	38	16	16	-	16	120	29.0	14.8	1°	3.0	4.0	SE-50125TR	LTW- 20
1913K-3D38	●	●	38	19	19	-	13	125	29.0	11.8					
2012JX-3D42	●	●	42	20	20	-	12	120	31.0	10.8					
2012JX-3D51	●	●	51	20	20	-	12	120	36.0	10.8					
2020JX-3D42	●	●	42	20	20	-	20	120	31.0	18.8					
2020JX-3D51	●	●	51	20	20	-	20	120	36.0	18.8					

Note 1) 0.157" (4mm) width insert can be installed in KGD□8-3JX and KGD□1212JX-3, but is not recommended due to the toolholder's rigidity.
2) Recommended tightening torque for clamp screw is 2.0Nm for SB-40120TR and 2.5Nm for SE-50125TR.
3) When machining material greater than Ø1.417" (36mm) with KGD□...-3D38(JX), KGD□...-3D42(JX), or KGD□...-3D51 toolholders, use 1-edge inserts. Max. workpiece diameter for 2-edge inserts is Ø1.417" (36mm)

Choose insert with width that falls within **MIN** and **MAX** parameters shown in table above. Insert table **H24-H25**

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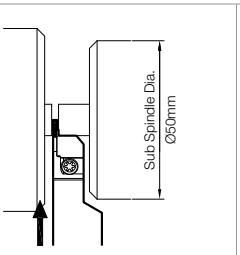
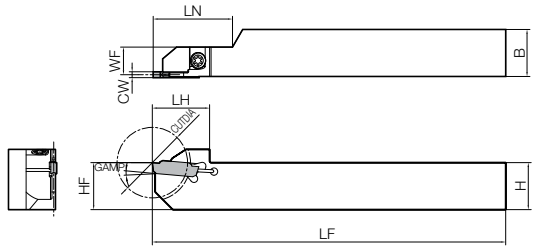
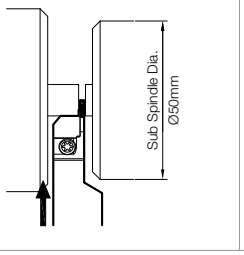
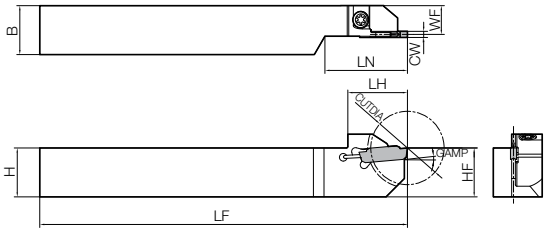
KGDS (Small Diameter Cut-Off / Sub Spindle)





Right-hand Shown





Left-hand Shown

Toolholder Dimensions

Part Number		Stock R	Stock L	Cut-Off Dia. CUTDIA	Dimensions (mm) H	HF	B	LF	LH	LN	WF	Angle (°) GAMP	Insert Width CW (mm) MIN	MAX	Spare Parts: Clamp Screw	Spare Parts: Wrench
KGDS[R/L]	1616JX-1.3B	●	●	24	16	16	16	120	19.5	27	9.50	5°	1.3	1.3	SB-40120TR	LTW-15S
	1616JX-1.5B	●	●								9.40		1.5	1.5		
	1616JX-2B	●	●								9.20	1°	2.0	3.0		

Choose insert with width that falls within **MIN** and **MAX** parameters shown in table above. Insert table H24-H25

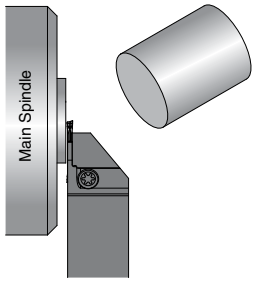
KGD / KGDS Selection Reference

KGD

Standard Type

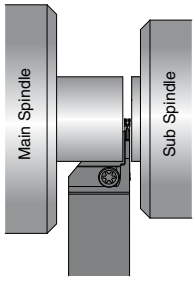
· Both Right-hand and Left-hand types are applicable to gang tool post.
· Left-hand type is used during cut-off operation using sub spindle.

KGDR (Right-hand Toolholder)



<1st. Recommendation>
Use insert with lead angle to remove boss.
· Not using sub spindle
· Cut-off operation near main spindle side

KGDL (Left-hand Toolholder)



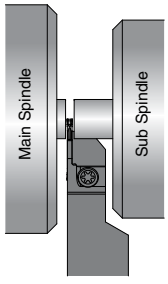
<1st. Recommendation>
Use insert without lead angle.
· Using sub spindle
· Cut-off operation near sub spindle side

KGDS

Sub Spindle Type

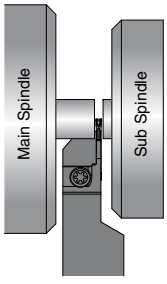
· When machining a workpiece with a small diameter, use KGDS to reduce overhang distance from the main spindle.

KGDSR (Right-hand Toolholder)



· Long workpiece and more rigidity
· Cut-off operation near main spindle side

KGDSL (Left-hand Toolholder)



· Short workpiece and less rigidity
· Cut-off operation near sub spindle side

Toolholder Identification System (Small Diameter)

KGD
KGDS

R	1616	JX	–	3	D38
				1.3	B
Hand of Tool	**Shank Width**	**Overall Length**		**Compatible Insert Width**	**Other**
R : Right-hand L : Left-hand	16mm X 16mm	120mm		GDM/GDMS Width: 1.3mm	B: Sub-spindle Compatible

Compatible Insert Width: GDM/GDMS Width: 3~4mm

Other: D38: CUTDIA = 38mm

● : Standard Item △ : Phaseout Item (will be removed from next catalog)
Contact your local Kyocera sales engineer to upgrade old products to new technology

Small Parts Grooving & Cut-Off

KGD-JCT

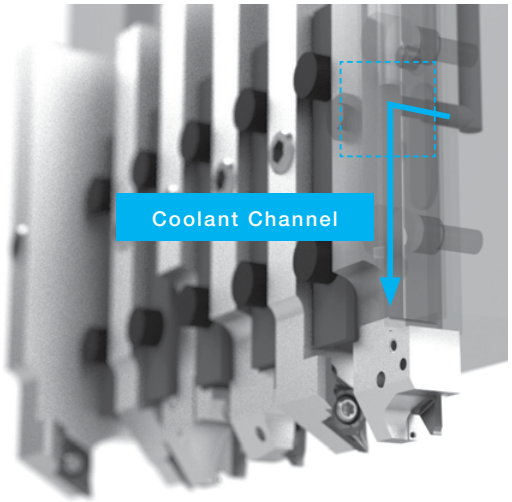
Jet Coolant-Through Cut-Off Holders for Small Parts Machining

KGD-JCTM NEW

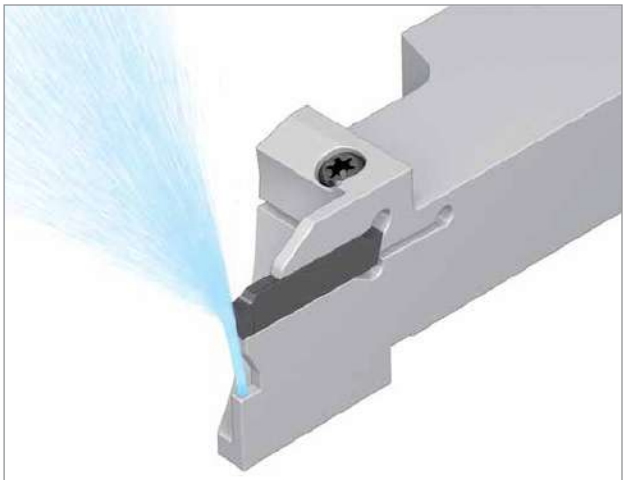
Direct from Turret Jet Coolant-Through Cut-Off Holders for Small Parts Machining

Small Diameter Grooving / Cut-Off

New JCTM-Series Direct Coolant System



Improved Tool Life Lowers Machining Costs



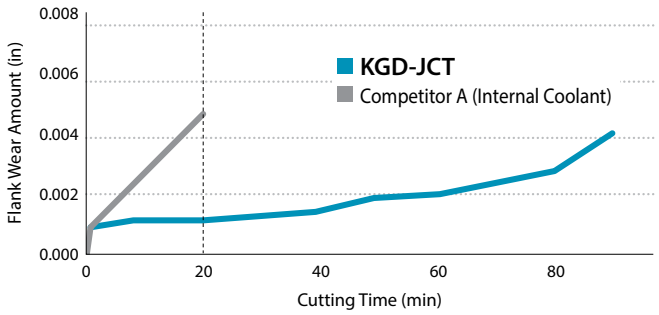
Effective Cooling of the Cutting Edge

Optimized Coolant Hole Position

Discharges Coolant towards the Flank Face of the Insert

Wear Resistance Comparison

(Internal Evaluation)

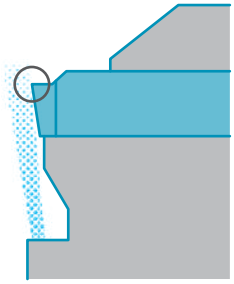


Cutting Conditions : Vc = 260 sfm, f=0.0024 ipr (at~Ø 0.079" : f = 0.0007 (ipr)
KGDR1625H-2JCT, GDM2020N-015PF PR1535 (Insert Width : 0.079")
Workpiece : 304 (Ø0.984")
Internal Coolant(218 psi) Cut-off

Coolant Discharge

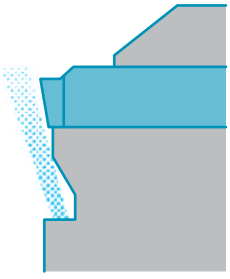
KGD-JCT / KGD-JCTM

Sufficient cooling towards the cutting edge

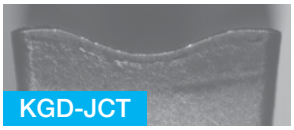


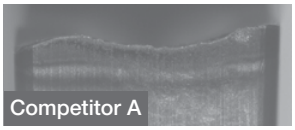
Competitor A

Coolant does not flow directly towards the cutting edge



Cutting Edge (After Machining 20 min)





High density and high speeds coolant provides effective cooling of the cutting edge

Superior cooling action improves tool life

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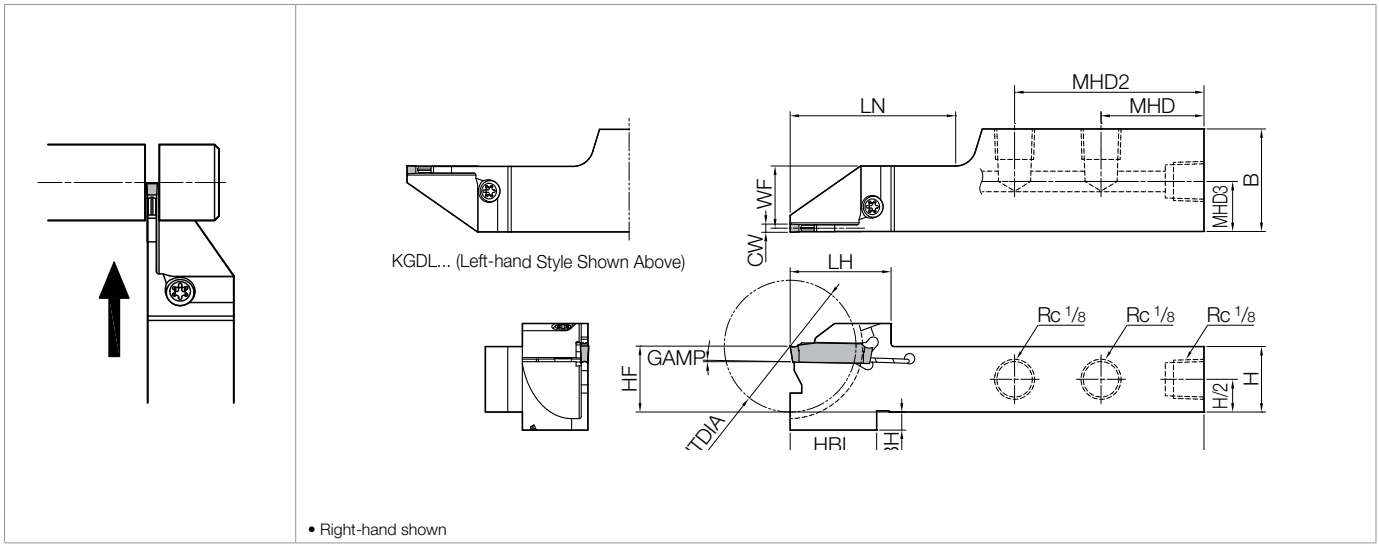
KGD-JCT (for Small Parts Machining / Jet Coolant-Through)

Insert Width: 0.079"~0.157" / 2.0mm~4.0mm



• Right-hand shown

Toolholder Dimensions (Metric Size)

Part Number	Stock		Cut-Off Dia.	Dimensions (mm)												Insert Width CW (mm)		Spare Parts		
																		Clamp Bolt	Wrench	Plug
	R	L	CUTDIA	H=HF	HBH	B	LF	LH	HBL	LN	WF	MHD	MHD2	MHD3	GAMP	MIN	MAX			
KGDR 1220H-2JCT	△		24	12	8.5	20	100	19.5	21	44	11.2	35	-	8.4	1°	2.0	3.0	SB-40120TR	LTW-15S	GP-1
KGDL 1220H-2JCT		△							21.5					7.7						
KGDR 1625H-2JCT	△		32	16	4.5	25		24.5	21	40	15.2	25	46	12.2						
KGDL 1625H-2JCT		△												7.7						
KGDR 1220H-2.4JCT	△		24	12	8.5	20	100	19.5	21	44	11	35	-	8.4	1°	2.4	3.0			
KGDL 1220H-2.4JCT		△							21.5					7.7						
KGDR 1625H-2.4JCT	△		32	16	4.5	25		24.5	21	40	15	25	46	12.2						
KGDL 1625H-2.4JCT		△												7.7						
KGDR 1220H-3JCT	△		24	12	8.5	20	100	19.5	21	44	10.8	35	-	8.6	1°	3.0	3.0			
KGDL 1220H-3JCT		△							21.5					7.7						
KGDR 1625H-3JCT	△		32	16	4.5	25		24.5	21	40	14.8	25	46	12.2			4.0			
KGDL 1625H-3JCT		△												7.7						

Choose insert with width that falls within **MIN** and **MAX** parameters shown in table above. Insert table ➔ **H24-H25**

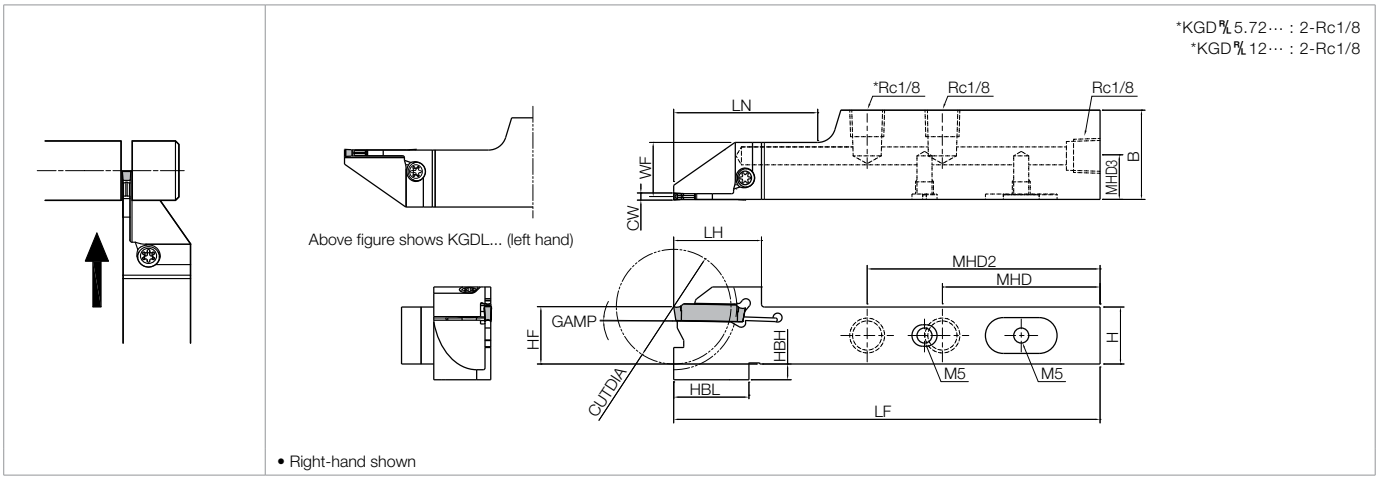
Coolant Connections and Pipe Parts ➔ **H14-H15**
Recommended Cutting Conditions ➔ **H38~H39**



● : Standard Item △ : Phaseout Item (will be removed from next catalog)
Contact your local Kyocera sales engineer to upgrade old products to new technology

KGD-JCTM (for Small Parts Machining / Direct from Turret Jet Coolant-Through) NEW

Insert Width: 0.079"~0.157" / 2.0mm~4.0mm



Toolholder Dimensions (Inch Size)

Part Number	Stock R	Stock L	Unit	Cut-Off Dia. CUTDIA	H=HF	HBH	B	LF	LH	HBL	LN	WF	MHD	MHD2	MHD3	Angle GAMP	Edge Width CW MIN	Edge Width CW MAX	Spare Parts: Clamp Screw	Wrench	Plug 1	Plug 2
KGDR 5.72-2JCTM	●		in	0.945	0.500	0.330	0.709	4.750	0.770	0.825	1.725	0.500	2.125	-	0.331	1°	0.079	0.118	SB-40120TR	LTW-15S	GP-1	HS5X4LP
KGDL 5.72-2JCTM		●								0.843					0.303							
KGDR 82.5-2JCTM	●			1.260	0.625	0.175	1.000		0.965	0.825	1.585	0.625	1.730	2.560	0.480							
KGDL 82.5-2JCTM		●													0.303							
KGDR 5.72-2.4JCTM	●			0.945	0.500	0.330	0.709	4.750	0.770	0.825	1.725	0.500	2.125	-	0.331	1°	0.094	0.118				
KGDL 5.72-2.4JCTM		●								0.843					0.303							
KGDR 82.5-2.4JCTM	●			1.260	0.625	0.175	1.000		0.965	0.825	1.585	0.625	1.730	2.560	0.480							
KGDL 82.5-2.4JCTM		●													0.303							
KGDR 5.72-3JCTM	●			0.945	0.500	0.330	0.709	4.750	0.770	0.825	1.725	0.500	2.125	-	0.331	1°	0.118	0.118				
KGDL 5.72-3JCTM		●								0.843					0.303							
KGDR 82.5-3JCTM	●			1.260	0.625	0.175	1.000		0.965	0.825	1.585	0.625	1.730	2.560	0.480			0.157				
KGDL 82.5-3JCTM		●													0.303							

Toolholder Dimensions (Metric Size)

Part Number	Stock R	Stock L	Unit	Cut-Off Dia. CUTDIA	H=HF	HBH	B	LF	LH	HBL	LN	WF	MHD	MHD2	MHD3	Angle GAMP	Edge Width CW MIN	Edge Width CW MAX	Spare Parts: Clamp Screw	Wrench	Plug 1	Plug 2
KGDR 1218JX-2JCTM	●		mm	24	12	8.5	18	120	19.5	21	44	11.2	54	-	8.4	1°	2.0	3.0	SB-40120TR	LTW-15S	GP-1	HS5X4LP
KGDL 1218JX-2JCTM		●								21.5					7.7							
KGDR 1625JX-2JCTM	●			32	16	4.5	25		24.5	21	40	15.2	44	65	12.2							
KGDL 1625JX-2JCTM		●													7.7							
KGDR 1218JX-2.4JCTM	●			24	12	8.5	18	120	19.5	21	44	11	54	-	8.4	1°	2.4	3.0				
KGDL 1218JX-2.4JCTM		●								21.5					7.7							
KGDR 1625JX-2.4JCTM	●			32	16	4.5	25		24.5	21	40	15	44	65	12.2							
KGDL 1625JX-2.4JCTM		●													7.7							
KGDR 1218JX-3JCTM	●			24	12	8.5	18	120	19.5	21	44	10.8	54	-	8.6	1°	3.0	3.0				
KGDL 1218JX-3JCTM		●								21.5					7.7							
KGDR 1625JX-3JCTM	●			32	16	4.5	25		24.5	21	40	14.8	44	65	12.2			4.0				
KGDL 1625JX-3JCTM		●													7.7							

Choose insert with width that falls within **MIN** and **MAX** parameters shown in table above. Insert table ➔ **H24-H25** Coolant Connections and Pipe Parts ➔ **H18~H19**

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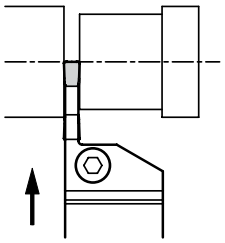
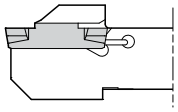
Recommended Cutting Conditions

Workpiece	Chipbreaker	Recommended Insert Grade (Cutting Speed Vc: sfm)					f (ipr)				Notes
		MEGACOAT NANO	MEGACOAT		DLC Coating	Carbide	Edge Width CW (in)				
		PR1535	**PR1225**	**PR1215**	**PDL025**	**GW15**	0.079 (2.0mm)	0.079 - 0.157 (2.0 - 4.0mm)	0.098 / 0.118 (2.5mm / 3.0mm)	0.118 - 0.157 (3.0mm - 4.0mm)	
Carbon Steel	PF (RE = 0.0012)	☆ 230 – 490	★ 230 – 490	☆ 230 – 590	–	–	0.0008 – 0.0024	–	0.0008 – 0.0031	–	Wet
	PF (RE = 0.0059)						0.0012 – 0.0031		0.0016 – 0.0039		
	PQ						0.0012 – 0.0039		0.0016 – 0.0047		
	PG						0.0004 – 0.0016		0.0004 – 0.0020		
	PM	☆ 260 – 660	★ 260 – 660	☆ 330 – 660			–	0.0031 – 0.0071	–	–	
	PH						0.0039 – 0.0098	–		0.0059 – 0.0110	
Alloy Steel	PF (RE = 0.0012)	☆ 230 – 490	★ 230 – 490	☆ 230 – 590	–	–	0.0008 – 0.0024	–	0.0008 – 0.0031	–	
	PF (RE = 0.0059)						0.0012 – 0.0031		0.0016 – 0.0039		
	PQ						0.0012 – 0.0039		0.0016 – 0.0047		
	PG						0.0004 – 0.0016		0.0004 – 0.0020		
	PM	☆ 230 – 590	★ 230 – 590	☆ 260 – 590			–	0.0031 – 0.0071	–	–	
	PH						0.0039 – 0.0098	–		0.0059 – 0.0110	
Stainless Steel	PF (RE = 0.0012)	★ 200 – 390	☆ 200 – 390	☆ 200 – 490	–	–	0.0004 – 0.0016	–	0.0004 – 0.0020	–	
	PF (RE = 0.0059)						0.0012 – 0.0028		0.0016 – 0.0031		
	PQ						0.0008 – 0.0028		0.0008 – 0.0031		
	PG						0.0004 – 0.0012		0.0004 – 0.0016		
	PM	★ 200 – 490	☆ 200 – 490	☆ 200 – 490			–	0.0024 – 0.0047	–	–	
	PH						0.0020 – 0.0047	–		0.0031 – 0.0059	
Cast Iron	PF (RE = 0.0012)	–	–	★ 260 – 660	–	–	0.0008 – 0.0028	–	0.0012 – 0.0031	–	
	PF (RE = 0.0059)						0.0012 – 0.0035		0.0016 – 0.0039		
	PQ					☆ 160 – 330	0.0016 – 0.0039		0.0016 – 0.0047		
	PG						0.0004 – 0.0016		0.0004 – 0.0020		
	PM			★ 330 – 660		–	–	0.0031 – 0.0071	–	–	
	PH						0.0039 – 0.0098	–		0.0059 – 0.0110	
Aluminum Alloy	PQ	–	–	–	★ 660 – 1,640	☆ 660 – 1,480	–	–	–	–	
	PG						0.0004 – 0.0020		0.0004 – 0.0024		
Brass	PQ	–	–	–	–	★ 330 – 660	–	–	–	–	
	PG						0.0004 – 0.0028		0.0004 – 0.0031		

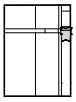
★ : 1st Recommendation ☆ : 2nd Recommendation

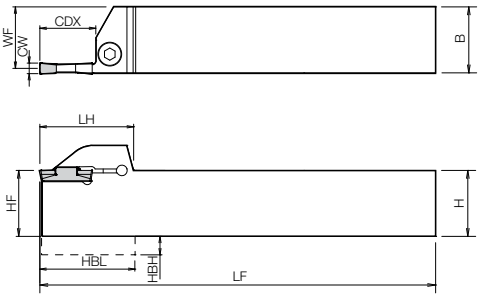
KGD (Integral-Style)





KGD□1216JX-3T06
KGD□1216JX-4T06
Shown in figure above





• Right-hand shown

Toolholder Dimensions (Inch Size)

Width (in)	Max. D.O.C. (in)	Part Number	Stock R	Stock L	H	HF	HBH	B	LF	LH	HBL	WF	CDX*	Insert Width CW (in) MIN	Insert Width CW (in) MAX	Spare Parts: Clamp Bolt	Spare Parts: Wrench
0.079" (2mm)	0.669" (17mm)	KGD□ 12-2T17	●	●	0.75	0.75	-	0.75	4.92	1.28	-	0.71	0.669" (17mm)	0.079" (2mm)	0.118" (3mm)	HH5X16	LW-4
		16-2T17	●	●	1.00	1.00	-	1.00	5.90	1.28	-	0.96				HH5X25	
0.118" (3mm)	0.393" (10mm)	KGD□ 12-3T10	●	●	0.75	0.75	-	0.75	4.92	1.20	-	0.70	0.393" (10mm)	0.118" (3mm)	0.157" (4mm)	HH5X16	LW-4
		16-3T10	●	●	1.00	1.00	-	1.00	5.90	1.20	-	0.95				HH5X25	
	0.787" (20mm)	KGD□ 12-3T20	●	●	0.75	0.75	-	0.75	4.92	1.35	-	0.70	0.787" (20mm)			HH5X16	LW-4
		16-3T20	●	●	1.00	1.00	-	1.00	5.90	1.39	-	0.95				HH5X25	
	1.000" (25.4mm)	KGD□ 12-3T254	●	●	0.75	0.75	-	0.75	4.92	1.52	-	0.70	1.000" (25.4mm)			HH5X16	LW-4
		16-3T254	●	●	1.00	1.00	-	1.00	5.90	1.52	-	0.95				HH5X25	
0.157" (4mm)	0.393" (10mm)	KGD□ 12-4T10	●	●	0.75	0.75	-	0.75	4.92	1.20	-	0.68	0.393" (10mm)	0.157" (4mm)	0.197" (5mm)	HH5X16	LW-4
		16-4T10	●	●	1.00	1.00	-	1.00	5.90	1.20	-	0.93				HH5X25	
	0.787 (20mm)	KGD□ 12-4T20	●	●	0.75	0.75	-	0.75	4.92	1.35	-	0.68	0.787 (20mm)			HH5X16	LW-4
		16-4T20	●	●	1.00	1.00	-	1.00	5.90	1.39	-	0.93				HH5X25	
	0.984 (25mm)	KGD□ 16-4T25	●	●	1.00	1.00	-	1.00	5.90	1.59	-	0.93	0.984 (25mm)			HH5X25	LW-4
0.197" (5mm)	0.393 (10mm)	KGD□ 12-5T10	●	●	0.75	0.75	-	0.75	4.92	1.20	-	0.66	0.393 (10mm)	0.197" (5mm)	0.236" (6mm)	HH5X16	LW-4
		16-5T10	●	●	1.00	1.00	-	1.00	5.90	1.20	-	0.91				HH5X25	
	0.669 (17mm)	KGD□ 12-5T17	●	●	0.75	0.75	-	0.75	4.92	1.47	-	0.66	0.669 (17mm)			HH5X16	LW-4
		16-5T17	●	●	1.00	1.00	-	1.00	5.90	1.47	-	0.91				HH5X25	
	0.984 (25mm)	KGD□ 16-5T25	●	●	1.00	1.00	-	1.00	5.90	1.59	-	0.91	0.984 (25mm)			HH5X25	LW-4
0.236" (6mm)	0.591 (15mm)	KGD□ 16-6T15	●	●	1.00	1.00	-	1.00	5.90	1.28	-	0.89	0.591 (15mm)	0.236" (6mm)	0.236" (6mm)	HH5X25	LW-4
	1.181 (30mm)	KGD□ 16-6T30	●	●	1.00	1.00	-	1.00	5.90	1.79	-	0.89	1.181 (30mm)				
0.315" (8mm)	0.984 (25mm)	KGD□ 16-8T25	●	●	1.00	1.00	0.26	1.00	5.90	1.65	1.69	0.88	0.984 (25mm)	0.315" (8mm)	0.315" (8mm)	HH6X25	LW-5

Note 1) Dimension CDX* : Shows the maximum grooving depth. If the dimension CDX is 0.787" (20mm) or more, using a 2-edge insert, the maximum grooving depth is 0.709" (18mm).
2) Recommended tightening torque for clamp bolt is 6.5Nm for HH5X○○ and 8.0Nm for HH6X25.
3) Above toolholders can also be used for cut-off applications.

Choose insert with width that falls within **MIN** and **MAX** parameters shown in table above. Insert table **H24-H25**

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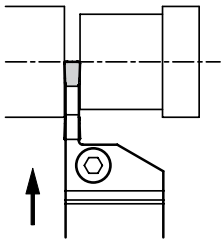
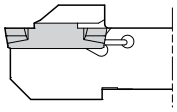
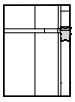
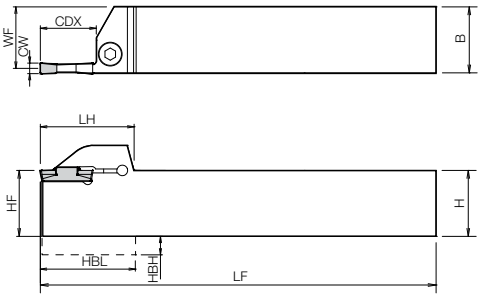
KGD (Integral-Style)





KGDR/L 1216JX-3T06
KGDR/L 1216JX-4T06
Shown in figure above





• Right-hand shown

Toolholder Dimensions (Metric Size)

Width (mm)	Max. D.O.C. (mm)	Part Number	Stock R	Stock L	H	HF	HBH	B	LF	LH	HBL	WF	CDX*	Insert Width CW (mm) MIN	Insert Width CW (mm) MAX	Spare Parts: Clamp Bolt/Screw	Spare Parts: Wrench
2.0	6	KGDR/L 1616H-2T06	●	●	16	16	4.0	16	100	27.7	28.0	15.2	6	2.0	3.0	HH5X16	LW-4
		2020K-2T06	●	●	20	20	-	20	125	28.0	-	19.2				HH5X16	
		2525M-2T06	●	●	25	25	-	25	150	28.0	-	24.2				HH5X25	
	10	KGDR/L 1616H-2T10	●	●	16	16	4.0	16	100	30.2	30.5	15.2	10			HH5X16	LW-4
		2020K-2T10	●	●	20	20	-	20	125	30.5	-	19.2				HH5X16	
		2525M-2T10	●	●	25	25	-	25	150	30.5	-	24.2				HH5X25	
	17	KGDR/L 1616H-2T17	●	●	16	16	4.0	16	100	31.2	31.5	15.2	17			HH5X16	LW-4
		2012K-2T17	●	●	20	20	-	12	125	32.5	-	11.2				HH5X16	
		2020K-2T17	●	●	20	20	-	20	125	32.5	-	19.2				HH5X16	
		2525M-2T17	●	●	25	25	-	25	150	32.5	-	24.2				HH5X25	
2.4	17	KGDR/L 2012K-2.4T17	●	●	20	20	-	12	125	32.5	-	11.0	17	2.4	3.0	HH5X16	LW-4
		2020K-2.4T17	●	●	20	20	-	20	125	32.5	-	19.0				HH5X16	
3.0	6	KGDR/L 1216JX-3T06	●	●	12	12	2.0	16	120	19.5	19.0	14.8	6	3.0	4.0	SE-50125TR	LTW-20
		1616H-3T06	●	●	16	16	4.0	16	100	27.7	28.0	14.8				HH5X16	LW-4
		2020K-3T06	●	●	20	20	-	20	125	28.0	-	18.8				HH5X16	
		2525M-3T06	●	●	25	25	-	25	150	28.0	-	23.8				HH5X25	
	10	KGDR/L 1616H-3T10	●	●	16	16	4.0	16	100	30.2	30.5	14.8	10			HH5X16	LW-4
		2020K-3T10	●	●	20	20	-	20	125	30.5	-	18.8				HH5X16	
		2525M-3T10	●	●	25	25	-	25	150	30.5	-	23.8				HH5X25	
	20	KGDR/L 1616H-3T20	●	●	16	16	4.0	16	100	34.2	34.5	14.8	20			HH5X16	LW-4
		2012K-3T20	●	●	20	20	-	12	125	34.5	-	10.8				HH5X16	
		2020K-3T20	●	●	20	20	-	20	125	34.5	-	18.8				HH5X16	
		2525M-3T20	●	●	25	25	-	25	150	35.5		23.8				HH5X25	
4.0	6	KGDR/L 1216JX-4T06	●	●	12	12	2.0	16	120	19.5	19.0	14.3	6	4.0	5.0	SE-50125TR	LTW-20
	10	KGDR/L 2020K-4T10	●	●	20	20	-	20	125	30.5	-	18.3	10			HH5X16	LW-4
		2525M-4T10	●	●	25	25	-	25	150	30.5	-	23.3				HH5X25	
	20	KGDR/L 2020K-4T20	●	●	20	20	-	20	125	34.5	-	18.3	20			HH5X16	
		2525M-4T20	●	●	25	25	-	25	150	35.5	-	23.3				HH5X25	
	25	KGDR/L 2525M-4T25	●	●	25	25	-	25	150	40.5	-	23.3	25			HH5X25	

Note 1) Dimension CDX* : Shows the maximum grooving depth. If the dimension CDX is 0.787" (20mm) or more, using a 2-edge insert, the maximum grooving depth is 0.709" (18mm).
2) Recommended tightening torque for clamp bolt/screw is 6.5Nm for HH5X○○, 8.0Nm for HH6X25 and 2.5Nm for SE-50125TR.
3) Above toolholders can also be used for cut-off applications.

Choose insert with width that falls within **MIN** and **MAX** parameters shown in table above. Insert table **H24-H25**

KGD-JCT

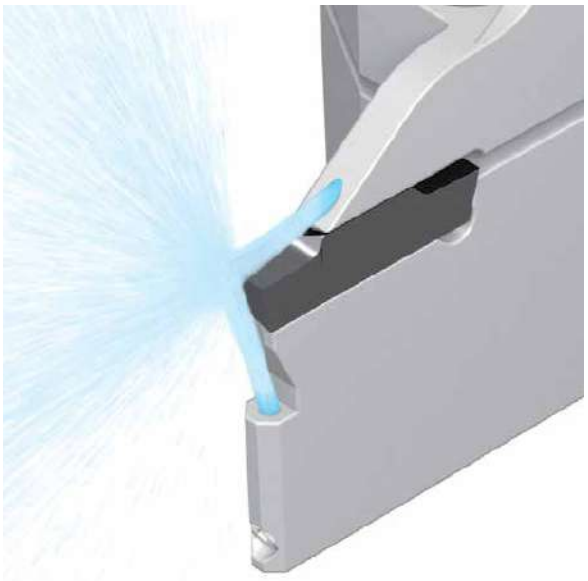
Coolant-Through Holders for External Grooving and Cut-Off

Coolant is Directed from the Rake Surface and the Flank Face of the Insert
Improved Chip Control and Longer Tool Life for External Grooving and Cut-off

1 Superior Chip Control Performance

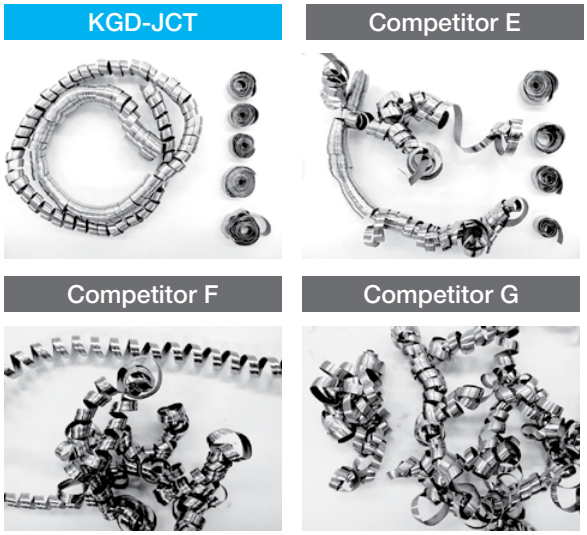
Coolant towards the rake face

Coolant hole position and angle improve chip control



Chip Control Comparison (Internal Evaluation)

KGD-JCT showed better chip control performance even at lower feed rates
f = 0.002 ipr (218 psi)

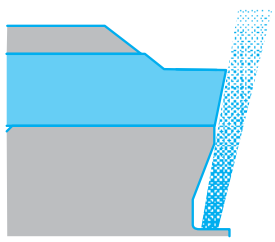


Cutting Conditions: Vc = 490 sfm, f = 0.002 ipr, d = 0.315", Wet
Edge Width 4 mm (0.157") Workpiece: 4131 Grooving

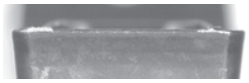
2 Keeping the Cutting Edge Cool Leads to Longer Tool Life

Coolant towards the rake surface and the flank face of the insert
Directing coolant towards the cutting edge lengthens tool life

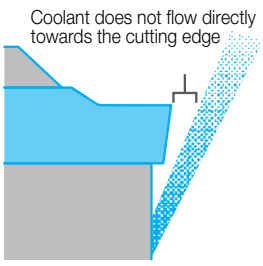
KGD-JCT



After Machining 39 min



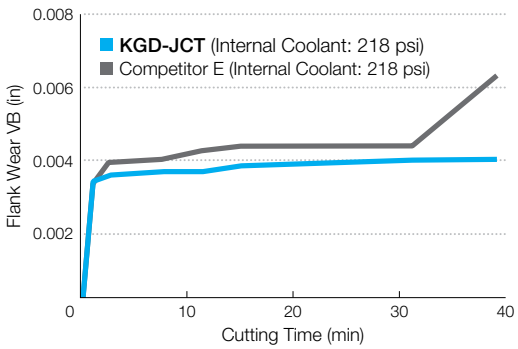
Competitor E



Defect



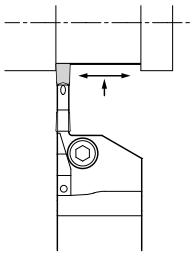
Wear Resistance Comparison (Internal Evaluation)

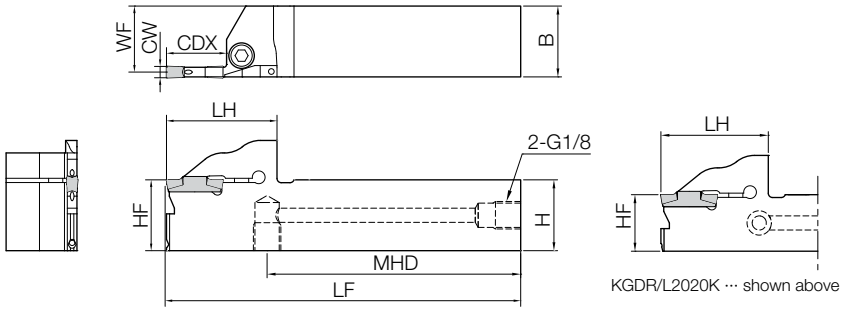


Cutting Conditions: Vc = 590 sfm, f = 0.006 ipr, d = 0.354", Wet
Edge Width 0.158" Workpiece: 4131 Grooving

KGD-JCT Minimizes Wear and Provides Longer Tool Life without Insert Fracturing

KGD-JCT (Integral Style / Jet Coolant-Through)





• Right-hand shown

Toolholder Dimensions (Inch Size)

Pressure Resistance: up to 2,175 psi

Width (mm)	Max. Grooving Depth (mm)	Part Number	Stock R	Stock L	H	HF	B	LF	LH	WF	CDX	MHD	Insert Width CW (in) MIN	Insert Width CW (in) MAX	Spare Parts: Clamp Bolt	Spare Parts: Wrench	Spare Parts: Plug
0.118 (3mm)	0.787 (20mm)	KGD® 12-3T20JCT	●	●	0.750	0.750	0.750	5.000	1.496	0.702	0.787 (20mm)	3.590	0.118 (3mm)	0.157 (4mm)	HH5X16	LW-4	HSG1/8X8.0
		16-3T20JCT	●	●	1.000	1.000	1.000	5.000	1.535	0.952		3.551			HH5X25		
0.157 (4mm)	0.787 (20mm)	KGD® 12-4T20JCT	●		0.750	0.750	0.750	5.000	1.496	0.683	0.787 (20mm)	3.590	0.157 (4mm)	0.197 (5mm)	HH5X16		
		16-4T20JCT	●	●	1.000	1.000	1.000	5.000	1.535	0.933		3.551			HH5X25		
	1.000 (25.4mm)	KGD® 16-4T25.4JCT	●	●	1.000	1.000	1.000	5.000	1.732	0.933	1.000 (25.4mm)	3.354			HH5X25		

Toolholder Dimensions (Metric Size)

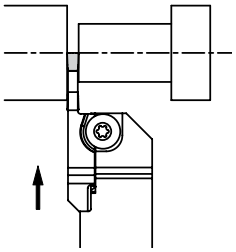
Pressure Resistance: up to 2,175 psi

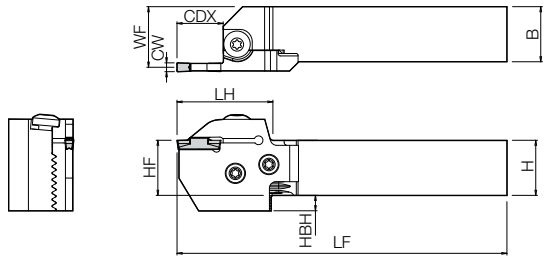
Width (mm)	Max. Grooving Depth (mm)	Part Number	Stock R	Stock L	H	HF	B	LF	LH	WF	CDX	MHD	Insert Width CW (mm) MIN	Insert Width CW (mm) MAX	Spare Parts: Clamp Bolt	Spare Parts: Wrench	Spare Parts: Plug
3	6	KGD® 2020K-3T06JCT	●	●	20	20	20	125	31.5	18.8	6	96.2	3.0	4.0	HH5X16	LW-4	HSG1/8X8.0
		2525K-3T06JCT	●	●	25	25	25		31.5	23.8		96.5			HH5X25		
	10	2020K-3T10JCT	●	●	20	20	20		34.0	18.8	10	94.2			HH5X16		
		2525K-3T10JCT	●	●	25	25	25		34.0	23.8		94.5			HH5X25		
	20	2020K-3T20JCT	●	●	20	20	20		38.0	18.8	20	90.2			HH5X16		
		2525K-3T20JCT	●	●	25	25	25		39.0	23.8		89.5			HH5X25		
4	10	KGD® 2020K-4T10JCT	●	●	20	20	20	125	34.0	18.8	10	94.2	4.0	5.0	HH5X16	LW-4	HSG1/8X8.0
		2525K-4T10JCT	●	●	25	25	25		34.0	23.8		94.5			HH5X25		
	20	KGD® 2020K-4T20JCT	●	●	20	20	20		38.0	18.8	20	90.2			HH5X16		
		2525K-4T20JCT	●	●	25	25	25		39.0	23.8		89.5			HH5X25		
	25	KGD® 2525K-4T25JCT	●	●	25	25	25		44.0	23.8	25	84.5					

Choose insert with width that falls within **MIN** and **MAX** parameters shown in table above. Insert table ➡ **H24-H25**

Coolant Connections and Pipe Parts ➡ **G37**
Recommended Cutting Conditions ➡ **H38~H39**

KGD-S (0° SwitchBlade Type)





• Right-hand shown (Right-hand Blade and Right-hand Toolholder)

Toolholder + Blade Dimensions (Inch Size)

(Choose **Right-hand** Blade for **Right-hand** Toolholder and **Left-hand** Blade for **Left-hand** Toolholder)

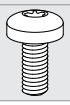
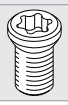
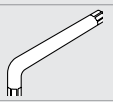
Shank Angle	Width (in)	Max. D.O.C. (in)	Shank Size (in)	Unit Part Number (Toolholder + Blade)	Stock R	Stock L	Toolholder Part Number G41	Blade Part Number G41	Dimensions (in) H	HF	HBH	B	LF	LH	WF	CDX*	Insert Width CW (in) MIN.	MAX.
0°	0.079 (2mm)	0.669 (17mm)	□0.75	KGD□ 12X-2T17S	●	●	KGD□12-C	KGD□-2T17-C	0.75	0.75	0.472	0.75	4.80	1.57	0.88	0.669 (17mm)	0.079 (2mm)	0.118 (3mm)
			□1.00	16X-2T17S	●	●	KGD□16-C		1.00	1.00	0.276	1.00	5.78	1.57	1.13			
	0.118 (3mm)	0.394 (10mm)	□0.75	KGD□ 12X-3T10S	●	●	KGD□12-C	KGD□-3T10-C	0.75	0.75	0.472	0.75	4.52	1.29	0.86	0.394 (10mm)	0.118 (3mm)	0.157 (4mm)
			□1.00	16X-3T10S	●	●	KGD□16-C		1.00	1.00	0.276	1.00	5.51	1.29	1.11			
		0.787 (20mm)	□0.75	KGD□ 12X-3T20S	●	●	KGD□12-C	KGD□-3T20-C	0.75	0.75	0.472	0.75	4.92	1.68	0.86	0.787 (20mm)		
			□1.00	16X-3T20S	●	●	KGD□16-C		1.00	1.00	0.276	1.00	5.90	1.68	1.11			
	0.157 (4mm)	0.394 (10mm)	□0.75	KGD□ 12X-4T10S	●	●	KGD□12-C	KGD□-4T10-C	0.75	0.75	0.472	0.75	4.52	1.29	0.84	0.394 (10mm)	0.157 (4mm)	0.197 (5mm)
			□1.00	16X-4T10S	●	●	KGD□16-C		1.00	1.00	0.276	1.00	5.51	1.29	1.09			
		0.787 (20mm)	□0.75	KGD□ 12X-4T20S	●	●	KGD□12-C	KGD□-4T20-C	0.75	0.75	0.472	0.75	4.92	1.68	0.84	0.787 (20mm)		
			□1.00	16X-4T20S	●	●	KGD□16-C		1.00	1.00	0.276	1.00	5.90	1.68	1.09			
		0.984 (25mm)	□0.75	KGD□ 12X-4T25S	●	●	KGD□12-C	KGD□-4T25-C	0.75	0.75	0.472	0.75	5.11	1.88	0.84	0.984 (25mm)		
			□1.00	16X-4T25S	●	●	KGD□16-C		1.00	1.00	0.276	1.00	6.10	1.88	1.09			

Note 1) When using the toolholder in normal mounting position, the lower jaw of the toolholder may interfere with the tool presetter.
2) The toolholder and blade part numbers are printed on the toolholder body. (Unit part numbers are not printed)
KGD-S: Right-hand blades for right-hand toolholders, and left-hand blades for left-hand toolholders.
3) If the unit part number is not listed (No Unit Part Number), please purchase toolholder and blade separately.
4) Dimension **CDX*** : Shows the maximum grooving depth. If the dimension **CDX** is 0.787" (20mm) or more, using a 2-edge insert, the maximum grooving depth is 0.709" (18mm).

Choose insert with width that falls within **MIN** and **MAX** parameters shown in table above. Insert table H24-H25

Spare Parts (Common with SwitchBlade Types)

* The parts are included in the toolholder and unit.

Unit Part Number	Spare Parts: Clamp Bolt (for Insert Clamp)	Clamp Screw (for Blade)	Wrench
			
KGD□·····S	BH6X10TR	SB-60120TR	LTW-25

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(Technical Support) 800.823.7284 - Option 2
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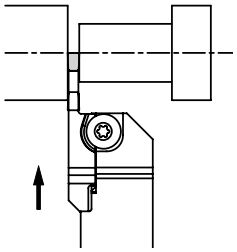
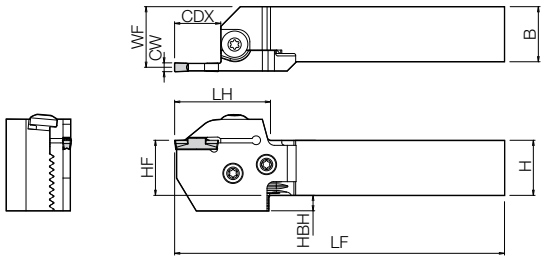
● : Standard Item △ : Phaseout Item (will be removed from next catalog)
Contact your local Kyocera sales engineer to upgrade old products to new technology

KGD-S (0° SwitchBlade Type)





• Right-hand shown (Right-hand Blade and Right-hand Toolholder)

Toolholder + Blade Dimensions (Metric Size)

(Choose **Right-hand** Blade for **Right-hand** Toolholder and **Left-hand** Blade for **Left-hand** Toolholder)

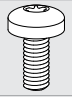
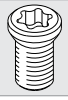
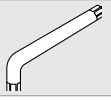
Shank Angle	Width (mm)	Max. D.O.C. (mm)	Shank Size (mm)	Unit Part Number (Toolholder + Blade)	Stock R	Stock L	Toolholder Part Number G41	Blade Part Number G41	H	HF	HBH	B	LF	LH	WF	CDX*	Insert Width CW (mm) MIN.	Insert Width CW (mm) MAX.
0°	2	17	□20	KGD□ 2020X-2T17S	●		KGD□2020-C	KGD□-2T17-C	20	20	12	20	122	40	23.4	17	2.0	3.0
			□25	2525X-2T17S	●	●	KGD□2525-C		25	25	7	25	147	40	28.4			
			□32	No Unit Part Number ➡			KGD□3232-C		32	32	-	32	167	40	35.4			
	3	10	□20	KGD□ 2020X-3T10S	●		KGD□2020-C	KGD□-3T10-C	20	20	12	20	115	33	23.0	10	3.0	4.0
			□25	2525X-3T10S	●		KGD□2525-C		25	25	7	25	140	33	28.0			
			□32	No Unit Part Number ➡			KGD□3232-C		32	32	-	32	160	33	35.0			
		20	□20	KGD□ 2020X-3T20S	●	●	KGD□2020-C	KGD□-3T20-C	20	20	12	20	125	43	23.0	20		
			□25	2525X-3T20S	●	●	KGD□2525-C		25	25	7	25	150	43	28.0			
			□32	3232X-3T20S	●		KGD□3232-C		32	32	-	32	170	43	35.0			
	4	10	□20	KGD□ 2020X-4T10S	●		KGD□2020-C	KGD□-4T10-C	20	20	12	20	115	33	22.5	10	4.0	5.0
			□25	2525X-4T10S	●		KGD□2525-C		25	25	7	25	140	33	27.5			
			□32	No Unit Part Number ➡			KGD□3232-C		32	32	-	32	160	33	34.5			
		20	□20	KGD□ 2020X-4T20S	●		KGD□2020-C	KGD□-4T20-C	20	20	12	20	125	43	22.5	20		
			□25	2525X-4T20S	●	●	KGD□2525-C		25	25	7	25	150	43	27.5			
			□32	3232X-4T20S	●		KGD□3232-C		32	32	-	32	170	43	34.5			
		25	□20	KGD□ 2020X-4T25S	●	●	KGD□2020-C	KGD□-4T25-C	20	20	12	20	130	48	22.5	25		
			□25	2525X-4T25S	●	●	KGD□2525-C		25	25	7	25	155	48	27.5			
			□32	3232X-4T25S	●		KGD□3232-C		32	32	-	32	175	48	34.5			

Note 1) When using the toolholder in normal mounting position, the lower jaw of the toolholder may interfere with the tool presetter.
2) The toolholder and blade part numbers are printed on the toolholder body. (Unit part numbers are not printed)
KGD-S: Right-hand blades for right-hand toolholders, and left-hand blades for left-hand toolholders.
3) If the unit part number is not listed (No Unit Part Number), please purchase toolholder and blade separately.
4) Dimension **CDX*** : Shows the maximum grooving depth. If the dimension **CDX** is 0.787" (20mm) or more, using a 2-edge insert, the maximum grooving depth is 0.709" (18mm).

Choose insert with width that falls within **MIN** and **MAX** parameters shown in table above. Insert table ➡ **H24-H25**

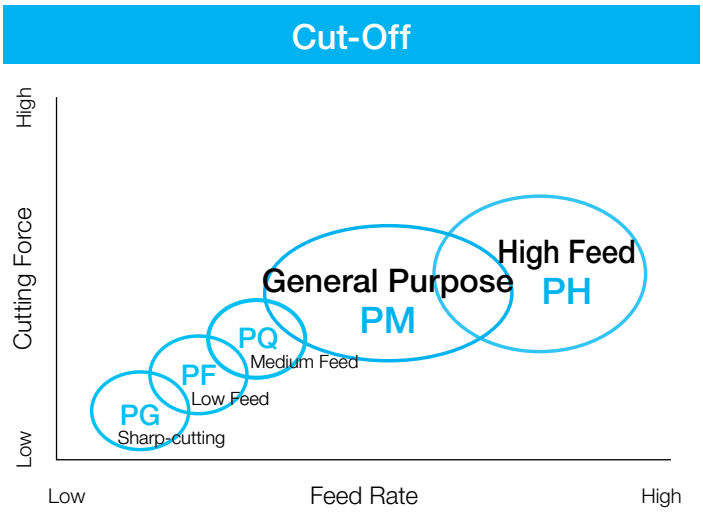
Spare Parts (Common with SwitchBlade Types)

* The parts are included in the toolholder and unit.

Unit Part Number	Spare Parts: Clamp Bolt (for Insert Clamp)	Spare Parts: Clamp Screw (for Blade)	Spare Parts: Wrench
			
KGD□·····S	BH6X10TR	SB-60120TR	LTW-25

● : Standard Item △ : Phaseout Item (will be removed from next catalog)
Contact your local Kyocera sales engineer to upgrade old products to new technology

Application Map



Recommended Cutting Conditions (PF / PQ / PG Chipbreakers) ★ : 1st Recommendation ☆ : 2nd Recommendation

PF Chipbreaker

Workpiece	Cutting Conditions (Vc : sfm) Recommended Insert Grade			Feed Rate (f : ipr)						Notes
				PF (RE = 0.0012)			**PF (RE = 0.0059)**			
	MEGACOAT NANO	MEGACOAT		CW (Insert Width)			CW (Insert Width)			
	PR1535	**PR1225**	**PR1215**	0.051" - 0.059" 1.3mm - 1.5mm	0.079" 2.0mm	0.098" - 0.118" 2.5mm - 3.0mm	0.051" - 0.059" 1.3mm - 1.5mm	0.079" 2.0mm	0.098" - 0.118" 2.5mm - 3.0mm	
Carbon Steel	☆ 230 - 490	★ 230 - 490	☆ 230 - 590	0.0004 - 0.0016	0.0008 - 0.0024	0.0008 - 0.0031	0.0004 - 0.0020	0.0012 - 0.0031	0.0016 - 0.0039	Coolant
Alloy Steel	☆ 230 - 490	★ 230 - 490	☆ 230 - 590							
Stainless Steel	★ 200 - 390	☆ 200 - 390	☆ 200 - 490	0.0004 - 0.0012	0.0004 - 0.0016	0.0004 - 0.0020	0.0004 - 0.0016	0.0012 - 0.0028	0.0016 - 0.0031	
Cast Iron	-	-	★ 260 - 660	0.0004 - 0.0020	0.0008 - 0.0028	0.0012 - 0.0031	0.0004 - 0.0024	0.0012 - 0.0035	0.0016 - 0.0039	

PQ / PG Chipbreaker

Workpiece	Cutting Conditions (Vc : sfm) Recommended Insert Grade					Feed Rate (f : ipr)				Notes
						PQ		**PG**		
	MEGACOAT NANO	MEGACOAT		DLC Coated Carbide	Carbide	CW (Insert Width)		CW (Insert Width)		
	PR1535	**PR1225**	**PR1215**	**PDL025**	**GW15**	0.079" 2.0mm	0.098" - 0.118" 2.5mm - 3.0mm	0.079" 2.0mm	0.098" - 0.118" 2.5mm - 3.0mm	
Carbon Steel	☆ 230 - 490	★ 230 - 490	☆ 230 - 590	-	-	0.0012 - 0.0039	0.0016 - 0.0047	0.0004 - 0.0016	0.0004 - 0.0020	Coolant
Alloy Steel	☆ 230 - 490	★ 230 - 490	☆ 230 - 590	-	-					
Stainless Steel	★ 200 - 390	☆ 200 - 390	☆ 200 - 490	-	-	0.0008 - 0.0028	0.0008 - 0.0031	0.0004 - 0.0012	0.0004 - 0.0016	
Cast Iron	-	-	★ 260 - 660	-	☆ 160 - 330	0.0016 - 0.0039	0.0016 - 0.0047	0.0004 - 0.0016	0.0004 - 0.0020	
Aluminum Alloy	-	-	-	★ 660 - 1,640	☆ 660 - 1,480	-	-	0.0004 - 0.0020	0.0004 - 0.0024	
Brass	-	-	-	-	★ 330 - 660	-	-	0.0004 - 0.0028	0.0004 - 0.0031	

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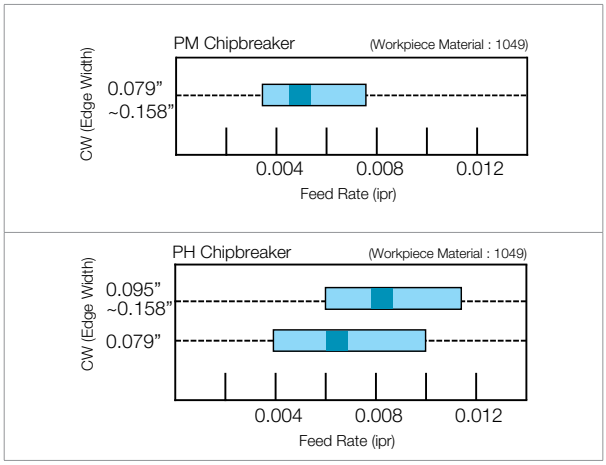
Recommended Cutting Conditions (PM / PH Chipbreakers) ★ : 1st Recommendation ☆ : 2nd Recommendation

Workpiece Material	Recommended Insert Grade (Vc sfm)			Feed Rate (ipr)			Remarks
				PM	PH		
	MEGACOAT NANO	MEGACOAT		CW (Insert Width)	CW (Insert Width)		
	PR1535	PR1225	PR1215	0.079"~0.158" (2mm~4mm)	0.079" (2mm)	0.095"~0.158" (3mm~4mm)	
Carbon Steel	☆ 260~660	★ 260~660	☆ 330~660	0.0031~0.0071	0.0039~0.0098	0.0059~0.0110	Wet
Alloy Steel	☆ 230~590	★ 230~590	☆ 260~590				
Stainless Steel	★ 200~490	☆ 200~490	☆ 200~490	0.0024~0.0047	0.0020~0.0047	0.0031~0.0059	
Cast Iron	-	-	★ 330~660	0.0031~0.0071	0.0039~0.0098	0.0059~0.0110	

★ : 1st Recommendation ☆ : 2nd Recommendation

Feed Examples



■ : Indicates the center value of feed (f)

CAUTION During Cut-Off

1) Flood coolant is recommended. Apply enough coolant to the cutting edge

2) Keep spindle revolution constant during processing to achieve longer tool life

3) Cut off as close to the chuck as possible

4) Reduce feed rate by 30-50% when diameter is same as cut-off insert width to prevent impact

GMM / GMN / GMR/L

Classification of Usage
- ◕ : Light Interruption / 1st Choice
- ◔ : Light Interruption / 2nd Choice
- ● : Continuous / 1st Choice
- ○ : Continuous / 2nd Choice

		Cermet	CVD Coated Carbide	PVD Coated Carbide			Carbide
				PR915	PR930	PR1115	KW10
P	Carbon Steel / Alloy Steel	○	◔	◕	◔	◕	
M	Stainless Steel		◔	◕	◔	◕	
K	Cast Iron						◕
N	Non-ferrous Metals						◕

Insert (Right-handed Insert Shown)	Part Number	CW inch	CW mm	RE	INSL	S	PSIR/L	TN90	CR9025	PR915	PR930	PR1115	KW10	Ref. Page for Toolholder
Neutral														
 Deep Grooving / Cut-Off Sharp Cutting Oriented	GMM 1520-MT	0.059	1.5	0 / 0.002	0.787	0.169	-			●	●		●	H42
	2020-MT	0.079	2.0	0 / 0.002	0.787	0.169	-			●	●		●	
	2520-MT	0.098	2.5	0 / 0.002	0.787	0.169	-			●	●		●	H42 H43
	3020-MT	0.118	3.0	0 / 0.002	0.787	0.169	-		●	●	●		●	
 Deep Grooving / Cut-Off Sharp Cutting Oriented Without Chipbreaker	GMM 1520-NB	0.059	1.5	0 / 0.002	0.787	0.169	-				●		●	H42
	2020-NB	0.079	2.0	0 / 0.002	0.787	0.169	-				●		●	
	2520-NB	0.098	2.5	0 / 0.002	0.787	0.169	-				●		△	
	3020-NB	0.118	3.0	0 / 0.002	0.787	0.169	-						●	
 Deep Grooving / Cut-Off Stability Oriented	GMM 2020-TK	0.079	2.0	0.008	0.787	0.169	-			●	●		●	
	2520-TK	0.098	2.5	0.008	0.787	0.169	-			●	●		●	
	3020-TK	0.118	3.0	0.010	0.787	0.169	-		●	●	●		●	
 Cut-Off / High Feed 2-Edge	GMM 2020-TMR	0.079	2.0	0.008	0.169	0.059	-					●		H42 H43
	2520-TMR	0.098	2.5	0.008	0.169	0.075	-					●		
	3020-TMR	0.118	3.0	0.010	0.169	0.091	-					●		
 Cut-Off Stability Oriented 1-Edge	GMN 2-TK	0.079	2.0	0.008	0.787	0.169	-			●	●		●	
	3-TK	0.118	3.0	0.010	0.787	0.169	-		●	●	●		●	
	4-TK	0.158	4.0	0.012	0.787	0.169	-		●	●	●		●	
 Deep Grooving / Cut-Off 1-Edge	GMN 2.2	0.087	2.2	0.007	0.787	0.169	-	●	●		●		●	
	3	0.118	3.0	0.008	0.787	0.169	-	●	●		●		●	
	4	0.158	4.0	0.010	0.787	0.169	-	●			●		●	
	5	0.197	5.0	0.031	0.787	0.169	-		●		●		●	
	6	0.236	6.0	0.031	0.787	0.169	-		●		●		●	
								R L	R L	R L	R L	R L	R L	
With Lead Angle														
 Cut-Off Sharp Cutting Oriented	GMM 1520R/L-MT-15D	0.059	1.5	0 / 0.002	0.787	0.169	15°			●	●		●	H42
	2020R/L-MT-15D	0.079	2.0	0 / 0.002	0.787	0.169	15°		●	●	● ●		●	
	2520R/L-MT-15D	0.098	2.5	0 / 0.002	0.787	0.169	15°			●	●			
	3020R/L-MT-15D	0.118	3.0	0 / 0.002	0.787	0.169	15°		●	●	● ●		●	
 Cut-Off Stability Oriented	GMM 2020R/L-TK-8D	0.079	2.0	0.008	0.787	0.169	8°			●	●		●	
	2520R/L-TK-8D	0.098	2.5	0.008	0.787	0.169	8°				●			
	3020R/L-TK-8D	0.118	3.0	0.010	0.787	0.169	8°			●	●			
 Cut-Off / High Feed 2-Edge	GMM 2020R/L-TMR-6D	0.079	2.0	0.008	0.169	0.059	6°					●		H42 H43
	2520R/L-TMR-6D	0.098	2.5	0.008	0.169	0.075	6°					●		
	3020R/L-TMR-6D	0.118	3.0	0.010	0.169	0.091	6°					●		
 Cut-Off Stability Oriented 1-Edge	GMR 2-TK-8D	0.079	2.0	0.008	0.787	0.169	8°				●		●	
	3-TK-8D	0.118	3.0	0.010	0.787	0.169	8°			●	●		●	
	4-TK-8D	0.158	4.0	0.012	0.787	0.169	8°			●	●		●	
 Cut-Off Sharp Cutting Oriented 1-Edge	GMR/L 2.2-8D	0.087	2.2	0.007	0.787	0.169	8°	●	●		● ●		●	
	2.2-15D	0.087	2.2	0.000	0.787	0.169	15°	●	●		●		●	
	3-4D	0.118	3.0	0.008	0.787	0.169	4°	●	● ●		● ●		●	
	4-4D	0.158	4.0	0.010	0.787	0.169	4°		● ●		●			

* Corner-R (RE) varies based on grade

Inserts are sold in 10 piece boxes

● : Standard Item △ : Phaseout Item (will be removed from next catalog)

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Edge Prep. and Chipbreakers (CERACUT Plunge & Turn)

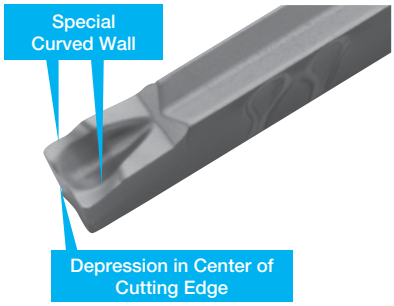
Name	**MT** Chipbreaker		**TK** Chipbreaker		**TMR** Chipbreaker	Without Chipbreaker **(NB)**	
Edge Preparation	Chamfered + Honed	Chamfered + Honed	Chamfered + Honed	Sharp Edge	Chamfered + Honed	Honed Cutting Edge	Sharp Edge
	Corner-R 0.002" 0.05mm	Sharp Edge	Corner-R 0.008"~0.012" 0.20~0.30mm	Corner-R 0.008"~0.012" 0.20~0.30mm	Corner-R 0.008" 0.20mm	Corner-R 0.002" 0.05mm	Sharp Edge
							
	CR9025 / PR915	**PR930 / KW10**	**CR9025 / PR915**	**PR930 / KW10**	**PR1115**	**CR9025**	**PR930 / KW10**

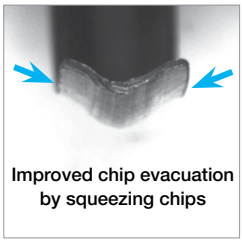
• Sharp Edge can reduce cutting resistance by 40%, compared with chamfered edge

Name	Advantages
GMM-MT	Specific chipbreaker for cut-off operations requiring sharp cutting performance Minimizes the boss
GMM-NB	Cutting edge is flat with no chipbreaker. Good performance for brass, etc.
GMM-TK	Stable design with chipbreaker for cut-off. Large corner-R 2-edge for economical performance
GMN-TK	Same chipbreaker geometry as GMM-TK 1-edge. Wide application range.
GMN (Std.)	Mainly for deep grooving, but available for groove widening and traversing due to projection near side cutting edge. 1-edge and wide application range. Available for cut-off applications.

TMR Chipbreaker

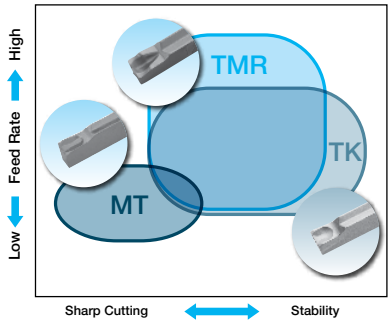
Chipbreaker Advantages





Chip Width < Grooving Width

GMM Chipbreaker Map



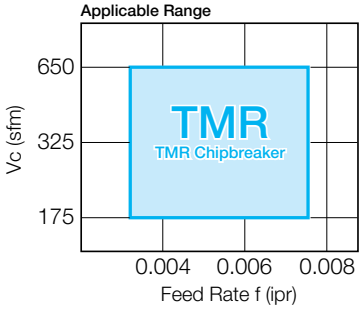
The TMR Chipbreaker Provides Stable Chip Control at High Feed Rates

Good chip control even when cutting speed (spindle revolution) is increased

(Cutting Conditions : 15CrMo4, Ø30, Constant Spindle Revolution)

Part Number	n=1060min^{-1}(Vc=325sfm)		n=2123min^{-1}(Vc=650sfm)	
	f=0.0008ipr	f=0.0047ipr	f=0.0008ipr	f=0.0047ipr
GMM 3020-TMR (Neutral)				
GMM 3020R-TMR-6D (Right-Hand)				

Applicable Range



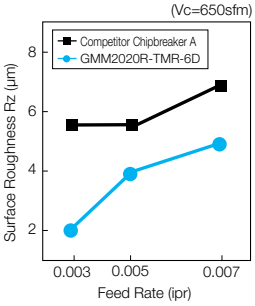
Recommended Cutting Conditions

Workpiece Material	Vc (sfm)	Feed Rate (ipr)
Carbon Steel	200~650	0.003~0.007
Alloy Steel	200~500	
Stainless Steel	175~450	

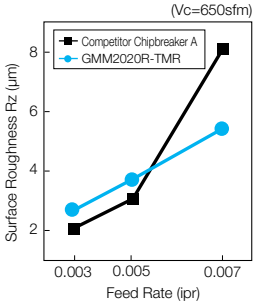
Workpiece Surface Roughness

TMR Chipbreaker provides good surface roughness on the workpiece end face at high feed rate ranges.

• GMM2020R-TMR-6D (Vc=650sfm)

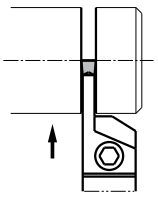


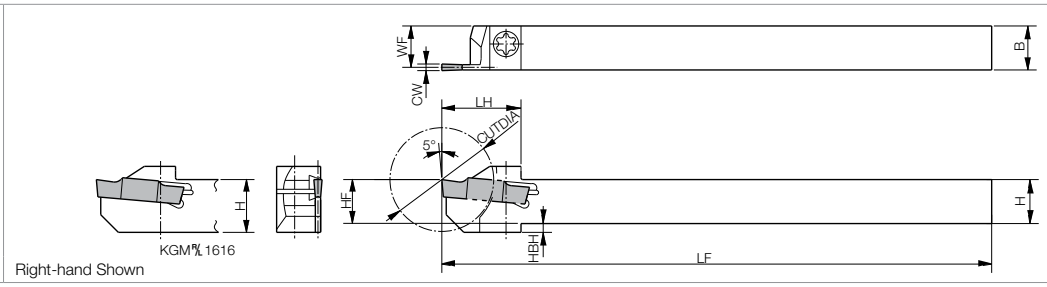
• GMM2020-TMR (Vc=650sfm)



KGM (Small Parts) - Will be phased out and removed from catalog. Switch to KGD H26

Insert Width : 0.079"~0.118" / 1.5mm~4.0mm





Right-hand Shown

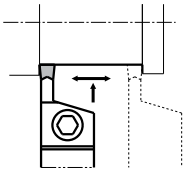
Toolholder Dimensions

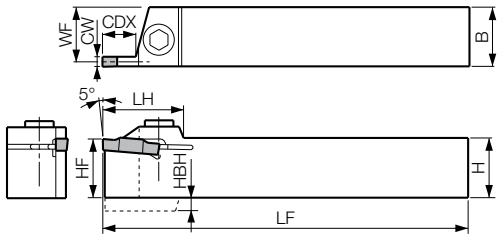
Part Number	Stock R	Stock L	Unit	Cut-Off Dia. CUTDIA	Dimensions H	HF	HBH	B	LF	LH	WF	Insert Width CW MIN	MAX	Spare Parts Clamp Screw	Wrench
KGM□ 6-2-5	●	●	inch	0.787	0.375	0.375	0.079	0.375	5.000	0.750	0.342	0.079	0.118	SE-40120TR	LTW-15S
8-2-6	●	●		0.984	0.500	0.500	0.051	0.500	6.000	0.830	0.467	0.079	0.118		
KGM□ 1010JX-1.5	●	●	mm	18	10	10	2	10	120	18.0	9.40	1.5	2.0	SE-40120TR	LTW-15S
1212JX-1.5	●	●		23	12	12	2	12	120	20.5	11.40	1.5	2.0		
KGM□ 1010JX-2	●	●		18	10	10	2	10	120	18.0	9.15	2.0	3.0	SE-40120TR	LTW-15S
1212JX-2	●	●		23	12	12	2	12	120	19.0	11.15	2.0	3.0		
1616JX-2	●	●		30	16	16	-	16	120	24.5	15.15	2.0	3.0	SE-50125TR	LTW-20
KGM□ 1212JX-2.5	●	●		23	12	12	2	12	120	20.5	11.00	2.4	3.0	SE-40120TR	LTW-15S
1616JX-2.5	●	●		30	16	16	-	16	120	25.5	15.00	2.4	3.0	SE-50125TR	LTW-20
KGM□ 1616JX-3	●	●		30	16	16	-	16	120	25.5	14.80	3.0	4.0	SE-50125TR	LTW-20
KGM□ 1212F-1.5-85	●			23	12	12	2	12	85	19.0	11.40	1.5	2.0	SE-40120TR	LTW-15S
1212F-2-85	●	●		23	12	12	2	12	85	19.0	11.15	2.0	3.0		
1212F-2.5-85	●			23	12	12	2	12	85	19.0	11.00	2.4	3.0		

Choose insert with width that falls within **MIN** and **MAX** parameters shown in table above. Insert table **H40**

KGM - Will be phased out and removed from catalog. Switch to KGD H26~H35

Insert Width : 0.750"~1.000" / 3mm~8mm





Right-hand Shown

Toolholder Dimensions

Part Number	Stock R	Stock L	Unit	Dimensions H	HF	HBH	B	LF	LH	WF	CDX	Insert Width CW MIN	MAX	Spare Parts Clamp Screw		Wrench	Wrench
KGM□ 12-3	●		inch	0.750	0.750	-	0.750	5.000	1.070	0.702	0.354	0.118	0.157	-	HH5X16	-	LW-4
16-3	●			1.000	1.000	-	1.000	6.000	1.070	0.953	0.354	0.118	0.157		HH5X25		
KGM□ 1212H-3	●		mm	12	12	4	12	100	27	10.8	9	3.0	3.0	SB-5TR	-	LTW-20	-
1616H-3	●			16	16	4	16	100	27	14.8	9	3.0	4.0	-	HH5X16	-	LW-4
2020K-3	●	●		20	20	-	20	125	27	18.8	9	3.0	4.0				
2525M-3	●	●		25	25	-	25	150	27	23.8	9	3.0	4.0		HH5X25		
KGM□ 2020K-4	●			20	20	-	20	125	27	18.3	10	4.0	5.0	-	HH5X16	-	LW-4
2525M-4	●	●		25	25	-	25	150	27	23.3	10	4.0	5.0		HH5X25		
KGM□ 2020K-5	●	△		20	20	-	20	125	27	17.8	10	5.0	6.0	-	HH5X16	-	LW-4
2525M-5	●			25	25	-	25	150	27	22.8	10	5.0	6.0		HH5X25		
KGM□ 2525M-8	●	●		25	25	7.5	25	150	40	22.0	25	8.0	8.0	-	HH6X25	-	LW-5

- Dimension **CDX** shows vailable grooving depth
- 4.0mm width insert can be installed in KGM□1212H-3, but is not recommended due to the toolholder's rigidity

Choose insert with width that falls within **MIN** and **MAX** parameters shown in table above. Insert table **H40**

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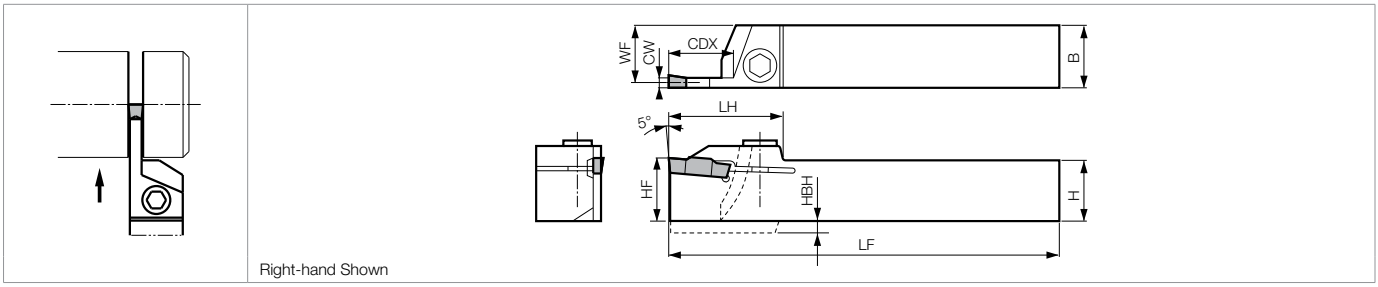
● : Standard Item △ : Phaseout Item (will be removed from next catalog)
Contact your local Kyocera sales engineer to upgrade old products to new technology

KGM-T - Will be phased out and removed from catalog. Switch to KGD H26~H35

Insert Width : 0.078"~0.236" / 2.0mm~6.0mm



Right-hand Shown

Toolholder Dimensions

Part Number	Stock R	Stock L	Unit	Dimensions H	HF	HBH	B	LF	LH	WF	CDX	Insert Width CW MIN	MAX	Spare Parts Clamp Screw		Wrench	Wrench
KGM□ 12-2T	●	●	inch	0.75	0.75	-	0.75	5.0	1.30	0.717	0.669	0.078	0.118	-	HH5X16	-	LW-4
16-2T	●			1.00	1.00		1.00	6.0		0.967					HH5X25		
KGM□ 12-3T	●	●		0.75	0.75	-	0.75	5.0	1.42	0.702	0.787	0.118	0.157	-	HH5X16	-	
16-3T	●	●		1.00	1.00		1.00	6.0		0.953					HH5X25		
KGM□ 12-4T	●	●		0.75	0.75	-	0.75	5.0	1.42	0.683	0.787	0.157	0.197	-	HH5X16	-	
16-4T	●	●		1.00	1.00		1.00	6.0	1.22	0.933	0.984				HH5X25		
KGM□ 16-5T	●	●		1.00	1.00	-	1.00	6.0	1.22	0.913	0.984	0.197	0.236	-	HH5X25	-	-
KGM□ 2012K-2T17		●	mm	20	20	-	12	125	33	11.15	17	2.0	3.0	SB-5TR	-	LTW-20	-
2020K-2T17	●	●					20	125		19.15				-	HH5X16	-	LW-4
2525M-2T17	●	●		25	25		25	150		24.15					HH5X25		
KGM□ 1616H-3T20	●			16	16	4	16	100	36	14.8	20	3.0	4.0	-	HH5X16	-	LW-4
2012K-3T20		●		20	20	-	12	125		10.8				SB-5TR	-	LTW-20	-
2020K-3T20	●	●					20			18.8				-	HH5X16	-	LW-4
2525M-3T20	●	●		25	25		25	150		23.8					HH5X25		
KGM□ 2020K-4T20	●			20	20	-	20	125	36	18.3	20	4.0	5.0	-	HH5X16	-	LW-4
2525M-4T20	●			25	25		25	150		23.3					HH5X25		
2525M-4T25	●	●							41		25						
KGM□ 2525M-5T25	●	●		25	25	-	25	150	42	22.8	25	5.0	6.0	-	HH5X25	-	LW-4
3232P-5T25	●			32	32		32	170		29.8							
KGM□ 2525M-6T30	●			25	25		25	150	45	22.4	30	6.0	6.0	-	HH5X25	-	LW-4

- Dimension **CDX** shows the distance from the toolholder to the cutting edge. Refer to the table (**H34**) for the relationship between available grooving depth and cutting diameter
- When using GMG / GMM type 2-edge insert, set groove depth under 0.591"(15mm)

Choose insert with width that falls within **MIN** and **MAX** parameters shown in table above. Insert table **H40**

Applicable Inserts

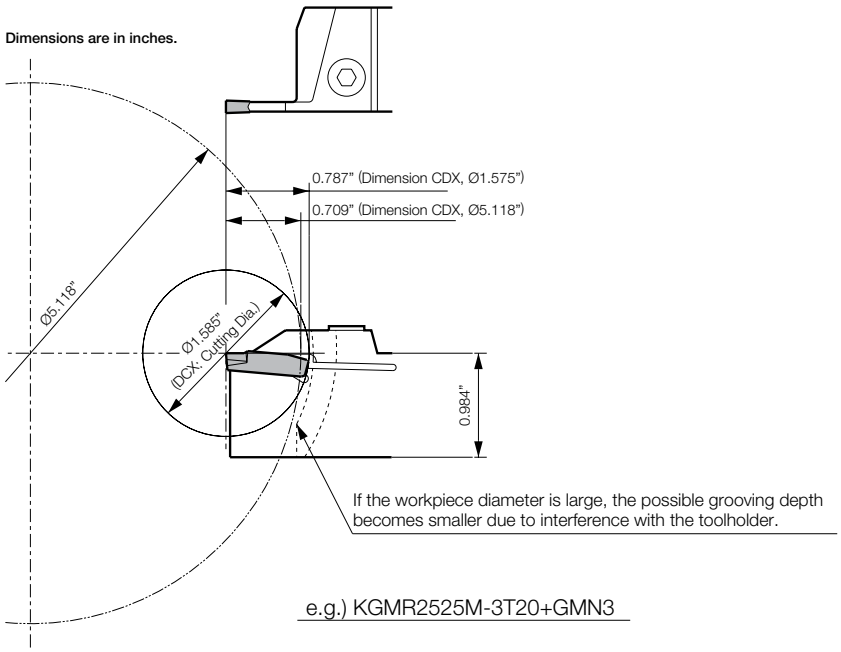
Application	Grooving / Traversing	Grooving / Traversing	Grooving	Full-R / Copying	Full-R / Copying	Cut-Off / Deep Grooving	Cut-Off / Deep Grooving	Cut-Off / Deep Grooving	Cut-Off / Deep Grooving	Cut-Off / Deep Grooving
Ref. Page	G48	G48	G48	G48	G49	H40	H40	H40	H40	H40
Shape / Toolholder	MW	MS	MG			MT	NB	TK / TMR	TK	
KGM□...1.5	-	-	-	-	-	GMM1520...MT GMM2020...MT GMM1520□...MT GMM2020□...MT	GMM1520...NB GMM2020...NB	GMM2020...T.. GMM2020□...T..	GMN2...TK GM□2...TK	-
KGM□...-2- KGM□...-2(T)	GMM2420...MW GMM3020...MW	GMG3020...MS GMM3020...MS	GMG2520...MG GMG3020...MG	GMG3020...R GMM3020...R	-	GMM2020...MT GMM2520...MT GMM3020...MT GMM2020□...MT GMM2520□...MT GMM3020□...MT	GMM2020...NB GMM2520...NB GMM3020...NB	GMM2020...T.. GMM2520...T.. GMM3020...T.. GMM2020□...T.. GMM2520□...T.. GMM3020□...T..	GMN2...TK GMN3...TK GM□2...TK GM□3...TK	GMN2.2 GMN3 GM□2.2 GM□3
KGM□...2.5	GMM2420...MW GMM3020...MW	GMG3020...MS GMM3020...MS	GMG2520...MG GMG3020...MG	GMG3020...R GMM3020...R	-	GMM2520...MT GMM3020...MT GMM2520□...MT GMM3020□...MT	GMM2520...NB GMM3020...NB	GMM2520...T.. GMM3020...T.. GMM2520□...T.. GMM3020□...T..	GMN3...TK GM□3...TK	GMN3 GM□3
KGM□...-3(T)	GMM3020...MW GMM4020...MW	GMG3020...MS GMM3020...MS GMG4020...MS GMM4020...MS	GMG3020...MG GMG3520...MG GMG4020...MG	GMG3020...R GMM3020...R GMG4020...R GMM4020...R	-	GMM3020...MT GMM3020□...MT	GMM3020...NB	GMM3020...T.. GMM3020□...T..	GMN3...TK GMN4...TK GM□3...TK GM□4...TK	GMN3 GMN4 GM□3 GM□4
KGM□...-4(T)	GMM4020...MW GMM5020...MW	GMG4020...MS GMM4020...MS GMG5020...MS GMM5020...MS	GMG4020...MG GMG5020...MG	GMG4020...R GMM4020...R GMG5020...R GMM5020...R	-	-	-	-	GMN4...TK GM□4...TK	GMN4 GMN5 GM□4
KGM□...-5(T)	GMM5020...MW GMM6020...MW	GMG5020...MS GMM5020...MS GMG6020...MS GMM6020...MS	GMG5020...MG GMG6020...MG	GMG5020...R GMM5020...R GMG6020...R GMM6020...R	GMGA6020...R	-	-	-	-	GMN5 GMN6
KGM□...-6T	GMM6020...MW	GMG6020...MS GMM6020...MS	GMG6020...MG	GMG6020...R GMM6020...R	GMGA6020...R	-	-	-	-	GMN6
KGM□...8	GMM8030...MW	-	GMG8030...MG	-	GMGA8030...R	-	-	-	-	-

Recommended Cutting Condtions **H60**

● : Standard Item △ : Phaseout Item (will be removed from next catalog)
Contact your local Kyocera sales engineer to upgrade old products to new technology

KGM • KGM-T Available Cutting Diameter

There is a limit to available grooving depth depending on the workpiece diameter



e.g.) KGMR2525M-3T20+GMN3

KGM Available Cutting Diameter Table

Toolholders		DCX Cutting Diameter																
KGM	0810K-1.5-125	-	-	-	-	-	-	-	-	-	-	-	-	10mm	14mm	16mm	32mm	
	1010○-1.5…	-	-	-	-	-	-	-	20mm	25mm	32mm	40mm	60mm	∞	∞	∞	∞	
	1212○-1.5…	-	-	-	-	25mm	26mm	28mm	32mm	36mm	40mm	60mm	100mm					
	0810K-2-125	-	-	-	-	-	-	-	-	-	-	-	-	10mm	14mm	16mm	32mm	
	6-2-5								0.80"	1.00"	1.28"	1.60"	2.40"	∞	∞	∞	∞	
	1010○-2…	-	-	-	-	-	-	-	20mm	25mm	32mm	40mm	60mm					
	8-2-6					1.00"	1.04"	1.12"	2.00"	∞	∞	∞	∞					∞
	1212○-2…	-	-	-	-	25mm	26mm	28mm	50mm									
	1616○-2…	32mm	40mm	50mm	60mm	80mm	100mm	∞	∞									
	1010○-2.5…	-	-	-	-	-	-	-	20mm	25mm	32mm	40mm	60mm					
	1212○-2.5…	-	-	-	-	25mm	26mm	28mm	32mm	36mm	40mm	60mm	100mm					
	1616○-2.5…	32mm	40mm	50mm	60mm	80mm	100mm	∞	∞	∞	∞	∞	∞					
	1616○-3…	32mm	40mm	50mm	60mm	80mm	100mm											
Available Grooving Depth CDX (in)		0.64"	0.60"	0.56"	0.52"	0.50"	0.48"	0.44"	0.40"	0.36"	0.32"	0.28"	0.24"	0.20"	0.16"	0.12"	0.08"	0.04"
Available Grooving Depth CDX (mm)		16mm	15mm	14mm	13mm	12.5mm	12mm	11mm	10mm	9mm	8mm	7mm	6mm	5mm	4mm	3mm	2mm	1mm

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KGM-T Available Cutting Diameter Table (GMN, GM℠ When Using 1-edge Insert)

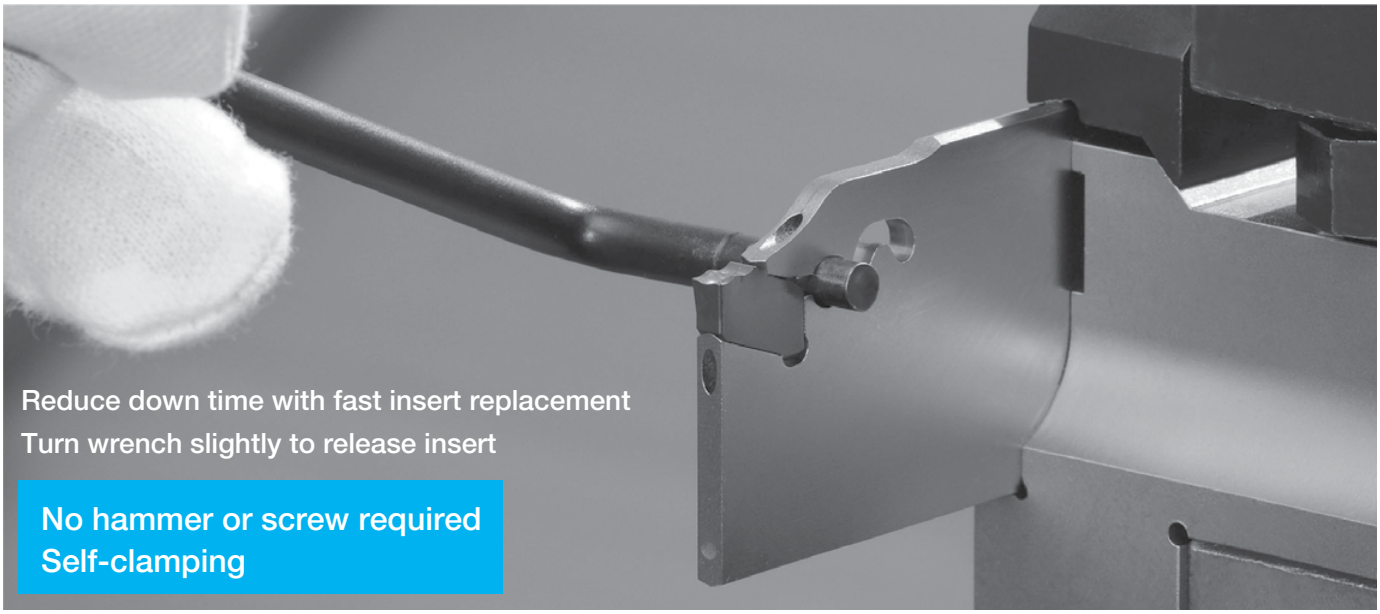
Toolholders		DCX Cutting Diameter												
KGM℠	2012K-2T17	-	-	-	-	-	-	-	-	66mm	80mm	130mm	260mm	
	12-2T	-	-	-	-	-	-	-	-	2.64"	3.20"	5.20"	10.40"	
	2020K-2T17	-	-	-	-	-	-	-	-	66mm	80mm	130mm	260mm	
	16-2T	-	-	-	-	-	-	-	-	2.64"	3.20"	5.20"	10.40"	
	2525M-2T1710	-	-	-	-	-	-	-	-	66mm	80mm	130mm	260mm	
	1616H-3T20	-	-	-	-	-	40mm	54mm	70mm	100mm	180mm			
	2012K-3T20	-	-	-	-	-	40mm	90mm	130mm	240mm				
	12-3T	-	-	-	-	-	1.60"	3.60"	5.20"	9.60"				
	2020K-3T20	-	-	-	-	-	40mm	90mm	130mm	240mm				
	16-3T	-	-	-	-	-	1.60"	3.60"	5.20"	9.60"				
	2525M-3T20	-	-	-	-	-	40mm	90mm	130mm	240mm				
	12-4T	-	-	-	-	-	1.60"	3.60"	5.20"	9.60"				
	2020K-4T20	-	-	-	-	-	40mm	90mm	130mm	240mm				
	2525M-4T20	-	-	-	-	-	40mm	90mm	130mm	240mm				
	16-4T	-	-	2.00"	5.60"	9.60"								
	2525M-4T25	-	-	50mm	140mm	240mm								
	16-5T	-	-	2.00"	5.60"	9.60"								
	2525M-5T25	-	-	50mm	140mm	240mm								
	3232P-5T25	-	-	50mm	280mm	600mm								
	2525M-6T30	100mm	300mm	∞	∞	∞								
Available Grooving Depth CDX (in)		1.20"	1.08"	1.00"	0.92"	0.88"	0.80"	0.76"	0.72"	0.68"	0.64"	0.60"	0.56"	<0.52"
Available Grooving Depth CDX (mm)		30mm	27mm	25mm	23mm	22mm	20mm	19mm	18mm	17mm	16mm	15mm	14mm	<13mm

KPK Series

High-Performance Cut-Off Solutions

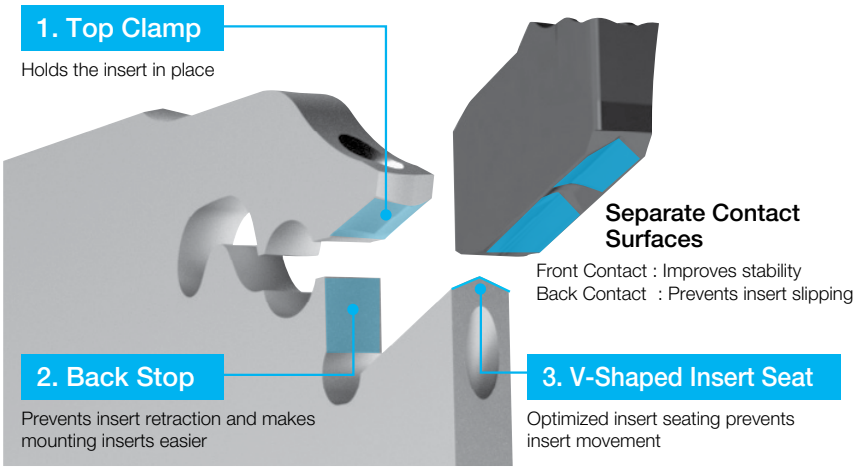
Easy Insert Replacement Reduces Downtime
High-Performance, Long Tool Life and Stable Machining with Strong Clamping Mechanism

1 Easy Insert Replacement

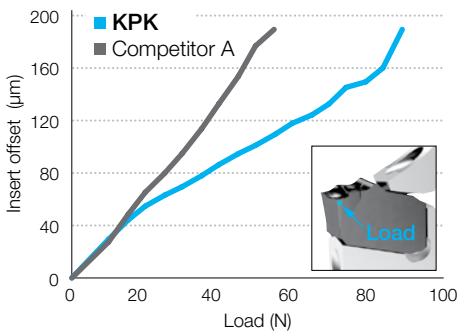


2 Firm Insert Clamp Ensures Added Safety and Security

The firmly secured insert uses three contact surfaces to eliminate sliding or chattering



Insert Deviation Comparison (Internal Evaluation)



Measured tool : KPKB32-3 PKM30N-025PM

NEW ITEMS!

3 Unique Chipbreaker Designs for Long Tool Life and Stable Machining

Advanced chipbreaker technology inherited from KGD lineup provides excellent chip control



PM Chipbreaker
General Purpose

Insert Grades

Steel	**: PR1625**
Stainless Steel	**: PR1535**
Cast Iron and Aluminum	**: GW15**

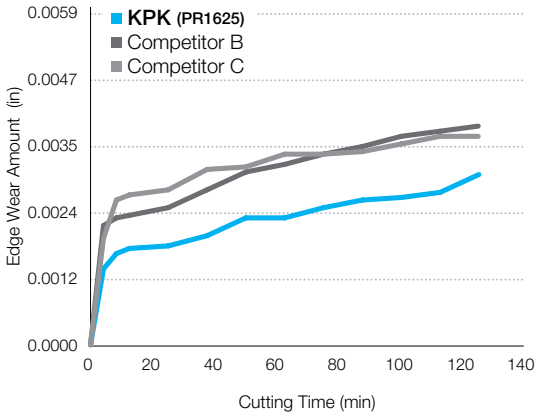


PH Chipbreaker
Tough Edge
High-Feed

Insert Grades

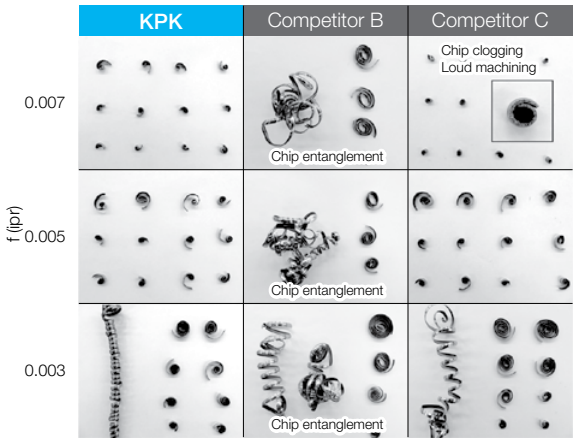
Steel	**: PR1625**
Stainless Steel	**: PR1535**

Wear Resistance Comparison (Internal Evaluation)



Cutting Conditions : n = 955 RPM (constant), Vc = ~ 490 sfm
f = 0.005 ipr (~ ø0.394" : f = 0.002 ipr) Wet (External Coolant)
Workpiece : 4131 (ø1.969") Cutting Width : 0.118" (3mm), PM Chipbreaker

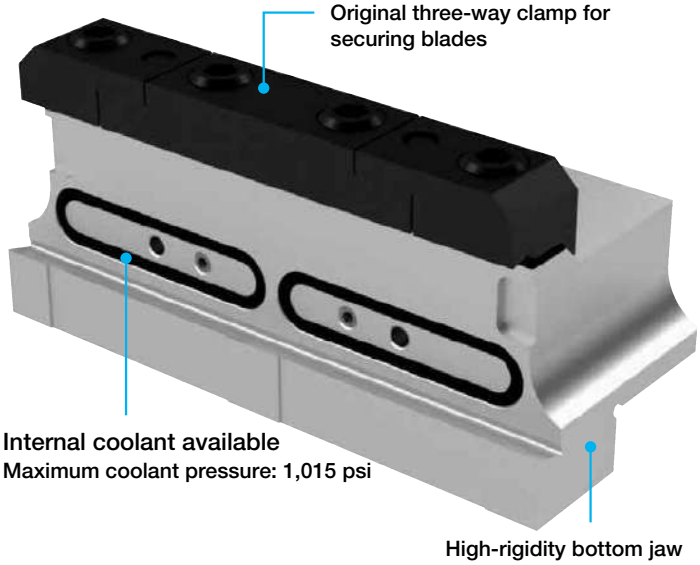
Chip Control Comparison (Internal Evaluation)



Cutting Conditions : n = RPM (constant) , Vc = ~ 390 sfm , Wet (External Coolant)
Workpiece : 4131 (ø1.969") Cutting Width : 0.118" (3mm), PM Chipbreaker

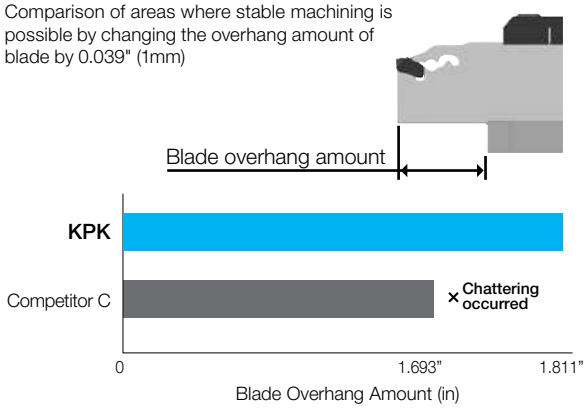
4 Rigid Tool Holder Block Prevents Chattering and Provides Internal Coolant

KPKTB-JCT



Chatter Resistance Comparison (Internal evaluation)

Comparison of areas where stable machining is possible by changing the overhang amount of blade by 0.039" (1mm)



Cutting Conditions : n = 650 RPM (Constant), Vc = ~ 330 sfm, f = 0.005 ipr
Wet (Internal Coolant : Normal Pressure), Workpiece : 4137 (ø1.969")
Cutting Width : 0.118" (3mm), PM Chipbreaker

KTKTB block is compatible with internal coolant with an optional internal connector. (~145 psi)

See Coolant Supply Method (Type C) H53

PKM Inserts

Classification of Usage						
● : Light Interruption / 1st Choice	P	Carbon Steel / Alloy Steel	●	◔		Ref. Page for Toolholder
◔ : Light Interruption / 2nd Choice	M	Stainless Steel	◔	●		
● : Continuous / 1st Choice	K	Cast Iron			●	
○ : Continuous / 2nd Choice	N	Non-ferrous Metals			●	

Insert (Right-handed Insert Shown)			Part Number	Dimensions (in) CW inch	Dimensions (in) CW mm	Dimensions (in) RE	Angle (°) PSIR℞	MEGACOAT NANO PR1625	MEGACOAT NANO PR1535	Carbide GW15	Ref. Page for Toolholder
Neutral	General Purpose		NEW PKM 16N-015PM	0.063	1.6	0.006	-	●	●	●	H49 H50 H52
			20N-020PM	0.079	2	0.008		●	●	●	
			NEW 24N-020PM	0.094	2.4	0.008		●	●	●	
			30N-025PM	0.118	3	0.01		●	●	●	
			40N-030PM	0.157	4	0.012		●	●	●	
			NEW 48N-030PM	0.189	4.8	0.012		●	●	●	
			NEW 50N-030PM	0.197	5	0.012		●	●	●	
			NEW 60N-035PM	0.236	6	0.014		●	●	●	
	Tough Edge		PKM 20N-020PH	0.079	2	0.008	-	●	●		
			30N-030PH	0.118	3	0.012		●	●		
			40N-030PH	0.157	4	0.012		●	●		
			NEW 50N-030PH	0.197	5	0.012		●	●		
			NEW 60N-040PH	0.236	6	0.016		●	●		
								R L	R L	R L	
With Lead Angle			NEW PKM 16℞-015PM-6D	0.063	1.6	0.006	6°	● ●	● ●	● ●	H49 H50 H52
			20℞-020PM-6D	0.079	2	0.008		● ●	● ●	● ●	
			NEW 24℞-020PM-6D	0.094	2.4	0.008		● ●	● ●	● ●	
			30℞-025PM-6D	0.118	3	0.01		● ●	● ●	● ●	
			40℞-030PM-6D	0.157	4	0.012		● ●	● ●	● ●	
			NEW 50℞-030PM-6D	0.197	5	0.012		● ●	● ●	● ●	

Recommended Cutting Conditions

PM Chipbreaker

Workpiece	Cutting Speed Vc (sfm) MEGACOAT NANO PR1625	Cutting Speed Vc (sfm) MEGACOAT NANO PR1535	Cutting Speed Vc (sfm) Carbide GW15	Feed f (ipr) Edge Width CW (mm) 1.6	Feed f (ipr) Edge Width CW (mm) 2 ~ 4	Feed f (ipr) Edge Width CW (mm) 4.8 ~ 6	Notes
Carbon Steel	★ 260 - 720	☆ 260 - 720	-	0.001 - 0.005	0.003 - 0.007	0.004 - 0.009	Wet
Alloy Steel	★ 230 - 660	☆ 230 - 660	-				
Stainless Steel	☆ 200 - 490	★ 200 - 490	-	0.001 - 0.003	0.002 - 0.005	0.003 - 0.006	
Cast Iron	-	-	★ 160 - 330	0.001 - 0.003	0.003 - 0.007	0.004 - 0.009	
Aluminum Alloy	-	-	★ 660 - 1480	0.001 - 0.003	0.003 - 0.007	0.004 - 0.009	
Brass	-	-	★ 330 - 660				

Reduce feed to 1/2 ~ 1/3 at the center of the workpiece.

PH Chipbreaker

Workpiece	Cutting Speed Vc (sfm) MEGACOAT NANO PR1625	Cutting Speed Vc (sfm) MEGACOAT NANO PR1535	Cutting Speed Vc (sfm) Carbide GW15	Feed f (ipr) Edge Width CW (mm) 2	Feed f (ipr) Edge Width CW (mm) 3 ~ 4	Feed f (ipr) Edge Width CW (mm) 5 ~ 6	Notes
Carbon Steel	★ 260 - 720	☆ 260 - 720	-	0.004 - 0.009	0.006 - 0.011	0.006 - 0.014	Wet
Alloy Steel	★ 230 - 660	☆ 230 - 660	-				
Stainless Steel	☆ 200 - 490	★ 200 - 490	-	0.002 - 0.005	0.003 - 0.006	0.003 - 0.007	
Cast Iron	-	-	-	-	-	-	
Aluminum Alloy	-	-	-	-	-	-	
Brass	-	-	-				

Reduce feed to 1/2 ~ 1/3 at the center of the workpiece.

★ : 1st Recommendation ☆ : 2nd Recommendation

(Customer Service) 800.823.7284 - Option 1
(Technical Support) 800.823.7284 - Option 2
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● : Standard Item △ : Phaseout Item (will be removed from next catalog)
Contact your local Kyocera sales engineer to upgrade old products to new technology

NEW ITEMS!

KPKB-JCT (Jet Coolant-Through)

Coolant Piping Parts ➡ **H54** Pressure Resistance: ~1,015 psi

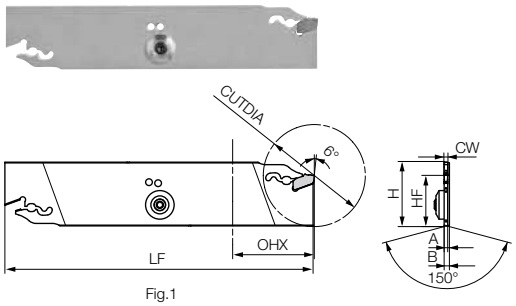


Fig.1

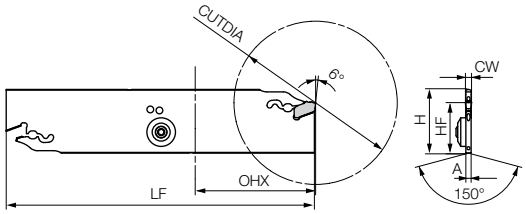


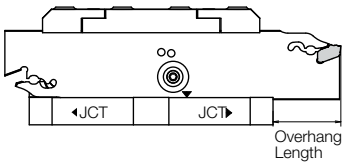
Fig.2

Blade Dimensions (Metric Sizes)

Part Number	Stock	Cut-Off Dia.	Dimensions (mm)					Insert Width	Drawing	Spare Parts				Applicable Inserts ➡ H49	Applicable Blocks ➡ H51
		CUTDIA	H*	HF	B	LF	A	CW		Insert Wrench	Coolant Plug	Screw	Wrench		
NEW KPKB 26-1JCT	●	35	26	21.4	2.6	110	1.4	1.6	Fig.1	LPW-5	CCP-4	SB-4065TR	FT-15	PKM16…	KPKTB○○-26JCT KTKTB○○-26
26-2JCT	●	50					1.8	2.0 2.4						PKM20… PKM24…	
26-3JCT	●	75			-		2.6	3.0	Fig.2					PKM30…	
26-4JCT	●	80					3.4	4.0						PKM40…	
NEW 26-5JCT	●						4.2	4.8 5.0						PKM48… PKM50…	
NEW KPKB 32-1JCT	●	35	32	25.0	2.6	150	1.4	1.6	Fig.1	Coolant Plug Screw Tightening Torque 3.0 Nm				PKM16…	KPKTB○○-32JCT KTKTB○○-32 KTKTBF○○-32
32-2JCT	●	50					1.8	2.0 2.4						PKM20… PKM24…	
32-3JCT	●	100			-		2.6	3.0	Fig.2					PKM30…	
32-4JCT	●	100					3.4	4.0						PKM40…	
NEW 32-5JCT	●						4.2	4.8 5.0						PKM48… PKM50…	
NEW 32-6JCT	●						5.4	6.0						PKM60…	

See **Page** ➡ H55 for insert mounting and removal instructions.
When using internal coolant with KTKTB, KTKTBF type tool holder blocks, coolant supply piping (**CCN -5**) sold separately.
*H: Length between virtual apex

Minimum / Maximum Overhang Length While Using Internal Coolant



Part Number		Overhang Length	
Blade	Tool Holder Block	Min.	Max.
KPKB26-1JCT	**KPKTB20-26JCT**	15	34.5
KPKB26-2/3/4JCT		20	40
KPKB26-5JCT		23	43
KPKB32-1JCT	**KPKTB20-32JCT**	18	49
	KPKTB25-32JCT	13	
	KPKTB32-32JCT		
KPKB32-2/3/4JCT	**KPKTB20-32JCT**	27.5	59
	KPKTB25-32JCT	22.5	
	KPKTB32-32JCT		
KPKB32-5/6JCT	**KPKTB20-32JCT**	31.5	63
	KPKTB25-32JCT	26.5	
	KPKTB32-32JCT		

KPKB (Not Coolant-Through)



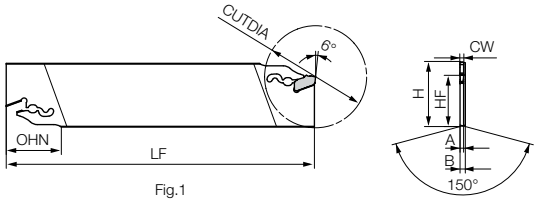


Fig.1

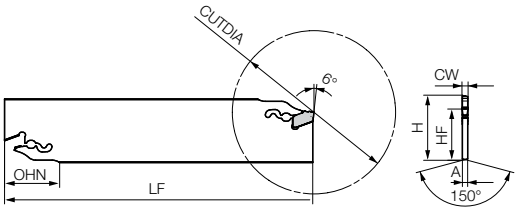


Fig.2

Blade Dimensions (Metric Sizes)

Part Number	Stock	Cut-Off Dia.	Dimensions (mm)					Insert Width	Drawing	Spare Parts	Applicable Inserts	Applicable Blocks
		CUTDIA	H*	HF	B	LF	A	CW		Insert Wrench	→ H49	→ H51
NEW KPKB 19-1	●	32	19	15.7	2.6	86	1.4	1.6	Fig.1	LPW-5	PKM16…	KTKTB○○-19
NEW 19-2	●	40			-		1.8	2.0 2.4	Fig.2		PKM20… PKM24…	
NEW KPKB 26-1	●	35	26	21.4	2.6	110	1.4	1.6	Fig.1		PKM16…	KPKTB○○-26JCT KTKTB○○-26
26-2	●	50			-		1.8	2.0 2.4	Fig.2		PKM20… PKM24…	
26-3	●	75					2.6	3.0			PKM30…	
26-4	●	80					3.4	4.0			PKM40…	
NEW 26-5	●	80					4.2	4.8 5.0			PKM48… PKM50…	
NEW KPKB 32-1	●	35	32	25.0	2.6	150	1.4	1.6	Fig.1		PKM16…	KPKTB○○-32JCT KTKTB○○-32 KTKTBF○○-32
32-2	●	50					1.8	2.0 2.4			PKM20…	
32-3	●	100			-		2.6	3.0	Fig.2		PKM30…	
32-4	●	100					3.4	4.0			PKM40…	
NEW 32-5	●	120					4.2	4.8 5.0			PKM48… PKM50…	
NEW 32-6	●	120					5.4	6.0			PKM60…	

See **Page** → H55 for insert mounting and removal instructions.
*H: Length between virtual apex

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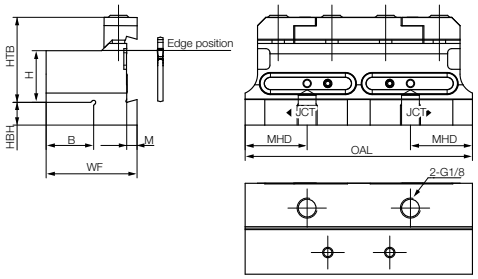
KPKTB-JCT (Jet Coolant-Through)

Coolant Piping Parts ➔ **H54** Pressure Resistance: ~1,015 psi





Toolblock Dimensions (Metric Sizes)

Part Number		Stock	Dimensions (mm) H	HTB	HBH	B	WF	M	MHD	OAL	Spare Parts: Clamp Set (Switchblade type)	Screw	Wrench	O-ring	Plug 1	Plug 2	Applicable Blades
KPKTB	**20-26JCT**	●	20	33	12.4	19	39	4	23.5	86	BCS-2	HH6x16	LW-5	GR-020	HS3x4	HSG1/8X8.0	KPKB26-○JCT KTKB26-○
	20-32JCT	●	20	41	16		40	5	25	100	BCS-3			GR-026	HS4x4		KPKB32-○JCT KTKB32-○
	25-32JCT	●	25		11	23	44		30	110	BCS-4			GR-029			KFTB□□-4S KFTB□□-5S
	32-32JCT	●	32		5	29	50										

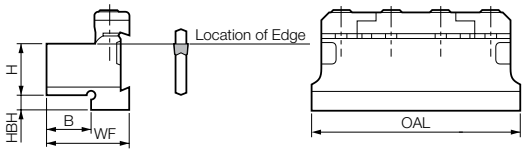
Applicable Blades ➔ **H49~H50, H57** ➔ **G143**

Includes only one **HSG1/8X8.0** plug.
KPKTB-JCT type block is also compatible with conventional KTKB type blades.
When using internal coolant, the coolant may appear to leak slightly, but this should not affect machining performance. (If the O-ring is damaged, order a new one separately.)

KTKTB / KTKTBF (Separate Toolblock Holder / Perpendicular Type)

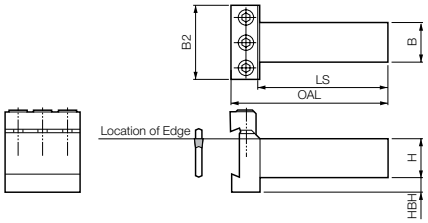
KTKTB





KTKTBF





Toolblock Dimensions

Part Number		Stock	Unit	Dimensions H	HBH	B	B2	OAL	LS	Spare Parts: Clamp Set Separate Type	Clamp Set Integral Type	Screw	Wrench	Applicable Blade: Cut-Off	Face Grooving
KTKTB	**19-19**	●	Inch	0.75	0.19	0.720	1.31	2.99	-	-	BCS-1	HH5X25	LW-4	KTKB19-○S KTKB19-1SS	-
	19-26	●		0.75	0.39	0.720	1.39	3.39	-	BCS-2	-	HH6X30	LW-5	※KPKB26-○ (JCT) KTKB26-○S KTKB26-1SS	-
	25.4-32	●		1.00	0.30	0.905	1.65	4.33	-	BCS-4	-	HH6X30	LW-5	※KPKB32-○ (JCT) KTKB32-○S KTKB32-1SS KTKB□32-○S	KFTB□□-4S KFTB□□-5S
KTKTB	**16-19**	●	mm	16	4	15.5	29.5	76	-	-	BCS-1	HH5X25	LW-4	KTKB19-○S KTKB19-1SS	-
	20-19	●		20	4	19	34	76	-						
	16-26	●		16	13	15.5	31.5	86	-	BCS-2	-	HH6X30	LW-5	※KPKB26-○ (JCT) KTKB26-○S KTKB26-1SS	-
	20-26	●		20	9	19	36	86	-						
	20-32	●		20	13	19	38	100	-	BCS-3	-	HH6X30	LW-5	※KPKB32-○ (JCT) KTKB32-○S KTKB32-1SS KTKB□32-○S	KFTB□□-4S KFTB□□-5S
	25-32	●		25	8	23	42	110	-	BCS-4					
	32-32	●		32	5	29	48	110	-						
KTKTBF	**25-32**	●	mm	25	9.5	25	48	102	84.5	-	BCS-5	HH6X30	LW-5	※KPKB32-○ (JCT) KTKB32-○S KTKB32-1SS KTKB□32-○S	KFTB□□-4S KFTB□□-5S
	32-32	●		32	2.5	32	48	117	99.5						

※ KPKB-JCT Blades can be used with internal coolant by utilizing compatible coolant piping (CCN-5). See Page ➔ **H54**

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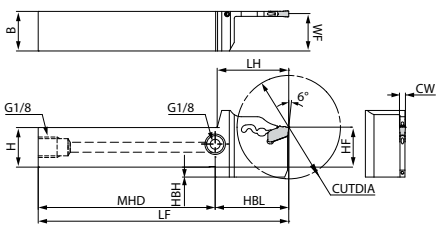
KPK CUT-OFF SYSTEM (SHANK STYLE)

KPKH-JCT (Coolant-Through) NEW

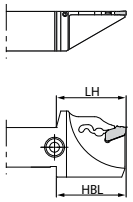
Pressure Resistance: ~2,175 psi





Right-hand Shown

Fig.1



*KPKH R/L2020K-2JCT··· shown above

Fig.2

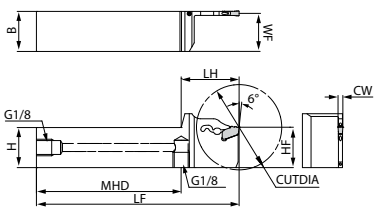


Fig.3

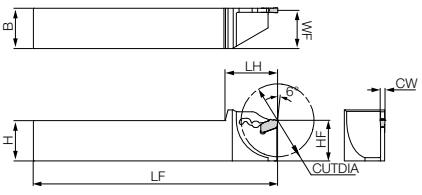
Toolholder Dimensions (Metric Sizes)

Part Number	Stock		Cut-Off Dia.	Dimensions (mm)									Insert Width	Drawing	Spare Parts		Applicable Inserts H49
	R	L	CUTDIA	H	HF	HBH	B	LF	LH	WF	HBL	MHD	CW		Insert Wrench	Plug	
KPKH R/L 2020K-2JCT	●	●	38	20	20	5	20	125	35.1	19.15	35.1	89	2.0 2.4	Fig.2	LPW-5	HSG1/8X8.0	PKM20… PKM24…
2020K-3JCT	●	●	52						36	18.75	37	88	3.0	Fig.1			PKM30…
2525K-3JCT	●	●	53	25	25	-	25			23.75	-	89		Fig.3			
2020K-4JCT	●	●	62	20	20	5	20		42.5	18.35	42	83	4.0	Fig.1			PKM40…
2525K-4JCT	●	●	68	25	25	-	25			23.35	-	82		Fig.3			

See **Page** H55 for insert mounting and removal instructions.
See **Page** H54 for coolant piping parts

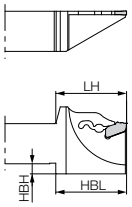
KPKH (Not Coolant-Through) NEW





Right-hand Shown

Fig.1



*KPKH R/L2020K-2··· shown above

Fig.2

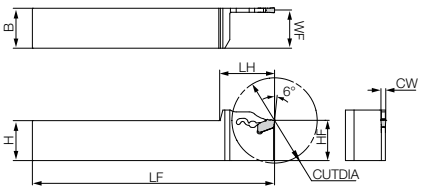


Fig.3

Toolholder Dimensions (Metric Sizes)

Part Number	Stock		Cut-Off Dia.	Dimensions (mm)								Insert Width	Drawing	Spare Parts	Applicable Inserts H49
	R	L	CUTDIA	H	HF	HBH	B	LF	LH	WF	HBL	CW		Insert Wrench	
KPKH R/L 2020K-2	●	●	38	20	20	5	20	125	33.1	19.15	33.1	2.0 2.4	Fig.2	LPW-5	PKM20… PKM24…
2020K-3	●	●	52			-			34	18.75	-	3.0	Fig.3		PKM30…
2525M-3	●	●	53	25	25	-	25	150		23.75					
2020K-4	●	●	62	20	20	-	20	125	40.5	18.35	-	4.0			PKM40…
2525M-4	●	●	68	25	25	-	25	150		23.35					
2525M-5	●	●	79	25	25	-	25	150	45.9	22.95	-	4.8 5.0			PKM48… PKM50…
KPKH R/L 2020K-3D35	●	●	35	20	20	-	20	125	32.5	18.75	-	3.0	Fig.1		PKM30…
2525M-3D45	●	●	45	25	25	-	25	150		23.75					
2020K-4D45	●	●	45	20	20	-	20	125	35	18.35	-	4.0			PKM40…
2525M-4D45	●	●	45	25	25	-	25	150		23.35					

See **Page** H55 for insert mounting and removal instructions.

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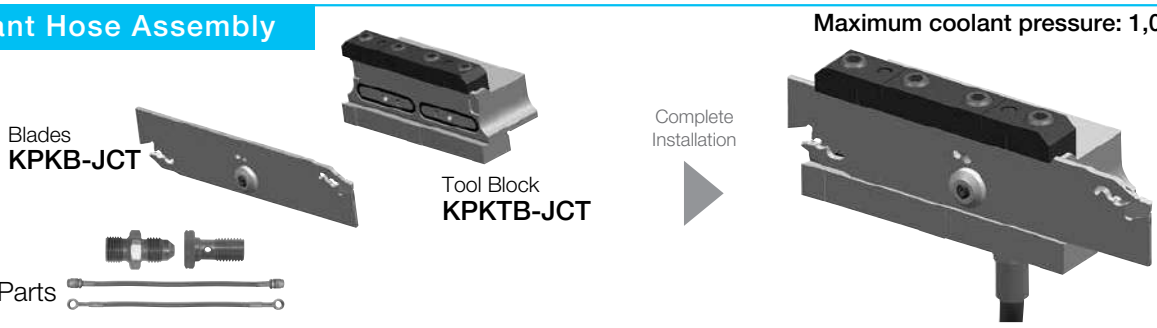
Internal Coolant Connection Methods (Method will be determined by machine specifications and requirements)

A : Coolant Hose Assembly

Maximum coolant pressure: 1,015 psi

See Page H54



B : VDI Holder Assembly

(Internal coolant type)

Maximum coolant pressure: 1,015 psi



C: Coolant Pipe Assembly

Maximum coolant pressure: 145 psi

See Page H54





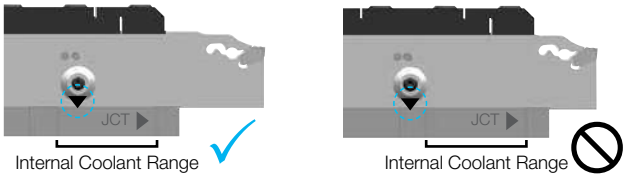
Coolant Supply Pipe Mounting Method

Attach to the blade with the supplied screw
Form pipe to the required shape and connect it to the piping of the machine.

Precautions

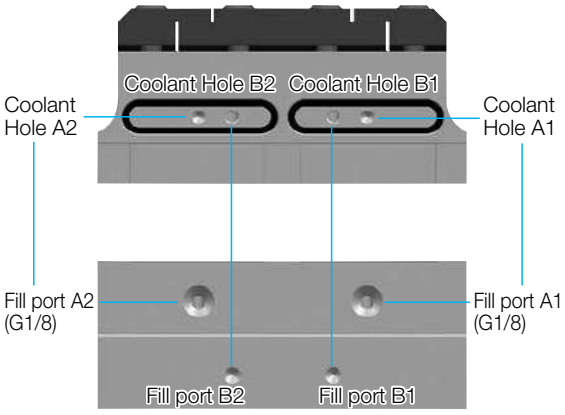
When mounting KPKB-JCT blade

When using internal coolant, keep the arrow (▼) on the blade within the range marked on the tool holder block.



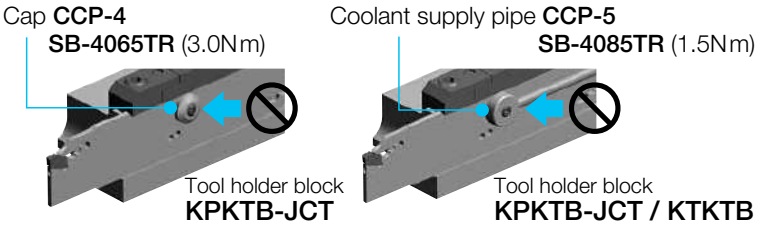
When using a tool block

When using the discharge port B1 (B2), use a sealant for the filler cap (HSG 1/8 X 8.0) of the accessory part of the coolant supply port A1 (A2).



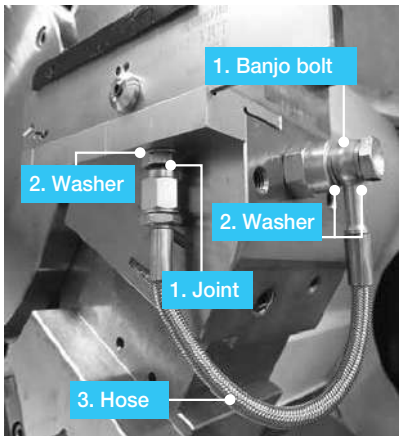
When the cap and coolant supply pipe are mounted

Coolant cannot be supplied correctly if it is mounted in the wrong position.



A : Coolant Hose Assembly

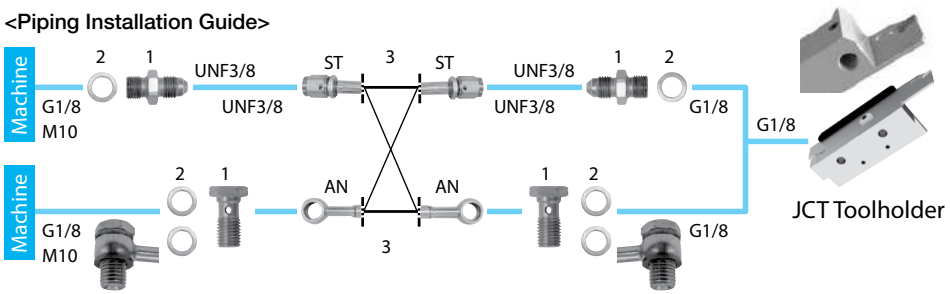
Connection Method and Piping Parts



Easy to use with high-pressure hose and joint

Can be used for internal coolant at normal pressure without a high pressure pump unit
Banjo bolts (for angled hoses) are also available.

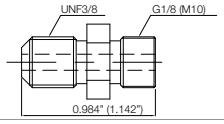
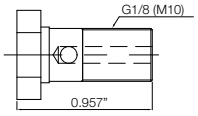
<Piping Installation Guide>



Depending on machine specifications and piping methods, 1.Joint/Banjo bolt x2 2.Washer x2-4 3.Hose x1

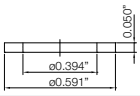
1. Joint / Banjo Bolt (Sold Separately)

Pressure Resistance: ~ 4,350 psi

Shape		Part Number	Stock	Thread Standard: Toolholder Machine Connection Side
		**J-G1/8-UNF3/8**	●	G1/8
		J-M10X1.5-UNF3/8	●	M10X1.5
Banjo Bolt (for Angled Hoses) 		**BB-G1/8**	●	G1/8
		BB-M10X1.5	●	M10X1.5

2. Washer (Sold Separately)

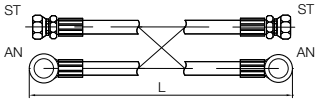
Pressure Resistance: ~ 4,350 psi

Shape		Part Number	Stock
		**WS-10**	●

*If you are using a banjo bolt, two washers are needed.

3. Hose (Sold Separately)

Pressure Resistance: ~ 4,350 psi

Shape		Part Number	Stock	Thread Standard		Dimensions (mm) L
Straight/Straight		**HS-ST-ST-200**	●	UNF3/8	UNF3/8	200
		HS-ST-ST-250	●			250
Straight/Angled		**HS-ST-AN-200**	●	UNF3/8	– (Banjo Bolt)	200
		HS-ST-AN-250	●			250
Angled/Angled		**HS-AN-AN-200**	●	– (Banjo Bolt)	– (Banjo Bolt)	200
		HS-AN-AN-250	●			250

Precautions

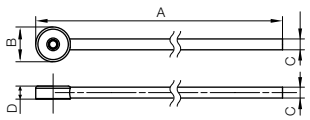
1. Make sure machine door is completely closed before use of these parts.
2. Use appropriate seal for the male thread of the piping parts and make sure the connection is secure. Use plugs to seal off unused coolant holes.
3. Connect and fasten the coolant hose firmly.
4. The use of copper washers may cause leakage but will have no effect on the performance.
5. Commercial piping parts can be used if the thread standards are same. Check the pressure resistance before use.
6. Regularly changing the coolant filter is recommended.

C: Coolant Pipe Assembly

Piping Parts

Coolant Supply Pipe (Sold Separately)

Pressure Resistance: 145 psi

Shape		Part Number	Stock	Dimensions (mm) A	B	C	D	Spare Parts (Screw)
		**CCN-5**	●	190	16	5	6	SB-4085TR

Use wrench (FT -15) supplied with the blade when connecting.

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How to Mount and Remove Inserts from Blade

1. Insert provided wrench and turn upwards as shown in (Fig. 1)
2. Slide insert into the blade's insert pocket from the front and push in until the back of the insert contacts the blade's back stop surface. (Fig. 2)

Completely eliminate chips from the insert pocket and the wrench insertion area by using compressed air.
Check to make sure the insert is straight and not tilted.
When removing the insert, follow the same procedure as shown in Fig. 2

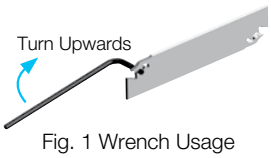


Fig. 1 Wrench Usage

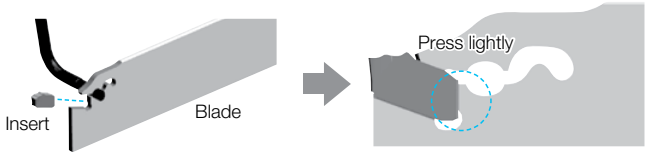
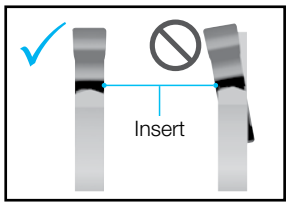
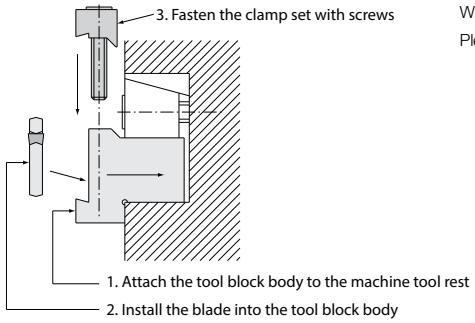


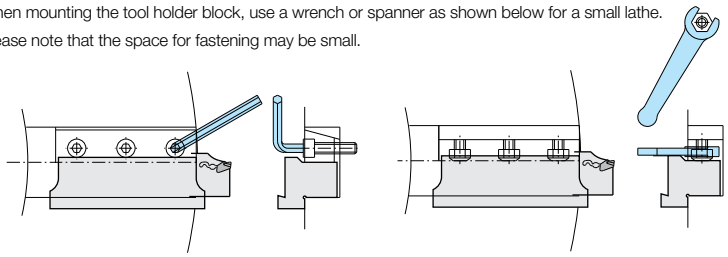
Fig. 2 Mounting Method



Tool Block and Blade Installation Guide

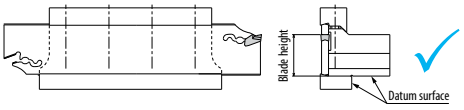


When mounting the tool holder block, use a wrench or spanner as shown below for a small lathe.
Please note that the space for fastening may be small.

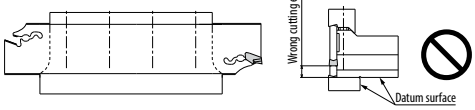


How to Install the Tool Block and Blade

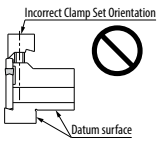
Correct blade installation



Incorrect blade installation



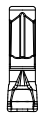
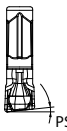
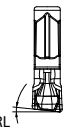
Incorrect Clamp Set Orientation

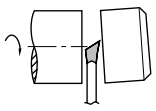
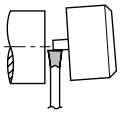


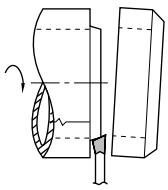
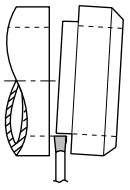
If the clamp set is mounted in the reverse direction, a large gap is created between the tool holder block main body and the clamp set as shown in the left figure. If you continue to use the product, the blade may break off. Reinstall in the correct orientation.

Lead Angle Direction and Usage

1. If there is no restriction on the finished shape, use an insert without lead angle.
2. Insert with lead angle is recommended to prevent remaining boss.
3. If you want to make the remaining boss smaller when machining small or thin parts, use insert with lead angle.

Handed insert with lead angle	N (Neutral)	R (Right-hand)	L (Left-hand)
		 PSIRR	 PSIRL
	· Inserts with lead angle (PSIR R/L) reduce burrs in cut-off machining. · The larger the lead angle (PSIR R/L), the smaller the cutting force. The feed also needs to be lower.		

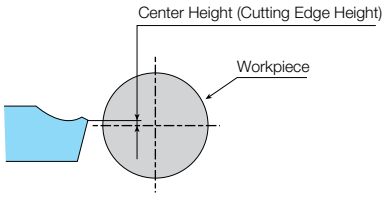
Solid Workpiece	Right-hand (R) Lead Neutral	Neutral
		

Hollow Workpiece (Pipe)	Right-hand (R) Lead Neutral	Neutral
		

Machining Precautions

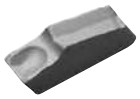
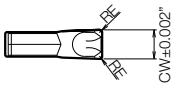
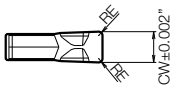
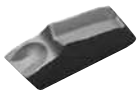
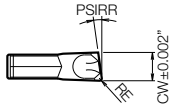
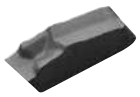
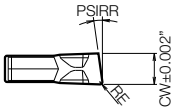
1. Set cutting edge height 0.004" (0.1mm) above core height.
2. Machining with ample supply of coolant is recommended
3. Machine at constant speeds to gain stable tool life
4. Make the cut-off as close as possible to the chuck
5. To prevent impacts, reduce feed rate by 1/2 ~ 1/3 when nearing the center of the workpiece

Excessive use of the insert may cause chipping or damage to the holder



TKN / TKR/L

Classification of Usage			P	M	K	N	Carbon Steel / Alloy Steel	Stainless Steel	Cast Iron	Non-ferrous Metals
● : Light Interruption / 1st Choice			○				●			
◔ : Light Interruption / 2nd Choice				◔				●		
● : Continuous / 1st Choice										
○ : Continuous / 2nd Choice				○			○	○		●

Insert (Right-handed Insert Shown)		Part Number	Dimensions (in) CW inch	CW mm	RE	Angle (°) PSIR R/L	Cermet TN620	Cermet TN90	CVD Coated Carbide CR9025	MEGACOAT NANO PR1535	PVD Coated Carbide PR660	PVD Coated Carbide PR930	Carbide KW10	Ref. Page for Toolholder
Neutral	 	TKN 1.6	0.063	1.6	0.006	-		●	●	●		●	●	H57
		TKN 2	0.087	2.2	0.008		●	●	●	●		●	●	
		TKN 2.4	0.094	2.4	0.008		●	●	●	●		●	●	
		TKN 3	0.122	3.1	0.010		●	●	●	●		●	●	H57
		TKN 4	0.161	4.1	0.012		●	●	●	●		●	●	H58
		TKN 4.8	0.189	4.8	0.012				●	●				
		TKN 5	0.201	5.1	0.012				●	●		●	●	
		TKN 6	0.252	6.4	0.014				●	●			●	
		TKN 8	0.315	8.0	0.016				●	●				
		TKN 9	0.378	9.6	0.018				●	●				H57
	 Low Feed	TKN 1.6-P	0.063	1.6	0.008				●	●			●	
		TKN 2-P	0.087	2.2	0.008	-	●	●	●	●		●	●	H57
		TKN 3-P	0.122	3.1	0.010		●	●	●	●		●	●	H58
							R	L	R	L	R	L	R	L	R	L	R	L	R	L	
With Lead Angle	 	TKR/L 1.6	0.063	1.6	0.006	8°			●		●	●			●		●	●	H57
		TKR/L 2	0.087	2.2	0.008		●		●		●	●			●		●	●	
		TKR/L 2.4	0.094	2.4	0.008				●		●	●			●		●	●	
		TKR/L 3	0.122	3.1	0.010		●		●		●	●			●	●	●	●	
		TKR/L 4	0.161	4.1	0.012		●		●		●	●					●	●	
		TKR/L 5	0.201	5.1	0.012				●		●	●					●		H57 H58
	 Low Feed	TKR/L 1.6-P	0.063	1.6	0.008						●								
		TKR/L 2-P	0.087	2.2	0.008	8°			●		●	●			●		●		
		TKR/L 3-P	0.122	3.1	0.010		●		●		●	●			●		●		

Recommended Cutting Condtions → H61

Cut-Off Tools

Name	Chipbreaker		Advantages
General Cut-Off	Standard (No Indication)		General cut-off type for feed rates over 0.004ipr Superior chip evacuation
Low Feed Cut-Off	P		Chipbreaker specially designed for low feed machining on automatic lathes, etc. Chips are controlled at feed rates between 0.0012~0.0032ipr

Insert's Edge Shape (CERACUT Cut-Off)

	Chamfered + Honed	Sharp Edge	Honed Cutting Edge
Edge Preparation			
Standard Chipbreaker	TN90 CR9025 / PR660	PR1535 PR930 / KW10	-
P-Chipbreaker	-	-	TN620 / TN90 / CR9025 / PR1535 PR660 / PR930 / KW10

• Sharp edge can reduce cutting resistance by 40%, compared with chamfered edge.

TKN / TKR/L Setup

1. Tap the insert lightly with a plastic hammer to push it tight enough that it cannot be removed by hand. **(Fig.1)**
2. Remove the insert with the supplied wrench. **(Fig.2)**

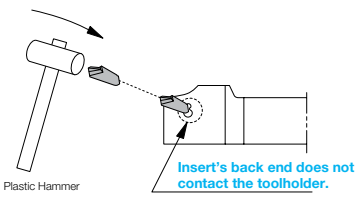


Fig. 1 How to Attach Inserts

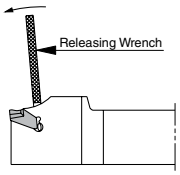


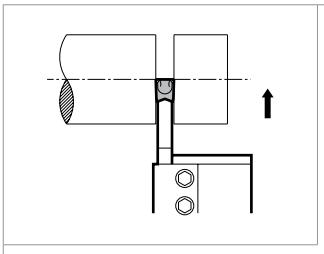
Fig. 2 How to Detach Inserts

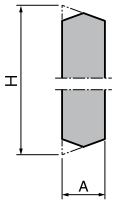
Inserts are sold in 10 piece boxes

● : Standard Item △ : Phaseout Item (will be removed from next catalog)
Contact your local Kyocera sales engineer to upgrade old products to new technology

(Customer Service) 800.823.7284 - Option 1
(Technical Support) 800.823.7284 - Option 2
Visit us online at KyoceraPrecisionTools.com

KTKB-SS / KTKB-S





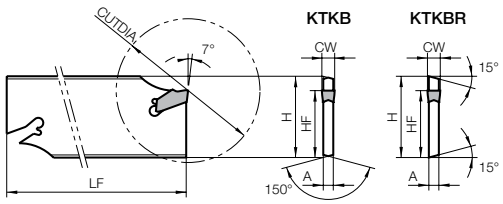


Fig.1

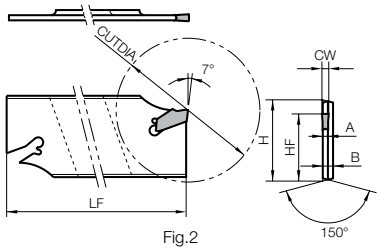


Fig.2

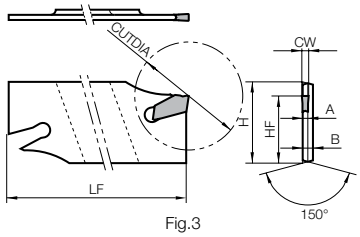


Fig.3

Blade Dimensions

Part Number		Stock	Cut-Off Dia.	Dimensions (mm)					Insert Width	Drawing	Applicable Inserts ➡ H56				Applicable Blocks ➡ H51
			CUTDIA	*H	HF	B	LF	A	CW			Low Feed	Lead Angle	Low Feed / Lead Angle	
KTKB	**19-1SS**	●	32	19	15.7	2.4	86	1.2	1.6	Fig. 3	TKN1.6	TKN1.6-P	TK[R/L]1.6	TK[R/L]1.6-P	KTKTB 16-19 20-19
KTKB	**26-1SS**	●	35	26	21.4	2.4	110	1.2	1.6	Fig. 3	TKN1.6	TKN1.6-P	TK[R/L]1.6	TK[R/L]1.6-P	KTKTB 16-26 20-26 KPKTB 20-26JCT
KTKB	**32-1SS**	●	35	32	25	2.4	150	1.2	1.6	Fig. 3	TKN1.6	TKN1.6-P	TK[R/L]1.6	TK[R/L]1.6-P	KTKTB 20-32 25-32 32-32 KTKTBF 25-32 32-32 KPKTB 20-32JCT 25-32JCT 32-32JCT
KTKB	**19-2S**	●	40	19	15.7	-	86	1.8	2.2 2.4	Fig. 1	TKN2 TKN2.4	TKN2-P	TK[R/L]2 TK[R/L]2.4	TK[R/L]2-P	KTKTB 16-19 20-19
KTKB	**26-2S**	●	50	26	21.4	-	110	1.8	2.2 2.4	Fig. 1	TKN2 TKN2.4	TKN2-P	TK[R/L]2 TK[R/L]2.4	TK[R/L]2-P	KTKTB 16-26 20-26 KPKTB 20-26JCT
	26-3S	●	75					2.6	3.1		TKN3	TKN3-P	TK[R/L]3	TK[R/L]3-P	
	26-4S	●	80					3.4	4.1		TKN4	-	TK[R/L]4	-	
	26-5S	●	80					4.2	4.8 5.1		TKN4.8 TKN5	-	TK[R/L]5	-	
KTKB	**32-2S**	●	50	32	25	2.6	150	1.8	2.2 2.4	Fig. 2	TKN2 TKN2.4	TKN2-P	TK[R/L]2 TK[R/L]2.4	TK[R/L]2-P	KTKTB 20-32 25-32 32-32 KTKTBF 25-32 32-32 KPKTB 20-32JCT 25-32JCT 32-32JCT
	32-3S	●	100			-		2.6	3.1	Fig. 1	TKN3	TKN3-P	TK[R/L]3	TK[R/L]3-P	
	32-4S	●	100					3.4	4.1		TKN4	-	TK[R/L]4	-	
	32-5S	●	120					4.2	4.8 5.1		TKN4.8 TKN5	-	TK[R/L]5	-	
	32-6S	●	120					5.4	6.4		TKN6	-	-	-	
KTKB[R/L]	**32-8S**	●	120	32	25	-	150	6.8	8.0	Fig. 1	TKN8	-	-	-	
KTKBR	**32-9S**	●	120					8.0	9.6		TKN9	-	-	-	

Note) 1. "**-SS**" means hard coated
2. Releasing wrench is "**LTK-5**"

* Dimension H shows virtual apex distance.

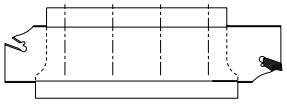
Recommended Cutting Condtions ➡ **H61**

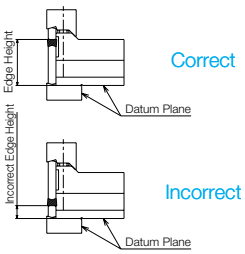
Toolblock and Blade Installation

Correct Way

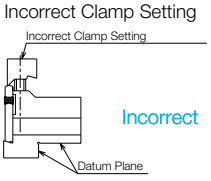


Incorrect Way





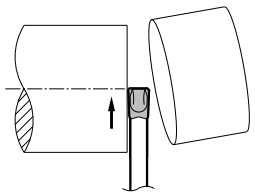
Incorrect Clamp Setting



If the clamp element is mounted backward, a large gap will occur between the clamp and the toolblock, and the blade may come off during machining. Be careful when installing the clamp for safety.

● : Standard Item △ : Phaseout Item (will be removed from next catalog)
Contact your local Kyocera sales engineer to upgrade old products to new technology

KTKH-S



For Small Parts Machining (Long Shank)

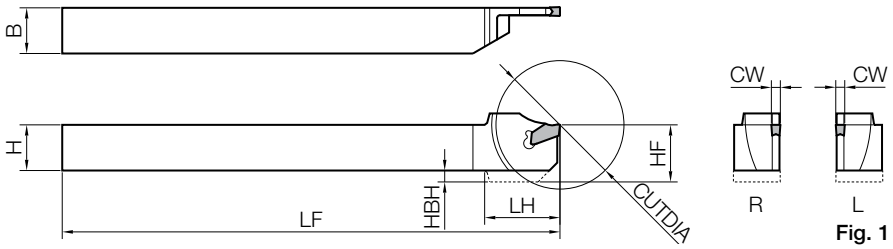


Fig. 1

For General Cut-Off

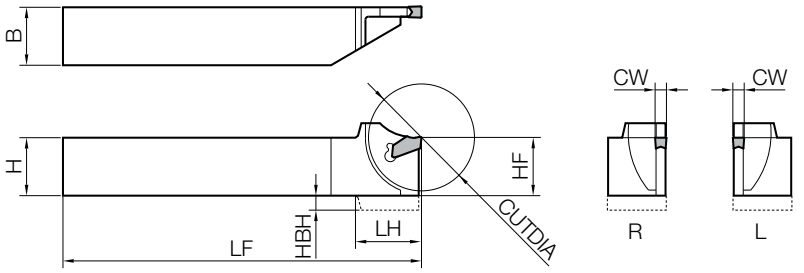


Fig. 2

For General Cut-Off

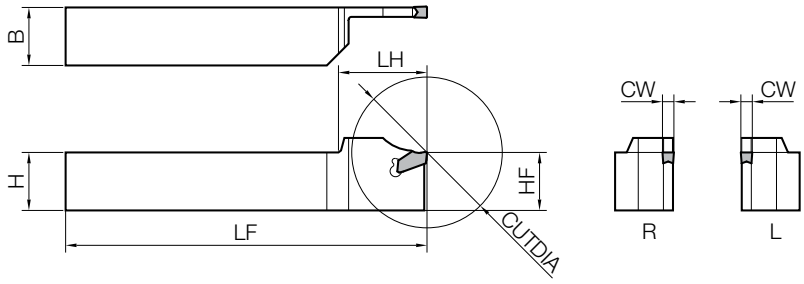


Fig. 3

Right-hand Shown

Toolholder Dimensions for Small Parts Machining (Long Shank Type)

Part Number		Stock R	Stock L	Unit	Cut-Off Dia. CUTDIA	Dimensions (in) H	HF	HBH	B	LF	LH	Insert Width CW	Drawing	Spare Parts Supplied Wrench
KTKH[R/L]	8-1.6-6S	●	●	inch	1.100	0.500	0.500	0.000	0.500	6.000	0.670	0.063	Fig.1	LTK-5
	6-2-5S	●	●		1.100	0.375	0.375	0.200	0.375	5.000	0.690	0.087 0.094		
	8-2-6S	●	●		1.100	0.500	0.500	0.160	0.500	6.000	0.700			

Recommended Cutting Condtions ➡ H61

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● : Standard Item △ : Phaseout Item (will be removed from next catalog)
Contact your local Kyocera sales engineer to upgrade old products to new technology

Toolholder Dimensions for General Cut-Off

Part Number		Stock R	Stock L	Unit	Cut-Off Dia. CUTDIA	Dimensions H	HF	HBH	B	LF	LH	Insert Width CW	Drawing	Spare Parts Supplied Wrench
KTKHR/L	12-2S	●		inch	1.400	0.750	0.750	0.000	0.750	5.000	0.870	0.087 0.094	Fig.2	LTK-5
	12-3S	●	●		2.000	0.750	0.750		0.750	5.000	1.190	0.122	Fig.3	
	16-3S	●	□		2.000	1.000	1.000		1.000	6.000	1.210	0.122		
	12-4S	●			2.300	0.750	0.750	-	0.750	5.000	1.350	0.161		
	16-4S	●			2.600	1.000	1.000		1.000	6.000	1.360	0.161		
	16-5S	●	□		3.000	1.000	1.000		1.000	6.000	1.560	0.189 0.201		
KTKHR/L	1010F-2S	●	●	mm	28	10	10	5	10	80	18.6	2.2 2.4	Fig.2	LTK-5
	1212H-2S	●	●		31	12	12	4	12	100	19.8			
	1612H-2S	●	●		31	16	16	-	12	100	19.8			
	1616H-2S	●	●		31	16	16	-	16	100	19.8			
	2012K-2S	●	●		36	20	20	-	12	125	22.8			
	2020K-2S	●	●		36	20	20	-	20	125	22.8			
	1612H-3S	●	●		35	16	16	4	12	100	21.7	3.1	Fig.2	
	1616H-3S	●	●		35	16	16	4	16	100	21.7			
	2012K-3S	●	●		40	20	20	-	12	125	25.3			
	2020K-3S	●	●		51	20	20	-	20	125	31.0		Fig.3	
	2525M-3S	●	●		52	25	25	-	25	150	31.5			
	2012K-4S	●	●		43	20	20	-	12	125	26.3	4.1	Fig.2	
	2020K-4S	●	●		59	20	20	-	20	125	35.0		Fig.3	
	2525M-4S	●	●		66	25	25	-	25	150	38.0			
	2525M-5S	●	●		77	25	25	-	25	150	43.5	4.8, 5.1	Fig.3	
KTKHR/L	2020K-3T17S	●	●		33	20	20	-	20	125	21.8	3.1	Fig.2	LTK-5
	2525M-3T22S	●	●		43	25	25	-	25	150	26.8			
	2020K-4T22S	●	●		44	20	20	-	20	125	26.8	4.1		
	2525M-4T22S	●	●		44	25	25	-	25	150	26.8			

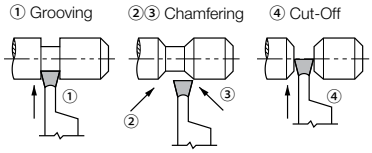
Recommended Cutting Condtions ➡ H61

Applicable Inserts

Ref. Page	➡ H56			
Shape / Toolholder		 Low Feed	 With Lead Angle	 Low Feed / Lead-Angle
KTKHR/L ...-1.6...	TKN1.6	TKN1.6-P	TKR/L1.6	TKR/L1.6-P
KTKHR/L ...-2...	TKN2 TKN2.4	TKN2-P	TKR/L2 TKR/L2.4	TKR/L2-P
KTKHR/L ...-3...	TKN3	TKN3-P	TKR/L3	TKR/L3-P
KTKHR/L ...-4...	TKN4	-	TKR/L4	-
KTKHR/L ...-5...	TKN4.8 TKN5	-	TKR/L5	-

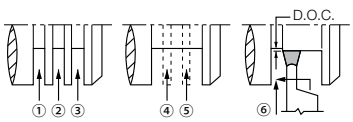
Usage Example of Cut-Off

1. Cut-Off after chamfering



2. Wide Grooving

① ~ ⑤ Groove Widening
⑥ Traverse Finishing
(Value of ap shall be under the value of Corner-R)



In order to maintain equal wear on both corners

TKF12

Workpiece Material	Recommended Grade (Vc sfm)							TKF12 Width (CW)						Notes
	MEGACOAT NANO			MEGA COAT	PVD Coated Carbide	DLC	Carbide	0.020" (0.50mm)	0.028" (0.70mm)	0.039" (1.00mm)	0.049" (1.25mm)	0.059" (1.50mm)	0.079" (2.00mm)	
	PR1725	PR1425	PR1535	PR1225	PR1025	PDL025	KW10	Feed Rate (ipr)						
Carbon Steel	★ 230~560 (160~460)	☆ 225~550 (175~450)	☆ 230~500 (160~400)	☆ 225~500 (175~400)	☆ 200~425	-	-	0.0004~0.0008	0.0004~0.0012	0.0004~0.0016 (0.0004~0.0020)	0.0004~0.0016	0.0004~0.0016 (0.0008~0.0039)	0.0004~0.0016 (0.0008~0.0039)	Wet
Alloy Steel	★ 230~560 (160~460)	☆ 225~550 (175~450)	☆ 230~500 (160~400)	☆ 225~500 (175~400)	☆ 200~425	-	-	0.0004~0.0008	0.0004~0.0012	0.0004~0.0016 (0.0004~0.0020)	0.0004~0.0016	0.0004~0.0016 (0.0008~0.0039)	0.0004~0.0016 (0.0008~0.0039)	
Stainless Steel	☆ 200~460 (130~390)	☆ 200~450 (125~400)	★ 200~400 (130~330)	☆ 200~400 (125~325)	☆ 175~325	-	-	0.0002~0.0006	0.0004~0.0008	0.0004~0.0008 (0.0004~0.0012)	0.0004~0.0008	0.0004~0.0008 (0.0004~0.0020)	0.0004~0.0008 (0.0004~0.0020)	
Cast Iron	-	-	-	-	-	-	★ 175~325	0.0004~0.0012	0.0004~0.0016	0.0004~0.0020	0.0004~0.0020	0.0004~0.0020	0.0004~0.0020	
Aluminum	-	-	-	-	-	★ 660~1640	☆ 650~1475	0.0004~0.0012	0.0004~0.0016	0.0004~0.0020	0.0004~0.0020	0.0004~0.0020	0.0004~0.0020	
Brass	-	-	-	-	-		★ 325~650	0.0004~0.0012	0.0004~0.0016	0.0004~0.0024	0.0004~0.0024	0.0004~0.0024	0.0004~0.0024	

Values in parentheses ( ) are cutting conditions for tough edge inserts style TKF..T..

★ : 1st Recommendation ☆ : 2nd Recommendation

TKF16

Workpiece Material	Recommended Grade (Vc sfm)							TKF16 Width (CW)		Notes
	MEGACOAT NANO			MEGA COAT	PVD Coated Carbide	DLC	Carbide	0.059" (1.50mm)	0.079" (2.00mm)	
	PR1725	PR1425	PR1535	PR1225	PR1025	PDL025	KW10	Feed Rate (ipr)		
Carbon Steel	★ 230~560 (160~460)	☆ 225~550 (175~450)	☆ 230~500 (160~400)	☆ 225~500 (175~400)	☆ 200~425	-	-	0.0008~0.0028 (0.0008~0.0039)	0.0008~0.0028 (0.0008~0.0039)	Wet
Alloy Steel	★ 230~560 (160~460)	☆ 225~550 (175~450)	☆ 230~500 (160~400)	☆ 225~500 (175~400)	☆ 200~425	-	-	0.0008~0.0028 (0.0008~0.0039)	0.0008~0.0028 (0.0008~0.0039)	
Stainless Steel	☆ 200~460 (130~390)	☆ 200~450 (125~400)	★ 200~400 (130~330)	☆ 200~400 (125~325)	☆ 175~325	-	-	0.0004~0.0016 (0.0004~0.0020)	0.0004~0.0016 (0.0004~0.0020)	
Cast Iron	-	-	-	-	-	-	★ 175~325	0.0008~0.0032	0.0008~0.0032	
Aluminum	-	-	-	-	-	★ 660~1640	☆ 650~1475	0.0008~0.0032	0.0008~0.0032	
Brass	-	-	-	-	-		★ 325~650	0.0008~0.0039	0.0008~0.0039	

Values in parentheses ( ) are cutting conditions for tough edge inserts style TKF..T..

★ : 1st Recommendation ☆ : 2nd Recommendation

GMM-MT / GMM-TK / GMM-NB

Workpiece Material	Recommended Grade (Vc sfm)				Width (CW)				Notes
	CVD Coated Carbide	PVD Coated Carbide		Carbide	0.059" (1.5mm)	0.079"~0.098" (2.0mm~2.5mm)	0.118" (3.0mm)	0.158" (4.0mm)	
	CR9025	PR915	PR930	KW10	Feed Rate (ipr)				
Carbon Steel	☆ 250~600	★ 200~500	☆ 200~425	-	0.0004~0.0016	0.0008~0.0059	0.0012~0.0079	0.0032~0.0118	Wet
Alloy Steel	☆ 225~500	★ 200~500	☆ 200~425	-	0.0004~0.0016	0.0008~0.0059	0.0012~0.0079	0.0032~0.0118	
Stainless Steel	☆ 200~450	★ 175~450	☆ 175~400	-	0.0004~0.0012	0.0008~0.0039	0.0012~0.0059	0.0032~0.0098	
Cast Iron	-	-	-	★ 175~325	0.0004~0.0020	0.0020~0.0047	0.0039~0.0098	0.0039~0.0118	
Aluminum	-	-	-	★ 650~1475	0.0004~0.0020	0.0020~0.0039	0.0020~0.0079	0.0020~0.0098	
Brass	-	-	-	★ 325~650	0.0004~0.0020	0.0020~0.0039	0.0020~0.0059	0.0020~0.0079	

• When using PR930, decrease the feed rate by 20%

★ : 1st Recommendation ☆ : 2nd Recommendation

GMM-TMR (PR1115)

Workpiece Material	Vc (sfm)		Notes
Carbon Steel	200~650	0.003~0.007	Wet
Alloy Steel	225~500		
Stainless Steel	175~450		

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PKM

Workpiece Material	Recommended Grade (Vc sfm)			PM	PH		Notes
				Width (CW)			
	MEGACOAT NANO		Carbide	0.079"~0.157" (2.00mm~4.00mm)	0.079" (2.00mm)	0.118"~0.157" (3.00mm~4.00mm)	
	PR1625	**PR1535**	**GW15**	Feed Rate (ipr)			
Carbon Steel	★ 260 ~ 720	☆ 260 ~ 720	-	0.003 ~ 0.007	0.004 ~ 0.009	0.006 ~ 0.011	Wet
Alloy Steel	★ 230 ~ 660	☆ 230 ~ 660	-				
Stainless Steel	☆ 200 ~ 490	★ 200 ~ 490	-	0.002 ~ 0.005	0.002 ~ 0.005	0.003 ~ 0.006	
Cast Iron	-	-	★ 160 ~ 330	0.003 ~ 0.007	-	-	
Aluminum	-	-	★ 660 ~ 1,480	0.003 ~ 0.007	-	-	
Brass	-	-	★ 330 ~ 660	0.003 ~ 0.007	-	-	

Reduce feed to 1/2 ~ 1/3 when nearing the center of the workpiece.

★ : 1st Recommendation ☆ : 2nd Recommendation

TKN / TKR/L

Workpiece Material	Recommended Grade (Vc sfm)							Width (CW)					Notes
	Cermet		CVD Coated Carbide	MEGACOAT NANO	PVD Coated Carbide		Carbide	1.6mm	2.0~2.4mm	3.1mm	4.1mm	4.8~9.6mm	
	TN620	**TN90**	**CR9025**	**PR1535**	**PR660**	**PR930**	**KW10**	Feed Rate (ipr)					
Carbon Steel	☆ 200~660	☆ 400~650	★ 250~600	☆ 200~490	☆ 200~425	☆ 200~425	-	0.0008~0.0032	0.0016~0.0071	0.0020~0.0098	0.0032~0.0118	0.0059~0.0157	Wet
Alloy Steel	☆ 200~530	☆ 325~525	★ 225~500	☆ 200~490	☆ 200~425	☆ 200~425	-	0.0008~0.0032	0.0016~0.0071	0.0020~0.0098	0.0032~0.0118	0.0059~0.0157	
Stainless Steel	☆ 200~490	☆ 250~500	☆ 200~450	★ 160~390	☆ 175~400	☆ 200~450	-	0.0008~0.0012	0.0016~0.0047	0.0020~0.0071	0.0032~0.0098	0.0039~0.0118	
Cast Iron			-		-	-	★ 175~325	0.0008~0.0032	0.0020~0.0047	0.0039~0.0098	0.0039~0.0118	0.0059~0.0138	
Aluminum			-		-	-	★ 325~1475	0.0008~0.0039	0.0020~0.0039	0.0020~0.0079	0.0020~0.0098	0.0039~0.0787	
Brass			-		-	-	★ 325~650	0.0008~0.0039	0.0020~0.0039	0.0020~0.0059	0.0020~0.0079	0.0039~0.0787	

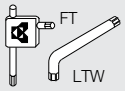
★ : 1st Recommendation ☆ : 2nd Recommendation

Swiss Style Length Toolholder Reference Table (KTKF / KGM)

Conventional Toolholder				Alternative Toolholder			
Part Number	Overall Length (mm)	Spare Parts: Clamp Screw	Spare Parts: Wrench	Part Number	Overall Length (mm)	Notes	Reference Page
							
KTKF□ 1010K-12	125	SB-4590TRWN	LTW-10S	KTKF□ 1010JX-12	120		H8
KTKF□ 1212M-12	150			KTKF□ 1212JX-12	120		
KTKF□ 1616M-12	150			KTKF□ 1616JX-12	120		
KTKF□ 1010K-16	125			KTKF□ 1010JX-16	120		
KTKF□ 1212M-16	150			KTKF□ 1212JX-16	120		
KTKF□ 1616M-16	150			KTKF□ 1616JX-16	120		
KGM□ 0810K-1.5-125	125	SE-40120TR	LTW-15S	-	-	No Replacement	H42
KGM□ 1010K-1.5-125	125			KGM□ 1010JX-1.5	120		
KGM□ 1212M-1.5-150	150			KGM□ 1212JX-1.5	120		
KGM□ 0810K-2-125	125	SE-40120TR	LTW-15S	-	-	No Replacement	
KGM□ 1010K-2-125	125			KGM□ 1010JX-2	120		
KGM□ 1212M-2-150	150			KGM□ 1212JX-2	120		
KGM□ 1616M-2-150	150	SE-50125TR	LTW-20	KGM□ 1616JX-2	120		
KGM□ 1010K-2.5-125	125	SE-40120TR	LTW-15S	-	-	No Replacement	
KGM□ 1212M-2.5-150	150			KGM□ 1212JX-2.5	120		
KGM□ 1616M-2.5-150	150	SE-50125TR	LTW-20	KGM□ 1616JX-2.5	120		
KGM□ 1616M-3-150	150	SE-50125TR	LTW-20	KGM□ 1616JX-3	120		

Note) The corresponding alternative toolholder may be different from the conventional toolholder in insert clamping system or insert size.
Make sure of their specifications by referring to the catalog or other documents.

Swiss Style Length Toolholder Reference Table (KTKH-B / KTKH-S)

Conventional Toolholder					Alternative Toolholder			
Part Number	Cut-Off Diameter (mm)	Spare Parts: Releasing Wrench	Spare Parts: Clamp Screw	Spare Parts: Wrench	Part Number	Cut-Off Diameter (mm)	Notes	Reference Page
								
KTKH□ 0808K-1.6-125B	Ø10	-	SE-40120TR	FT-15	-	-	No Replacement	H42
KTKH□ 1010K-1.6-125B	Ø20				KGM□ 1010JX-1.5	Ø20		
KTKH□ 1212M-1.6-150B	Ø25				KGM□ 1212JX-1.5	Ø25		
KTKH□ 1414M-1.6-150B	Ø26				-	-	No Replacement	
KTKH□ 1010K-2-125B	Ø20	-	SE-40120TR	FT-15	KGM□ 1010JX-2	Ø20		
KTKH□ 1212M-2-150B	Ø25				KGM□ 1212JX-2	Ø25		
KTKH□ 1616M-2-150B	Ø32	-	SE-50125TR	LTW-20	KGM□ 1616JX-2	Ø32		
KTKH□ 1616M-3-150B	Ø32				KGM□ 1616JX-3	Ø32		
KTKHR 1010K-2-125S	Ø30	LTK-5	-	-	KGMR 1010JX-2	Ø20	Small Machining Dia.	
KTKH□ 1212M-2-150S	Ø30				KGM□ 1212JX-2	Ø25	Small Machining Dia.	
KTKH□ 1616M-2-150S	Ø36				KGM□ 1616JX-2	Ø32	Small Machining Dia.	
KTKH□ 1616M-3-150S	Ø45				KGM□ 1616JX-3	Ø32	Small Machining Dia.	

Note) The corresponding alternative toolholder may be different from the conventional toolholder in insert clamping system or insert size.
Make sure of their specifications by referring to the catalog or other documents.

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