KYOCERA

JCTM Series

Direct Coolant-Through Holders for Small Parts Machining

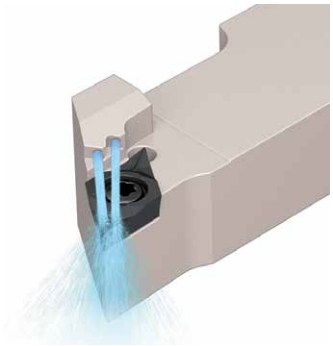
Supports Fewer Piping Attachments with Direct Coolant Supply

Can 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 Grade

Turning

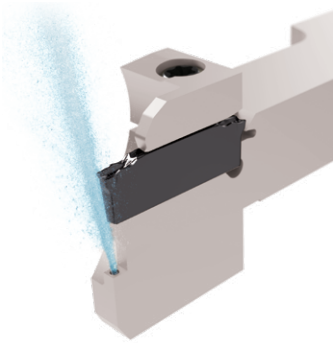


Screw Clamp - JCTM

External Grooving

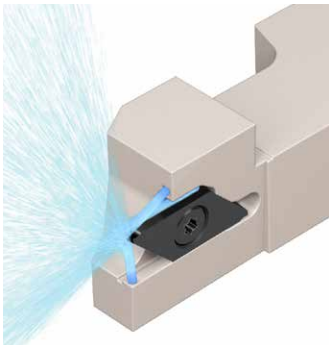
KGBF - JCTM

Cut-Off



KGZ - JCTM

Cut-Off



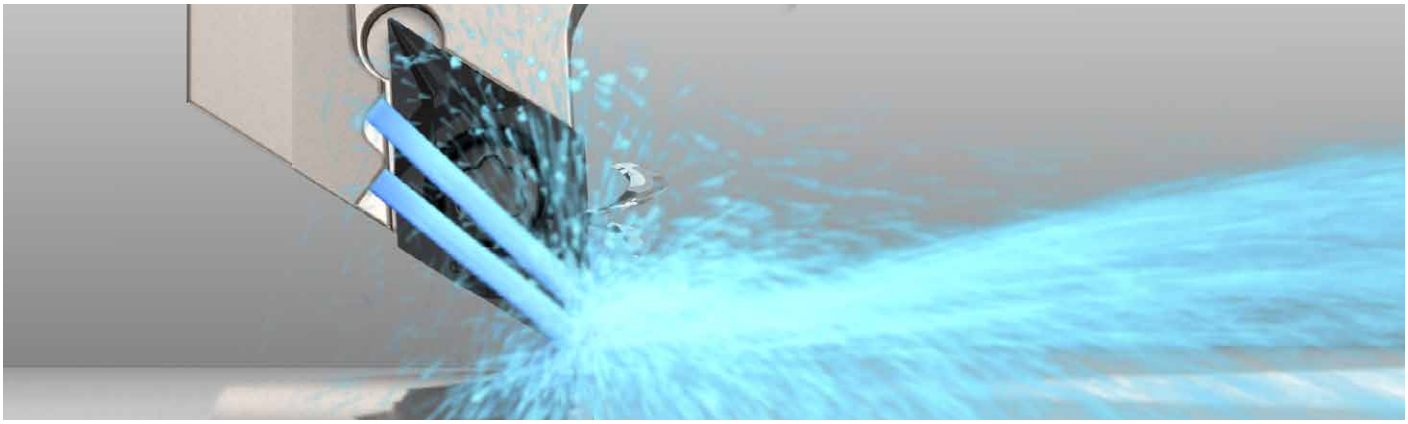
KTKF - JCTM

JCTM Series

Direct Coolant Holders for Small Parts Machining

Supports Internal Coolant with or without Piping Systems
Lineup of Turning, Grooving (KGBF), and Cut-off (KGZ/KTKF) Holders

1 Using Internal Coolant to Enhance Tool Performance



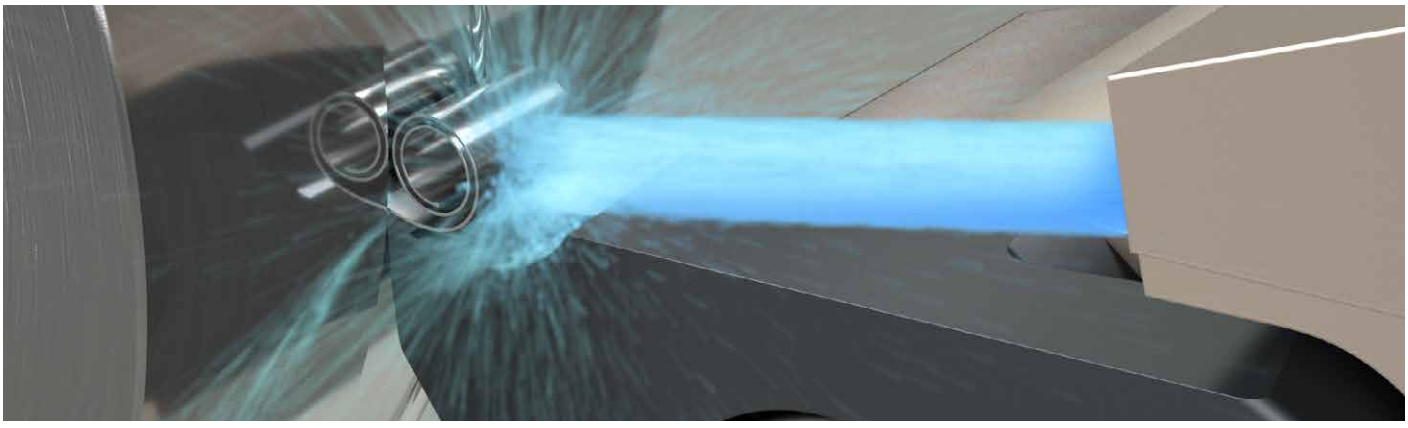
CG Image

Challenges

- Difficulty with automated operations due to sudden chip entanglement issues
- Insert change is not enough to extend tool life

SOLUTIONS

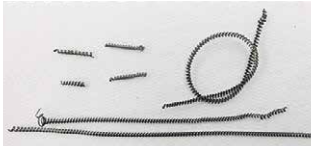
- The JCTM series is compatible with internal coolant in a wide range of machines and also works under normal pressure
- Reduces down time by improving chip control and reduces cost by extending tool life



CG Image

Switching to internal coolant toolholder reduces chip entanglement issues

Internal Coolant (2.5 MPa)



External Coolant

Pin Alloy Tool Steel
Vc = 590 sfm, D.O.C. = 0.055"
f = 0.005 ipr, Wet
SDJC Holder / DCMT3251 Insert (User Evaluation)

2 Supports Internal Coolant with or without Piping Systems

Internal Coolant without Piping

***When the tool plate supports direct coolant**

Coolant is supplied directly from the tool plate into the holder without the need to install piping

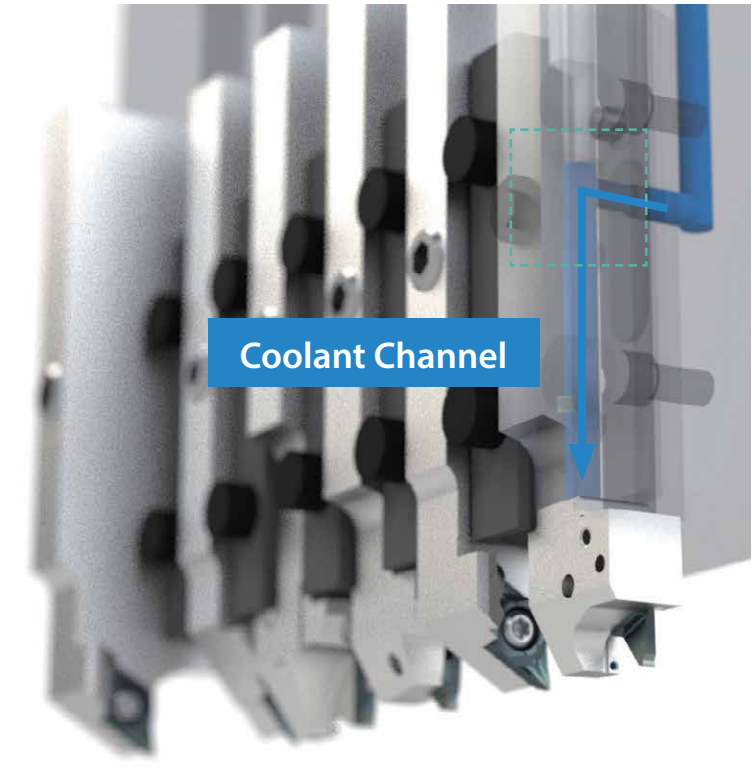
Applicable to Wide Range of Machines

Direct coolant 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)

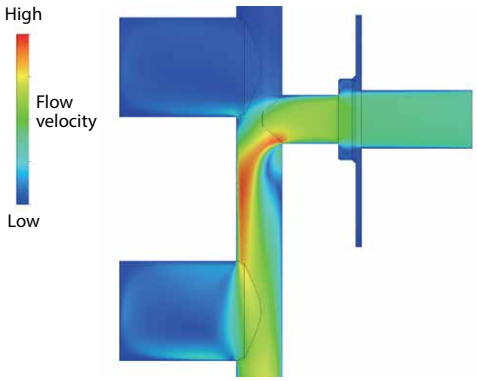
Compatible with various machine including the above.Toolholders can be customized as well.



Optimized Coolant Supply

Supply hole designed to reduce energy loss based on extensive flow analysis

Analysis Image (Internal Evaluation)

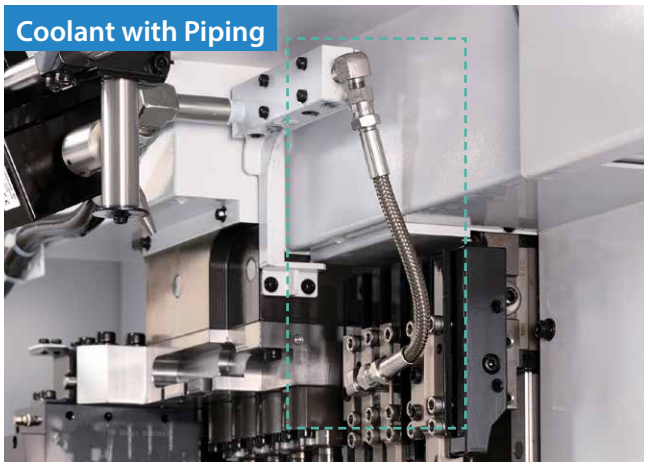


Internal Coolant with Piping

*Piping parts: See pages 14 and 15

Compatible with internal coolant on any machine with standard piping parts

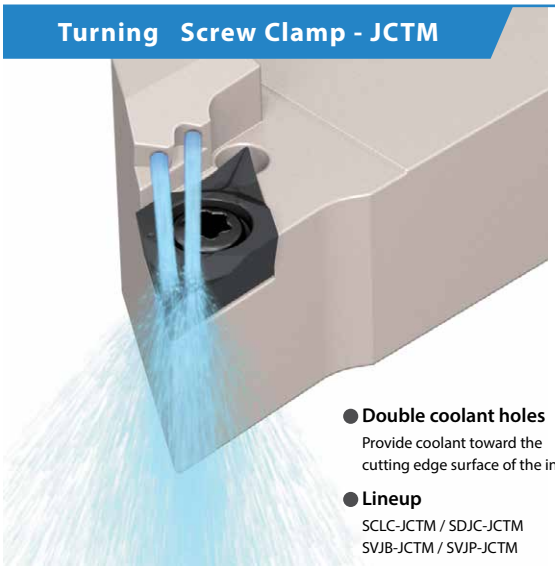
Commercial piping parts are available when using at normal pressure



3 Large Lineup for Various Tooling Operations

Turning Screw Clamp - JCTM

➡ P6

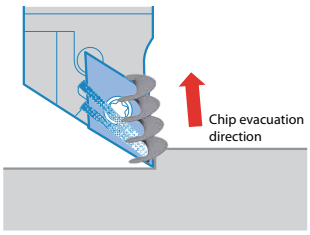


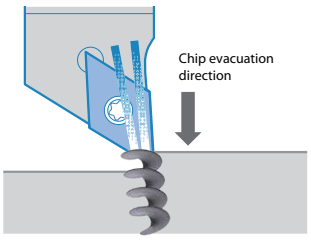
● **Double coolant holes**
Provide coolant toward the cutting edge surface of the insert

● **Lineup**
SCLC-JCTM / SDJC-JCTM
SVJB-JCTM / SVJP-JCTM

Coolant Supply Structure Comparison (Internal Evaluation)

Screw clamp - JCTM	Competitor A
Discharges coolant toward the rake surface of insert	Discharges coolant down onto the chip forcing the chip into the part





Chip control performance	✓ Provides stable chip curls	Chip control performance	Chip becomes unstable
Cooling effect	✓ The cutting edge stays cool	Cooling effect	Chip can cause interference with the workpiece

External Grooving KGBF - JCTM

➡ P10

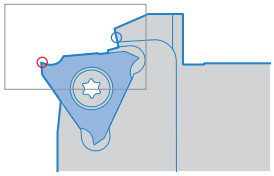
● **Provides coolant toward the rake surface of insert**

● **Specification**
Edge Width: 0.010" - 0.118" (0.25mm - 3mm)
Ground Chipbreaker / Molded GL Chipbreaker
Maximum groove depth: 0.118" (3mm)

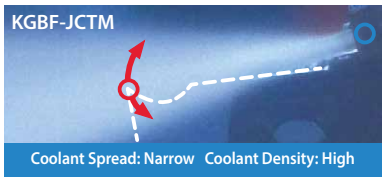
Coolant Discharge Comparison (Internal Evaluation)

Small chips and better cooling of the insert leads to longer tool life.

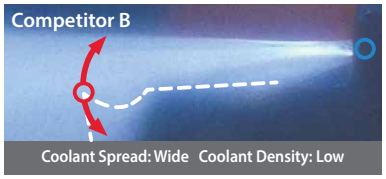
○ Cutting Edge
○ Coolant Hole



(Without Insert)



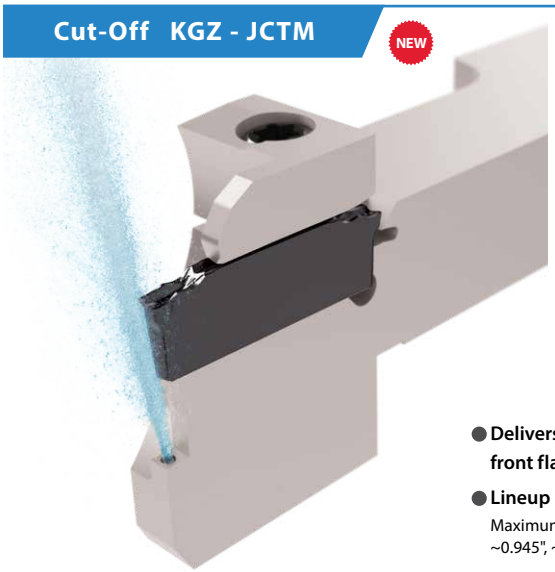
(Without Insert)



Cut-Off KGZ - JCTM

NEW

➡ P14



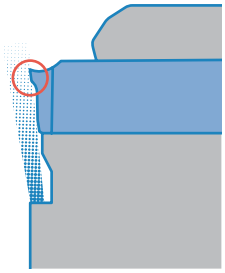
● **Delivers coolant directly to front flank face**

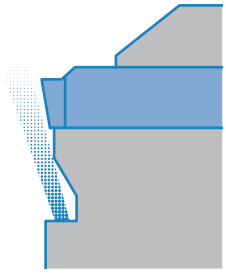
● **Lineup**
Maximum Cutting Dia. :
~0.945", ~1.024", ~1.260" / ~24mm, ~26mm, ~32mm

Coolant discharge comparison (Image)

KGZ-JCTM
Cooling the cutting edge leads to longer tool life

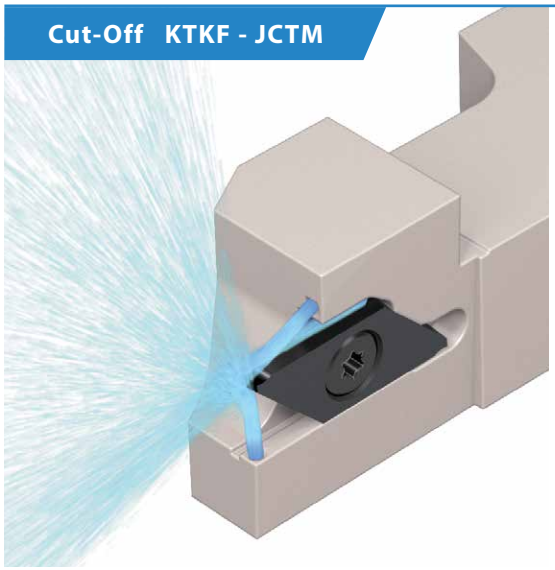
Competitor C
Coolant does not flow directly toward the cutting edge





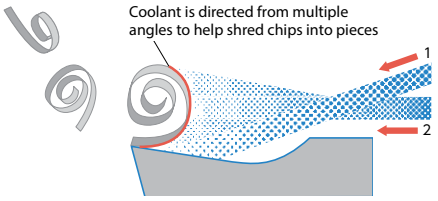
Cut-Off KTKF - JCTM

P18

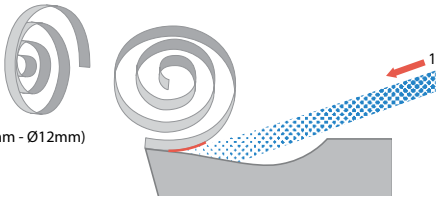


- **Discharges coolant in three directions toward rake surface of insert**
  (Two holes toward the rake face and one hole toward the flank face of the insert)
- **Lineup**
  TKF 12 Type (Maximum Cut-Off: Ø0.197" - Ø0.472" / Ø5mm - Ø12mm)
  TKF 16 Type (Maximum Cut-Off: Ø0.630" / Ø16mm)

Coolant Discharge Structure Comparison



KTKF-JCTM



Competitor D

4 Kyocera's High-Performance Insert Grades

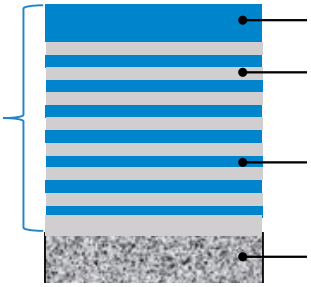
PR1725

1st Recommendation for Steel Machining
Excellent Surface Finish and Long Tool Life

MEGACOAT NANO PLUS

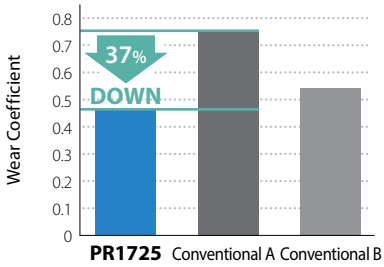
AlTiN/AlCrN Nano laminated film with superior wear resistance and adhesion resistance

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



- **Special surface layer with high lubrication**
- High aluminum content **AlTiN layer**
  High hardness and oxidation resistance
- Optimized **AlCrN layer**
  Great Deposition Resistance
- Tough micro-grain carbide substrate
  High stability

Wear Coefficient Comparison (Internal Evaluation)



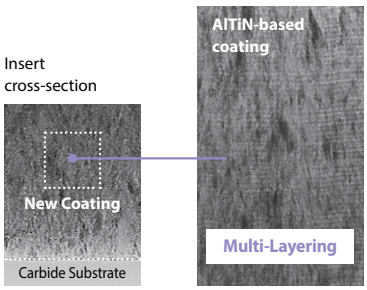
PR20 Series

NEW Achieves long tool life with the combination of high content aluminum nano coating layer

MEGACOAT NANO EX Grooving Cut-Off

Multi-layering of high content aluminum nano layers
Excellent wear resistance, high-temperature hardness and plastic deformation resistance

Insert cross-section



Long Tool Life

High melting point material having different concentration

Excellent oxidation resistance

Stable Machining

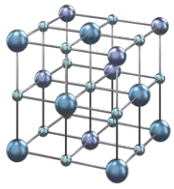
Crystal grain refinement

High coating toughness
Suppresses crack growth

Unique technology (Patent applied)

Proprietary coating process improves high content aluminum nano layers performance

Maintains a cubic crystal structure to maximize the properties of aluminum (Al)



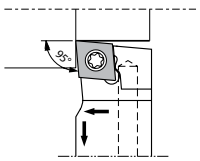
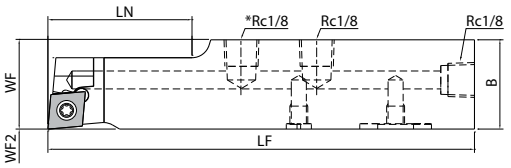


Fig. 1



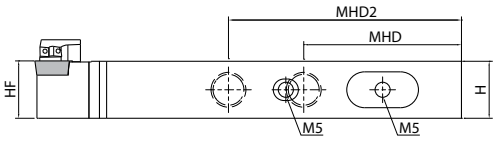
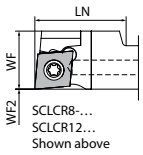
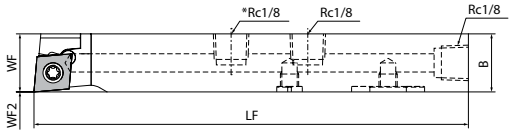
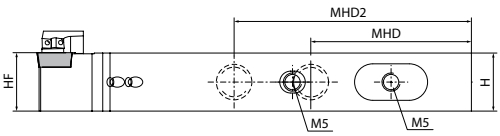


Fig. 2







Right-hand shown | SCLCR5.72…, SCLCR8-… : 2-Rc1/8 | SCLCR1218…, SCLCR1212… : 2-Rc1/8

Toolholder Dimensions

Unit	Part Number	Std. Item	Dimensions									Fig.	Standard Corner-R (RE)	Spare Parts				Applicable Inserts
														Plug	Plug	Screw	Wrench	
		R	H	B	MHD	MHD2	HF	LF	LN	WF	WF2							
Inch	SCLCR 5.72-3FFJCTM	●	0.500	0.709	2.126	-	0.500	4.750	1.102	0.630	0	1	0.008	GP-1	HS5X4LP	SB-4085TR	FT-15	CC□T325... CC□W325...
	82.5-3FFJCTM	●	0.625	1.000	1.732	2.559	0.625		1.575	0.787								
	SCLCR 8-3FFJCTM	●	0.500	0.500	2.323	-	0.500	4.750	0.984	0.630	0	2	0.008	GP-1	HS5X4LP	SB-4085TR	FT-15	
	10-3FFJCTM	●	0.625	0.625	1.732	2.559	0.625		-	0.625								
	12-3FFJCTM	●	0.750	0.750			0.750			0.750					-			
mm	SCLCR 1218JX-09FFJCTM	●	12	18	54	-	12	120	28	18	0	1	0.2	GP-1	HS5X4LP	SB-4085TR	FT-15	CC□T325... CC□W325...
	1625JX-09FFJCTM	●	16	25	44	65	16		40	25								
	2025JX-09FFJCTM	●	20				20								-			
	SCLCR 1212JX-09FFJCTM	●	12	12	59	-	12	120	25	16	0	2	0.2	GP-1	HS5X4LP	SB-4085TR	FT-15	
	1616JX-09FFJCTM	●	16	16	44	65	16		-									
	2020JX-09FFJCTM	●	20	20			20			20					-			

Available Piping Parts see **Pages 26-27**

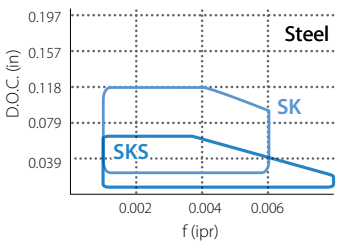
● : Standard Item

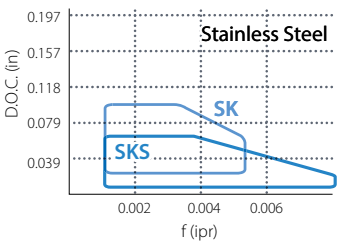
Applicable Chipbreakers

Molded Sharp Edge Chipbreaker Series

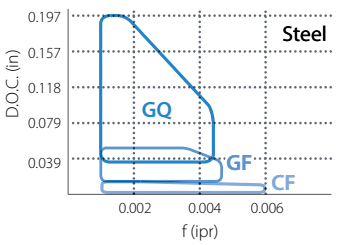
1. **Excellent Chip Control in a Wide Range of Machining Applications**
2. **High Precision with Periphery Grinding and Sharp Edge Specification**
3. **Anti-welding Properties with Improved Mirror Surface Finish**

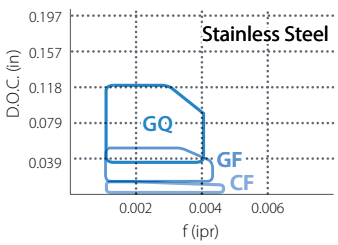
1st Recommended Chipbreaker (Low Cutting Force)



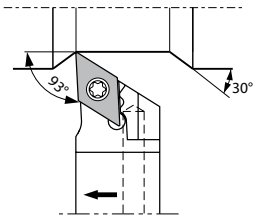


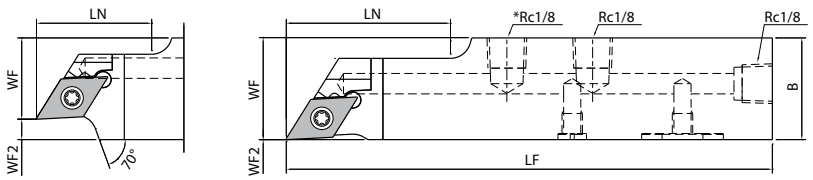
Additional Chipbreaker (Chip Control Oriented)





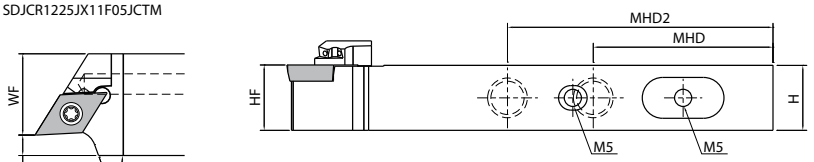
More chipbreakers are available. For more details, see the KYOCERA general product catalog.





SDJCR82-3-F05JCTM
SDJCR112-3-F15JCTM
SDJCR1235JX11F15JCTM
SDJCR1225JX11F05JCTM

Fig. 1



SDJCR82.5-3-F05JCTM
SDJCR112.5-3-F15JCTM
SDJCR1625JX11F05JCTM
SDJCR1635JX11F15JCTM

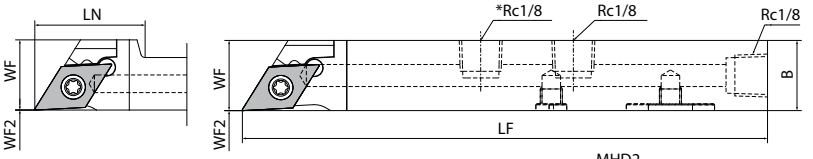
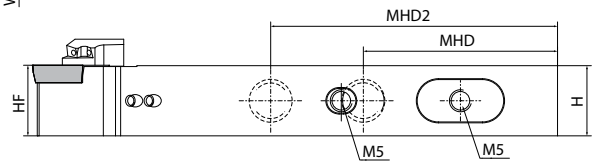


Fig. 2

SDJCR8-3FFJCTM
SDJCR1212JX-11FFJCTM



*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

Unit	Part Number	Std. Item	Dimensions									Fig.	Standard Corner-R (RE)	Spare Parts				Applicable Inserts
														Plug	Plug	Screw	Wrench	
		R	H	B	MHD	MHD2	HF	LF	LN	WF	WF2							
Inch	SDJCR 5.72-3FFJCTM	●	0.500	0.709	2.126	-	0.500	4.750	1.102	0.630	0		0.008	GP-1	HS5X4LP	SB-4085TR	FT-15	DC□T325... DC□W325... DC□X325...
	82.5-3FFJCTM	●	0.625	1.000	1.732	2.559	0.625		1.575	0.787								
	SDJCR 82-3-F05JCTM	●	0.500	1.000	2.126	-	0.500	4.750	1.102	0.630	0.197	1	0.008	GP-1	HS5X4LP	SB-4085TR	FT-15	DC□T325... DC□W325... DC□X325...
	112-3-F15JCTM	●		1.375							0.591							
	82.5-3-F05JCTM	●	0.625	1.000	1.732	2.559	0.625	4.750	-	0.787	0.197							
	112.5-3-F15JCTM	●		1.375							0.591							
	SDJCR 8-3FFJCTM	●	0.500	0.500	2.323	-	0.500	4.750	0.984	0.630	0	2	0.008	GP-1	HS5X4LP	SB-4085TR	FT-15	DC□T325... DC□W325... DC□X325...
	10-3FFJCTM	●	0.625	0.625	1.732	2.559	0.625		-	0.625								
	12-3FFJCTM	●	0.750	0.750			0.750			0.750					-			
mm	SDJCR 1218JX-11FFJCTM	●	12	18	54	-	12	120	28	18	0	1	0.2	GP-1	HS5X4LP	SB-4085TR	FT-15	DC□T325... DC□W325... DC□X325...
	1625JX-11FFJCTM	●	16	25	44	65	16		40	25								
	2025JX-11FFJCTM	●	20				20								-			
	SDJCR 1225JX11F05JCTM	●	12	25	54	-	12	120	28	20	5		0.2	GP-1	HS5X4LP	SB-4085TR	FT-15	DC□T325... DC□W325... DC□X325...
	1235JX11F15JCTM	●		35							15							
	1625JX11F05JCTM	●	16	25	44	65	16		-		5							
	1635JX11F15JCTM	●		35							15							
	SDJCR 1212JX-11FFJCTM	●	12	12	59	-	12	120	25	16	0	2	0.2	GP-1	HS5X4LP	SB-4085TR	FT-15	DC□T325... DC□W325... DC□X325...
	1616JX-11FFJCTM	●	16	16	44	65	16		-									
	2020JX-11FFJCTM	●	20	20			20			20					-			

Available Piping Parts see **Pages 26-27**

● : Standard Item

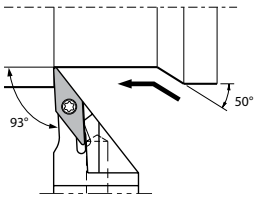
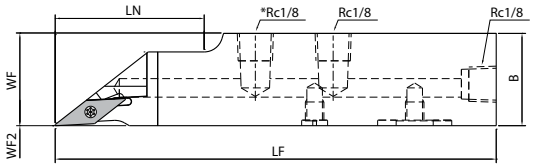


Fig. 1



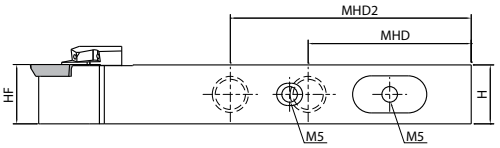
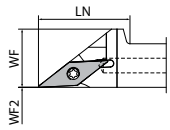
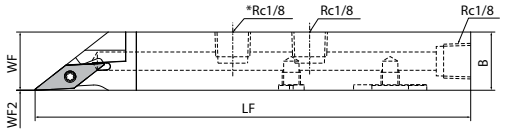
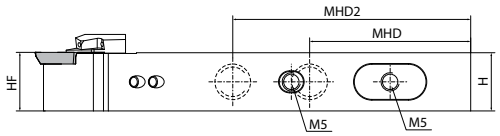


Fig. 2



SVJB/PR8-2FFJCTM
SVJB/PR1212JX-11FFJCTM
Shown Above





Right-hand shown
SVJB/PR5.72…, SVJB/PR8-… : 2-Rc1/8
SVJB/PR1218…, SVJB/PR1212… : 2-Rc1/8

Toolholder Dimensions

Unit	Part Number	Std. Item	Dimensions									Fig.	Standard Corner-R (RE)	Spare Parts				Applicable Inserts
														Plug	Plug	Screw	Wrench	
		R	H	B	MHD	MHD2	HF	LF	LN	WF	WF2							
Inch	SVJBR 5.72-2FFJCTM	●	0.500	0.709	2.126	-	0.500	4.750	1.102	0.630	0	1	1/64	GP-1	HS5X4LP	SB-2570TR	FT-8	VB□T22... VB□W22...
	82.5-2FFJCTM	●	0.625	1.000	1.732	2.559	0.625		1.575	0.787								
	SVJBR 8-2FFJCTM	●	0.500	0.500	2.323	-	0.500	4.750	0.984	0.630	0	2	1/64	GP-1	HS5X4LP	SB-2570TR	FT-8	VB□T22... VB□W22...
	10-2FFJCTM	●	0.625	0.625	1.732	2.559	0.625		-	0.625								
	12-2FFJCTM	●	0.750	0.750			0.750			0.750					-			
mm	SVJBR 1218JX-11FFJCTM	●	12	18	54	-	12	120	28	18	0	1	0.4	GP-1	HS5X4LP	SB-2570TR	FT-8	VB□T22... VB□W22...
	1625JX-11FFJCTM	●	16	25	44	65	16		40	25								
	2025JX-11FFJCTM	●	20				20								-			
	SVJBR 1212JX-11FFJCTM	●	12	12	59	-	12	120	25	16	0	2	0.4	GP-1	HS5X4LP	SB-2570TR	FT-8	VB□T22... VB□W22...
	1616JX-11FFJCTM	●	16	16	44	65	16		-									
	2020JX-11FFJCTM	●	20	20			20			20					-			
Inch	SVJPR 5.72-2FFJCTM	●	0.500	0.709	2.126	-	0.500	4.750	1.102	0.630	0	1	0.008	GP-1	HS5X4LP	SB-2570TR	FT-8	VP□T22...
	82.5-2FFJCTM	●	0.625	1.000	1.732	2.559	0.625		1.575	0.787								
	SVJPR 8-2FFJCTM	●	0.500	0.500	2.323	-	0.500	4.750	0.984	0.630	0	2	0.008	GP-1	HS5X4LP	SB-2570TR	FT-8	
	10-2FFJCTM	●	0.625	0.625	1.732	2.559	0.625		-	0.625								
	12-2FFJCTM	●	0.750	0.750			0.750			0.750					-			
mm	SVJPR 1218JX-11FFJCTM	●	12	18	54	-	12	120	28	18	0	1	0.2	GP-1	HS5X4LP	SB-2570TR	FT-8	VP□T22...
	1625JX-11FFJCTM	●	16	25	44	65	16		40	25								
	2025JX-11FFJCTM	●	20				20								-			
	SVJPR 1212JX-11FFJCTM	●	12	12	59	-	12	120	25	16	0	2	0.2	GP-1	HS5X4LP	SB-2570TR	FT-8	
	1616JX-11FFJCTM	●	16	16	44	65	16		-									
	2020JX-11FFJCTM	●	20	20			20			20					-			

Available Piping Parts see **Pages 26-27**

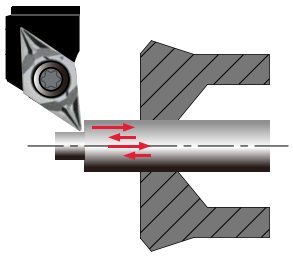
● : Standard Item

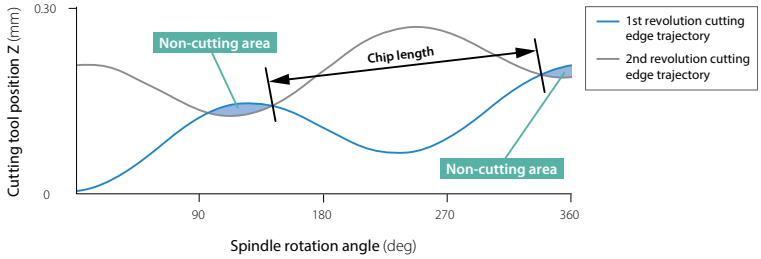
Featured Inserts for Vibration Machining

What is vibration or ocsillation machining?

This unique vibration machining method generates intentional micro vibrations of a tool or workpiece in a cutting direction to finely cut chips. This creates a stable and intermittent discharge of chips to prevent entanglement issues with the workpiece and is compatible with a variety of workpiece materials.

Example of vibration machining





Solution

Inserts for high precision, high quality, and high productivity

Combination of a high toughness substrate and special coating to withstand high machining load

PVD Coating MEGACOAT NANO
PR1535

+

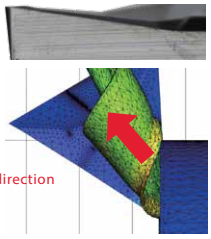
Low cutting resistance enables longer tool life and stable machining
Controls chips with a slanted cutting edge

Molded Sharp Edge Chipbreaker
SK Chipbreaker / CK Chipbreaker

Chip Evacuation Examples (Internal Evaluation)

SK Chipbreaker

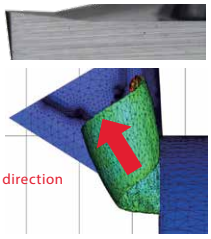
Sloped Cutting Edge



Chip evacuation direction
Evacuates chips diagonally upward

CK Chipbreaker

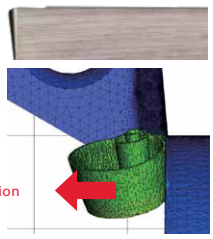
Sloped cutting edge



Chip evacuation direction
Evacuates chips diagonally upward

U Chipbreaker

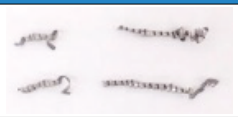
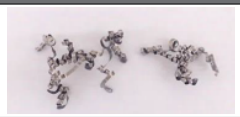
No slope



Chip evacuation direction

Machining Condition Comparison in Vibration Machining (Internal Evaluation)

SK chipbreaker shows good chip condition, reduced burrs, and excellent surface finish.
In vibration machining, the combination of PR1535 and SK or CK chipbreakers provides excellent performance.

	SK Chipbreaker	Competitor Q (Sloped Cutting Edge)	Competitor R (No Slope)
Chips	✓ 	⊘ 	⊘ 
Surface finish	✓ 	✓ 	⊘ 
Burr	✓ 	⊘ 	✓ 

Cutting Conditions : Vc = 200 sfm, f = 0.002 ipr, D.O.C. = 0.079", 304

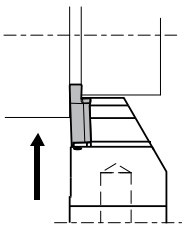
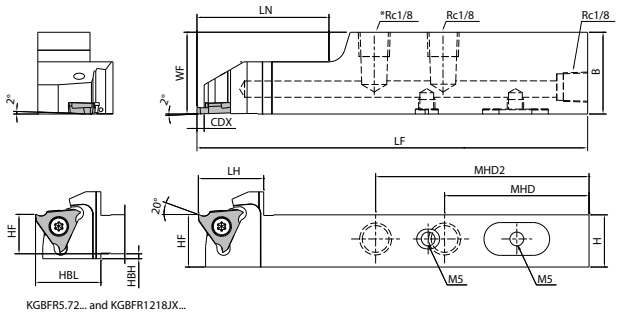
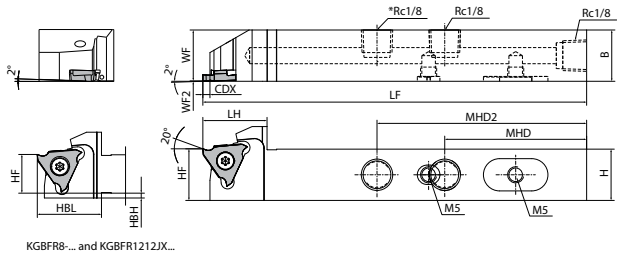


Fig. 1



KGBFR5.72... and KGBFR1218JX...

Fig. 2



KGBFR8-... and KGBFR1212JX...

Right-hand shown | Right-hand Insert for Right-hand Toolholder.
KGBFR5.72-…, KGBFR8-… : 2-Rc1/8
KGBFR1218JX…, KGBFR1212JX… : 2-Rc1/8

Toolholder Dimensions

Unit	Part Number	Std. Item	Dimensions												Fig.	Spare Parts				Applicable Inserts
																Plug	Plug	Screw	Wrench	
		R	CDX	H	B	LH	MHD	MHD2	HF	HBH	HBL	LF	LN	WF						P11~P13
Inch	KGBFR 5.72-16FJCTM	●	0.118	0.500	0.709	0.787	2.126	-	0.500	0.059	0.787	4.750	1.110	0.500	1	GP-1	HS5X4LP	SB-4070TRW	FT-8	GBF32R
	82.5-16FJCTM	●		0.625	1.000		1.732	2.559	0.625	-	-			0.625			-			
	KGBFR 8-16FJCTM	●	0.118	0.500	0.500	0.787	2.323	-	0.500	0.059	0.787	4.750	-	0.500	2	GP-1	HS5X4LP	SB-4070TRW	FT-8	GBF32R
	10-16FJCTM	●		0.625	0.625		1.732	2.559	0.625	-	-			0.625						
	12-16FJCTM	●		0.750	0.750				0.750					0.750			-			
mm	KGBFR 1218JX-16FJCTM	●	3	12	18	20	54	-	12	1.5	20	120	28	12	1	GP-1	HS5X4LP	SB-4070TRW	FT-8	GBF32R
	1625JX-16FJCTM	●		16	25		44	65	16	-	-		40	16						
	2025JX-16FJCTM	●		20					20					20			-			
	KGBFR 1212JX-16FJCTM	●	3	12	12	20	59	-	12	1.5	20	120	-	12	2	GP-1	HS5X4LP	SB-4070TRW	FT-8	GBF32R
	1616JX-16FJCTM	●		16	16		44	65	16	-	-			16						
	2020JX-16FJCTM	●		20	20				20					20			-			

CDX shows the distance from the toolholder to the cutting edge. Available Groove Depth : "CDX" of Insert.

● : Standard Item

Available Piping Parts see **Pages 26-27**

Precautions

· GBF and GBA Compatibility

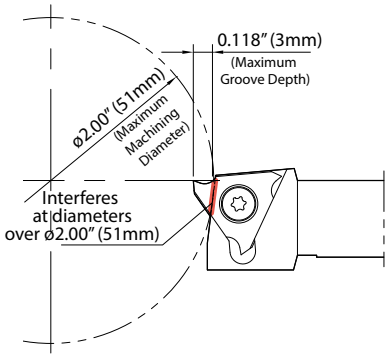
1 GBF will fit KGBA/KGBAS holders.
Caution : The maximum groove depth for KGBA/KGBAS holders is 0.098" (2.5mm)

2 GBA inserts will also fit KGBF/KGBFS holders
Caution : The rake angle after installation in the toolholder is 11°

· KGBF/KGBFS Holder with GBF Insert Maximum Machining Diameter

0.118" (3mm) groove depth is available on workpiece diameters up to ø2.008" (51mm)
0.106" (2.7mm) groove depth is available on workpiece diameters up to ø3.937" (100mm)
0.098" (2.5mm) groove depth is available on workpiece diameters up to ø7.874" (200mm)
The workpiece will interfere with the holder at maximum cutting diameter or larger.

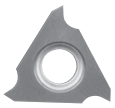
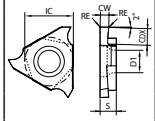
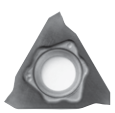
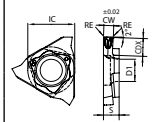
· Grooving Depth : 0.118" (3mm)



KGBF-JCTM Applicable Inserts

Insert Size	IC		S		D1	
	in	mm	in	mm	in	mm
GBF32...	3/8	9.525	1/8	3.18	0.173	4.4

P	Carbon Steel / Alloy Steel	●	◔	
M	Stainless Steel	○	●	
K	Cast Iron			●
N	Non-Ferrous Metals			●
S	Titanium Alloy		●	◔

Insert		Part Number	No. of Edges	Dimensions (mm)							Tolerance (mm)		Carbide		
				CW		CDX	IC	S	D1	RE	CW min.	CW max.	PVD		-
				in	mm								PR1215	PR1535	GW15
	 Sharp Edge	GBF32R 025-000F	3	0.010	0.25	0.6	9.525	3.18	4.4	0	-0.02	+0.02	●	●	●
		030-000F		0.012	0.3	0.8					-0.02	+0.02	●	●	●
		033-000F		0.013	0.33	0.8					-0.025	+0.015	●	●	●
		043-000F		0.017	0.43	1					-0.025	+0.015	●	●	●
		050-000F		0.020	0.5	1.2					-0.02	+0.02	●	●	●
		053-000F		0.021	0.53	1.2					-0.025	+0.015	●	●	●
		065-000F		0.026	0.65	1.2					-0.02	+0.02	●	●	●
		075-000F		0.030	0.75	2					-0.02	+0.02	●	●	●
		080-000F		0.031	0.8	2					-0.02	+0.02	●	●	●
		095-000F		0.037	0.95	2					-0.02	+0.02	●	●	●
		100-000F		0.039	1	2					-0.02	+0.02	●	●	●
		110-000F		0.043	1.1	2					-0.02	+0.02	●	●	●
		120-000F		0.047	1.2	2					-0.02	+0.02	●	●	●
		125-000F		0.049	1.25	2					-0.02	+0.02	●	●	●
		130-000F		0.051	1.3	2					-0.02	+0.02	●	●	●
		140-000F		0.055	1.4	2.7					-0.02	+0.02	●	●	●
		145-000F		0.057	1.45	2.7					-0.02	+0.02	●	●	●
		150-000F		0.059	1.5	2.7					-0.02	+0.02	●	●	●
		165-000F		0.065	1.65	2.7					-0.02	+0.02	●	●	●
		170-000F		0.067	1.7	3					-0.02	+0.02	●	●	●
		175-000F		0.069	1.75	3					-0.02	+0.02	●	●	●
		200-000F		0.079	2	3					-0.02	+0.02	●	●	●
		GBF32L 025-000F	3	0.010	0.25	0.6	9.525	3.18	4.4	0	-0.02	+0.02	●	●	●
		030-000F		0.012	0.3	0.8					-0.02	+0.02	●	●	●
		033-000F		0.013	0.33	0.8					-0.025	+0.015	●	●	●
		043-000F		0.017	0.43	1					-0.025	+0.015	●	●	●
		050-000F		0.020	0.5	1.2					-0.02	+0.02	●	●	●
		053-000F		0.021	0.53	1.2					-0.025	+0.015	●	●	●
		065-000F		0.026	0.65	1.2					-0.02	+0.02	●	●	●
		075-000F		0.030	0.75	2					-0.02	+0.02	●	●	●
		080-000F		0.031	0.8	2					-0.02	+0.02	●	●	●
		095-000F		0.037	0.95	2					-0.02	+0.02	●	●	●
		100-000F		0.039	1	2					-0.02	+0.02	●	●	●
		110-000F		0.043	1.1	2					-0.02	+0.02	●	●	●
		120-000F		0.047	1.2	2					-0.02	+0.02	●	●	●
		125-000F		0.049	1.25	2					-0.02	+0.02	●	●	●
		130-000F		0.051	1.3	2					-0.02	+0.02	●	●	●
		140-000F		0.055	1.4	2.7					-0.02	+0.02	●	●	●
		145-000F		0.057	1.45	2.7					-0.02	+0.02	●	●	●
		150-000F		0.059	1.5	2.7					-0.02	+0.02	●	●	●
		165-000F		0.065	1.65	2.7					-0.02	+0.02	●	●	●
		170-000F		0.067	1.7	3					-0.02	+0.02	●	●	●
		175-000F		0.069	1.75	3					-0.02	+0.02	●	●	●
		200-000F		0.079	2	3					-0.02	+0.02	●	●	●
	 Molded Chipbreaker	GBF32R 075-005GL	3	0.030	0.75	2	9.525	3.18	4.4	0.05	-0.02	+0.02	●	●	
		095-005GL		0.037	0.95	2				0.05	-0.02	+0.02	●	●	
		100-005GL		0.039	1	2				0.05	-0.02	+0.02	●	●	
		150-010GL		0.059	1.5	2.7				0.1	-0.02	+0.02	●	●	
		200-010GL		0.079	2	3				0.1	-0.02	+0.02	●	●	
		300-010GL		0.118	3	3				0.1	-0.02	+0.02	●	●	

The maximum machining diameter is Ø2.008" (51mm) (Please check caution on **Page 10**)

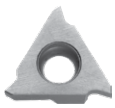
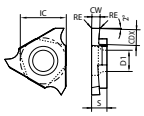
● : Standard Item

Recommended Cutting Conditions **Page 23**

KGBF-JCTM Applicable Inserts

Insert Size	IC		S		D1	
	in	mm	in	mm	in	mm
GBF32...	3/8	9.525	1/8	3.18	0.173	4.4

P	Carbon Steel / Alloy Steel	●	◔	
M	Stainless Steel	○	●	
K	Cast Iron			●
N	Non-Ferrous Metals			●
S	Titanium Alloy		●	◔

Insert		Part Number	No. of Edges	Dimensions (mm)							Tolerance (mm)		Carbide		
				CW		CDX	IC	S	D1	RE	CW min.	CW max.	PVD		Uncoated
				in	mm								PR1215	PR1535	GW15
		GBF32R 025-005	3	0.010	0.25	0.6	9.525	3.18	4.4	0.05	-0.02	+0.02	●	●	●
		030-005		0.012	0.3	0.8				0.05	-0.02	+0.02	●	●	●
		033-005		0.013	0.33	0.8				0.05	-0.025	+0.015	●	●	●
		043-005		0.017	0.43	1				0.05	-0.025	+0.015	●	●	●
		050-005		0.020	0.5	1.2				0.05	-0.02	+0.02	●	●	●
		053-005		0.021	0.53	1.2				0.05	-0.025	+0.015	●	●	●
		065-005		0.026	0.65	1.2				0.05	-0.02	+0.02	●	●	●
		075-005		0.030	0.75	2				0.05	-0.02	+0.02	●	●	●
		075-010		0.030	0.75	2				0.1	-0.02	+0.02	●	●	●
		080-005		0.031	0.8	2				0.05	-0.02	+0.02	●	●	●
		080-010		0.031	0.8	2				0.1	-0.02	+0.02	●	●	●
		095-005		0.037	0.95	2				0.05	-0.02	+0.02	●	●	●
		095-010		0.037	0.95	2				0.1	-0.02	+0.02	●	●	●
		100-005		0.039	1	2				0.05	-0.02	+0.02	●	●	●
		100-010		0.039	1	2				0.1	-0.02	+0.02	●	●	●
		041N		0.041	1.05	1				0.05	-0.03	+0.03	●	●	●
		110-005		0.043	1.1	2				0.05	-0.02	+0.02	●	●	●
		110-010		0.043	1.1	2				0.1	-0.02	+0.02	●	●	●
		120-005		0.047	1.2	2				0.05	-0.02	+0.02	●	●	●
		120-010		0.047	1.2	2				0.1	-0.02	+0.02	●	●	●
		125-005		0.049	1.25	2				0.05	-0.02	+0.02	●	●	●
		125-010		0.049	1.25	2				0.1	-0.02	+0.02	●	●	●
		130-005		0.051	1.3	2				0.05	-0.02	+0.02	●	●	●
		130-010		0.051	1.3	2				0.1	-0.02	+0.02	●	●	●
		140-005		0.055	1.4	2.7				0.05	-0.02	+0.02	●	●	●
		140-010		0.055	1.4	2.7				0.1	-0.02	+0.02	●	●	●
		145-005		0.057	1.45	2.7				0.05	-0.02	+0.02	●	●	●
		145-010		0.057	1.45	2.7				0.1	-0.02	+0.02	●	●	●
		058N		0.058	1.47	1.2				0.1	-0.03	+0.03	●	●	●
		150-005		0.059	1.5	2.7				0.05	-0.02	+0.02	●	●	●
		150-010		0.059	1.5	2.7				0.1	-0.02	+0.02	●	●	●
		062N		0.062	1.57	1.2				0.1	-0.03	+0.03	●	●	●
		165-005		0.065	1.65	2.7				0.05	-0.02	+0.02	●	●	●
		165-010		0.065	1.65	2.7				0.1	-0.02	+0.02	●	●	●
		170-005		0.067	1.7	3				0.05	-0.02	+0.02	●	●	●
		170-010		0.067	1.7	3				0.1	-0.02	+0.02	●	●	●
		175-005		0.069	1.75	3				0.05	-0.02	+0.02	●	●	●
		175-010		0.069	1.75	3				0.1	-0.02	+0.02	●	●	●
		200-005		0.079	2	3				0.05	-0.02	+0.02	●	●	●
		200-010		0.079	2	3				0.1	-0.02	+0.02	●	●	●
		225-005		0.089	2.25	3				0.05	-0.02	+0.02	●	●	●
		225-010		0.089	2.25	3				0.1	-0.02	+0.02	●	●	●
		094N		0.094	2.39	2				0.1	-0.03	+0.03	●	●	●
		250-005		0.098	2.5	3				0.05	-0.02	+0.02	●	●	●
		250-010		0.098	2.5	3				0.1	-0.02	+0.02	●	●	●
		300-005		0.118	3	3				0.05	-0.02	+0.02	●	●	●
		300-010		0.118	3	3				0.1	-0.02	+0.02	●	●	●

The maximum machining diameter is Ø2.008" (51mm) (Please check caution on **Page 10**)

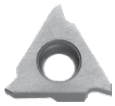
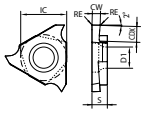
● : Standard Item

Recommended Cutting Conditions **Page 23**

KGBF-JCTM Applicable Inserts

Insert Size	IC		S		D1	
	in	mm	in	mm	in	mm
GBF32...	3/8	9.525	1/8	3.18	0.173	4.4

P	Carbon Steel / Alloy Steel	●	◔	
M	Stainless Steel	○	●	
K	Cast Iron			●
N	Non-Ferrous Metals			●
S	Titanium Alloy		●	◔

Insert		Part Number	No. of Edges	Dimensions (mm)							Tolerance (mm)		Carbide		
				CW		CDX	IC	S	D1	RE	CW min.	CW max.	PVD		Uncoated
				in	mm								PR1215	PR1535	GW15
		GBF32L 025-005		0.010	0.25	0.6				0.05	-0.02	+0.02	●	●	●
		030-005		0.012	0.3	0.8				0.05	-0.02	+0.02	●	●	●
		033-005		0.013	0.33	0.8				0.05	-0.025	+0.015	●	●	●
		043-005		0.017	0.43	1				0.05	-0.025	+0.015	●	●	●
		050-005		0.020	0.5	1.2				0.05	-0.02	+0.02	●	●	●
		053-005		0.021	0.53	1.2				0.05	-0.025	+0.015	●	●	●
		065-005		0.026	0.65	1.2				0.05	-0.02	+0.02	●	●	●
		075-005		0.030	0.75	2				0.05	-0.02	+0.02	●	●	●
		075-010		0.030	0.75	2				0.1	-0.02	+0.02	●	●	●
		080-005		0.031	0.8	2				0.05	-0.02	+0.02	●	●	●
		080-010		0.031	0.8	2				0.1	-0.02	+0.02	●	●	●
		095-005		0.037	0.95	2				0.05	-0.02	+0.02	●	●	●
		095-010		0.037	0.95	2				0.1	-0.02	+0.02	●	●	●
		100-005		0.039	1	2				0.05	-0.02	+0.02	●	●	●
		100-010		0.039	1	2				0.1	-0.02	+0.02	●	●	●
		041N		0.041	1.05	1				0.05	-0.03	+0.03	●	●	●
		110-005		0.043	1.1	2				0.05	-0.02	+0.02	●	●	●
		110-010		0.043	1.1	2				0.1	-0.02	+0.02	●	●	●
		120-005		0.047	1.2	2				0.05	-0.02	+0.02	●	●	●
		120-010		0.047	1.2	2				0.1	-0.02	+0.02	●	●	●
		125-005		0.049	1.25	2				0.05	-0.02	+0.02	●	●	●
		125-010		0.049	1.25	2				0.1	-0.02	+0.02	●	●	●
		130-005		0.051	1.3	2				0.05	-0.02	+0.02	●	●	●
		130-010	3	0.051	1.3	2	9.525	3.18	4.4	0.1	-0.02	+0.02	●	●	●
		140-005		0.055	1.4	2.7				0.05	-0.02	+0.02	●	●	●
		140-010		0.055	1.4	2.7				0.1	-0.02	+0.02	●	●	●
		145-005		0.057	1.45	2.7				0.05	-0.02	+0.02	●	●	●
		145-010		0.057	1.45	2.7				0.1	-0.02	+0.02	●	●	●
		058N		0.058	1.47	1.2				0.1	-0.03	+0.03	●	●	●
		150-005		0.059	1.5	2.7				0.05	-0.02	+0.02	●	●	●
		150-010		0.059	1.5	2.7				0.1	-0.02	+0.02	●	●	●
		062N		0.062	1.57	1.2				0.1	-0.03	+0.03	●	●	●
		165-005		0.065	1.65	2.7				0.05	-0.02	+0.02	●	●	●
		165-010		0.065	1.65	2.7				0.1	-0.02	+0.02	●	●	●
		170-005		0.067	1.7	3				0.05	-0.02	+0.02	●	●	●
		170-010		0.067	1.7	3				0.1	-0.02	+0.02	●	●	●
		175-005		0.069	1.75	3				0.05	-0.02	+0.02	●	●	●
		175-010		0.069	1.75	3				0.1	-0.02	+0.02	●	●	●
		200-005		0.079	2	3				0.05	-0.02	+0.02	●	●	●
		200-010		0.079	2	3				0.1	-0.02	+0.02	●	●	●
		225-005		0.089	2.25	3				0.05	-0.02	+0.02	●	●	●
		225-010		0.089	2.25	3				0.1	-0.02	+0.02	●	●	●
		094N		0.094	2.39	2				0.1	-0.03	+0.03	●	●	●
		250-005		0.098	2.5	3				0.05	-0.02	+0.02	●	●	●
		250-010		0.098	2.5	3				0.1	-0.02	+0.02	●	●	●
		300-005		0.118	3	3				0.05	-0.02	+0.02	●	●	●
		300-010		0.118	3	3				0.1	-0.02	+0.02	●	●	●

The maximum machining diameter is Ø2.008" (51mm) (Please check caution on **Page 10**)

● : Standard Item

Recommended Cutting Conditions **Page 23**

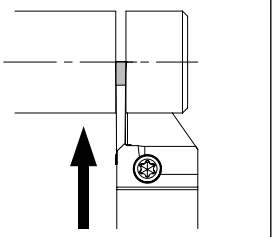
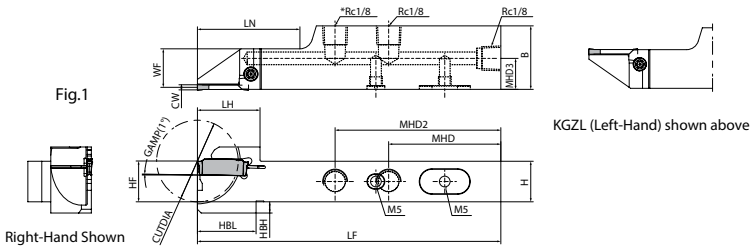


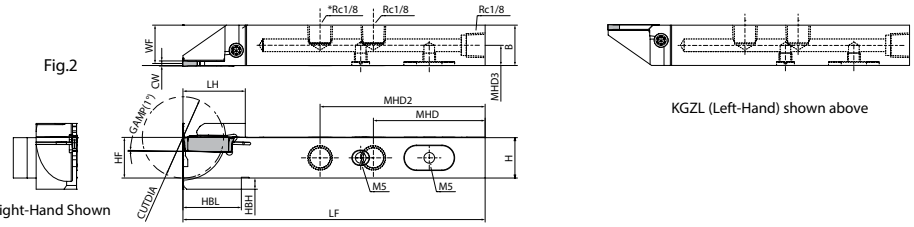
Fig.1



Right-Hand Shown

KGZL (Left-Hand) shown above

Fig.2



Right-Hand Shown

KGZL (Left-Hand) shown above

Right-hand shown | KGZ■5.72...-JCTM, KGZ■8-...-JCTM : 2-Rc1/8

Toolholder Dimensions

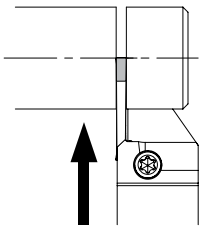
Unit	Part Number	Std. Item		Dimensions															Angle	Fig.	Coolant Hole	Spare Parts				Applicable Inserts P16~P17
		R	L	CUTDIA	H	B	LH	MHD	MHD2	MHD3	HF	HBH	HBL	LF	LN	WF	CW min.	CW max.	GAMP (°)			Plug	Plug	Screw	Wrench	
Inch	KGZR 5.72-2JCTM	●		0.945	0.500	0.709	0.780	2.126	-	0.331	0.500	0.335	0.778	4.750	1.717	0.469	0.079" (2mm)	0.118" (3mm)	1	1	Yes	GP-1	HS5X4LP	SB-40120TR	LTW-15S	GZ...2020... GZ...2220... GZ...2420... GZ...2520... GZ...3020...
	KGZL 5.72-2JCTM		●							0.303																
	KGZR 82.5-2JCTM	●		1.260	0.625	1.000	0.976	1.732	2.559	0.480	0.625	0.177	0.913		1.575	0.594										
	KGZL 82.5-2JCTM		●							0.303																
	KGZR 5.72-2.4JCTM	●		0.945	0.500	0.709	0.780	2.126	-	0.331	0.500	0.335	0.778	4.750	1.717	0.461	0.095" (2.4mm)	0.118" (3mm)	1	1	Yes	GP-1	HS5X4LP	SB-40120TR	LTW-15S	GZ...2420... GZ...2520... GZ...3020...
	KGZL 5.72-2.4JCTM		●							0.303																
	KGZR 82.5-2.4JCTM	●		1.260	0.625	1.000	0.976	1.732	2.559	0.480	0.625	0.177	0.913		1.575	0.586										
	KGZL 82.5-2.4JCTM		●							0.303																
	KGZR 5.72-3JCTM	●		0.945	0.500	0.709	0.780	2.126	-	0.339	0.500	0.335	0.778	4.750	1.717	0.453	0.118" (3mm)	0.118" (3mm)	1	1	Yes	GP-1	HS5X4LP	SB-40120TR	LTW-15S	GZ...3020...
	KGZL 5.72-3JCTM		●							0.303																
	KGZR 82.5-3JCTM	●		1.260	0.625	1.000	0.976	1.732	2.559	0.480	0.625	0.177	0.913		1.575	0.578										
	KGZL 82.5-3JCTM		●							0.303																
	KGZ■ 8-2JCTM	●	●	0.945	0.500	0.500	0.780	2.323	-	0.236	0.500	0.236	0.780	4.750	-	0.469	0.079" (2mm)	0.118" (3mm)	1	2	Yes	GP-1	HS5X4LP	SB-40120TR	LTW-15S	GZ...2020... GZ...2220... GZ...2420... GZ...2520... GZ...3020...
	KGZ■ 10-2D26JCTM	●	●	1.024	0.625	0.625	0.976	1.732	2.559	0.315	0.625	0.039	0.913			0.594										
	KGZ■ 10-2JCTM	●	●	1.260								0.177														
	KGZ■ 8-2.4JCTM	●	●	0.945	0.500	0.500	0.780	2.323	-	0.236	0.500	0.236	0.780	4.750	-	0.461	0.095" (2.4mm)	0.118" (3mm)	1	2	Yes	GP-1	HS5X4LP	SB-40120TR	LTW-15S	GZ...2420... GZ...2520... GZ...3020...
	KGZ■ 10-2.4D26JCTM	●	●	1.024	0.625	0.625	0.976	1.732	2.559	0.315	0.625	0.039	0.913			0.586										
	KGZ■ 10-2.4JCTM	●	●	1.260								0.177														
	KGZ■ 8-3JCTM	●	●	0.945	0.500	0.500	0.780	2.323	-	0.236	0.500	0.236	0.780	4.750	-	0.453	0.118" (3mm)	0.118" (3mm)	1	2	Yes	GP-1	HS5X4LP	SB-40120TR	LTW-15S	GZ...3020...
	KGZ■ 10-3D26JCTM	●	●	1.024	0.625	0.625	0.976	1.732	2.559	0.315	0.625	0.039	0.913			0.578										
	KGZ■ 10-3JCTM	●	●	1.260								0.177														

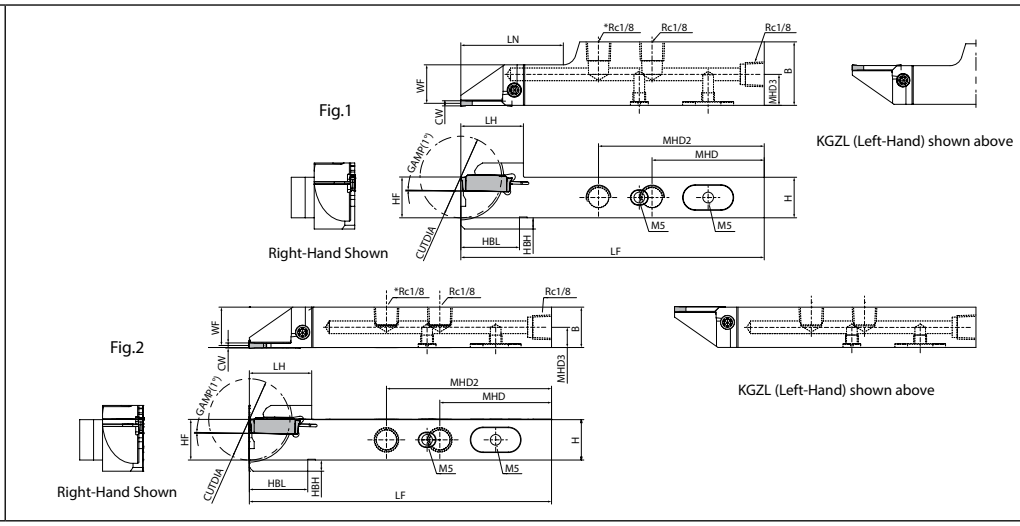
Recommended tightening torque : 2.0N·m (SB-40120TR)

● : Standard Item

GM* and GD* inserts cannot be installed in the KGZ holder (GMM, GMG, GMN, GMR/L, GDM, GDG, GDGS, GDMS).

Available Piping Parts see **Pages 26-27**





Right-hand shown | KGZR/L12...-JCTM : 2-Rc1/8

Toolholder Dimensions

Unit	Part Number	Std. Item		Dimensions															Angle	Fig.	Coolant Hole	Spare Parts				Applicable Inserts P16~P17
		R	L	CUTDIA	H	B	LH	MHD	MHD2	MHD3	HF	HBH	HBL	LF	LN	WF	CW min.	CW max.	GAMP (°)			Plug	Plug	Screw	Wrench	
mm	KGZR 1218JX-2JCTM	●		24	12	18	19.8	54	-	8.4	12	8.5	19.8	120	43.7	11.2	0.079" (2mm)	0.118" (3mm)	1	1	Yes	GP-1	HS5X4LP	SB-40120TR	LTW-15S	GZ...2020... GZ...2220... GZ...2420... GZ...2520... GZ...3020...
	KGZL 1218JX-2JCTM		●							7.7																
	KGZR 1625JX-2JCTM	●		32	16	25	24.8	44	65	12.2	16	4.5	23.2		40.0	15.2										
	KGZL 1625JX-2JCTM		●							7.7																
	KGZR 1218JX-2.4JCTM	●		24	12	18	19.8	54	-	8.4	12	8.5	19.8	120	43.7	11.0	0.095" (2.4mm)	0.118" (3mm)	1	1	Yes	GP-1	HS5X4LP	SB-40120TR	LTW-15S	GZ...2420... GZ...2520... GZ...3020...
	KGZL 1218JX-2.4JCTM		●							7.7																
	KGZR 1625JX-2.4JCTM	●		32	16	25	24.8	44	65	12.2	16	4.5	23.2		40.0	15.0										
	KGZL 1625JX-2.4JCTM		●							7.7																
	KGZR 1218JX-3JCTM	●		24	12	18	19.8	54	-	8.6	12	8.5	19.8	120	43.7	10.8	0.118" (3mm)	0.118" (3mm)	1	1	Yes	GP-1	HS5X4LP	SB-40120TR	LTW-15S	GZ...3020...
	KGZL 1218JX-3JCTM		●							7.7																
	KGZR 1625JX-3JCTM	●		32	16	25	24.8	44	65	12.2	16	4.5	23.2		40.0	14.8										
	KGZL 1625JX-3JCTM		●							7.7																
	KGZR/L 1212JX-2JCTM	●	●	24	12	12	19.8	59	-	6	12	5	19.8	120	-	11.2	0.079" (2mm)	0.118" (3mm)	1	2	Yes	GP-1	HS5X4LP	SB-40120TR	LTW-15S	GZ...2020... GZ...2220... GZ...2420... GZ...2520... GZ...3020...
	KGZR/L 1616JX2D26JCTM	●	●	26	16	16	24.8	44	65	8	16	1	23.2			15.2										
	KGZR/L 1616JX-2JCTM	●	●	32								4.5														
	KGZR/L 1212JX-2.4JCTM	●	●	24	12	12	19.8	59	-	6	12	5	19.8	120	-	11.0	0.095" (2.4mm)	0.118" (3mm)	1	2	Yes	GP-1	HS5X4LP	SB-40120TR	LTW-15S	GZ...2420... GZ...2520... GZ...3020...
	KGZR/L 1616JX2.4D26JCTM	●	●	26	16	16	24.8	44	65	8	16	1	23.2													
	KGZR/L 1616JX-2.4JCTM	●	●	32								4.5				15.0										
	KGZR/L 1212JX-3JCTM	●	●	24	12	12	19.8	59	-	6	12	5	19.8	120	-	10.8	0.118" (3mm)	0.118" (3mm)	1	2	Yes	GP-1	HS5X4LP	SB-40120TR	LTW-15S	GZ...3020...
	KGZR/L 1616JX3D26JCTM	●	●	26	16	16	24.8	44	65	8	16	1	23.2			14.8										
	KGZR/L 1616JX-3JCTM	●	●	32								4.5														

Recommended tightening torque : 2.0N·m (SB-40120TR)

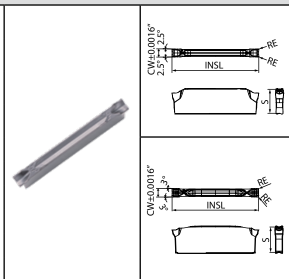
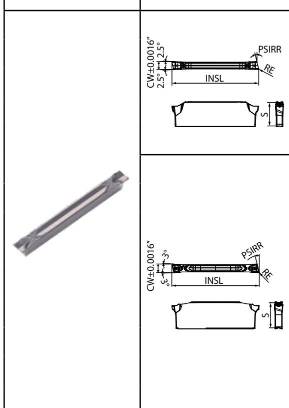
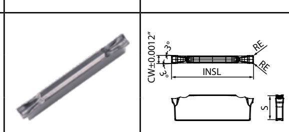
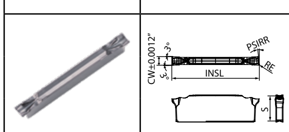
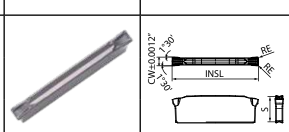
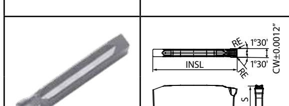
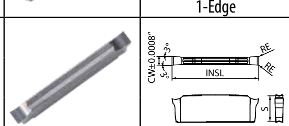
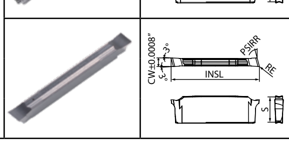
● : Standard Item

GM* and GD* inserts cannot be installed in the KGZ holder (GMM, GMG, GMN, GMR/L, GDM, GDG, GDGS, GDMS).

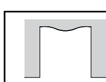
Available Piping Parts see **Pages 26-27**

KGZ-JCTM Applicable Inserts (Cut-Off)

		PDL025	PR2015	PR2025	PR2035	GW15
P	Carbon Steel / Alloy Steel		○	●	○	
M	Stainless Steel		○	○	●	
K	Cast Iron		●			○
N	Non-Ferrous Metals	●				○

	Insert	Part Number	No. of Edges	Dimensions (mm) CW in	CW mm	S	RE	INSL	Angle (°) PSIRR	Tolerance (mm) CW min.	CW max.	Carbide DLC PDL025	PVD PR2015	PVD PR2025	PVD PR2035	- GW15
Low Feed (Cut-Off)		GZM 1316N-003PF	2	0.051	1.3	4.4	0.03	16	-	- 0.04	+ 0.04		●	●	●	
		1316N-015PF					0.15						●	●	●	
		GZM 1516N-003PF		0.059	1.5		0.03						●	●	●	
		1516N-015PF					0.15						●	●	●	
		GZM 2020N-003PF		0.079	2	5.9	0.03	20					●	●	●	
		2020N-015PF					0.15						●	●	●	
		GZM 2520N-003PF		0.098	2.5		0.03						●	●	●	
		2520N-015PF					0.15						●	●	●	
		GZM 3020N-003PF		0.118	3		0.03						●	●	●	
		3020N-015PF					0.15						●	●	●	
		GZM 1316R-003PF-15D	2	0.051	1.3	4.4	0.03	16	15	- 0.04	+ 0.04		●	●	●	
		1316L-003PF-15D					0.03						●	●	●	
		GZM 1516R-003PF-15D		0.059	1.5		0.03						●	●	●	
		1516L-003PF-15D					0.03						●	●	●	
		1516R-015PF-15D					0.15						●	●	●	
		GZM 2020R-003PF-15D		0.079	2	5.9	0.03	20					●	●	●	
		2020L-003PF-15D					0.03						●	●	●	
		2020R-015PF-15D					0.15						●	●	●	
		GZM 2520R-003PF-15D		0.098	2.5		0.03						●	●	●	
		2520L-003PF-15D					0.03						●	●	●	
		2520R-015PF-15D					0.15						●	●	●	
		GZM 3020R-003PF-15D		0.118	3		0.03						●	●	●	
		3020L-003PF-15D					0.03						●	●	●	
		3020R-015PF-15D					0.15						●	●	●	
Medium Feed (Cut-Off)		GZM 2020N-020PM	2	0.079	2	5.9	0.2	20	-	- 0.03	+ 0.03		●	●	●	
		GZM 2520N-020PM		0.098	2.5								●	●	●	
		GZM 3020N-025PM		0.118	3		0.25						●	●	●	
		GZM 2020R-020PM-6D	2	0.079	2		0.2		6				●	●	●	
		GZM 2520R-020PM-6D		0.098	2.5								●	●	●	
		GZM 3020R-025PM-6D		0.118	3		0.25						●	●	●	
High Feed (Cut-Off / Grooving)		GZM 2020N-020PH	2	0.079	2	5.9	0.2	20	-	- 0.03	+ 0.03		●	●	●	
		GZM 2520N-020PH		0.098	2.5								●	●	●	
		GZM 3020N-030PH		0.118	3		0.3						●	●	●	
		GZMS 2020N-020PH	1	0.079	2		0.2						●	●	●	
		GZMS 3020N-030PH		0.118	3		0.3						●	●	●	
Low Cutting Force (Cut-Off)		GZG 2020N-005PG	2	0.079	2	5.9	0.05	20	-	- 0.02	+ 0.02	●		●	●	●
		GZG 2520N-005PG		0.098	2.5							●		●	●	●
		GZG 3020N-005PG		0.118	3							●		●	●	●
		GZG 2020R-005PG-15D		0.079	2				15°	- 0.02	+ 0.02	●		●	●	●
		GZG 2520R-005PG-15D		0.098	2.5							●		●	●	●
		GZG 3020R-005PG-15D		0.118	3							●		●	●	●

Handed insert shows Right-hand
Using the PF / PM chipbreaker (for cut-off) for grooving cannot create a flat bottom (Ref. to the right figure).
GZM and GZG inserts cannot be used in KGM or KGD holders.

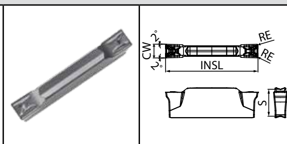
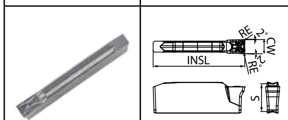
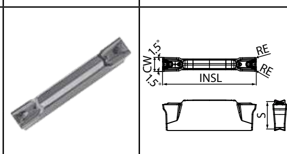
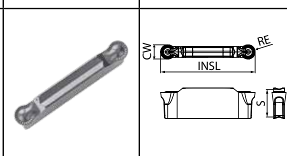
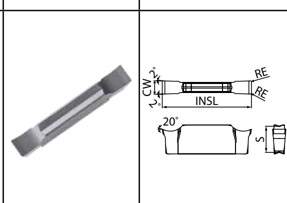
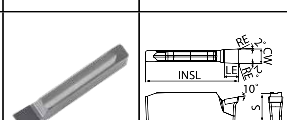


Groove bottom created by PF / PM chipbreaker

● : Standard Item

Recommended Cutting Conditions ➡ **Page 24**

KGZ-JCTM Applicable Inserts (Grooving)

													TN620	PR2015	PR2025	PR2035	GW15	KPD001
			P	Carbon Steel / Alloy Steel									●	○	●	○		
			M	Stainless Steel										○	○	●		
			K	Cast Iron										●			○	
			N	Non-Ferrous Metals													○	●
	Insert	Part Number	Edge Prep	No. of Edges	Dimensions (mm)						Tolerance (mm)		Cermet	Carbide				PCD
					CW		S	RE	INSL	LE	CW min.	CW max.	-	PVD			-	-
					in	mm							TN620	PR2015	PR2025	PR2035	GW15	KPD001
General Purpose (Grooving)		GZM 2420N-020GM	-	2	0.094	2.4	5.9	0.2	20	-	-0.03	+0.03	●	●	●	●		
		3020N-020GM			0.118	3		0.2					●	●	●	●		
		3020N-040GM			0.118	3		0.4					●	●	●	●		
	 1-Edge	GZMS 2220N-020GM	-	1	0.087	2.2	5.9	0.2	20	-	-0.03	+0.03	●	●	●	●		
		3020N-040GM			0.118	3		0.4					●	●	●	●		
Low Feed (Grooving)		GZM 2420N-020GL	-	2	0.094	2.4	5.9	0.2	20	-	-0.03	+0.03	●	●	●	●		
		3020N-020GL			0.118	3		0.2					●	●	●	●		
		3020N-040GL			0.118	3		0.4					●	●	●	●		
Copying (Grooving)		GZM 3020N-150R-CM	-	2	0.118	3	5.9	1.5	20	-	-0.03	+0.03	●	●	●	●		
Low Cutting Force (Grooving)		GZG 2520N-020GS	-	2	0.098	2.5	5.9	0.2	20	-	-0.02	+0.02	●	●	●	●	●	
		3020N-020GS			0.118	3							●	●	●	●	●	
PCD (Grooving)	 1-Edge	GZGS 2020N-020NB	F	1	0.079	2	5.9	0.2	20	2.9	-0.02	+0.02						●
		3020N-020NB			0.118	3												●

GZM and GZG inserts cannot be used in KGM or KGD holders.

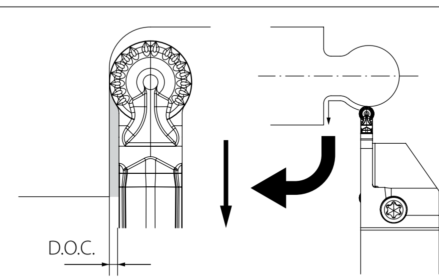
● : Standard Item

Recommended Cutting Conditions ➡ Page 24

CM Chipbreaker [Depth of cut (D.O.C.) when back copying]

Maximum D.O.C. when back copying

Insert Part Number	Maximum D.O.C.		
	Toolholder Part Number		
	KGZ...2(...)	KGZ...2.4(...)	KGZ...3(...)
GZM3020N-150R-CM	0.009" (0.24mm)	0.009" (0.24mm)	0.008" (0.2mm)



KTKFR-JCTM (Right-Hand)

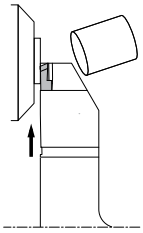


Fig. 1

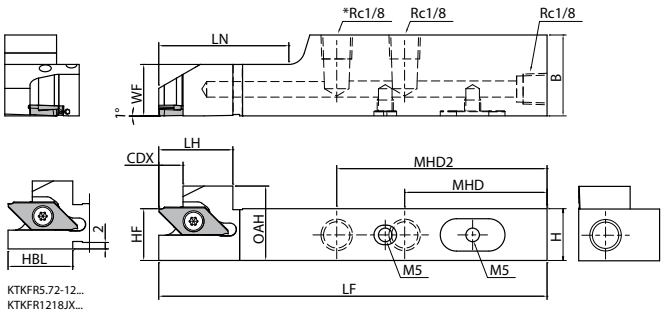
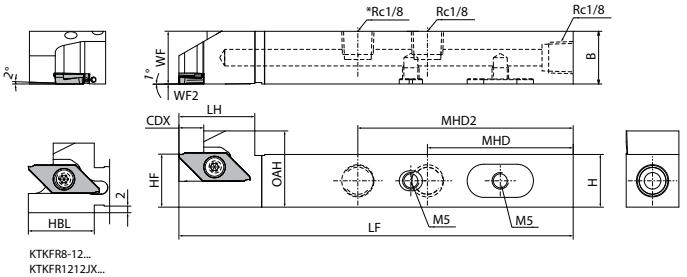


Fig. 2



Right-hand shown | Right-hand Insert for Right-hand Toolholder.
KTKFR5.72-…, KTKFR8-… : 2-Rc1/8
KTKFR1218-…, KTKFR1212-… : 2-Rc1/8

Toolholder Dimensions

Unit	Part Number	Std. Item	Dimensions													Fig.	Coolant Hole	Spare Parts				Applicable Inserts P20~P22
																		Plug	Plug	Screw	Wrench	
		R	CDX	H	B	LH	OAH	MHD	MHD2	HF	HBL	LF	LN	WF								
Inch	KTKFR 5.72-12JCTM	●	0.295	0.500	0.709	0.787	0.776	2.126	-	0.500	0.787	4.750	1.110	0.500	1	Yes	GP-1	HS5X4LP	SB-4590TRWN	FT-10	TKF12R...
	82.5-12JCTM	●		0.625	1.000	0.906	0.901	1.732	2.559	0.625	-		1.585	0.625							
	KTKFR 82.5-16JCTM	●	0.378	0.625	1.000	0.906	0.901	1.732	2.559	0.625	-	4.750	1.585	0.625				HS5X4LP			TKF16R...
	KTKFR 8-12JCTM	●	0.295	0.500	0.500	0.787	0.776	2.323	-	0.500	0.787	4.750	-	0.500	2	Yes	GP-1	HS5X4LP	SB-4590TRWN	FT-10	TKF12R...
	10-12JCTM	●		0.625	0.625	0.906	0.901	1.732	2.559	0.625	-			0.625							
	12-12JCTM	●		0.750	0.750		1.026			0.750				0.750				-			
	KTKFR 10-16JCTM	●	0.378	0.625	0.625	0.906	0.901	1.732	2.559	0.625	-	4.750	-	0.625				HS5X4LP	SB-4590TRWN	FT-10	TKF16R...
	12-16JCTM	●		0.750	0.750		1.026			0.750				0.750							
mm	KTKFR 1218JX-12JCTM	●	7.5	12	18	20	19	54	-	12	20	120	28	12	1	Yes	GP-1	HS5X4LP	SB-4590TRWN	FT-10	TKF12R...
	1625JX-12JCTM	●		16	25	23	23	44	65	16	-		40	16							
	2025JX-12JCTM	●		20			27			20				20				-			
	KTKFR 1625JX-16JCTM	●	9.6	16	25	23	23	44	65	16	-	120	40	16		Yes	GP-1	HS5X4LP	SB-4590TRWN	FT-10	TKF16R...
	2025JX-16JCTM	●		20			27			20			41	20							
	KTKFR 1212JX-12JCTM	●	7.5	12	12	20	19	59	-	12	20	120	-	12	2	Yes	GP-1	HS5X4LP	SB-4590TRWN	FT-10	TKF12R...
	1616JX-12JCTM	●		16	16	23	23	44	65	16	-			16							
	2020JX-12JCTM	●		20	20		27			20				20				-			
	KTKFR 1616JX-16JCTM	●	9.6	16	16	23	23	44	65	16	-	120	-	16		Yes	GP-1	HS5X4LP	SB-4590TRWN	FT-10	TKF16R...
	2020JX-16JCTM	●		20	20		27			20				20							

Available Piping Parts see **Pages 26-27**

● : Standard Item

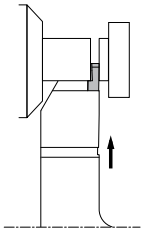


Fig. 1

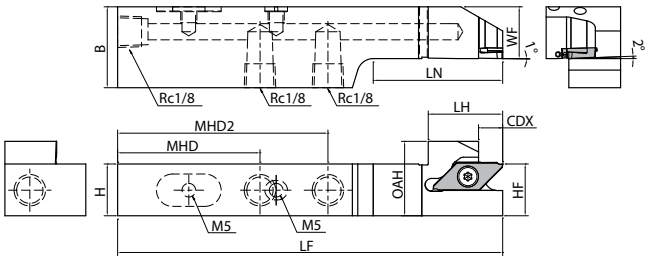
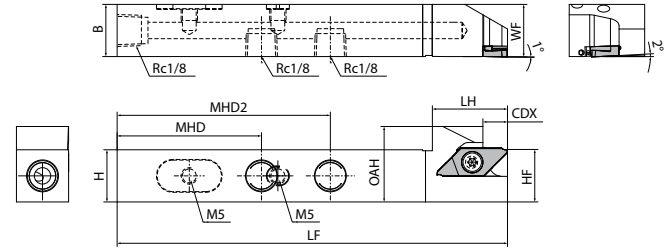


Fig. 2



Left-hand shown | Left-hand Insert for Left-hand Toolholder.

Toolholder Dimensions

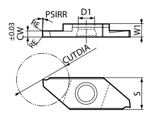
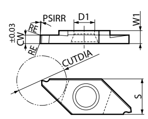
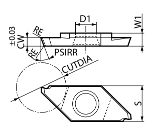
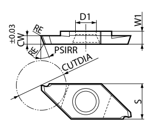
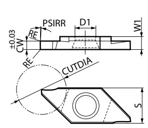
Unit	Part Number	Std. Item	Dimensions												Fig.	Coolant Hole	Spare Parts				Applicable Inserts P20~P22
			L	CDX	H	B	LH	OAH	MHD	MHD2	HF	LF	LN	WF			Plug	Plug	Screw	Wrench	
																					
Inch	KTKFL 82.5-12JCTM	●	0.295	0.625	1.000	0.906	0.901	1.732	2.559	0.625	4.750	1.585	0.625	1	Yes	GP-1	HS5X4LP	SB-4590TRWN	FT-10	TKF12L...
	KTKFL 82.5-16JCTM	●	0.378	0.625	1.000	0.906	0.901	1.732	2.559	0.625	4.750	1.585	0.625							TKF16L...
	KTKFL 10-12JCTM	●	0.295	0.625	0.625	0.906	0.901	1.732	2.559	0.625	4.750	-	0.625	2	Yes	GP-1	HS5X4LP	SB-4590TRWN	FT-10	TKF12L...
	12-12JCTM	●		0.750	0.750		1.026			0.750			0.750				-			
	KTKFL 10-16JCTM	●	0.378	0.625	0.625	0.906	0.901	1.732	2.559	0.625	4.750	-	0.625		Yes	GP-1	HS5X4LP	SB-4590TRWN	FT-10	TKF16L...
	12-16JCTM	●		0.750	0.750		1.026			0.750			0.750							
mm	KTKFL 1625JX-12JCTM	●	7.5	16	25	23	23	44	65	16	120	40	16	1	Yes	GP-1	HS5X4LP	SB-4590TRWN	FT-10	TKF12L...
	2025JX-12JCTM	●		20			27			20			20				-			
	KTKFL 1625JX-16JCTM	●	9.6	16	25	23	23	44	65	16	120	40	16		Yes	GP-1	HS5X4LP	SB-4590TRWN	FT-10	TKF16L...
	2025JX-16JCTM	●		20			27			20		41	20							
	KTKFL 1616JX-12JCTM	●	7.5	16	16	23	23	44	65	16	120	-	16	2	Yes	GP-1	HS5X4LP	SB-4590TRWN	FT-10	TKF12L...
	2020JX-12JCTM	●		20	20		27			20			20				-			
	KTKFL 1616JX-16JCTM	●	9.6	16	16	23	23	44	65	16	120	-	16		Yes	GP-1	HS5X4LP	SB-4590TRWN	FT-10	TKF16L...
	2020JX-16JCTM	●		20	20		27			20			20							

Available Piping Parts see **Pages 26-27**

● : Standard Item

KTKF-JCTM Applicable Inserts (TKF12)

		PDL025	PR1225	PR1535	PR1725	KW10
P	Carbon Steel / Alloy Steel		◌	◌	●	
M	Stainless Steel		◌	●	◌	
K	Cast Iron					●
N	Non-Ferrous Metals	●				◌

Insert		Part Number	No. of Edges	Dimensions (mm) CW in	CW mm	S	D1	RE	W1	CUTDIA	Angle (°) PSIRR	Tolerance (mm) CW min.	CW max.	Carbide DLC PDL025	PVD PR1225	PVD PR1535	PVD PR1725	- KW10
		TKF12R 050-S	2	0.020	0.5	8.7	5	0.03	3	5	0	- 0.03	+ 0.03	●	●	●	●	●
		070-S		0.028	0.7					8				●	●	●	●	●
		100-S		0.039	1					12				●	●	●	●	●
		125-S		0.049	1.25					12				●	●	●	●	
		150-S		0.059	1.5					12				●	●	●	●	●
		200-S		0.079	2					12				●	●	●	●	●
		TKF12L 050-S		0.020	0.5					5				●		●	●	●
		070-S		0.028	0.7					8				●		●	●	●
		100-S		0.039	1					12				●	●	●	●	●
		125-S		0.049	1.25					12				●		●	●	
		150-S		0.059	1.5					12				●	●	●	●	●
		200-S		0.079	2					12				●	●	●	●	●
	 Tough Edge	TKF12R 100-T	2	0.039	1	8.7	5	0.08	3	12	0	- 0.03	+ 0.03		●	●	●	
		150-T		0.059	1.5										●	●	●	
		200-T		0.079	2										●	●	●	
		TKF12L 100-T		0.039	1										●	●	●	
		150-T		0.059	1.5										●	●	●	
		200-T		0.079	2											●	●	
		TKF12R 050-S-16DR	2	0.020	0.5	8.7	5	0.03	3	5	16	- 0.03	+ 0.03			●	●	●
		070-S-16DR		0.028	0.7					8					●	●	●	●
		100-S-16DR		0.039	1					12				●	●	●	●	●
		125-S-16DR		0.049	1.25					12				●	●	●	●	
		150-S-16DR		0.059	1.5					12				●	●	●	●	●
		200-S-16DR		0.079	2					12				●	●	●	●	●
		TKF12L 050-S-16DR		0.020	0.5					5						●	●	●
		070-S-16DR		0.028	0.7					8						●	●	●
		100-S-16DR		0.039	1					12				●	●	●	●	●
		125-S-16DR		0.049	1.25					12				●		●	●	
		150-S-16DR		0.059	1.5					12				●	●	●	●	●
		200-S-16DR		0.079	2					12				●		●	●	●
	 Tough Edge	TKF12R 100-T-16DR	2	0.039	1	8.7	5	0.08	3	12	16	- 0.03	+ 0.03		●	●	●	
		150-T-16DR		0.059	1.5										●	●	●	
		200-T-16DR		0.079	2										●	●	●	
		TKF12L 100-T-16DR		0.039	1										●	●	●	
		150-T-16DR		0.059	1.5										●	●	●	
		200-T-16DR		0.079	2											●	●	
	 Without Chipbreaker	TKF12R 050-NB	2	0.020	0.5	8.7	5	0	3	5	0	- 0.03	+ 0.03			●	●	●
		070-NB		0.028	0.7					8						●	●	●
		100-NB		0.039	1					12						●	●	●
		150-NB		0.059	1.5					12						●	●	●
		200-NB		0.079	2					12						●	●	●
		TKF12L 050-NB		0.020	0.5					5						●	●	●
		070-NB		0.028	0.7					8						●	●	●
		100-NB		0.039	1					12						●	●	●
		150-NB		0.059	1.5					12						●	●	●
		200-NB		0.079	2					12						●	●	●

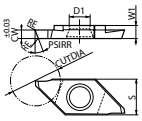
Lead angle (PSIRR) shows the angle when installed in toolholder.
The cut-off diameter of the insert (CUTDIA) is indicated when the top of the cut-off edge progresses 0.039" (1mm) from the center.
Right-hand shown

● : Standard Item

Recommended Cutting Conditions ➡ **Page 25**

KTKF-JCTM Applicable Inserts (TKF12)

P	Carbon Steel / Alloy Steel	○ ●
M	Stainless Steel	● ○
K	Cast Iron	●
N	Non-Ferrous Metals	○

Insert		Part Number	No. of Edges	Dimensions (mm)								Angle (°)	Tolerance (mm)		Carbide		
				CW		S	D1	RE	W1	CUTDIA		PSIRR	CW min.	CW max.	PVD		-
				in	mm										PR1535	PR1725	KW10
	 Without Chipbreaker	TKF12R 050-NB-20DR	2	0.020	0.5	8.7	5	0	3	5		20	-0.03	+0.03	●	●	●
		070-NB-20DR		0.028	0.7					8					●	●	●
		100-NB-20DR		0.039	1					12					●	●	●
		150-NB-20DR		0.059	1.5					12					●	●	●
		200-NB-20DR		0.079	2					12					●	●	●
		TKF12L 050-NB-20DR		0.020	0.5					5					●	●	●
		070-NB-20DR		0.028	0.7					8					●	●	●
		100-NB-20DR		0.039	1					12					●	●	●
		150-NB-20DR		0.059	1.5					12					●	●	●
		200-NB-20DR		0.079	2					12					●	●	●

Lead angle (PSIRR) shows the angle when installed in toolholder.
The cut-off diameter of the insert (CUTDIA) is indicated when the top of the cut-off edge progresses 0.039" (1mm) from the center.
Right-hand shown

● : Standard Item

Recommended Cutting Conditions Page 25

Inserts Identification System

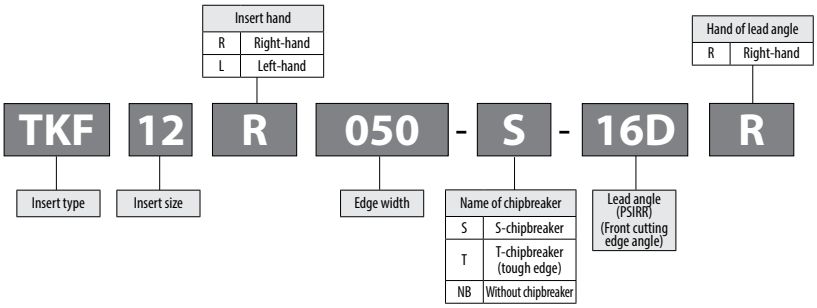
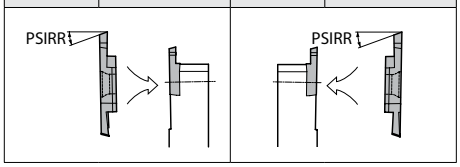
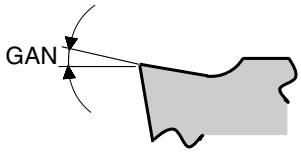


Table 1

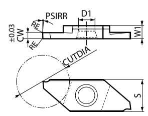
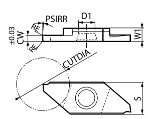
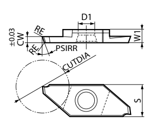
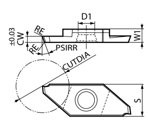
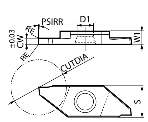
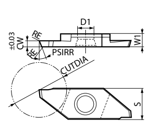
Toolholder	Right-hand	Toolholder	Left-hand
Insert	Right-hand	Insert	Left-hand
Lead angle	Right-hand	Lead angle	Right-hand



Descriptions of Chipbreaker Edge Shape

Chipbreaker / Edge Shape	S Chipbreaker		T Chipbreaker (Tough Edge)		NB (Without Chipbreaker)	
	GAN	Part Number	GAN	Part Number	GAN	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				

KTKF-JCTM Applicable Inserts (TKF16)

														PDL025	PR1225	PR1535	PR1725	KW10
			P	Carbon Steel / Alloy Steel											○	○	●	
			M	Stainless Steel											○	●	○	
			K	Cast Iron														●
			N	Non-Ferrous Metals										●				○
Insert		Part Number	No. of Edges	Dimensions (mm)							Angle (°)	Tolerance (mm)		Carbide				
				CW										DLC	PVD			-
				in	mm	S	D1	RE	W1	CUTDIA	PSIRR	CW min.	CW max.	PDL025	PR1225	PR1535	PR1725	KW10
		TKF16R 150-S	2	0.059	1.5	9.5	5	0.05	4	16	0	- 0.03	+ 0.03	●	●	●	●	●
		200-S		0.079	2									●	●	●	●	●
		TKF16L 150-S		0.059	1.5									●	●	●	●	●
		200-S		0.079	2									●	●	●	●	●
	 Tough edge	TKF16R 150-T	2	0.059	1.5	9.5	5	0.08	4	16	0	- 0.03	+ 0.03		●	●	●	
		200-T		0.079	2										●	●	●	
		TKF16L 150-T		0.059	1.5										●	●	●	
		200-T		0.079	2										●	●	●	
		TKF16R 150-S-16DR	2	0.059	1.5	9.5	5	0.05	4	16	16	- 0.03	+ 0.03	●	●	●	●	●
		200-S-16DR		0.079	2									●	●	●	●	●
		TKF16L 150-S-16DR		0.059	1.5									●	●	●	●	●
		200-S-16DR		0.079	2									●	●	●	●	●
	 Tough edge	TKF16R 150-T-16DR	2	0.059	1.5	9.5	5	0.08	4	16	16	- 0.03	+ 0.03		●	●	●	
		200-T-16DR		0.079	2										●	●	●	
		TKF16L 150-T-16DR		0.059	1.5										●	●	●	
		200-T-16DR		0.079	2										●	●	●	
	 Without Chipbreaker	TKF16R 150-NB	2	0.059	1.5	9.5	5	0	4	16	0	- 0.03	+ 0.03			●	●	●
		200-NB		0.079	2											●	●	●
		TKF16L 150-NB		0.059	1.5											●	●	●
		200-NB		0.079	2											●	●	●
	 Without Chipbreaker	TKF16R 150-NB-20DR	2	0.059	1.5	9.5	5	0	4	16	20	- 0.03	+ 0.03			●	●	●
		200-NB-20DR		0.079	2											●	●	●
		TKF16L 150-NB-20DR		0.059	1.5											●	●	●
		200-NB-20DR		0.079	2											●	●	●

Lead angle (PSIRR) shows the angle when installed in toolholder.
The cut-off diameter of the insert (CUTDIA) is indicated when the top of the cut-off edge progresses 0.039" (1mm) from the center.
Right-hand shown

● : Standard Item

Recommended Cutting Conditions ➡ **Page 25**

Recommended Cutting Conditions - GBF

GBF inserts

Workpiece Material	Recommended Insert Grade (Cutting Speed Vc: sfm)			(1) Grooving Feed Rate (ipr) (2) Traversing Feed Rate (ipr) (3) Max D.O.C. for Traversing (in)				Notes
	MEGACOAT	MEGACOAT NANO	Carbide					
	PR1215	PR1535	GW15	GBF32R/L 025~053	GBF32R/L 065~095	GBF32R/L 100~145	GBF32R/L 150~300	
Carbon Steel	★ 260 - 590	☆ 230 - 530	-	(1) 0.0004 – 0.0020 (2) Not Recommended (3) Not Recommended	(1) 0.0008 – 0.0028 (2) Not Recommended (3) Not Recommended	(1) 0.0012 – 0.0031 (2) 0.0012 – 0.0024 (3) MAX. 0.0079	(1) 0.0012 – 0.0031 (2) 0.0012 – 0.0024 (3) MAX. 0.0079	Coolant
Alloy Steel	★ 260 - 590	☆ 230 - 530	-	(1) 0.0004 – 0.0016 (2) Not Recommended (3) Not Recommended	(1) 0.0008 – 0.0024 (2) Not Recommended (3) Not Recommended	(1) 0.0012 – 0.0028 (2) 0.0008 – 0.0020 (3) MAX. 0.0079	(1) 0.0012 – 0.0028 (2) 0.0008 – 0.0020 (3) MAX. 0.0079	
Stainless Steel	☆ 200 - 430	★ 160 - 390	-	(1) 0.0004 – 0.0016 (2) Not Recommended (3) Not Recommended	(1) 0.0008 – 0.0024 (2) Not Recommended (3) Not Recommended	(1) 0.0012 – 0.0028 (2) 0.0008 – 0.0020 (3) MAX. 0.0079	(1) 0.0012 – 0.0028 (2) 0.0008 – 0.0020 (3) MAX. 0.0079	
Cast Iron	-	-	★ 200 - 330	(1) 0.0004 – 0.0020 (2) Not Recommended (3) Not Recommended	(1) 0.0008 – 0.0028 (2) Not Recommended (3) Not Recommended	(1) 0.0012 – 0.0031 (2) 0.0012 – 0.0024 (3) MAX. 0.0079	(1) 0.0012 – 0.0031 (2) 0.0012 – 0.0024 (3) MAX. 0.0079	
Aluminum Alloy	-	-	★ 490 - 1,310	(1) 0.0004 – 0.0020 (2) Not Recommended (3) Not Recommended	(1) 0.0008 – 0.0028 (2) Not Recommended (3) Not Recommended	(1) 0.0012 – 0.0031 (2) 0.0012 – 0.0024 (3) MAX. 0.0079	(1) 0.0012 – 0.0031 (2) 0.0012 – 0.0024 (3) MAX. 0.0079	
Brass	-	-	★ 490 - 980	(1) 0.0004 – 0.0016 (2) Not Recommended (3) Not Recommended	(1) 0.0008 – 0.0028 (2) Not Recommended (3) Not Recommended	(1) 0.0012 – 0.0028 (2) 0.0008 – 0.0020 (3) MAX. 0.0079	(1) 0.0012 – 0.0028 (2) 0.0008 – 0.0020 (3) MAX. 0.0079	

★:1st Recommendation ☆:2nd Recommendation

GBF32...-000F inserts (RE = 0.00)

Workpiece Material	Recommended Insert Grade (Cutting Speed Vc: sfm)			(1) Grooving Feed Rate (ipr) (2) Traversing Feed Rate (ipr) (3) Max D.O.C. for Traversing (in)				Notes
	MEGACOAT	MEGACOAT NANO	Carbide					
	PR1215	PR1535	GW15	GBF32R/L 025 ~ 053 - 000F	GBF32R/L 065 ~ 095 - 000F	GBF32R/L 100 ~ 145 - 000F	GBF32R/L 150 ~ 200 - 000F	
Carbon Steel	★ 260 - 590	☆ 230 - 530	-	(1) 0.0002 – 0.0012 (2) Not Recommended (3) Not Recommended	(1) 0.0004 – 0.0016 (2) Not Recommended (3) Not Recommended	(1) 0.0004 – 0.0020 (2) 0.0004 – 0.0016 (3) MAX. 0.0079	(1) 0.0004 – 0.0020 (2) 0.0004 – 0.0016 (3) MAX. 0.0079	Coolant
Alloy Steel	★ 260 - 590	☆ 230 - 530	-	(1) 0.0002 – 0.0010 (2) Not Recommended (3) Not Recommended	(1) 0.0004 – 0.0012 (2) Not Recommended (3) Not Recommended	(1) 0.0004 – 0.0016 (2) 0.0004 – 0.0012 (3) MAX. 0.0079	(1) 0.0004 – 0.0016 (2) 0.0004 – 0.0012 (3) MAX. 0.0079	
Stainless Steel	☆ 200 - 430	★ 160 - 390	-	(1) 0.0002 – 0.0008 (2) Not Recommended (3) Not Recommended	(1) 0.0004 – 0.0010 (2) Not Recommended (3) Not Recommended	(1) 0.0004 – 0.0012 (2) 0.0004 – 0.0010 (3) MAX. 0.0079	(1) 0.0004 – 0.0012 (2) 0.0004 – 0.0010 (3) MAX. 0.0079	
Cast Iron	-	-	★ 200 - 330	(1) 0.0002 – 0.0012 (2) Not Recommended (3) Not Recommended	(1) 0.0004 – 0.0016 (2) Not Recommended (3) Not Recommended	(1) 0.0004 – 0.0020 (2) 0.0004 – 0.0016 (3) MAX. 0.0079	(1) 0.0004 – 0.0020 (2) 0.0004 – 0.0016 (3) MAX. 0.0079	
Aluminum Alloy	-	-	★ 490 - 1,310	(1) 0.0002 – 0.0012 (2) Not Recommended (3) Not Recommended	(1) 0.0004 – 0.0016 (2) Not Recommended (3) Not Recommended	(1) 0.0004 – 0.0020 (2) 0.0004 – 0.0016 (3) MAX. 0.0079	(1) 0.0004 – 0.0020 (2) 0.0004 – 0.0016 (3) MAX. 0.0079	
Brass	-	-	★ 490 - 980	(1) 0.0004 – 0.0012 (2) Not Recommended (3) Not Recommended	(1) 0.0004 – 0.0016 (2) Not Recommended (3) Not Recommended	(1) 0.0004 – 0.0020 (2) 0.0004 – 0.0016 (3) MAX. 0.0079	(1) 0.0004 – 0.0020 (2) 0.0004 – 0.0016 (3) MAX. 0.0079	

★:1st Recommendation ☆:2nd Recommendation

GBF-GL inserts

Workpiece Material	Recommended Insert Grade (Cutting Speed Vc: sfm)		(1) Grooving Feed Rate (ipr) (2) Traversing Feed Rate (ipr) (3) Max D.O.C. for Traversing (in)				Notes
	MEGACOAT	MEGACOAT NANO					
	PR1215	PR1535	GBF32R075~005GL	GBF32R095 ~ 100-005GL	GBF32R 150 – 200 (GL)	GBF32R 300 (GL)	
Carbon Steel	★ 260 - 590	☆ 230 - 530	(1) 0.0008 – 0.0028 (2) Not Recommended (3) Not Recommended	(1) 0.0012 – 0.0031 (2) 0.0012 – 0.0024 (3) MAX. 0.0079	(1) 0.0012 – 0.0031 (2) 0.0012 – 0.0024 (3) MAX. 0.0079	(1) 0.0016 – 0.0039 (2) 0.0016 – 0.0031 (3) MAX. 0.0197	Coolant
Alloy Steel	★ 260 - 590	☆ 230 - 530	(1) 0.0008 – 0.0024 (2) Not Recommended (3) Not Recommended	(1) 0.0012 – 0.0028 (2) 0.0012 – 0.0024 (3) MAX. 0.0079	(1) 0.0012 – 0.0028 (2) 0.0012 – 0.0024 (3) MAX. 0.0079	(1) 0.0016 – 0.0035 (2) 0.0016 – 0.0031 (3) MAX. 0.0197	
Stainless Steel	☆ 200 - 430	★ 160 - 390	(1) 0.0008 – 0.0024 (2) Not Recommended (3) Not Recommended	(1) 0.0012 – 0.0028 (2) 0.0012 – 0.0024 (3) MAX. 0.0079	(1) 0.0012 – 0.0028 (2) 0.0012 – 0.0024 (3) MAX. 0.0079	(1) 0.0016 – 0.0035 (2) 0.0016 – 0.0031 (3) MAX. 0.0197	

★:1st Recommendation ☆:2nd Recommendation

Recommended Cutting Conditions - KGZ

Cut-Off - PF Chipbreaker

Workpiece Material	Recommended Insert Grade (Cutting Speed Vc: sfm)					Feed Rate f (ipr)						Notes
						PF (RE = 0.0012")			PF (RE = 0.0059")			
	MEGACOAT NANO EX			DLC	Carbide	CW						
	PR2015	PR2025	PR2035	PDL025	GW15	0.051"~0.059" (1.3mm~1.5mm)	0.079" (2mm)	0.098"~0.118" (2.5mm~3.0mm)	0.051~0.059 (1.3mm~1.5mm)	0.079" (2mm)	0.098"~0.118" (2.5mm~3.0mm)	
Carbon Steel	☆ 230~590	★ 230~590	☆ 230~490	-	-	0.0004~0.0016	0.0008~0.0024	0.0008~0.0031	0.0004~0.002	0.0012~0.0031	0.0016~0.0031	Coolant
Alloy Steel	☆ 230~590	★ 230~590	☆ 230~490	-	-							
Stainless Steel	☆ 200~490	☆ 200~390	★ 200~390	-	-	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	-	-	-	☆ 160~330	0.0004~0.0020	0.001~0.0028	0.0012~0.0031	0.0004~0.0024	0.0012~0.0035	0.0016~0.0039	
Aluminum Alloy	-	-	-	★ 660~1640	☆ 660~1480	-	-	-	-	-	-	
Brass	-	-	-	-	★ 330~660	-	-	-	-	-	-	

★:1st Recommendation ☆:2nd Recommendation

Cut-Off - PM / PH / PG Chipbreaker

Workpiece Material	Recommended Insert Grade (Cutting Speed Vc: sfm)					Feed Rate f (ipr)				Notes
						PM	PH	PG		
	MEGACOAT NANO EX			DLC	Carbide	CW				
	PR2015	PR2025	PR2035	PDL025	GW15	0.079~0.118" (2mm~3mm)	0.079~0.118" (2mm~3mm)	0.079" (2mm)	0.098"~0.118" (2.5mm~3.0mm	
Carbon Steel	☆ 230~590	★ 230~590	☆ 230~490	-	-	0.0020~0.0059	0.0039~0.0079	0.0004~0.0016	0.0004~0.002	Coolant
Alloy Steel	☆ 230~590	★ 230~590	☆ 230~490	-	-					
Stainless Steel	☆ 200~490	☆ 200~390	★ 200~390	-	-	0.0016~0.0047	0.0031~0.0063	0.0004~0.0012	0.0004~0.0016	
Cast Iron	★ 260~660	-	-	-	☆ 160~330	0.002~0.0059	0.0039~0.0079	0.0004~0.0016	0.0004~0.002	
Aluminum Alloy	-	-	-	★ 660~1640	☆ 660~1480	-	-	0.0004~0.0020	0.0004~0.0024	
Brass	-	-	-	-	★ 330~660	-	-	0.0004~0.0028	0.0004~0.0031	

★:1st Recommendation ☆:2nd Recommendation

Grooving - GM / GL / PH / CM Chipbreaker

Workpiece Material	Recommended Insert Grade (Cutting Speed Vc: sfm)						Feed Rate f (ipr)						Notes
							GM		GL		PH	CM	
	MEGACOAT NANO EX			Cermet	Carbide	PCD	CW						
	PR2015	PR2025	PR2035	TN620	GW15	KPD001	0.087"~0.095" (2.2mm~2.4mm)	0.118" (3.0mm)	0.095" (2.4mm)	0.118" (3.0mm)	0.079"~0.118" (2.0mm~3.0mm)	0.118" (3.0mm)	
Carbon Steel	☆ 230 ~ 590	★ 230 ~ 490	☆ 230 ~ 490	★ 260 ~ 490	-	-	0.0020 ~ 0.0051	0.0028 ~ 0.0067	0.0012 ~ 0.0043	0.0016 ~ 0.0059	0.0039 ~ 0.0079	0.0020 ~ 0.0059	Coolant
Alloy Steel	☆ 230 ~ 590	★ 230 ~ 490	☆ 230 ~ 490	★ 260 ~ 490	-	-							
Stainless Steel	☆ 200 ~ 490	☆ 200 ~ 390	★ 200 ~ 390	-	-	-	0.0012 ~ 0.0047	0.0020 ~ 0.0059	0.0008 ~ 0.0039	0.0012 ~ 0.0047	0.0031 ~ 0.006	0.0016 ~ 0.0047	
Cast Iron	★ 260 ~ 660	-	-	-	☆ 160 ~ 330	-	0.0020 ~ 0.0051	0.0028 ~ 0.0067	0.0012 ~ 0.0043	0.0016 ~ 0.0059	0.0039 ~ 0.0079	0.0020 ~ 0.0059	
Aluminum Alloy	-	-	-	-	☆ 660 ~ 1480	★ 490 ~ 6560	-	-	-	-	-	-	
Brass	-	-	-	-	☆ 330 ~ 660	★ 660 ~ 2620	-	-	-	-	-	-	

★:1st Recommendation ☆:2nd Recommendation

Recommended Cutting Conditions - KGZ

Grooving - GS / NB (Non-Ferrous)

Workpiece Material	Recommended Insert Grade (Cutting Speed Vc: sfm)						Feed Rate f (ipr)			Notes
							GS	NB		
	MEGACOAT NANO EX			Cermet	Carbide	PCD	CW			
	PR2015	PR2025	PR2035	TN620	GW15	KPD001	0.098"~0.118" (2.5mm~3.0mm)	0.079" (2.0mm)	0.118" (3.0mm)	
Carbon Steel	☆ 230 ~ 590	★ 230 ~ 490	☆ 230 ~ 490	★ 260 ~ 490	-	-	0.0016 ~ 0.0035	-	-	Coolant
Alloy Steel	☆ 230 ~ 590	★ 230 ~ 490	☆ 230 ~ 490	★ 260 ~ 490	-	-				
Stainless Steel	☆ 200 ~ 490	☆ 200 ~ 390	★ 200 ~ 390	-	-	-	0.0012 ~ 0.0031	-	-	
Cast Iron	★ 260 ~ 660	-	-	-	☆ 160 ~ 330	-	0.0016 ~ 0.0035	-	-	
Aluminum Alloy	-	-	-	-	☆ 660 ~ 1480	★ 490 ~ 6560	0.0012 ~ 0.0028	0.0020 ~ 0.0059	0.0020 ~ 0.0059	
Brass	-	-	-	-	☆ 330 ~ 660	★ 660 ~ 2620	-			

★:1st Recommendation ☆:2nd Recommendation

Recommended Cutting Conditions - KTKF

TKF12

Workpiece Material	Recommended Insert Grade (Cutting Speed Vc: sfm)					TKF12						Notes
						Width (CW)						
	MEGACOAT NANO		MEGACOAT	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	PR1535	PR1225	PDL025	KW10	Feed Rate (ipr)						
Carbon Steel	★ 230~560 (160~460)	☆ 230~500 (160~400)	☆ 225~500 (175~400)	-	-	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)	Coolant
Alloy Steel	★ 230~560 (160~460)	☆ 230~500 (160~400)	☆ 225~500 (175~400)	-	-	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)	★ 200~400 (130~330)	☆ 200~400 (125~325)	-	-	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 Alloy	-	-	-	★ 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 Insert Grade (Cutting Speed Vc: sfm)					TKF16		Notes
						Width (CW)		
	MEGACOAT NANO		MEGACOAT	DLC	Carbide	0.059" (1.50mm)	0.079" (2.00mm)	
	PR1725	PR1535	PR1225	PDL025	KW10	Feed Rate f (ipr)		
Carbon Steel	★ 230~560 (160~460)	☆ 230~500 (160~400)	☆ 225~500 (175~400)	-	-	0.0008~0.0028 (0.0008~0.0039)	0.0008~0.0028 (0.0008~0.0039)	Coolant
Alloy Steel	★ 230~560 (160~460)	☆ 230~500 (160~400)	☆ 225~500 (175~400)	-	-	0.0008~0.0028 (0.0008~0.0039)	0.0008~0.0028 (0.0008~0.0039)	
Stainless Steel	☆ 200~460 (130~390)	★ 200~400 (130~330)	☆ 200~400 (125~325)	-	-	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 Alloy	-	-	-	★ 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..

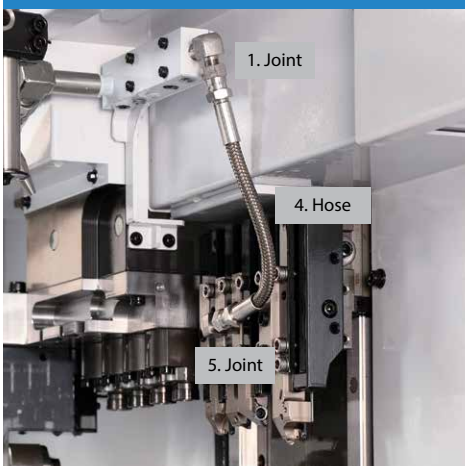
★:1st Recommendation ☆:2nd Recommendation

Coolant Piping Parts

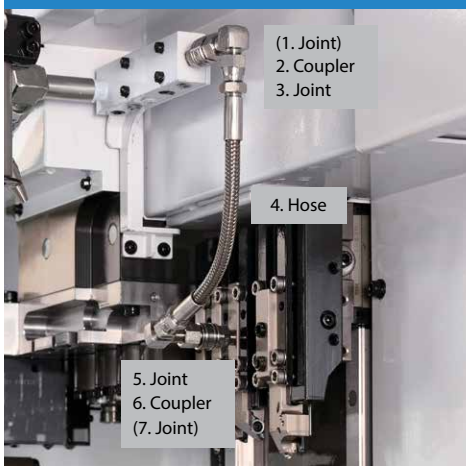
Pipe parts will be required separately if internal coolant is used

Pump Pressure: up to 2,900 psi
Pump Pressure: up to 1,090 psi if couplers are used

Without Coupler (Pump Pressure: Up to 2,900 psi)



With Coupler (Pump Pressure: Up to 1,090 psi)



Combination Part Number (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.

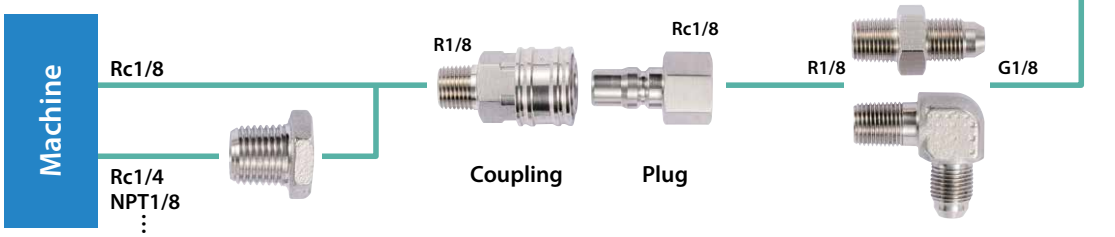
Combination Part Number (Example)

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 1,090 psi)

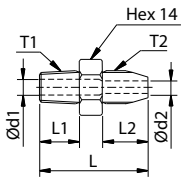
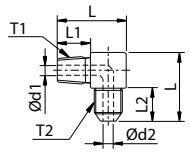
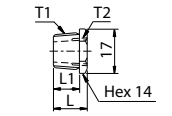
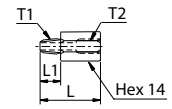


1. Joint 2. Coupler 3. Joint 4. Hose

Piping Installation Parts Description

Joint (1, 3, 5, 7) Pressure Resistance: up to 2,900 psi

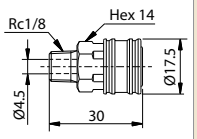
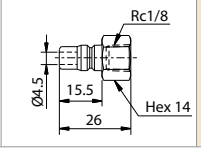
(Unit: mm)

Shape	Part Number	Std. Item	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-ST-R1/8-G1/8-L	●	4.0	4.0	40	20	14	R1/8	G1/8
 	J-AN-R1/8-G1/8	●	4.0	4.0	27	14	13	R1/8	G1/8
	J-AN-R1/8-G1/8-L	●	4.0	4.0	34	20	14	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

Elbow piping (J-AN-R1/8-G1/8) is recommended.

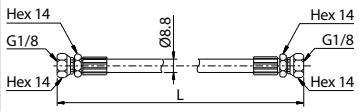
● : Standard Item

Coupler (2, 6) Pressure Resistance: up to 1,090 psi (Unit: mm)

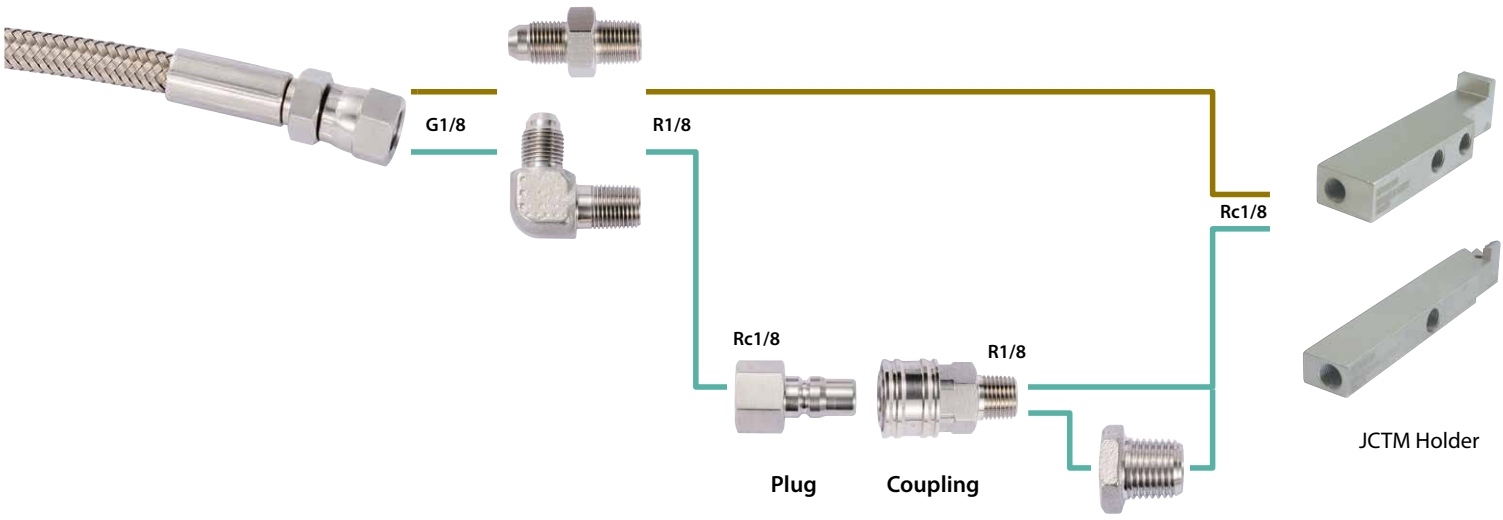
Shape	Part Number	Std. Item
 	CP-ST-R1/8	●
 	P-ST-RC1/8	●

Hose (4) Pressure Resistance: up to 2,900 psi

(Unit: mm)

Shape	Part Number	Std. Item	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

● : Standard Item



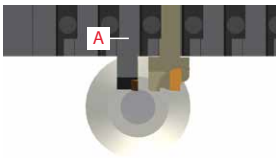
4. Hose 5. Joint 6. Coupler 7. Joint (Extension Joint)

Precautions

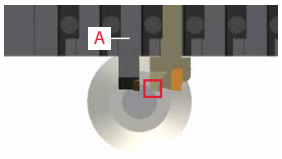
Maximum D.O.C. of the next tool (indicated as tool A) and holder interference

When using JCTM holder 1218/1212 , note maximum D.O.C. of the next tool to avoid interference.

No interference



Interference



Estimated maximum D.O.C. of tool A (mm)

Workpiece Dia. / JCTM Part Number	ø12mm	ø16mm	ø20mm
KGZ R/L 1218JX-*JCTM	2.4	2.0	1.7
KGZ R/L 1212JX-*JCTM	-	-	3.8

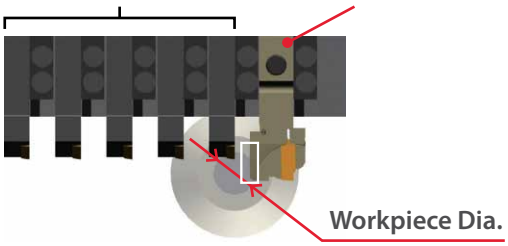
When using the JCTM holder 1218/1625/1616 for T01 on the following models, please check the workpiece diameter in advance to avoid interference.

<Target Models>

T01: Machines where both □16mm (or Spacer plate +□12mm) holders can be mounted

Non-T01: Machines where only □12mm holders can be mounted

Non-T01:□12mm **T01 :□16mm (or Spacer plate +□12mm)**



KGZ Compatibility

Workpiece Dia. / JCTM Part Number	ø14mm or smaller	ø14mm or larger
KGZ R/L 1218JX-*JCTM	Compatible	Please use KGZ R/L 1212JX-*JCTM or KGZ R/L 1616JX*D26JCTM
KGZ R/L 1625JX-*JCTM		
KGZ R/L 1616JX-*JCTM		

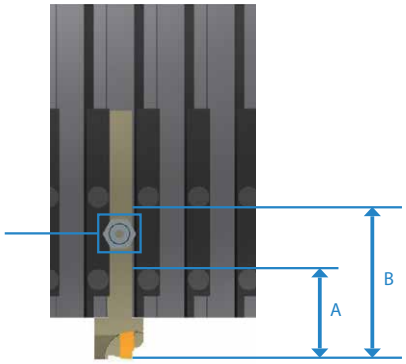
Piping part interference avoidance

Rectangular shank are recommended for use with piping parts connected to JCTM holders.

When connecting the J-**-R1/8-G1/8-L piping parts to the rectangular shank, please check for any potential interference with the machine in advance.

When connecting piping parts to the JCTM square shank, check the lengths of A and B below to avoid interference with the screws of the tool turret.

Adjust the piping part to fit between the top and bottom screws.

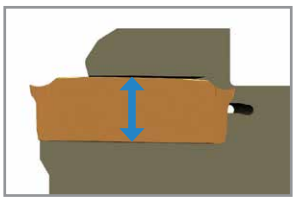


Shank Size	Square Shank Use
□0.500" □12mm	"A" shorter than 51.5mm and "B" longer than 68.5mm → Available Other than the above conditions → Use J-**-R1/8-G1/8-L or a rectangular shank
□0.625" □16mm	Available

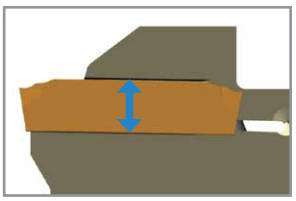
Compatibility with Conventional Tools

KGZ is not compatible with the conventional tools (KGD/KGM)

KGZ



Conventional



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