

JCTM Series

NEW



Superior chip control and long tool life

Applicable to different supply styles, like internal coolant with/without piping system

Large lineup for various tooling operations

Turning



Screw clamp - JCTM

External grooving



KGBF-JCTM

Cut-off



KGD-JCTM

Cut-off



KTKF-JCTM

JCTM Series direct coolant holder for small parts machining

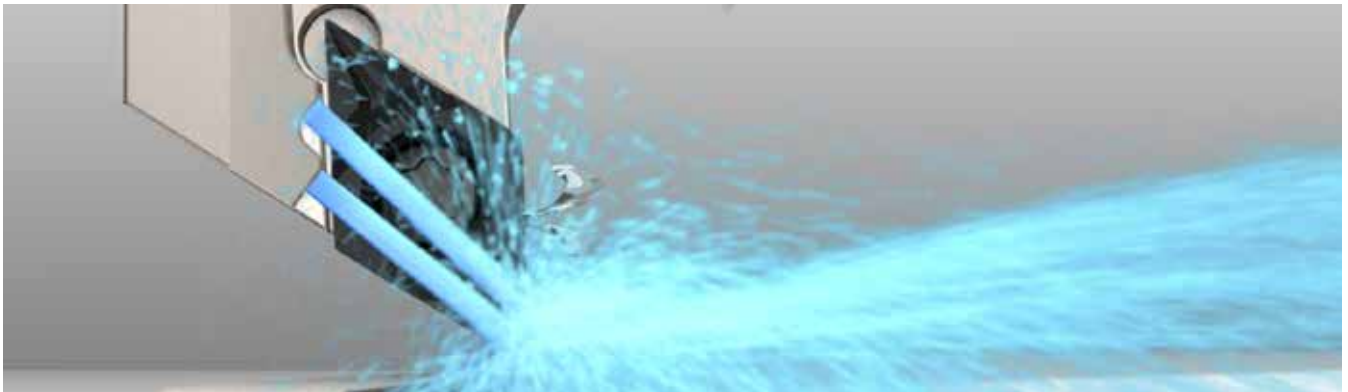
JCTM Series

Applicable to different supply styles.

Supports internal coolant with/without piping system.

Lineup of turning, grooving (KGBF), and cut-off (KGD/KTKF) holders

1 Using internal coolant to enhance tool performance



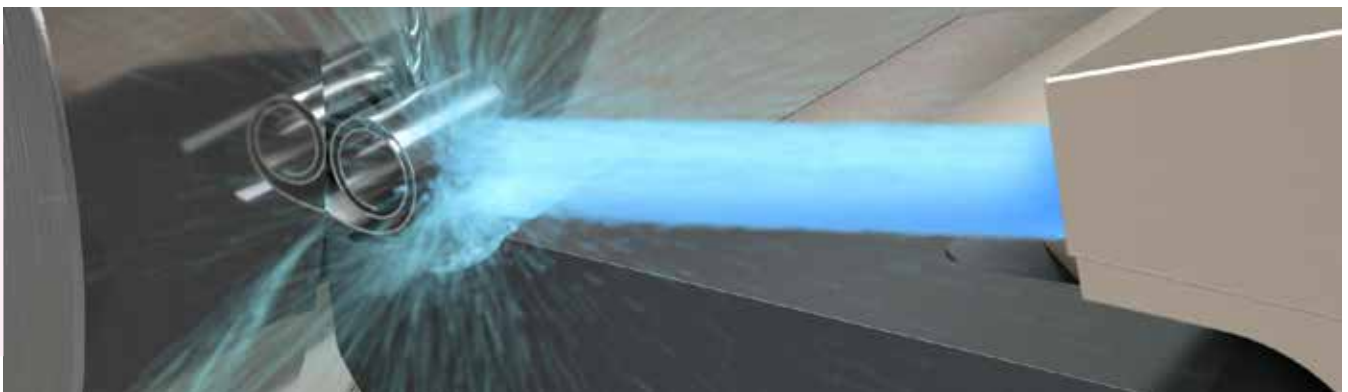
CG Image

Challenges

- Difficulty in automatic operation due to sudden chip entanglement
- Insert change is not enough to extend tool life

Solution

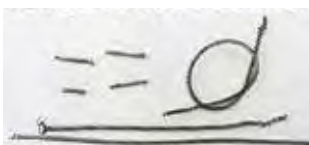
- The JCTM series is compatible with internal coolant supply system in a wide range of machines and also works under normal pressure
- Reduces down time by improving chip control and reduces cost by extending tool life



CG Image

Switching to internal coolant toolholder reduces chip entanglement

Internal coolant (2.5 MPa)



External coolant



Pin Alloy tool steel (SKS 93, JIS)

$V_c = 180 \text{ m/min}$, $a_p = 1.4 \text{ mm}$

$f = 0.13 \text{ mm/rev}$, wet

SDJC / DCMT11T304 type (User evaluation)

2

Applicable to different supply styles. Supports internal coolant with/without piping system

Internal coolant without piping

*When the tool turret supports direct coolant

NEW

Coolant is supplied directly from tool turret into the holder. No need for piping just by installing tools

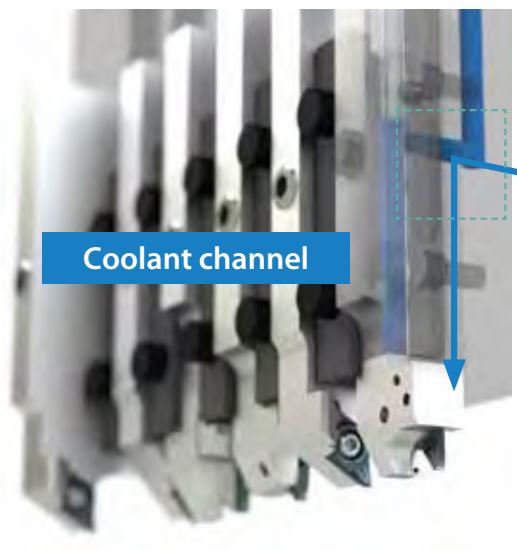
Applicable to wide range of machines

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)

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

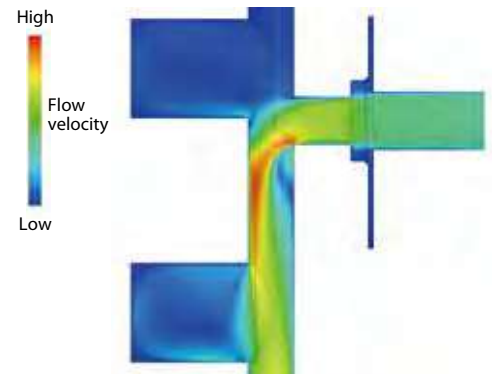
(Random order)
Based on Kyocera survey in January 2021



Point

Appropriate hole design to reduce energy loss based on deep analysis

Analysis image (Internal evaluation)

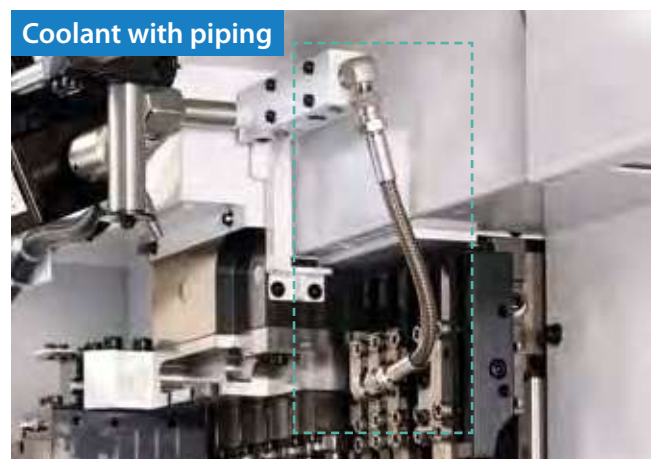


Internal coolant with piping

*Piping parts: See pages 13 and 14

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



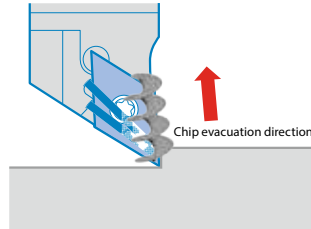
➔ P5

Coolant supply structure comparison (Internal evaluation)

(Image)

Screw clamp- JCTM

Discharges coolant toward the rake surface of insert



Chip control performance

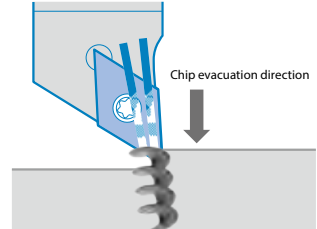
✓ Provides stable chip curls

Cooling effect

✓ The cutting edge stays cool

Competitor A

Discharges coolant down onto the chip forcing the chip into the part



Chip control performance

Chip becomes unstable

Cooling effect

Chip can prevent coolant supply to edges

● Double coolant holes

Provide coolant toward the rake face of the insert

(V Type □12: Single hole)

● Lineup

SCLC-JCTM / SDJC-JCTM
SVJB-JCTM / SVJP-JCTM

External grooving KGBF-JCTM

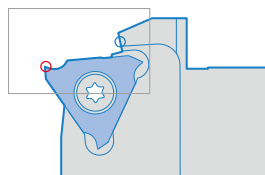


➔ P7

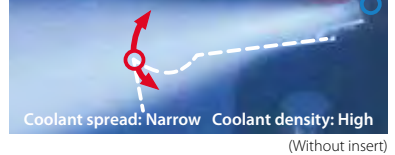
Coolant discharging comparison (Internal evaluation)

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

- Cutting edge
- Coolant hole



KGBF-JCTM



Competitor B



● Provides coolant toward the rake surface of insert

● Specification

Edge width: 0.25 - 3 mm
Ground chipbreaker/3D GL Chipbreaker
Maximum groove depth: 3 mm

4

Kyocera's high-performance insert grades

PR1725

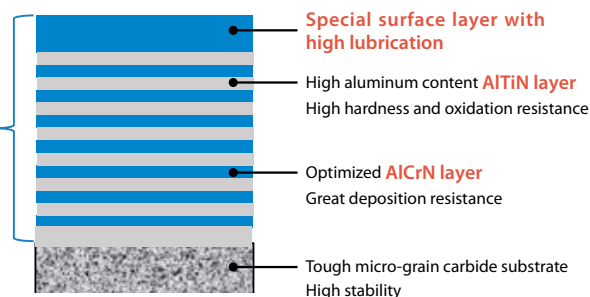
1st recommendation for steel machining. Excellent surface finish and long tool life.

MEGACOAT NANO® PLUS

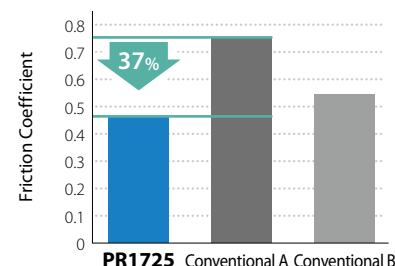
AlTiN/AlCrN Nano laminated film with superior wear resistance and adhesion resistance

Reduces cracking

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



Friction coefficient comparison (Internal evaluation)



Cut-off KGD-JCTM



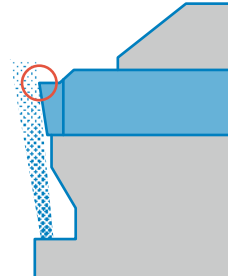
- Delivers coolant directly to front flank face
- Lineup

Maximum cutting dia.: ~ 24 mm, ~ 32 mm

Coolant discharge comparison (Image)

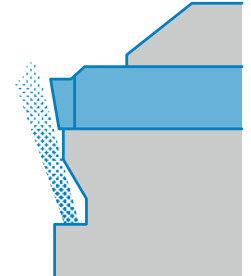
KGD-JCTM

Cooling the cutting edge leads to longer tool life



Competitor C

Coolant does not flow directly toward the cutting edge



Cut-off KTKF-JCTM

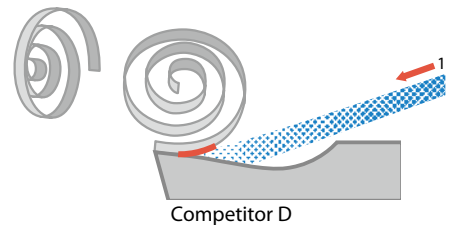
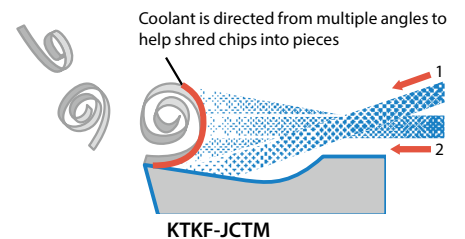


- Discharges coolant in three directions toward rake surface of insert
Two holes toward the rake face and one hole toward the flank face of the insert

Lineup

TKF 12 Type (Maximum cutting dia. ϕ 5 - ϕ 12)
TKF 16 Type (Maximum cutting dia. ϕ 16)

Coolant discharge structure comparison (Image)



PR1535 Stable machining of stainless steel

MEGACOAT NANO®

The combination of a high-toughness substrate and a special nano layer coating maintains long tool life and stable machining of stainless steel

Cracking comparison by diamond indenter (Internal evaluation)



23%
Fracture toughness*

Impact resistance

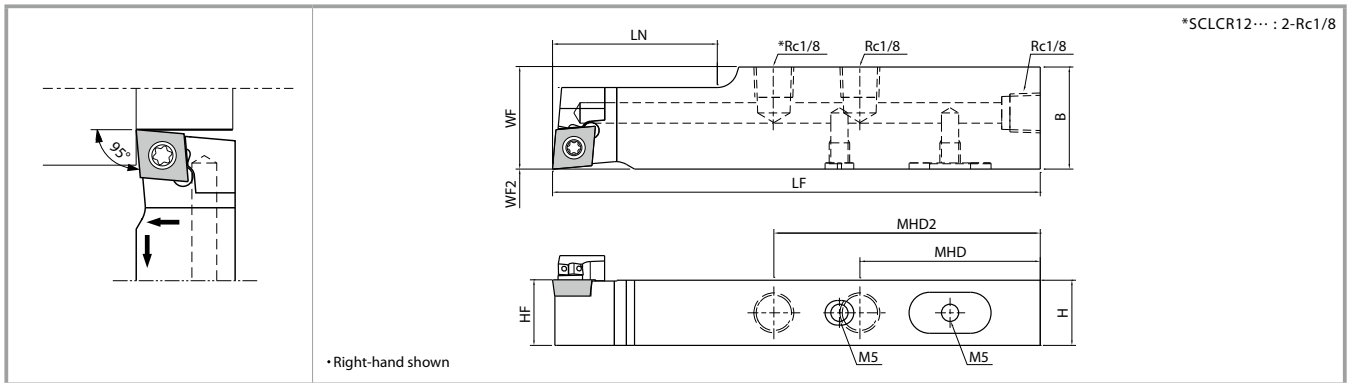


MEGACOAT base layer structure

Point

Superior performance in steel and stainless steel machining under unstable conditions

SCLC-JCTM



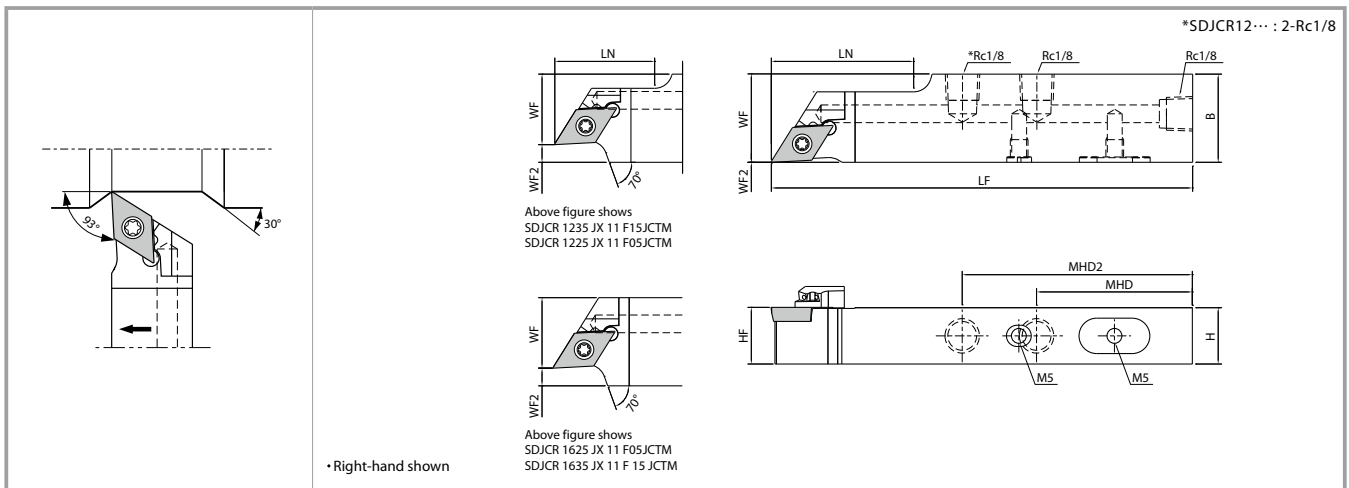
Toolholder dimensions

Description		Availability		Dimensions (mm)								Reference Corner-R (RE)	Parts				
													Clamp Screw	Wrench	Plug 1	Plug 2	
		R	L	H	HF	B	LF	LN	WF	WF2	MHD		MHD2				
SCLCR	1218JX-09FFJCTM	●		12	12	18	120	28	18	0	54	-	0.2	SB-408STR	FT-15	GP-1	HSSX4LP
	1625JX-09FFJCTM	●		16	16	25		40	25		44	65					
	2025JX-09FFJCTM	●		20	20												

*For coolant holder piping parts, see pages 13 and 14.

● : Available

SDJC-JCTM

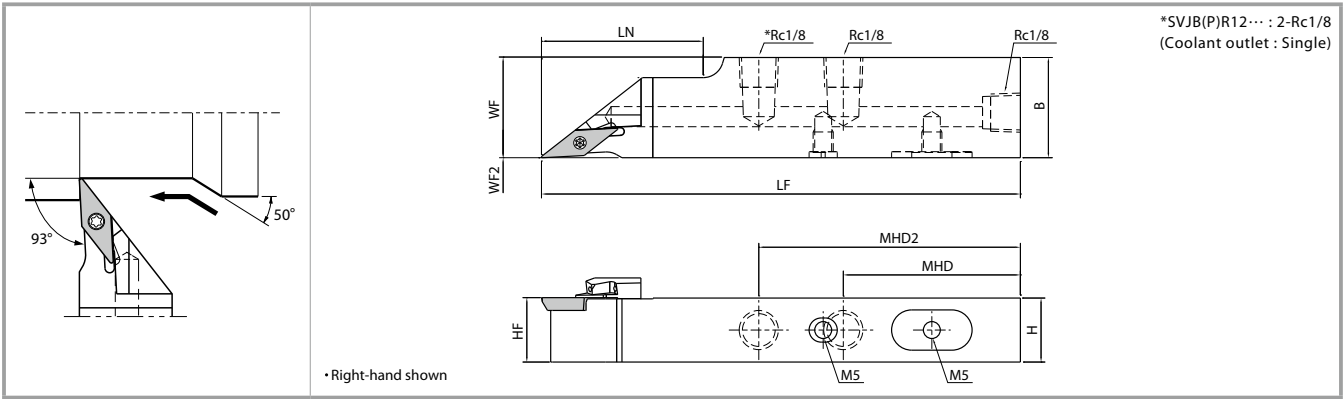


Toolholder dimensions

Description		Availability		Dimensions (mm)									Reference corner-R (RE)	Parts							
														Clamp Screw	Wrench	Plug 1	Plug 2				
		R	L	H	HF	B	LF	LN	WF	WF2	MHD	MHD2									
SDJCR	1218JX-11FFJCTM	●		12	12	18	120	28	18	0	54	-	0.2	SB-408STR	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				SB-408STR	FT-15	GP-1	HS5X4LP	
	1235JX11F15JCTM	●				35				15											
SDJCR	1625JX11F05JCTM	●		16	16	25	120	-	20	5	44	65	0.2	SB-408STR	FT-15	GP-1					HS5X4LP
	1635JX11F15JCTM	●				35				15											

*For coolant holder piping parts, see pages 13 and 14.

● : Available



Toolholder dimensions

Description		Stock		Dimensions (mm)								Reference corner-R (RE)	Parts				
													Clamp Screw	Wrench	Plug 1	Plug 2	
		R	L	H	HF	B	LF	LN	WF	WF2	MHD		MHD2				
SVJBR	1218JX-11FFJCTM	●		12	12	18	120	28	18	0	54	-	0.4	SB-2570TR	FT-8	GP-1	HSSX4LP
	1625JX-11FFJCTM	●		16	16	25		40	25		44	65					-
	2025JX-11FFJCTM	●		20	20												-
SVJPR	1218JX-11FFJCTM	●		12	12	18	120	28	18	0	54	-	0.2	SB-2570TR	FT-8	GP-1	HSSX4LP
	1625JX-11FFJCTM	●		16	16	25		40	25		44	65					-
	2025JX-11FFJCTM	●		20	20												-

*For coolant holder piping parts, see pages 13 and 14. ● : Available

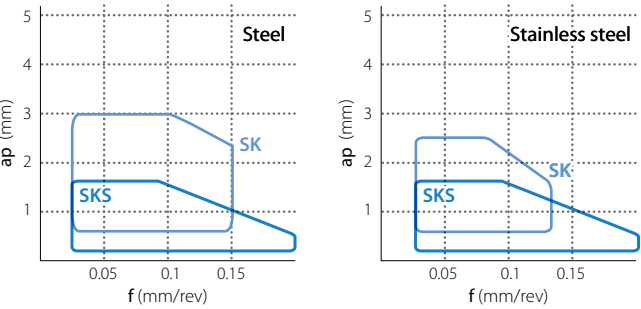
Applicable chipbreakers

3D Sharp edge chipbreaker series

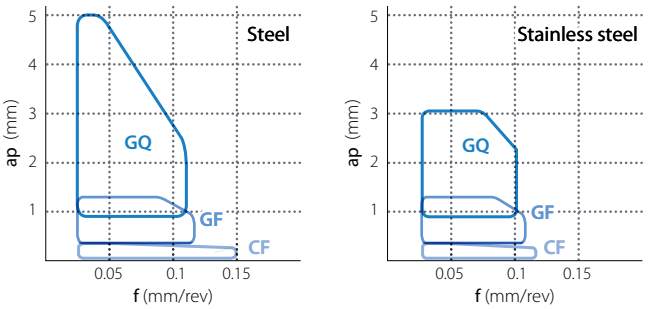
- 1
- Excellent chip control in a wide range of machining applications
- 2
- High precision with periphery grinding and sharp edge specification
- 3
- Anti-welding properties with improved mirror surface finish



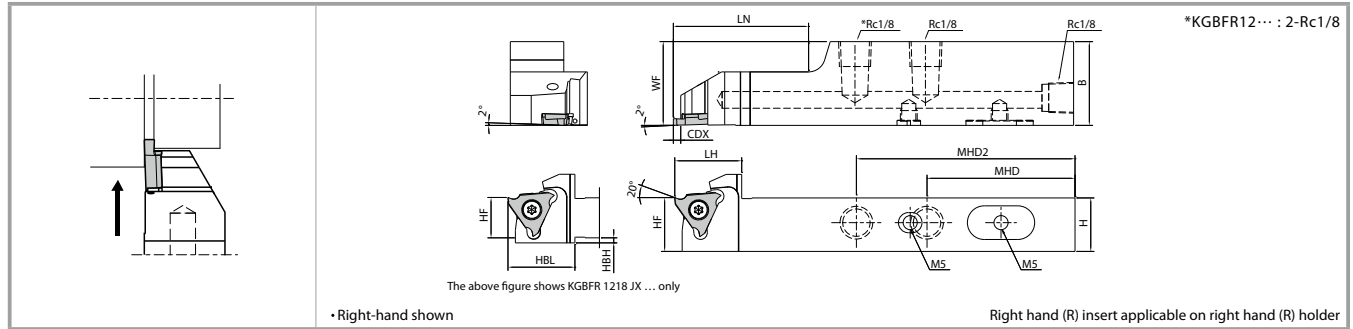
1st recommended chipbreakers (Low cutting force)



Additional chipbreakers (Chip control oriented)



KGBF-JCTM



Toolholder dimensions

Description	Availability	Dimensions (mm)													Parts			
		R	L	H=HF	HBH	B	LF	HBL	LH	LN	WF	CDX *1	MHD	MHD2	Clamp Screw	Wrench	Plug 1	Plug 2
KGBFR 1218JX-16FJCTM	●			12	1.5	18		20		28	12		54	-	SB-4070TRW	FT-8	GP-1	HSSX4LP
1625JX-16FJCTM	●			16	-	25	120		20	40	16	3	44	65				
2025JX-16FJCTM	●			20							20							

*For coolant holder piping parts, see pages 13 and 14.

*1. CDX indicates the distance from the holder face to the cutting edge. The actual machining depth is insert's CDX.

● : Available

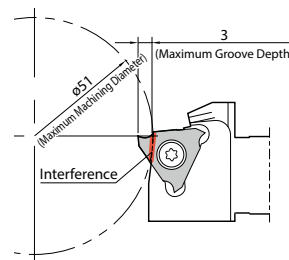
Precautions

GBF and GBA compatibility

- GBF (Insert) can be attached to KGBA/KGBAS (holder).
Caution: The maximum groove depth for KGBA/KGBAS holders is 2.5 mm
- GBA (Insert) can be attached to KGBF-JCTM (holder).
Caution: Rake angle when the holder is installed becomes 11 °.

Maximum cutting dia. limits

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.



Recommended cutting conditions ★ 1st Recommendation ☆ 2nd Recommendation

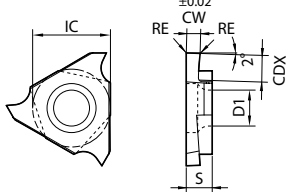
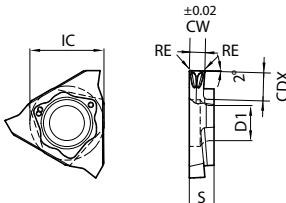
Workpiece	Recommended insert grade (Vc: m/min)			1. Feed during grooving machining (mm/rev) 2. Feed during traversing (mm/rev) 3. D.O.C. during traversing (mm)			
	MEGACOAT	MEGACOAT NANO	Carbide				
	PR1215	PR1535	GW15				
Carbon steel	★ 80 – 180	☆ 70 – 160	–	GBF32R 025 – 053 (~000F) 1. 0.01 – 0.05 (0.005 - 0.03) 2. Traversing is NOT Recommended 3. Traversing is NOT Recommended	GBF32R 065 – 095 (~000F) 1. 0.02 – 0.07 (0.01 - 0.04) 2. Traversing is NOT Recommended 3. Traversing is NOT Recommended	GBF32R 100 – 145 (~000F) 1. 0.03 – 0.08 (0.01 - 0.05) 2. 0.03 – 0.06 (0.01 - 0.04) 3. MAX. 0.2	GBF32R 150 – 300 (~200 - 000F) 1. 0.03 – 0.08 (0.01 - 0.05) 2. 0.03 – 0.06 (0.01 - 0.04) 3. MAX. 0.2
Alloy steel	★ 80 – 180	☆ 70 – 160	–	1. 0.01 – 0.04 (0.005 - 0.025) 2. Traversing is NOT Recommended 3. Traversing is NOT Recommended	1. 0.02 – 0.06 (0.01 - 0.03) 2. Traversing is NOT Recommended 3. Traversing is NOT Recommended	1. 0.03 – 0.07 (0.01 - 0.04) 2. 0.02 – 0.05 (0.01 - 0.03) 3. MAX. 0.2	1. 0.03 – 0.07 (0.01 - 0.04) 2. 0.02 – 0.05 (0.01 - 0.03) 3. MAX. 0.2
Stainless steel	☆ 60 – 130	★ 50 – 120	–	1. 0.01 – 0.04 (0.005 - 0.02) 2. Traversing is NOT Recommended 3. Traversing is NOT Recommended	1. 0.02 – 0.06 (0.01 - 0.025) 2. Traversing is NOT Recommended 3. Traversing is NOT Recommended	1. 0.03 – 0.07 (0.01 - 0.03) 2. 0.02 – 0.05 (0.01 - 0.025) 3. MAX. 0.2	1. 0.03 – 0.07 (0.01 - 0.03) 2. 0.02 – 0.05 (0.01 - 0.025) 3. MAX. 0.2
Cast iron	–	–	★ 60 – 100	1. 0.01 – 0.05 (0.005 - 0.03) 2. Traversing is NOT Recommended 3. Traversing is NOT Recommended	1. 0.02 – 0.07 (0.01 - 0.04) 2. Traversing is NOT Recommended 3. Traversing is NOT Recommended	1. 0.03 – 0.08 (0.01 - 0.05) 2. 0.03 – 0.06 (0.01 - 0.04) 3. MAX. 0.2	1. 0.03 – 0.08 (0.01 - 0.05) 2. 0.03 – 0.06 (0.01 - 0.04) 3. MAX. 0.2
Aluminum alloy	–	–	★ 150 – 400	1. 0.01 – 0.05 (0.005 - 0.03) 2. Traversing is NOT Recommended 3. Traversing is NOT Recommended	1. 0.02 – 0.07 (0.01 - 0.04) 2. Traversing is NOT Recommended 3. Traversing is NOT Recommended	1. 0.03 – 0.08 (0.01 - 0.05) 2. 0.03 – 0.06 (0.01 - 0.04) 3. MAX. 0.2	1. 0.03 – 0.08 (0.01 - 0.05) 2. 0.03 – 0.06 (0.01 - 0.04) 3. MAX. 0.2
Brass	–	–	★ 150 – 300	1. 0.01 – 0.04 (0.01 - 0.03) 2. Traversing is NOT Recommended 3. Traversing is NOT Recommended	1. 0.02 – 0.06 (0.01 - 0.04) 2. Traversing is NOT Recommended 3. Traversing is NOT Recommended	1. 0.03 – 0.07 (0.01 - 0.05) 2. 0.02 – 0.05 (0.01 - 0.04) 3. MAX. 0.2	1. 0.03 – 0.07 (0.01 - 0.05) 2. 0.02 – 0.05 (0.01 - 0.04) 3. MAX. 0.2

GBF-GL

Workpiece	Recommended insert grade (Vc: m/min)		1. Feed during grooving machining (mm/rev) 2. Feed during traversing (mm/rev) 3. D.O.C. during traversing (mm)			
	MEGACOAT	MEGACOAT NANO				
	PR1215	PR1535				
Carbon steel	★ 80 – 180	☆ 70 – 160	GBF32R 075 – 005GL 1. 0.02 – 0.07 2. Traversing is NOT Recommended 3. Traversing is NOT Recommended	GBF32R 095 – 005GL 1. 0.03 – 0.08 2. 0.03 – 0.06 3. MAX. 0.2	GBF32R 150 – 200-010GL 1. 0.03 – 0.08 2. 0.03 – 0.06 3. MAX. 0.3	GBF32R 300 – 010GL 1. 0.04 – 0.1 2. 0.04 – 0.08 3. MAX. 0.5
Alloy steel	★ 80 – 180	☆ 70 – 160	1. 0.02 – 0.06 2. Traversing is NOT Recommended 3. Traversing is NOT Recommended	1. 0.03 – 0.07 2. 0.03 – 0.06 3. MAX. 0.2	1. 0.03 – 0.07 2. 0.03 – 0.06 3. MAX. 0.3	1. 0.04 – 0.09 2. 0.04 – 0.08 3. MAX. 0.5
Stainless steel	☆ 60 – 130	★ 50 – 120	1. 0.02 – 0.06 2. Traversing is NOT Recommended 3. Traversing is NOT Recommended	1. 0.03 – 0.07 2. 0.03 – 0.06 3. MAX. 0.2	1. 0.03 – 0.07 2. 0.03 – 0.06 3. MAX. 0.3	1. 0.04 – 0.09 2. 0.04 – 0.08 3. MAX. 0.5

List of KGBF-JCTM applicable inserts

Applicable inserts

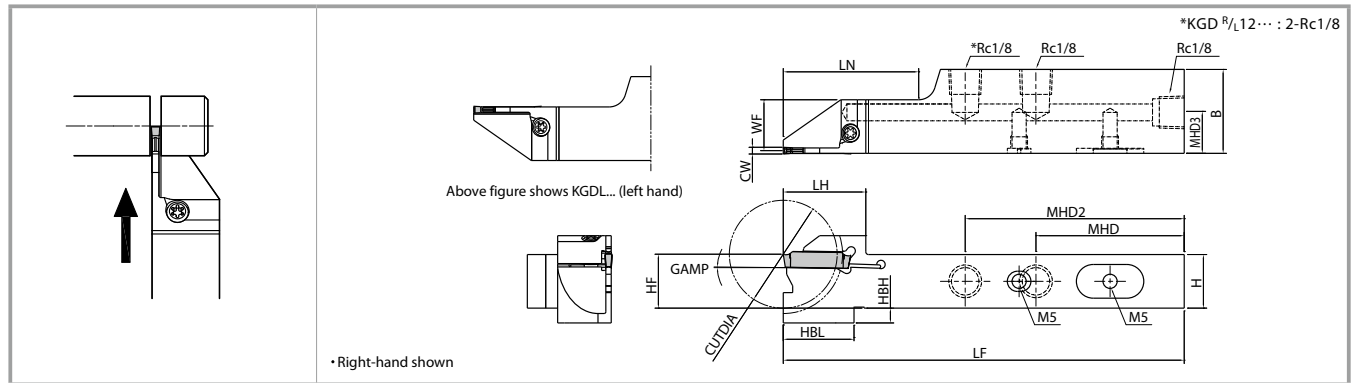
				Usage classification		P	Carbon steel /Alloy steel	●	☺	
				☺ : Continuous-light interruption /1st Choice		M	Stainless steel	☺	●	
				☺ : Continuous-light interruption /2nd Choice		K	Cast iron			●
				● : Continuous/1st Choice		N	Non-ferrous metal			●
				○ : Continuous /2nd Choice		S	Titanium alloy			●
Description	IC	S	D1							
GBF32	9.525	3.18	4.4							
Shape		Description		Dimensions (mm)			MEGACOAT	MEGACOAT NANO	Carbide	
				CW	CDX	RE	PR1215	PR1535	GW15	
		GBF32R	025-000F	0.25	0.6	0.00	●	●	●	
			025-005			0.05	●	●	●	
			030-000F	0.30	0.8	0.00	●	●	●	
			030-005			0.05	●	●	●	
			033-000F *1	0.33	0.8	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	1.2	0.00	●	●	●	
			053-005 *3			0.05	●	●	●	
			065-000F	0.65	1.2	0.00	●	●	●	
			065-005			0.05	●	●	●	
			075-000F	0.75	2.0	0.00	●	●	●	
			075-005			0.05	●	●	●	
			080-000F	0.80	2.0	0.00	●	●	●	
			080-005			0.05	●	●	●	
			095-000F	0.95	2.0	0.00	●	●	●	
			095-005			0.05	●	●	●	
			100-000F	1.00	2.0	0.00	●	●	●	
			100-005			0.05	●	●	●	
			110-000F	1.10	2.0	0.00	●	●	●	
			110-005			0.05	●	●	●	
			120-000F	1.20	2.0	0.00	●	●	●	
			120-005			0.05	●	●	●	
			125-000F	1.25	2.0	0.00	●	●	●	
			125-005			0.05	●	●	●	
			125-010			0.1	●	●	●	
			130-000F	1.30	2.0	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	2.7	0.00	●	●	●	
			145-005			0.05	●	●	●	
			145-010			0.1	●	●	●	
			150-000F	1.50	2.7	0.00	●	●	●	
			150-005			0.05	●	●	●	
			150-010			0.1	●	●	●	
			165-000F	1.65	2.7	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	3.0	0.00	●	●	●	
			175-005			0.05	●	●	●	
			175-010			0.1	●	●	●	
			200-000F	2.00	3.0	0.00	●	●	●	
			200-005			0.05	●	●	●	
			200-010			0.1	●	●	●	
			225-005	2.25	3.0	0.05	●	●	●	
			225-010			0.1	●	●	●	
			250-005	2.50	3.0	0.05	●	●	●	
			250-010			0.1	●	●	●	
			300-005	3.00	3.0	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 dia. in a groove depth of 3 mm is $\phi 51$ mm (Please check the precautions on page 7.)

*1. GBF 32 R 033-000F/005 Edge width tolerance : $0.33^{+0.015}_{-0.025}$ *2. GBF 32 R043-000F/005 Edge width tolerance : $0.43^{+0.015}_{-0.025}$ *3. GBF 32 R053-000F/005 Edge width tolerance : $0.53^{+0.015}_{-0.025}$

● : Available

KGD-JCTM



Toolholder dimensions

Description	Availability		Cutting dia.	Dimensions (mm)											Angle	Edge width CW (mm)		Parts				Applicable inserts		
	R	L		CUTDIA	H-HF	HBH	B	LF	LH	HBL	LN	WF	MHD	MHD2		MHD3	GAMP	MIN.	MAX.					
KGDR 1218JX-2JCTM	●		24	12	8.5	18	120	19.5	21	44	11.2	54	-	8.4	1°	2.0	3.0	SB-40120TR		GP-1		GDM Type GDG Type (GDMS Type) (GDGS Type)		
KGDL 1218JX-2JCTM		●						21.5															7.7	
KGDR 1625JX-2JCTM	●		32	16	4.5	25	120	24.5	21	40	15.2	44	65	12.2	1°	2.4	3.0							
KGDL 1625JX-2JCTM		●						24.5	21	40	15	44	65	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	120	24.5	21	40	15	44	65	12.2	1°	3.0	4.0							
KGDL 1625JX-2.4JCTM		●						24.5	21	40	14.8	44	65	7.7										
KGDR 1218JX-3JCTM	●		24	12	8.5	18	120	19.5	21	44	10.8	54	-	8.6	1°	3.0	4.0							
KGDL 1218JX-3JCTM		●						21.5															7.7	
KGDR 1625JX-3JCTM	●		32	16	4.5	25	120	24.5	21	40	14.8	44	65	12.2	1°	3.0	4.0							
KGDL 1625JX-3JCTM		●						24.5	21	40	14.8	44	65	7.7										

*For coolant holder piping parts, see pages 13 and 14.

● : Available

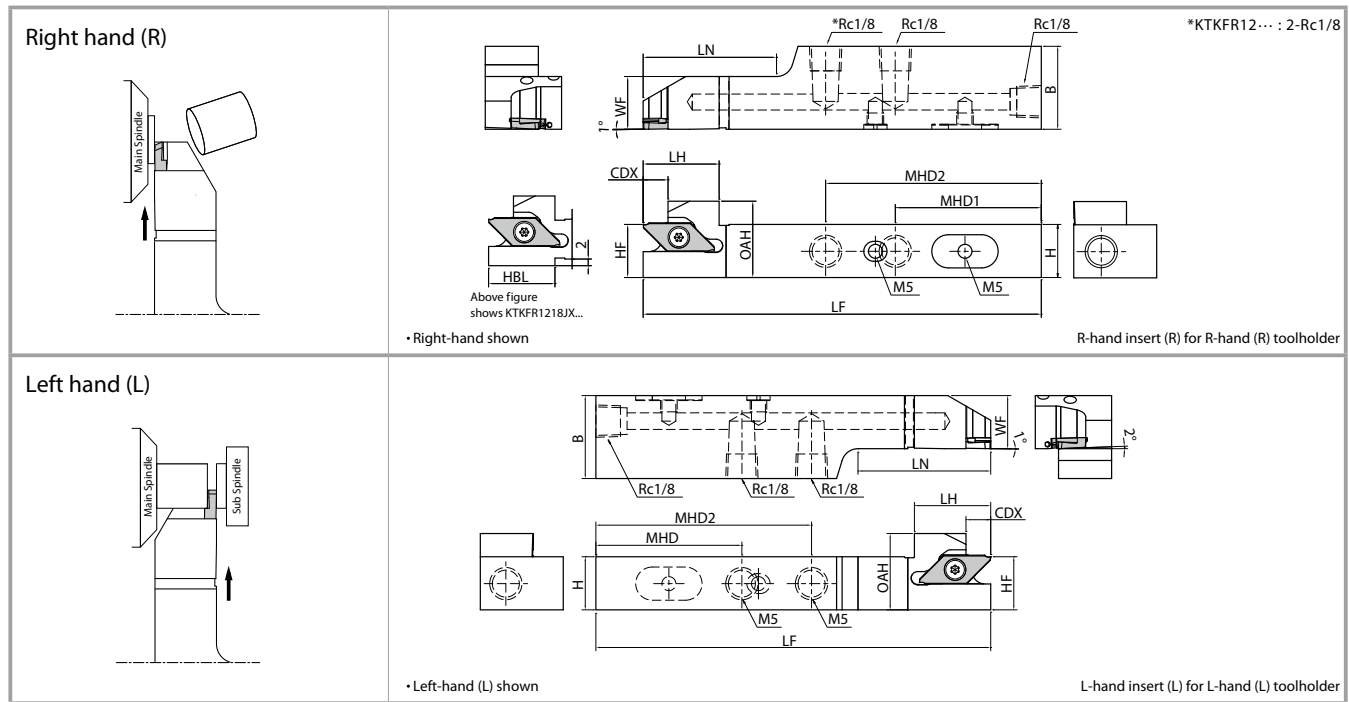
Recommended cutting conditions ★ 1st Recommendation ☆ 2nd Recommendation

Workpiece	Chipbreaker	Recommended insert grade (Vc: m/min)					f (mm/rev)				Remarks
		MEGACOAT NANO	MEGACOAT		DLC Coating	Carbide	Edge width CW (mm)				
		PR1535	PR1225	PR1215	PDL025	GW15	2.0	2.0 - 4.0	2.5 / 3.0	3.0 - 4.0	
Carbon steel	PF(RE=0.03)						0.02 – 0.06		0.02 – 0.08		Wet
	PF(RE=0.15)	☆	★	☆			0.03 – 0.08		0.04 – 0.10	–	
	PQ	70 – 150	70 – 150	70 – 180	–	–	0.03 – 0.1	–	0.04 – 0.12		
	PG						0.01 – 0.04		0.01 – 0.05		
	PM	☆	★	☆			–	0.08 – 0.18	–	–	
	PH	80 – 200	80 – 200	100 – 200			0.1 – 0.25	–	–	0.15 – 0.28	
Alloy steel	PF(RE=0.03)						0.02 – 0.06		0.02 – 0.08		
	PF(RE=0.15)	☆	★	☆	–	–	0.03 – 0.08		0.04 – 0.10	–	
	PQ	70 – 150	70 – 150	70 – 180			0.03 – 0.1	–	0.04 – 0.12		
	PG						0.01 – 0.04		0.01 – 0.05		
	PM	☆	★	☆			–	0.08 – 0.18	–	–	
	PH	70 – 180	70 – 180	80 – 180			0.1 – 0.25	–	–	0.15 – 0.28	
Stainless steel	PF(RE=0.03)						0.01 – 0.04		0.01 – 0.05		
	PF(RE=0.15)	★	☆	☆	–	–	0.03 – 0.07		0.04 – 0.08	–	
	PQ	60 – 120	60 – 120	60 – 150			0.02 – 0.07	–	0.02 – 0.08		
	PG						0.01 – 0.03		0.01 – 0.04		
	PM	★	☆	☆			–	0.06 – 0.12	–	–	
	PH	60 – 150	60 – 150	60 – 150			0.05 – 0.12	–	–	0.08 – 0.15	
Cast iron	PF(RE=0.03)			★		–	0.02 – 0.07		0.03 – 0.08		
	PF(RE=0.15)			80 – 200	–		0.03 – 0.09		0.04 – 0.10	–	
	PQ	–	–			☆	0.04 – 0.1	–	0.04 – 0.12		
	PG					50 – 100	0.01 – 0.04		0.01 – 0.05		
	PM			★			–	0.08 – 0.18	–	–	
	PH			100 – 200		–	0.1 – 0.25	–	–	0.15 – 0.28	
Aluminium alloy	PQ	–	–	–	★	☆	–	–	–		
	PG				200 – 500	200 – 450	0.01 – 0.05	–	0.01 – 0.06	–	
Brass	PQ	–	–	–	–	★	–	–	–		
	PG					100 – 200	0.01 – 0.07	–	0.01 – 0.08	–	

List of KGD-JCTM applicable inserts

Applicable inserts

			Usage classification		P	Carbon steel / Alloy steel						
					M	Stainless steel						
					N	Non-ferrous metal						



Toolholder dimensions

Description		Availability		Dimensions (mm)											Parts				Applicable inserts	
															Clamp screw	Wrench	Plug 1	Plug 2		
				R	L	H	HF	OAH	B	LF	HBL	LH	LN	WF	CDX	MHD	MHD2			
KTKFR 1218JX-12JCTM	●		12	12	19	18	120	20	20	28	12	7.5	54	-	SB-4590TRWN	FT-10	GP-1	HSSX4LP	TKF12R/...	
KTKF ^{R/L} 1625JX-12JCTM	●	●	16	16	23	25		-	23	40	16		44	21(65)					TKFT12R/...	
KTKF ^{R/L} 2025JX-12JCTM	●	●	20	20	27			20	TKFT12R/L...											
KTKF ^{R/L} 1625JX-16JCTM	●	●	16	16	23	25	120	-		23	40	16	9.6	44	21(65)	SB-4590TRWN	FT-10	GP-1		HSSX4LP
KTKF ^{R/L} 2025JX-16JCTM	●	●	20	20	27						41	20							TKFT16R/L...	

*For coolant holder piping parts, see pages 13 and 14.

● : Available

Recommended cutting conditions ★ 1st Recommendation ☆ 2nd Recommendation

Workpiece	Recommended insert grade (Vc: m/min)					TKF12						TKF16		Remarks
						Edge width CW (mm)						Edge width CW (mm)		
	MEGACOAT NANO PLUS	MEGACOAT NANO	MEGACOAT	DLC Coating	Carbide	0.5	0.7	1.0	1.25	1.5	2.0	1.5	2.0	
	PR1725	PR1535	PR1225	PDL025	KW10	f (mm/rev)						f (mm/rev)		
Carbon Steel	★ 70 – 170 (50 – 140)	☆ 70 – 150 (50 – 120)	☆ 70 – 150 (50 – 120)	–	–	0.01 – 0.02	0.01 – 0.03	0.01 – 0.04 (0.01 – 0.05)	0.01 – 0.04	0.01 – 0.04 (0.02 – 0.1)	0.01 – 0.04 (0.02 – 0.1)	0.02 – 0.07 (0.02 – 0.1)	0.02 – 0.07 (0.02 – 0.1)	Wet
Alloy Steel	★ 70 – 170 (50 – 140)	☆ 70 – 150 (50 – 120)	☆ 70 – 150 (50 – 120)	–	–	0.01 – 0.02	0.01 – 0.03	0.01 – 0.04 (0.01 – 0.05)	0.01 – 0.04	0.01 – 0.04 (0.02 – 0.1)	0.01 – 0.04 (0.02 – 0.1)	0.02 – 0.07 (0.02 – 0.1)	0.02 – 0.07 (0.02 – 0.1)	
Stainless Steel	☆ 60 – 140 (40 – 120)	★ 60 – 120 (40 – 100)	☆ 60 – 120 (40 – 100)	–	–	0.005 – 0.015	0.01 – 0.02	0.01 – 0.02 (0.01 – 0.03)	0.01 – 0.02	0.01 – 0.02 (0.01 – 0.05)	0.01 – 0.02 (0.01 – 0.05)	0.01 – 0.04 (0.01 – 0.05)	0.01 – 0.04 (0.01 – 0.05)	
Cast Iron	–	–	–	–	★ 50 – 100	0.01 – 0.03	0.01 – 0.04	0.01 – 0.05	0.01 – 0.05	0.01 – 0.05	0.01 – 0.05	0.02 – 0.08	0.02 – 0.08	
Aluminium	–	–	–	★ 200 – 500	☆ 200 – 450	0.01 – 0.03	0.01 – 0.04	0.01 – 0.05	0.01 – 0.05	0.01 – 0.05	0.01 – 0.05	0.02 – 0.08	0.02 – 0.08	
Brass	–	–	–	–	★ 100 – 200	0.01 – 0.03	0.01 – 0.04	0.01 – 0.06	0.01 – 0.06	0.01 – 0.06	0.01 – 0.06	0.02 – 0.1	0.02 – 0.1	

Recommendations in parentheses () : Tough edge type (TKF.T.)

List of KTKF-JCTM applicable inserts

Applicable inserts (TKF 12/TKF 16)

Applicable inserts (TKF 12/TKF 16)		Usage classification		P	Carbon steel /Alloy steel											
		: Continuous-light interruption /1st Choice		M	Stainless steel											
		: Continuous-light interruption /2nd Choice		K	Cast iron											
		: Continuous/1st Choice : Continuous /2nd Choice		N	Non-ferrous metal											
Shape Handed insert shows right-hand		Description	Dimensions (mm)					Angle	MEGACOAT NANO PLUS	MEGACOAT NANO	MEGACOAT	DLC Coating	Carbide			
			CW	CUTDIA	RE	W1	S	D1	PSIR R/L	PR1725 R L	PR1535 R L	PR1225 R L	PDL025 R L	KW10 R L		
 With right lead angle	TKF12 R/L	050-S-16DR	0.5	5	0.03	3	8.7	5	16°							
		070-S-16DR	0.7	8												
		100-S-16DR	1.0	12												
		125-S-16DR	1.25													
		150-S-16DR	1.5													
		200-S-16DR	2.0													
 With right lead angle/Tough edge	TKF12 R/L	050-S	0.5	5	0.03	3	8.7	5	0°							
		070-S	0.7	8												
		100-S	1.0	12												
		125-S	1.25													
		150-S	1.5													
		200-S	2.0													
 With right lead angle/Tough edge	TKF12 R/L	100-T-16DR	1.0	12	0.08	3	8.7	5	16°							
		150-T-16DR	1.5													
		200-T-16DR	2.0													
 Tough edge	TKF12 R/L	100-T	1.0	12	0.08	3	8.7	5	0°							
		150-T	1.5													
		200-T	2.0													
 With right lead angle/Without chipbreaker	TKF12 R/L	050-NB-20DR	0.5	5	0	3	8.7	5	20°							
		070-NB-20DR	0.7	8												
		100-NB-20DR	1.0	12												
		150-NB-20DR	1.5													
		200-NB-20DR	2.0													
 Without chipbreaker	TKF12 R/L	050-NB	0.5	5	0	3	8.7	5	0°							
		070-NB	0.7	8												
		100-NB	1.0	12												
		150-NB	1.5													
		200-NB	2.0													
 With right lead angle	TKF16 R/L	150-S-16DR	1.5	16	0.05	4	9.5	5	16°							
		200-S-16DR	2.0													
 With right lead angle/Tough edge	TKF16 R/L	150-S	1.5	16	0.05	4	9.5	5	0°							
		200-S	2.0													
 With right lead angle/Tough edge	TKF16 R/L	150-T-16DR	1.5	16	0.08	4	9.5	5	16°							
		200-T-16DR	2.0													
 Tough edge	TKF16 R/L	150-T	1.5	16	0.08	4	9.5	5	0°							
		200-T	2.0													
 With right lead angle/Without chipbreaker	TKF16 R/L	150-NB-20DR	1.5	16	0	4	9.5	5	20°							
		200-NB-20DR	2.0													
 Without chipbreaker	TKF16 R/L	150-NB	1.5	16	0	4	9.5	5	0°							
		200-NB	2.0													

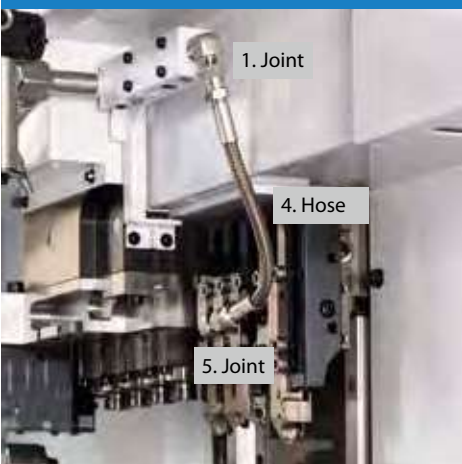
Lead angle (front cutting edge angle: PSIR R / L) shows the angle when installed in the toolholder.
Insert's cutting dia. (CUTDIA) indicates the cutting dia. when the tool tip has proceeded to the center of workpiece.

● : Available

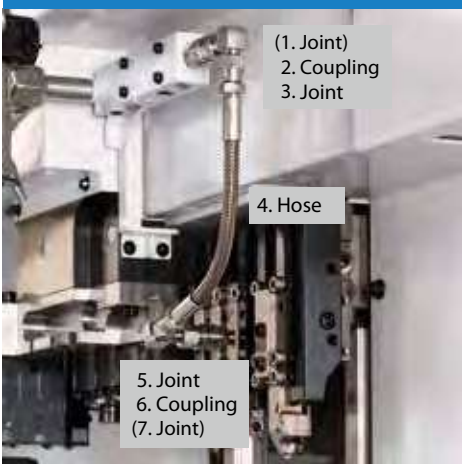
Piping parts

Pipe parts will be required separately if internal coolant is used.

Without coupling (Pump pressure: Up to 20 MPa)



With coupling (Pump pressure: Up to 7.5 MPa)



Combination part description (Example)

Parts	Description
1. Joint	J-AN-R1/8-G1/8
4. Hose	HS-G1/8-G1/8-200
5. Joint	J-AN-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)

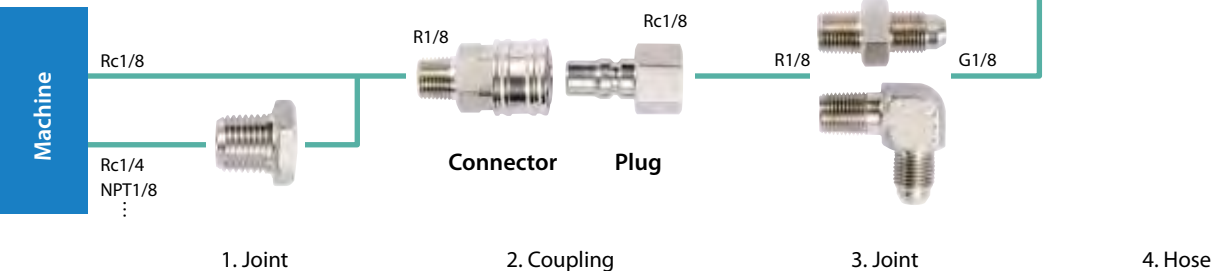
Parts	Description
(1. Joint)	-
2. Coupling	CP-ST-R1/8, P-ST-RC1/8
3. Joint	J-AN-R1/8-G1/8
4. Hose	HS-G1/8-G1/8-200
5. Joint	J-AN-R1/8-G1/8
6. Coupling	P-ST-RC1/8, CP-ST-R1/8
(7. Joint)	-

Convert the thread standards on the machine's side (Rc1/4, Rc1/8, NPT1/8, etc.) to thread standards of the coupling (Rc1/8, etc.) or hose (G1/8) for use.
Use sealing agents such as seal tapes when installing piping parts.

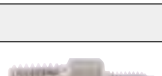
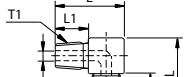
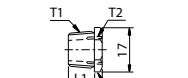
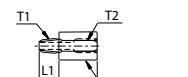
Without coupling (Pump pressure: Up to 20 MPa)



With coupling (Pump pressure: Up to 7.5 MPa)

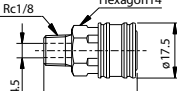
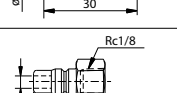


(Unit: mm)

Shape		Description	Availability	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

●: Available

(Unit: mm)

Shape		Description	Availability
		CP-ST-R1/8	●
		P-ST-RC1/8	●

● : Available

(Unit: mm)

Shape		Description	Availability	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

●: Available





Coolant channel CG image

Drastically improve machining performance
by using **internal coolant**