

# JCTM Series

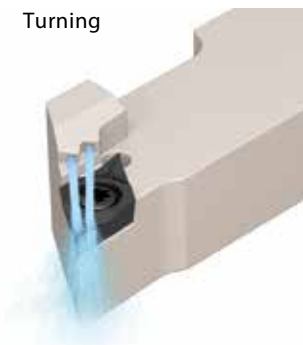


Superior chip control and long tool life

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

Large lineup for various tooling operations

Turning



Screw clamp - JCTM

External grooving



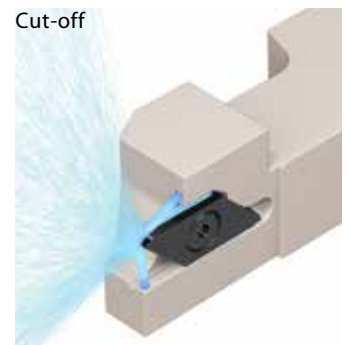
KGBF-JCTM

Cut-off



KGD-JCTM

Cut-off



KTKF-JCTM

JCTM Series direct coolant holder for small parts machining

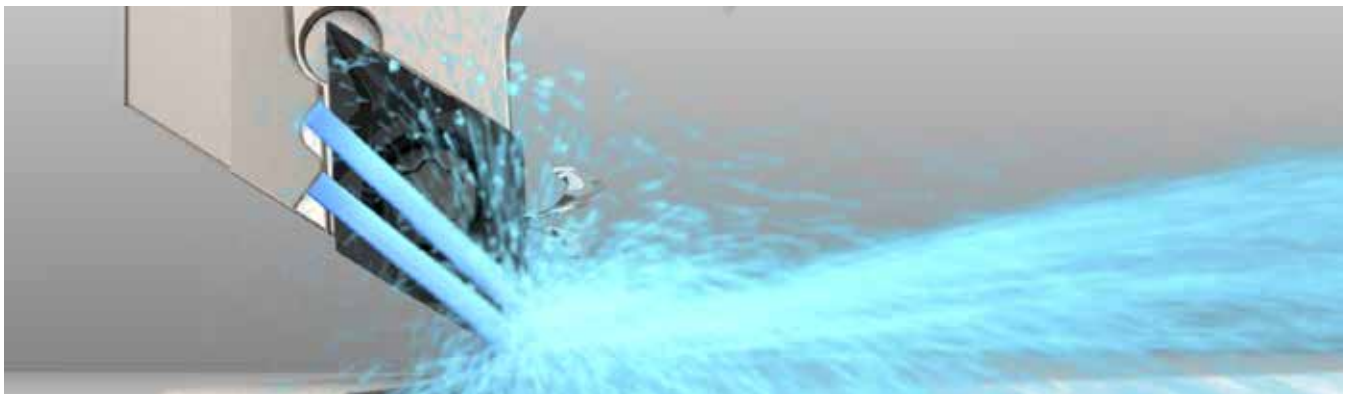
# JCTM Series

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



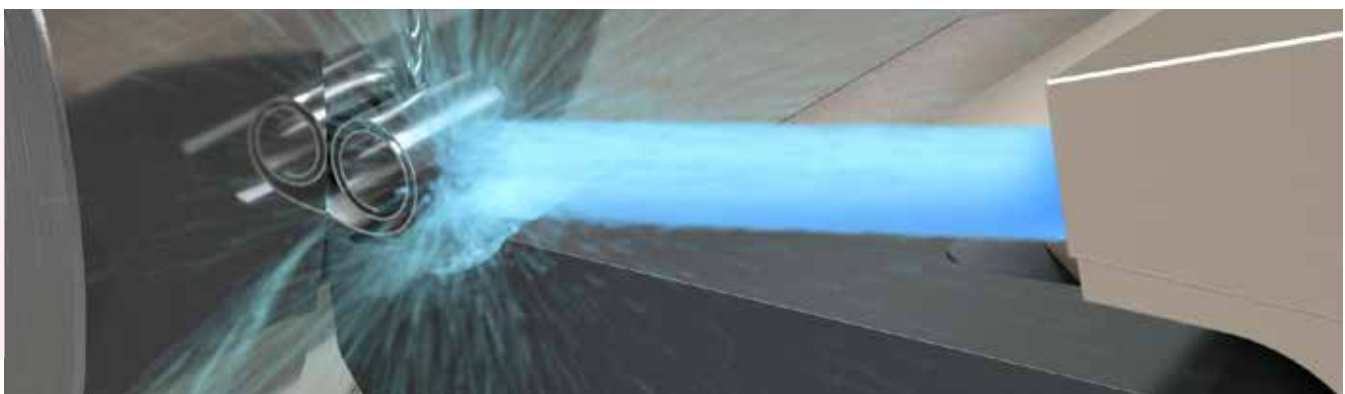
CG Image

### Challenges

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

### Solution

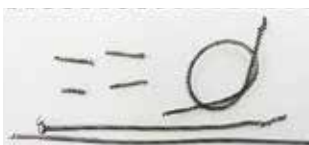
- The JCTM series is compatible with internal coolant supply system in a wide range of machines and also works under normal pressure
- Reduces down time by improving chip control and reduces cost by extending tool life



CG Image

## Switching to internal coolant toolholder reduces chip entanglement

### Internal coolant (2.5 MPa)



### External coolant



### Pin Alloy tool steel (SKS 93, JIS)

Vc = 180 m/min, ap = 1.4 mm  
f = 0.13 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

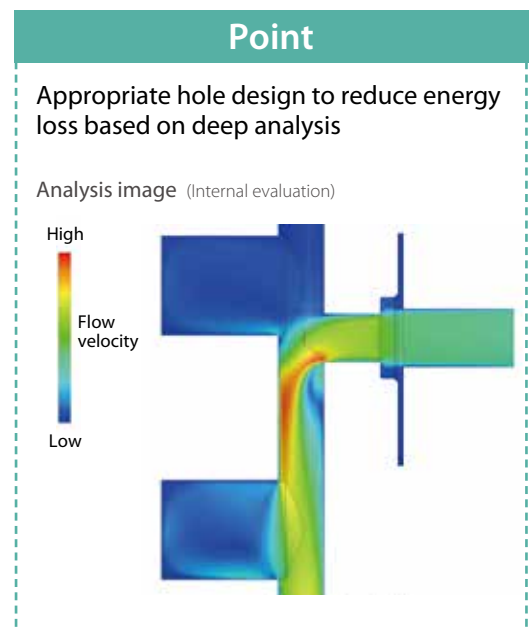
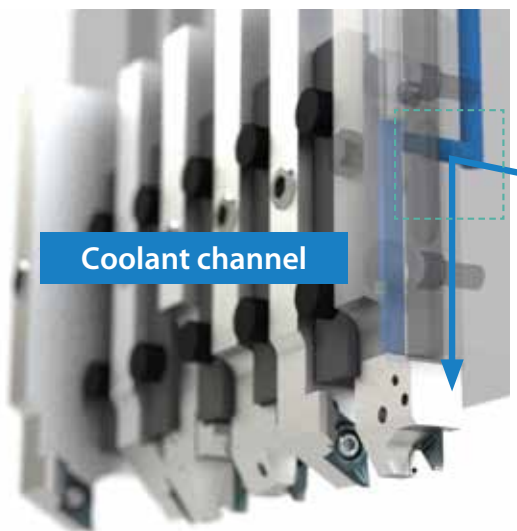
Applicable to wide range of machines

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

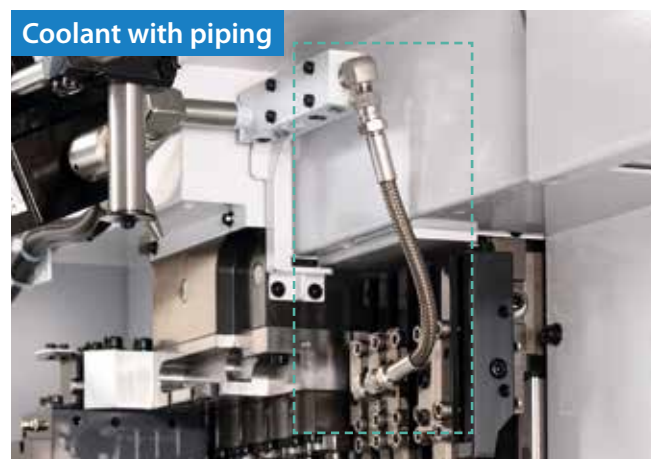


### Internal coolant with piping

\*Piping parts: See pages 13 and 14

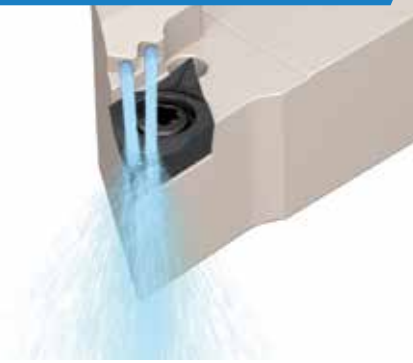
Compatible with internal coolant on any machine with standard piping parts

Commercial piping parts are available when using at normal pressure



### 3 Large lineup for various tooling operations

#### Turning Screw clamp - JCTM



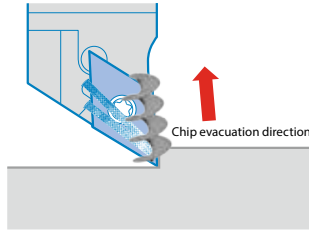
→ P5

Coolant supply structure comparison (Internal evaluation)

(Image)

##### Screw clamp- JCTM

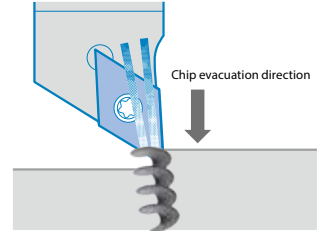
Discharges coolant toward the rake surface of insert



- 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

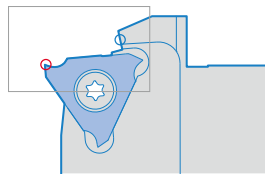


→ P7

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

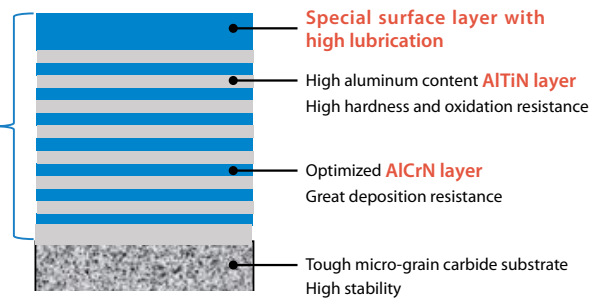
**PR1725** 1st recommendation for steel machining. Excellent surface finish and long tool life.

#### MEGACOAT NANO® PLUS

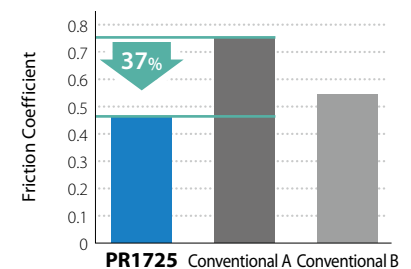
AlTiN/AlCrN Nano laminated film with superior wear resistance and adhesion resistance

##### Reduces cracking

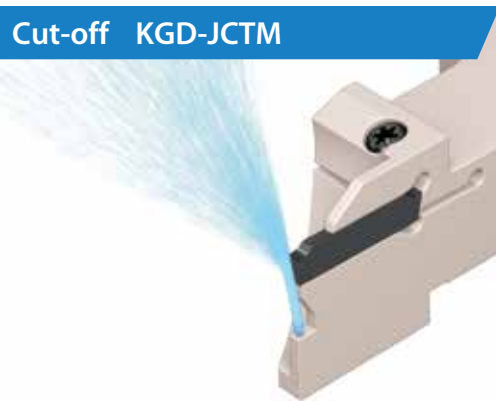
Reduces abnormal damages such as chipping because of increased lamination layer with a thinner gap than conventional coatings.



Friction coefficient comparison (Internal evaluation)



## Cut-off KGD-JCTM

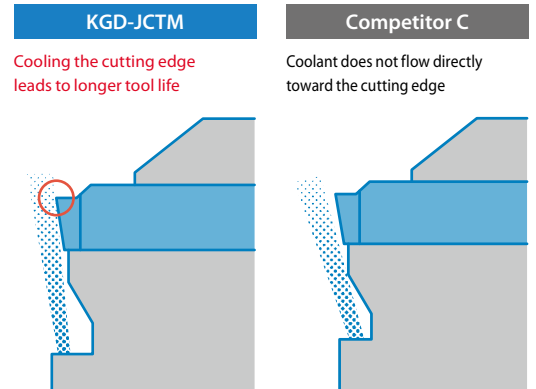


- Delivers coolant directly to front flank face
- Lineup

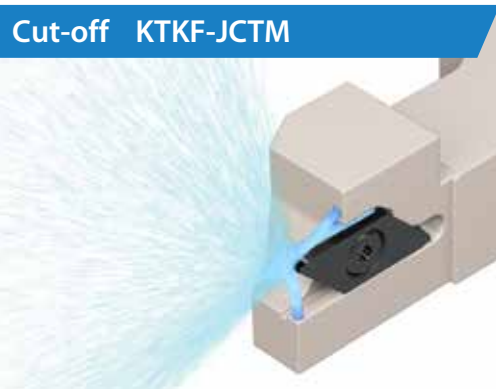
Maximum cutting dia.: ~ 24 mm, ~ 32 mm

→ P9

### Coolant discharge comparison (Image)



## Cut-off KTKF-JCTM

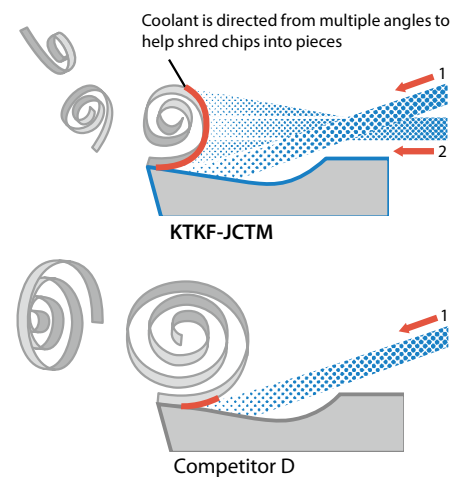


- Discharges coolant in three directions toward rake surface of insert
- Two holes toward the rake face and one hole toward the flank face of the insert

- Lineup
- TKF 12 Type (Maximum cutting dia.  $\phi$  5 -  $\phi$  12)
- TKF 16 Type (Maximum cutting dia.  $\phi$  16)

→ P11

### 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

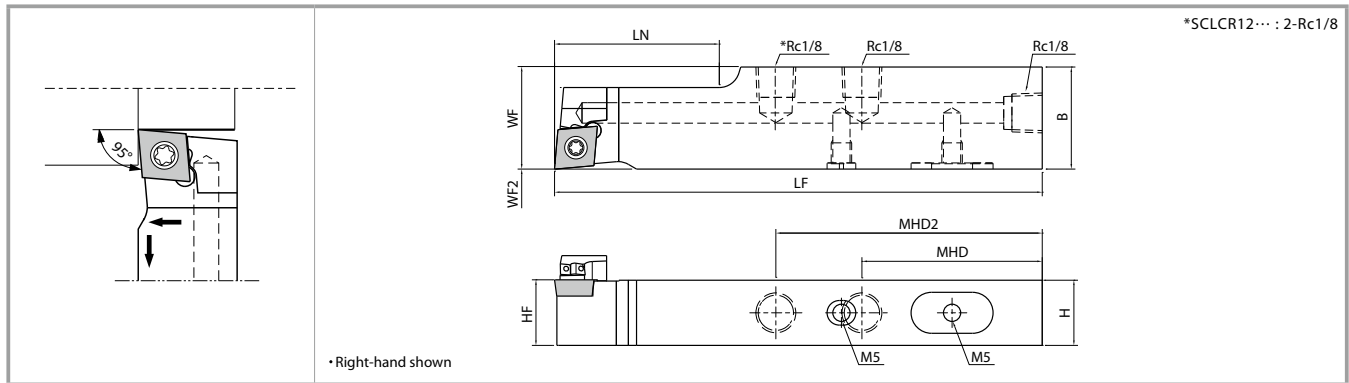


MEGACOAT base layer structure

### Point

Superior performance in steel and stainless steel machining under unstable conditions

# SCLC-JCTM



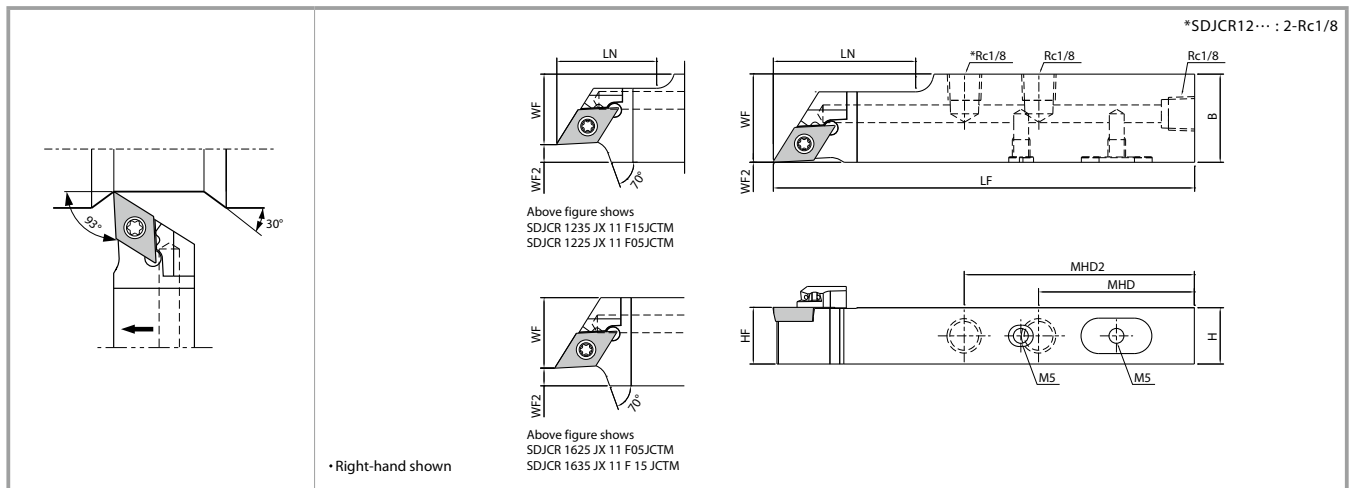
## Toolholder dimensions

Description	Availability		Dimensions (mm)									Reference Corner-R (RE)	Parts				
	R	L	H	HF	B	LF	LN	WF	WF2	MHD	MHD2		Clamp Screw	Wrench	Plug 1	Plug 2	
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



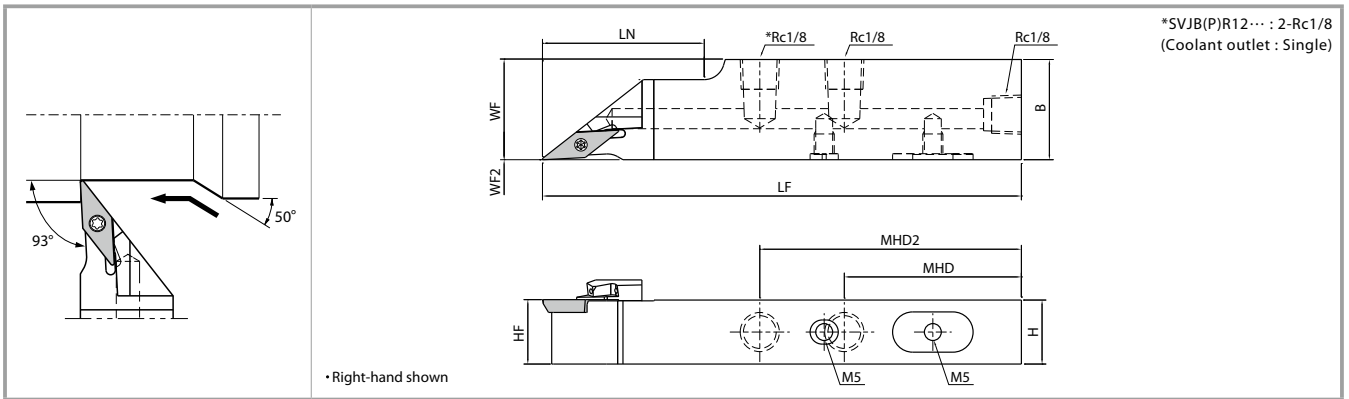
## Toolholder dimensions

Description	Availability		Dimensions (mm)									Reference corner-R (RE)	Parts				
	R	L	H	HF	B	LF	LN	WF	WF2	MHD	MHD2		Clamp Screw	Wrench	Plug 1	Plug 2	
SDJCR 1218JX-11FFJCTM	●		12	12	18	120	28	18	0	54	-	0.2	SB-408STR	FT-15	GP-1	HSSX4LP	
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	HSSX4LP	
1235JX11F15JCTM	●				35				15								
SDJCR 1625JX11F05JCTM	●		16	16	25	120	-	20	5	44	65	0.2	SB-408STR	FT-15	GP-1	HSSX4LP	
1635JX11F15JCTM	●				35				15								

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

● : Available

# SVJB / SVJP-JCTM



## Toolholder dimensions

Description	Stock		Dimensions (mm)										Reference corner-R (RE)	Parts			
	R	L	H	HF	B	LF	LN	WF	WF2	MHD	MHD2	Clamp Screw		Wrench	Plug 1	Plug 2	
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	25		40	25		44	65					-	-
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	25		40	25		44	65					-	-

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

● Available

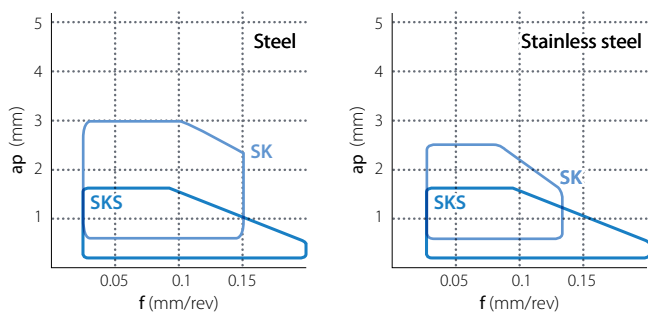
## Applicable chipbreakers

### 3D Sharp edge chipbreaker series

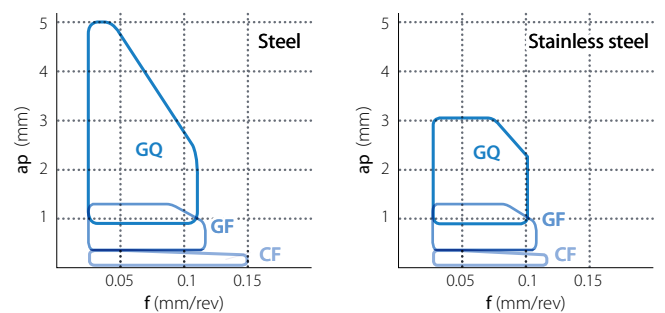
- 1 Excellent chip control in a wide range of machining applications
- 2 High precision with periphery grinding and sharp edge specification
- 3 Anti-welding properties with improved mirror surface finish



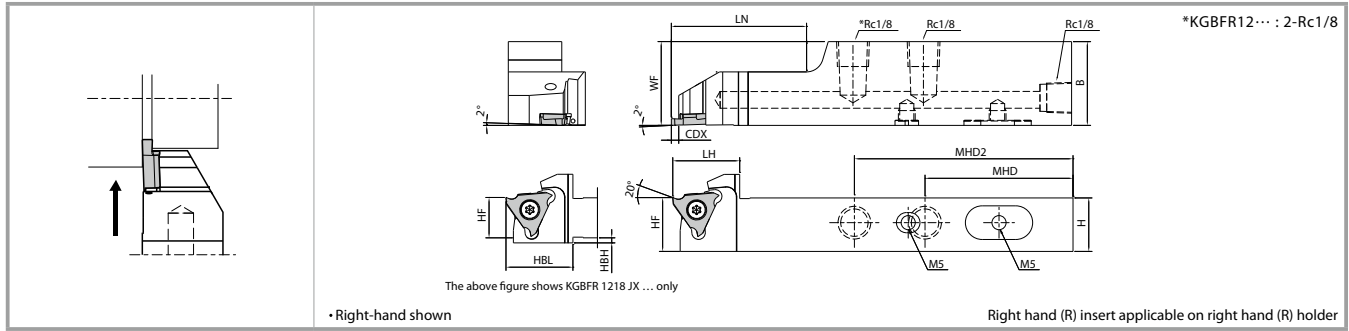
1st recommended chipbreakers (Low cutting force)



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.

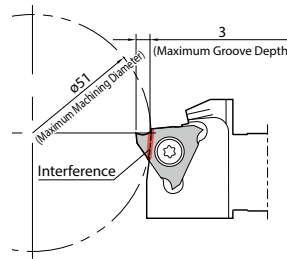
\*1. CDX indicates the distance from the holder face to the cutting edge. The actual machining depth is insert's CDX.

● : 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 Ø51 mm  
 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	GBF32R		GBF32R	
	PR1215	PR1535	GW15	025 - 053 (~000F)	065 - 095 (~000F)	100 - 145 (~000F)	150 - 300 (~200 - 000F)
Carbon steel	★ 80 - 180	☆ 70 - 160	-	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
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	GBF32R		GBF32R	
	PR1215	PR1535	075 - 005GL	095 - 100-005GL	150 - 200-010GL	300 - 010GL
Carbon steel	★ 80 - 180	☆ 70 - 160	1. 0.02 - 0.07 2. Traversing is NOT Recommended 3. Traversing is NOT Recommended	1. 0.03 - 0.08 2. 0.03 - 0.06 3. MAX. 0.2	1. 0.03 - 0.08 2. 0.03 - 0.06 3. MAX. 0.3	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

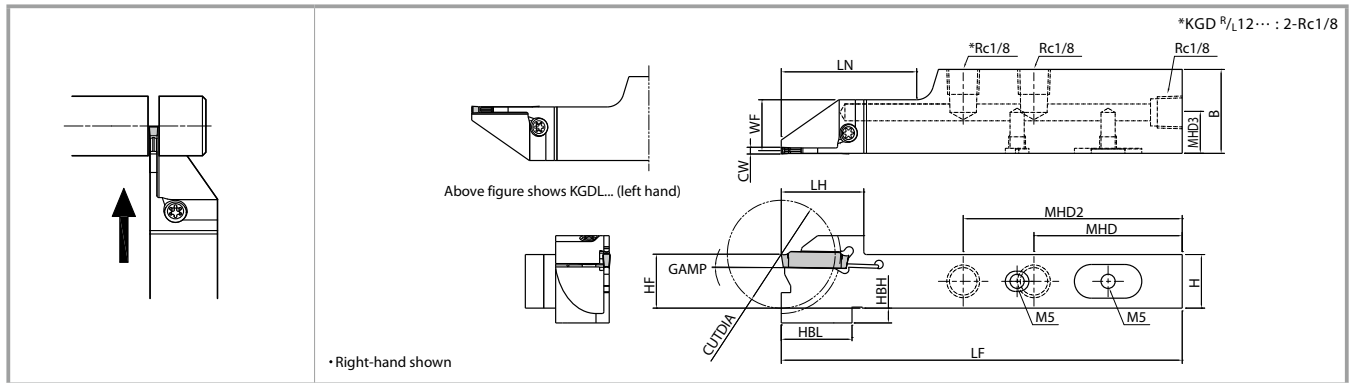
Description	IC	S	D1	Usage classification		P	Carbon steel / Alloy steel	☺	☹	
				☺ : Continuous-light interruption /1st Choice	☹ : Continuous-light interruption /2nd Choice	M	Stainless steel	☺	☹	☺
				● : Continuous/1st Choice	○ : Continuous /2nd Choice	K	Cast iron			☺
						N	Non-ferrous metal			☺
						S	Titanium alloy			☺
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.	Clamp screw	Wrench	Plug 1		Plug 2			
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	LTW-15S	GP-1	HSSX4LP	GDM Type GDG Type (GDMS Type) (GDGS Type)					
KGDL 1218JX-2JCTM		●						19.5	21.5	44													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		●						19.5	21.5	44													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		●						19.5	21.5	44													7.7				
KGDR 1625JX-3JCTM	●		32	16	4.5	25	120	24.5	21	40	14.8	44	65	12.2	1°	4.0											
KGDL 1625JX-3JCTM		●						24.5	21	40													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	
	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)						0.03-0.09			0.04-0.10	
	PQ			80-200			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

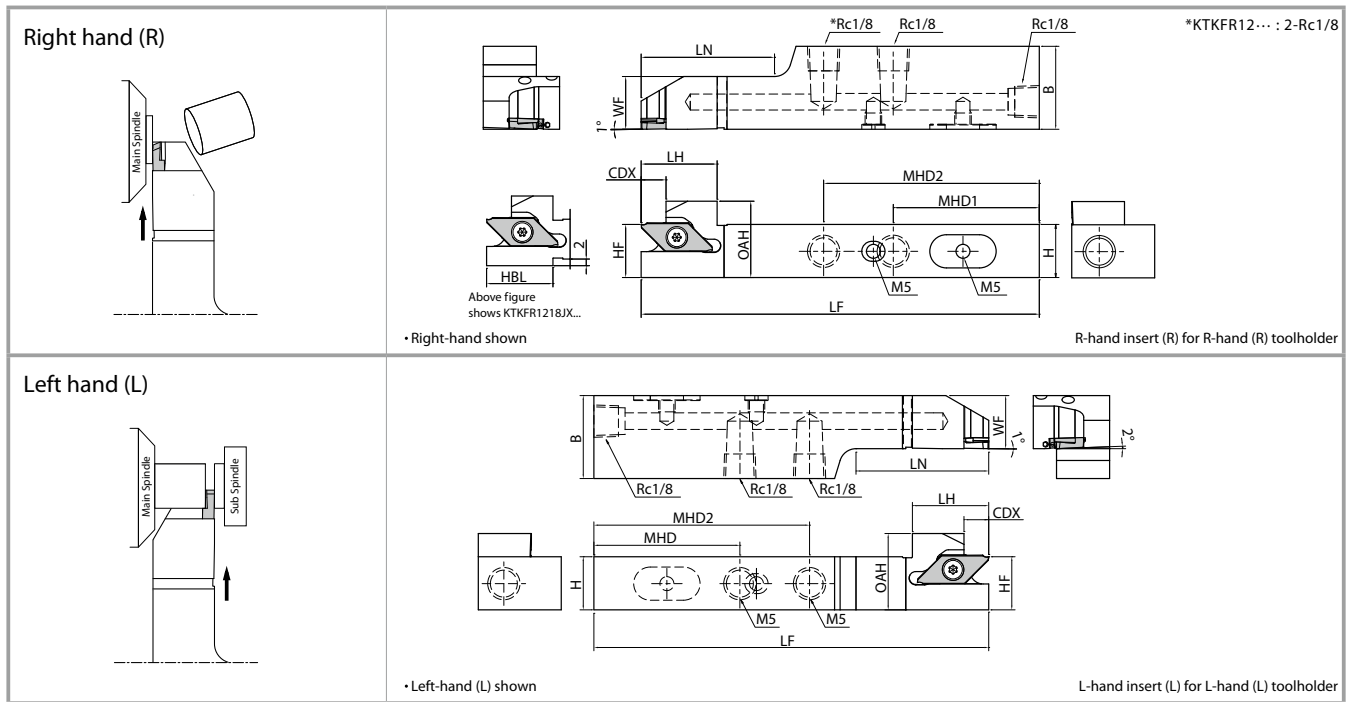
## Applicable inserts

Shape		Description	Dimensions (mm)			Angle	MEGACOAT NANO	MEGACOAT			DLC Coating	Carbide	
			CW	RE	INSL			S	PSIR $R/L$	PR1535			PR1225
Handed insert shows right-hand													
Cut-off (Low feed)		GDM 2020N-003PF	2.0	0.03	20	4.3	—	●	●	●			
		GDM 2020N-015PF	2.0	0.15				●	●	●			
		GDM 2520N-003PF	2.5	0.03				●	●	●			
		GDM 2520N-015PF	2.5	0.15				●	●	●			
		GDM 3020N-003PF	3.0	0.03				●	●	●			
		GDM 3020N-015PF	3.0	0.15				●	●	●			
Cut-off (Low feed)		GDM 2020 $R/L$ -003PF-15D	2.0	0.03	20	4.3	15°	●	●	●			
		GDM 2020R-015PF-15D	2.0	0.15				R	R	R			
		GDM 2520 $R/L$ -003PF-15D	2.5	0.03				●	●	●			
		GDM 2520R-015PF-15D	2.5	0.15				R	R	R			
		GDM 3020 $R/L$ -003PF-15D	3.0	0.03				●	●	●			
		GDM 3020R-015PF-15D	3.0	0.15				R	R	R			
Cut-off (Medium feed)		GDM 2020N-010PQ	2.0	±0.03	0.1	20	4.3	—	●	●	●		
		GDM 2520N-010PQ	2.5						●	●	●		
		GDM 3020N-010PQ	3.0						●	●	●		
Cut-off (Medium feed)		GDM 2020R-010PQ-15D	2.0	±0.03	0.1	20	4.3	15°	R	R	R		
		GDM 2520R-010PQ-15D	2.5						R	R	R		
		GDM 3020R-010PQ-15D	3.0						R	R	R		
Cut-off (Low cutting force)		GDG 2020N-005PG	2.0	±0.02	0.05	20	4.3	—	●	●		●	
		GDG 2520N-005PG	2.5						●	●		●	●
		GDG 3020N-005PG	3.0						●	●		●	●
Cut-off (Low cutting force)		GDG 2020R-005PG-15D	2.0	±0.02	0.05	20	4.3	15°	R	R		R	
		GDG 2520R-005PG-15D	2.5						R	R		R	R
		GDG 3020R-005PG-15D	3.0						R	R		R	R
Cut-off (General use)		GDM 2020N-020PM	2.0	±0.03	0.2	20	4.3	—	●	●	●		
		GDM 2520N-020PM	2.5		0.25				●	●	●		
		GDM 3020N-025PM	3.0		0.25				●	●	●		
		GDM 4020N-030PM	4.0		0.3				●	●	●		
		GDM 2020R-020PM-6D	2.0	±0.03	0.2	20	4.3	6°	●	●	●		
		GDM 2520R-020PM-6D	2.5		0.25				●	●	●		
		GDM 3020R-025PM-6D	3.0		0.25				●	●	●		
		GDMS 2020N-020PM	2.0	±0.03	0.2	20	4.3	—	●	●	●		
		GDMS 3020N-025PM	3.0		0.25				●	●	●		
GDMS 4020N-030PM		4.0	0.3		●				●	●			
	GDMS 2020R-020PM-6D	2.0	±0.03	0.2	20	4.3	6°	R	R	R			
	GDMS 3020R-025PM-6D	3.0		0.25				R	R	R			
	GDMS 4020R-030PM-6D	4.0		0.3				R	R	R			
Grooving (Cut-off High feed)		GDM 2020N-020PH	2.0	±0.03	0.2	20	4.3	—	●	●	●		
		GDM 3020N-030PH	3.0		0.3				●	●	●		
		GDM 4020N-030PH	4.0		0.3				●	●	●		
Grooving (Cut-off High feed)		GDMS 2020N-020PH	2.0	±0.03	0.2	20	4.3	—	●	●	●		
		GDMS 3020N-030PH	3.0		0.3				●	●	●		
		GDMS 4020N-030PH	4.0		0.3				●	●	●		

● : Available

R: Right hand (R) only available

# KTKF-JCTM



## Toolholder dimensions

Description	Availability		Dimensions (mm)													Parts				Applicable inserts
	R	L	H	HF	OAH	B	LF	HBL	LH	LN	WF	CDX	MHD	MHD2	Clamp screw	Wrench	Plug 1	Plug 2		
KTKFR 1218JX-12JCTM	●		12	12	19	18		20	20	28	12		54	-	SB-4590TRWN	FT-10	GP-1	HSSX4LP	TKF12R... TKFT12R...	
KTKF <sup>R/L</sup> 1625JX-12JCTM	●	●	16	16	23	25	120	-	23	40	16	7.5	44	21(65)					SB-4590TRWN	FT-10
KTKF <sup>R/L</sup> 2025JX-12JCTM	●	●	20	20	27			40	16	9.6	44		21(65)	SB-4590TRWN	FT-10	GP-1	HSSX4LP	TKF16R/L... TKFT16R/L...		
KTKF <sup>R/L</sup> 1625JX-16JCTM	●	●	16	16	23	25	120	-	23	40	16	9.6	44	21(65)	SB-4590TRWN	FT-10	GP-1	HSSX4LP	TKF16R/L... TKFT16R/L...	
KTKF <sup>R/L</sup> 2025JX-16JCTM	●	●	20	20	27			41	20	44	21(65)		SB-4590TRWN	FT-10					GP-1	HSSX4LP

\*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
	MEGACOAT NANO PLUS	MEGACOAT NANO	MEGACOAT	DLC Coating	Carbide	Edge width CW (mm)						Edge width CW (mm)		
						0.5	0.7	1.0	1.25	1.5	2.0	1.5	2.0	
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)

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							

Shape Handed insert shows right-hand	Description	Dimensions (mm)							Angle PSIR R/L	MEGACOAT	MEGACOAT	MEGACOAT	DLC Coating		Carbide	
		CW	CUTDIA	RE	W1	S	D1	PR1725		PR1535	PR1225	PDL025		KW10		
								R		L	R	L	R	L	R	L
With right lead angle	TKF12 R/L 050-S-16DR 070-S-16DR 100-S-16DR 125-S-16DR 150-S-16DR 200-S-16DR	0.5 0.7 1.0 1.25 1.5 2.0	5 8 12	0.03	3	8.7	5	16°	●	●	●	●	●	●	●	●
									●	●	●	●	●	●	●	●
									●	●	●	●	●	●	●	●
									●	●	●	●	●	●	●	●
									●	●	●	●	●	●	●	●
With right lead angle	TKF12 R/L 050-S 070-S 100-S 125-S 150-S 200-S	0.5 0.7 1.0 1.25 1.5 2.0	5 8 12	0.03	3	8.7	5	0°	●	●	●	●	●	●	●	●
									●	●	●	●	●	●	●	●
									●	●	●	●	●	●	●	●
									●	●	●	●	●	●	●	●
									●	●	●	●	●	●	●	●
With right lead angle/Tough edge	TKF12 R/L 100-T-16DR 150-T-16DR 200-T-16DR	1.0 1.5 2.0	12	0.08	3	8.7	5	16°	●	●	●	●	●	●	●	●
									●	●	●	●	●	●	●	●
									●	●	●	●	●	●	●	●
Tough edge	TKF12 R/L 100-T 150-T 200-T	1.0 1.5 2.0	12	0.08	3	8.7	5	0°	●	●	●	●	●	●	●	●
									●	●	●	●	●	●	●	●
									●	●	●	●	●	●	●	●
With right lead angle/Without chipbreaker	TKF12 R/L 050-NB-20DR 070-NB-20DR 100-NB-20DR 150-NB-20DR 200-NB-20DR	0.5 0.7 1.0 1.5 2.0	5 8 12	0	3	8.7	5	20°	●	●	●	●	●	●	●	●
									●	●	●	●	●	●	●	●
									●	●	●	●	●	●	●	●
									●	●	●	●	●	●	●	●
									●	●	●	●	●	●	●	●
Without chipbreaker	TKF12 R/L 050-NB 070-NB 100-NB 150-NB 200-NB	0.5 0.7 1.0 1.5 2.0	5 8 12	0	3	8.7	5	0°	●	●	●	●	●	●	●	●
									●	●	●	●	●	●	●	●
									●	●	●	●	●	●	●	●
									●	●	●	●	●	●	●	●
									●	●	●	●	●	●	●	●
With right lead angle	TKF16 R/L 150-S-16DR 200-S-16DR	1.5 2.0	16	0.05	4	9.5	5	16°	●	●	●	●	●	●	●	●
									●	●	●	●	●	●	●	●
With right lead angle	TKF16 R/L 150-S 200-S	1.5 2.0	16	0.05	4	9.5	5	0°	●	●	●	●	●	●	●	●
									●	●	●	●	●	●	●	●
With right lead angle/Tough edge	TKF16 R/L 150-T-16DR 200-T-16DR	1.5 2.0	16	0.08	4	9.5	5	16°	●	●	●	●	●	●	●	●
									●	●	●	●	●	●	●	●
Tough edge	TKF16 R/L 150-T 200-T	1.5 2.0	16	0.08	4	9.5	5	0°	●	●	●	●	●	●	●	●
									●	●	●	●	●	●	●	●
With right lead angle/Without chipbreaker	TKF16 R/L 150-NB-20DR 200-NB-20DR	1.5 2.0	16	0	4	9.5	5	20°	●	●	●	●	●	●	●	●
									●	●	●	●	●	●	●	●
Without chipbreaker	TKF16 R/L 150-NB 200-NB	1.5 2.0	16	0	4	9.5	5	0°	●	●	●	●	●	●	●	●
									●	●	●	●	●	●	●	●

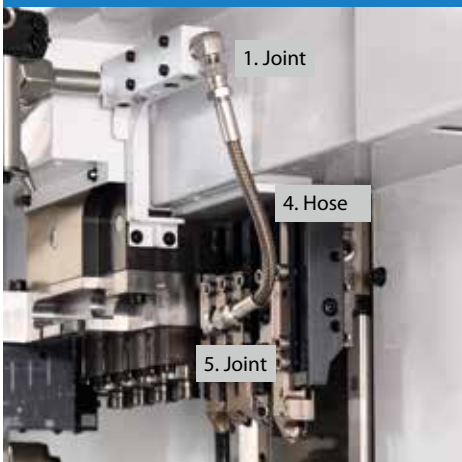
Lead angle (front cutting edge angle: PSIR R / L) shows the angle when installed in the toolholder.  
 Insert's cutting dia. (CUTDIA) indicates the cutting dia. when the tool tip has proceeded to the center of workpiece.

● : Available

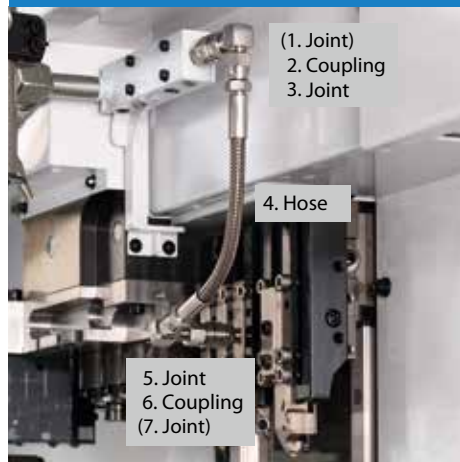
# Piping parts

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)

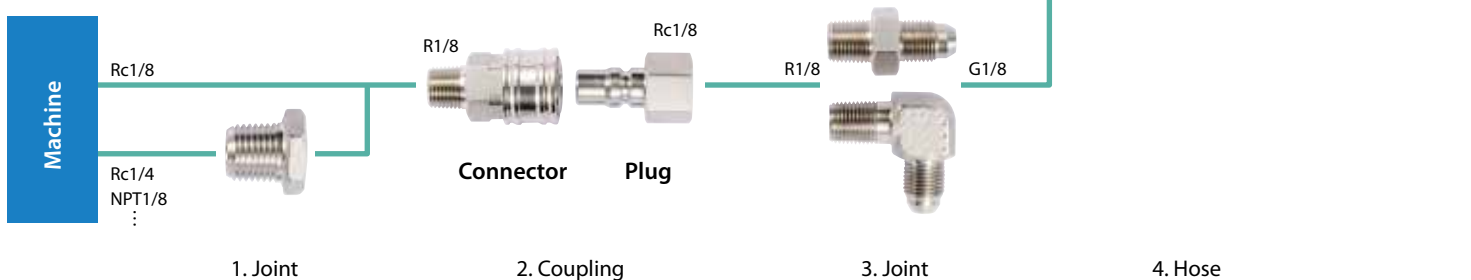
Parts	Description
(1. Joint)	-
2. Coupling	CP-ST-R1/8, P-ST-RC1/8
3. Joint	J-AN-R1/8-G1/8
4. Hose	HS-G1/8-G1/8-200
5. Joint	J-AN-R1/8-G1/8
6. Coupling	P-ST-RC1/8, CP-ST-R1/8
(7. Joint)	-

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)



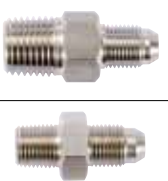



With coupling (Pump pressure: Up to 7.5 MPa)



## Piping part dimensions

Joint (1, 3, 5, 7) Pressure: Up to 20.0 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

Coupling (2,6) Pressure: Up to 7.5 MPa

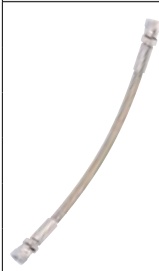
(Unit: mm)

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

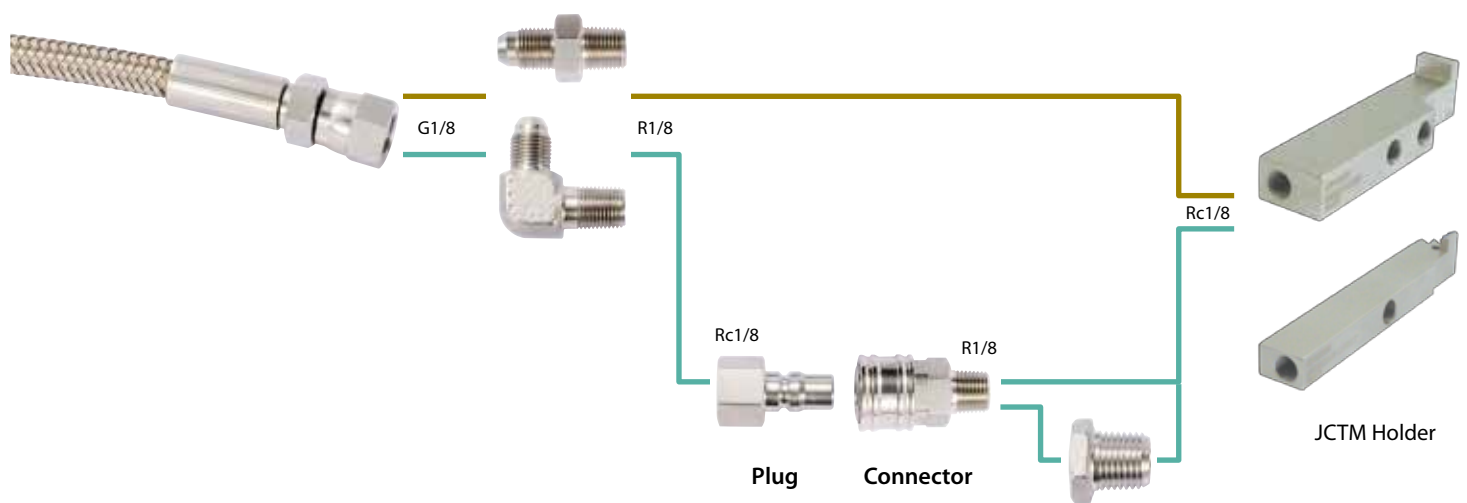
●: Available

Hose (4) Pressure: Up to 20 MPa

(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

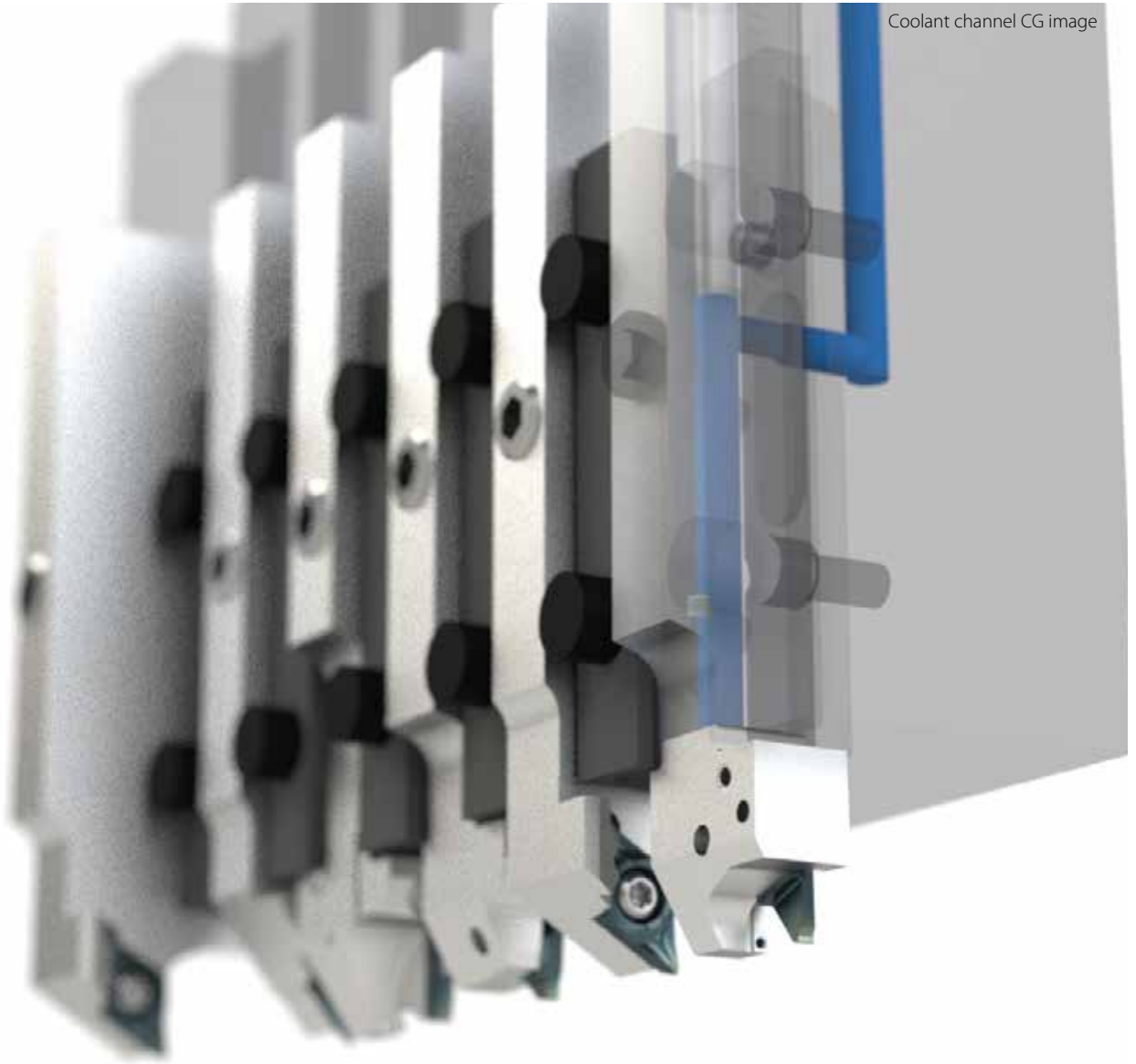


4. Hose

5. Joint

6. Coupling

7. Joint (Extension joint)



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