

THE NEW VALUE FRONTIER



Small tools with internal
coolant supply

JCT Series

JCT Series

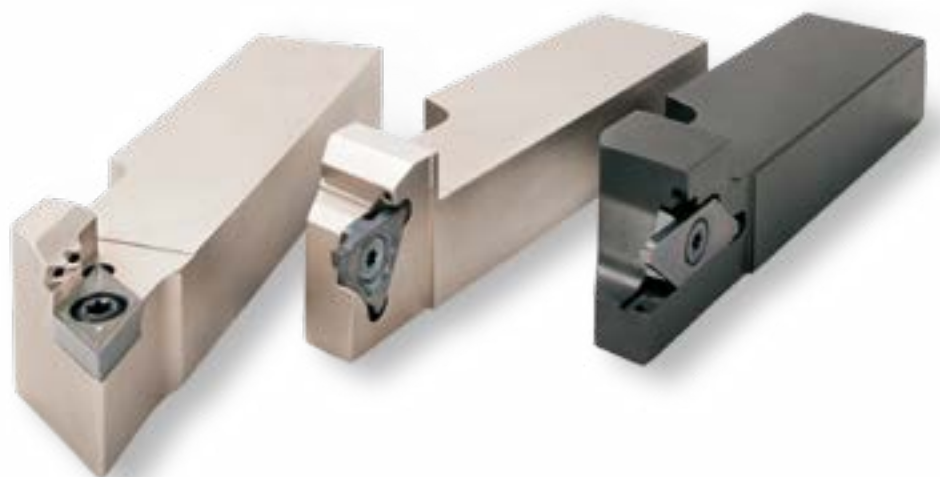
for small parts machining



Provides long tool life and excellent chip control

Great for high pressure coolant; up to 20 MPa

Large holder lineup for turning, external grooving and cut-off



For small parts machining

JCT Series

Capable of pressure up to 20MPa. Improves chip control performance and lengthens tool life. Holder lineup for turning, external grooving and cut-off

Turning
Screw clamp JCT

➡ P.5



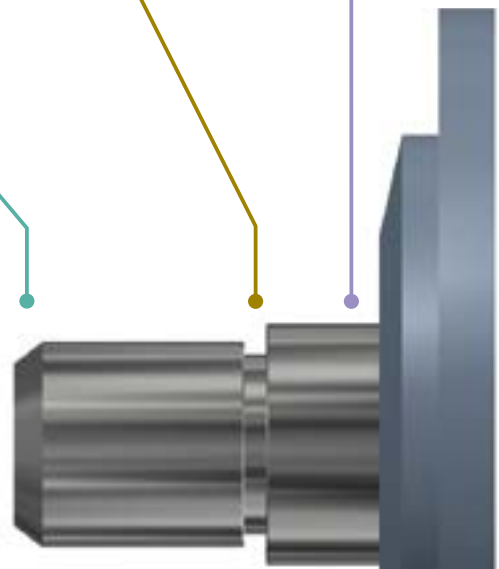
External grooving
KGBF-JCT

➡ P.9



Cut-Off
KTKF-JCT

➡ P.13



Unique coolant system for various machining

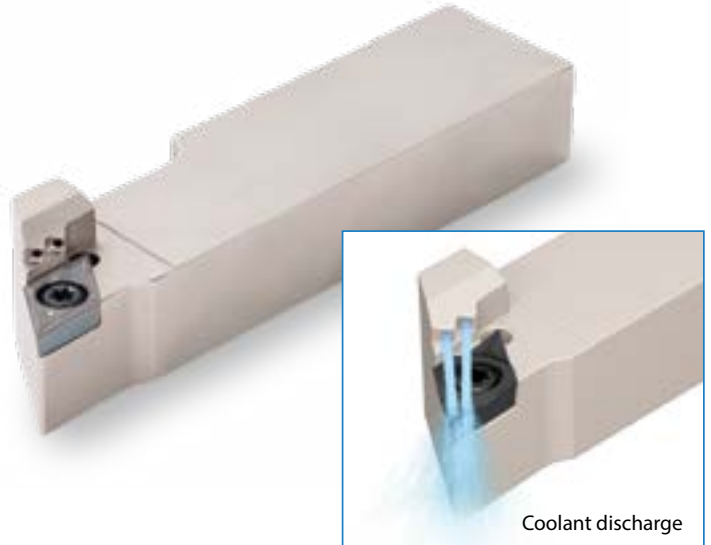
Turning Screw clamp JCT

Double coolant holes

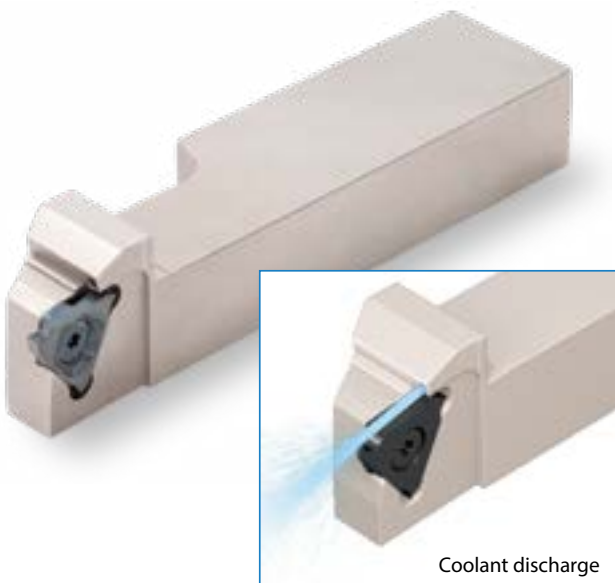
Double coolant holes provide coolant toward the cutting edge surface of the insert

Lineup

SCLC-JCT
SDJC-JCT
SVJB-JCT
SVJP-JCT



Coolant discharge



Coolant discharge

External grooving KGBF-JCT

Provides coolant towards the rake surface of insert

Lineup

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

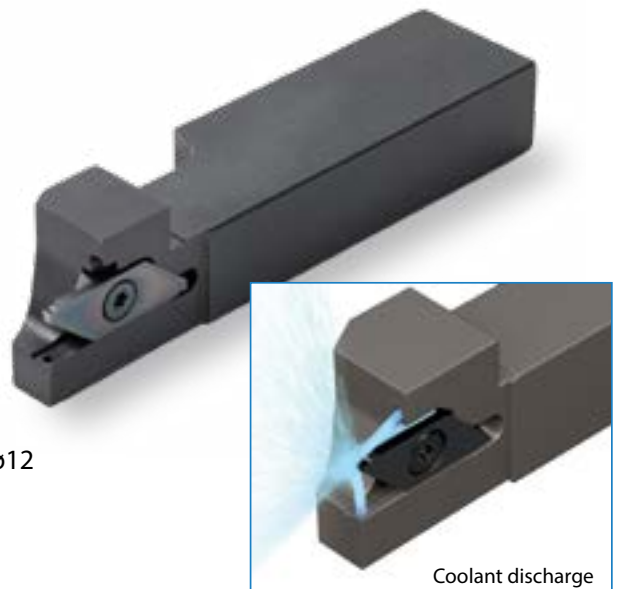
Cut-Off KTKF-JCT

Discharges coolant in three directions toward cutting point

Two holes toward the rake face and one hole towards the flank face of the insert

Lineup

TKF12 type: Maximum machining diameter $\varnothing 5 - \varnothing 12$
TKF16 type: Maximum machining diameter $\varnothing 16$



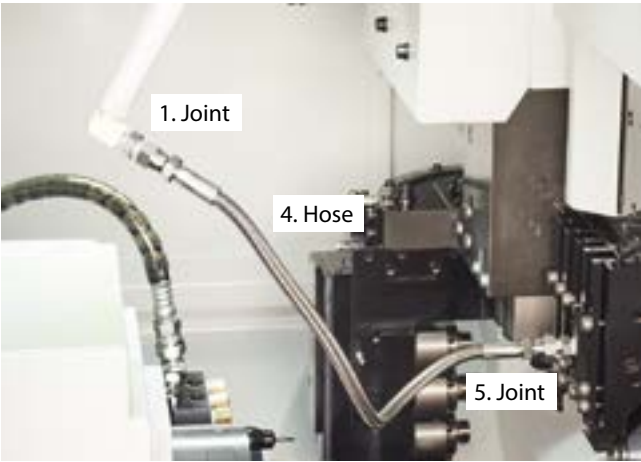
Coolant discharge

Coolant pipe parts

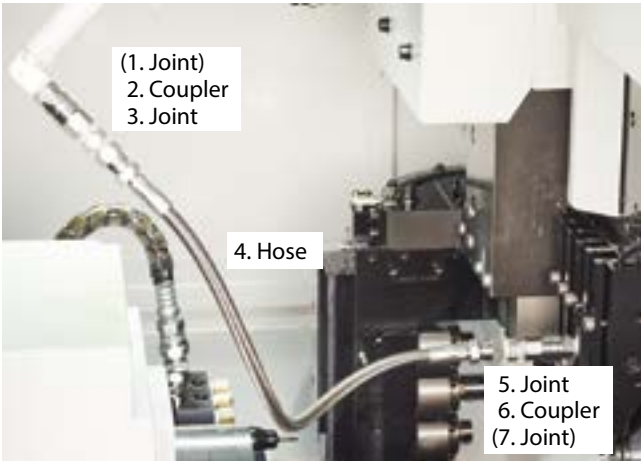
Pipe parts will be required separately if internal coolant is used

Pump pressure: Up to 20 MPa. Pump pressure: Up to 7.5 MPa if couplers are used

Without coupler (Pump pressure: Up to 20 MPa)



With coupler (Pump pressure: Up to 7.5 MPa)



Combination part description: Example

Part	Description
1. Joint	J-ST-R1/8-G1/8
4. Hose	HS-G1/8-G1/8-500
5. Joint	J-ST-R1/8-G1/8

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

Combination part description: Example

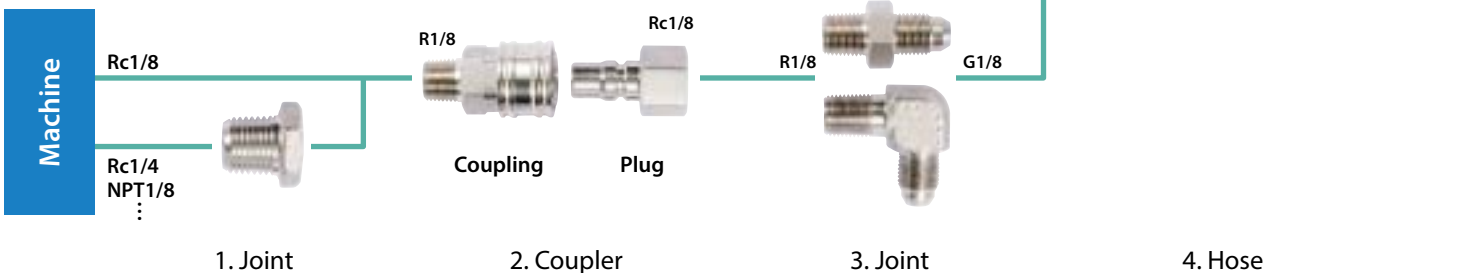
Part	Description
(1. Joint)	—
2. Coupler	CP-ST-R1/8, P-ST-RC1/8
3. Joint	J-ST-R1/8-G1/8
4. Hose	HS-G1/8-G1/8-500
5. Joint	J-ST-R1/8-G1/8
6. Coupler	P-ST-RC1/8, CP-ST-R1/8
(7. Joint)	—

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

Without coupler (Pump pressure: Up to 20 MPa)



With coupler (Pump pressure: Up to 7.5 MPa)



Piping installation parts description

Joint (1, 3, 5, 7): Applicable 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

Coupler (2, 6):

Applicable pressure: Up to 7.5 MPa

Unit: mm

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

● : Available

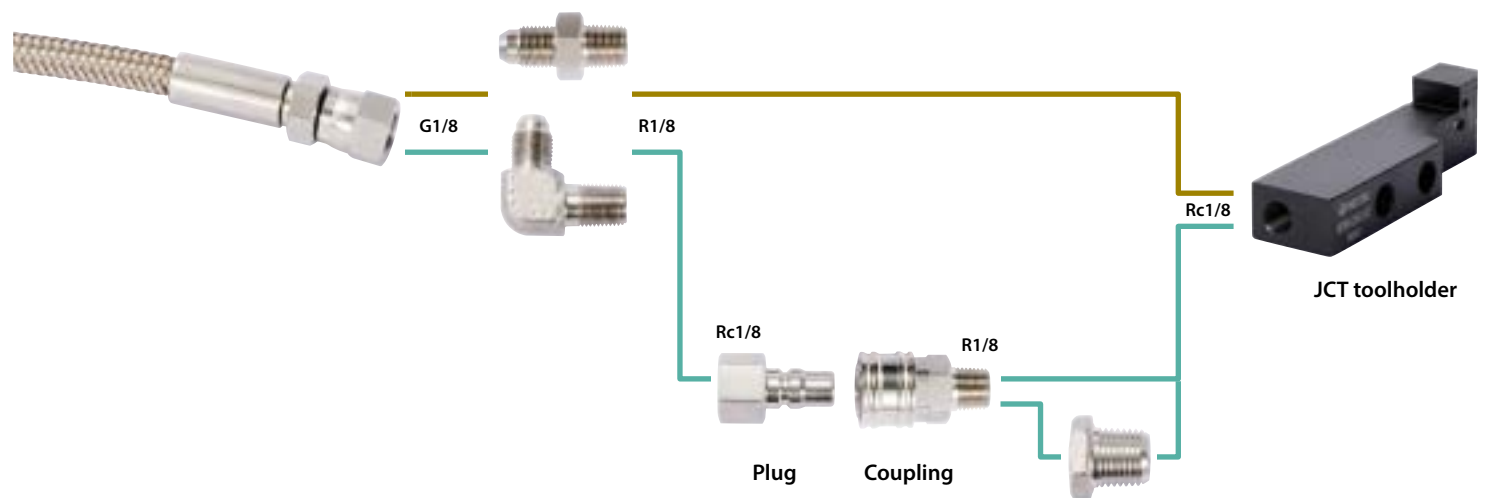
Hose (4):

Applicable pressure: Up to 20.0 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. Coupler

7. Joint (Extension joint)

Screw clamp JCT

Double-coolant hole design delivers an ample supply of coolant to the tool edge
Excellent chip control and longer tool life

1

Superior chip control
performance

2

Sufficient cooling of the cutting
edge leads to longer tool life

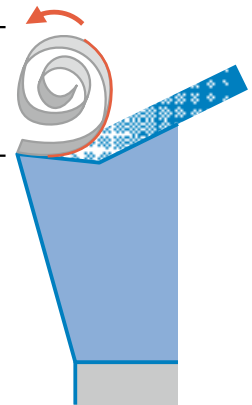
Double coolant hole design provides coolant to the insert cutting edge surface



Double coolant holes

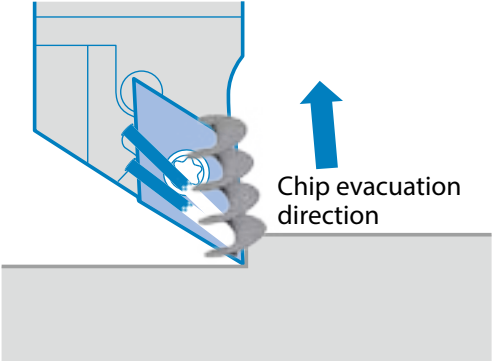
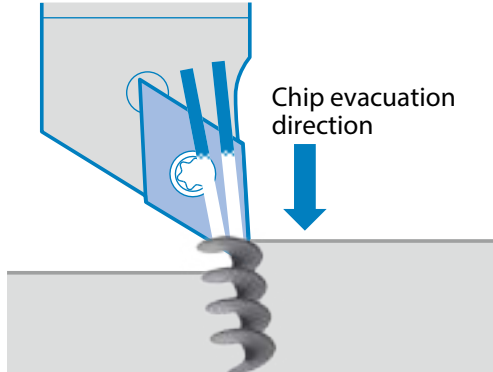
Provides stable chip curls
Superior chip control

The cutting edge stays cool
Long tool life



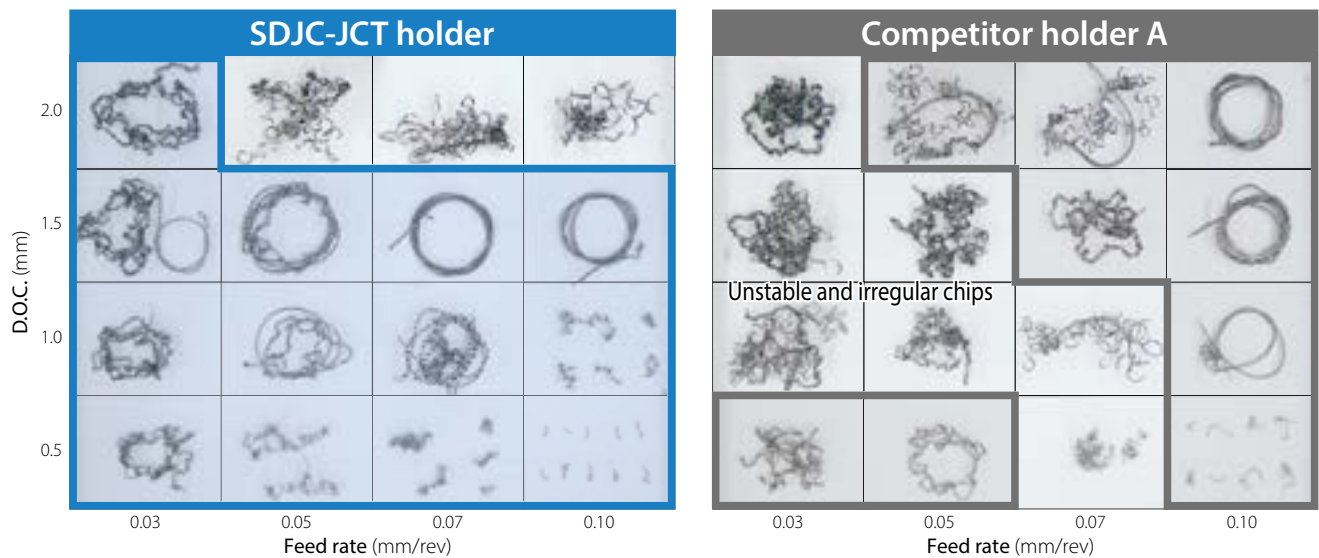
Insert cross-section

Coolant system comparison (Internal evaluation)

	Screw clamp JCT holder	Competitor holder A
Coolant system	Discharges coolant towards the rake surface of insert 	Discharges coolant down onto the chip forcing the chip into the part 
Superior chip control	Excellent: Provides stable chip curls	Poor: Chip becomes unstable
Coolant effects	Excellent: Ensures proper cooling of the cutting edge	Poor: Chip can obstruct coolant supply

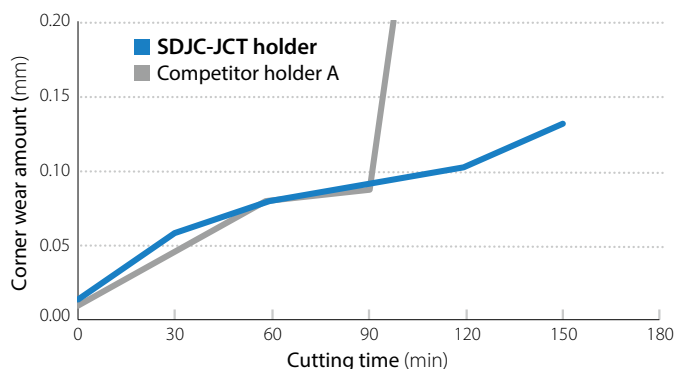
Great for high pressure coolant - Chip control comparison (Internal evaluation)

SDJC-JCT holder allows excellent chip control in a wide variety of cutting conditions



Cutting conditions: $V_c = 80$ m/min, DCGT11T302MP-CK PR1535 (Same inserts were used) Workpiece: TAB6400 (Ti-6Al-4V) External and internal coolant (1.5MPa) turning

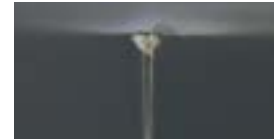
Great for high pressure coolant - Wear resistance comparison (Internal evaluation)



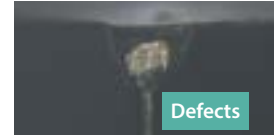
Cutting conditions: $V_c = 200$ m/min, external turning: $a_p = 2.0$ mm, $f = 0.05$ mm/rev, facing: $a_p = 0.2$ mm, $f = 0.03$ mm/rev DCGT11T302MFP-GQ PR1535 (same inserts were used) Workpiece: X5CrNi1810, external and internal coolant (1.5MPa) External turning and facing

Cutting edge

SDJC-JCT holder after machining 150 min



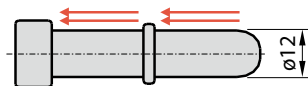
Competitor Holder A after machining 106 min



Case studies

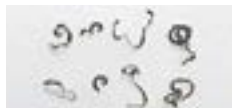
Pipe X5CrNi1810-equivalent

$V_c = 160$ m/min
 $a_p = 0.9 / 1.2$ mm
 $f = 0.18$ mm/rev
 Wet (Internal coolant: 14MPa)
 DCMT11T304 type



Chip control

SDJC-JCT holder
 Internal coolant



Competitor holder B
 Internal coolant



Changes to SDJC-JCT improved chip control while keeping same or more tool life.

User evaluation

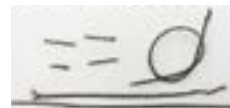
Pin 1.2842

$V_c = 180$ m/min
 $a_p = 1.4$ mm
 $f = 0.13$ mm/rev
 Wet
 DCMT11T304 type



Chip control

SDJC-JCT holder
 Internal coolant: 2.5MPa



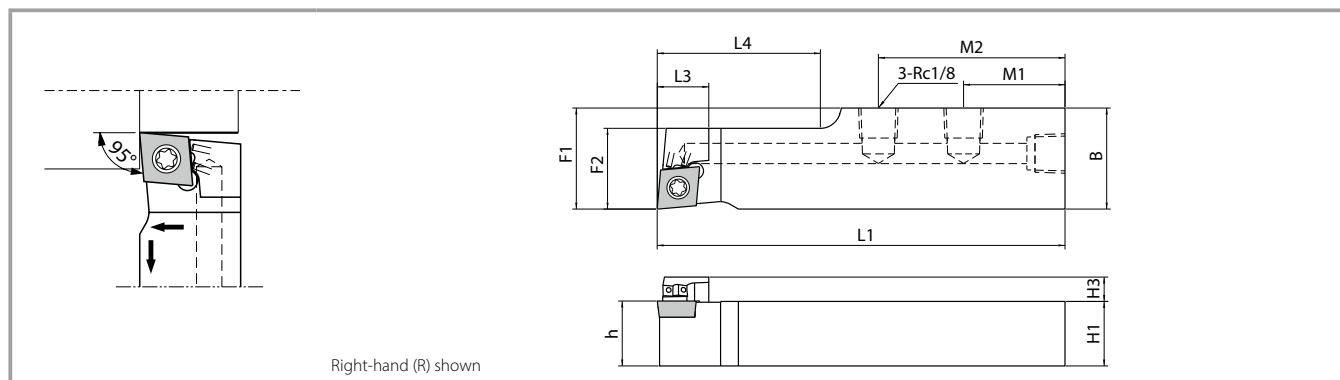
Conventional holder
 External coolant



SDJC-JCT holder with internal coolant improved chip control. Reduced chip entanglement

User evaluation

SCLC-JCT

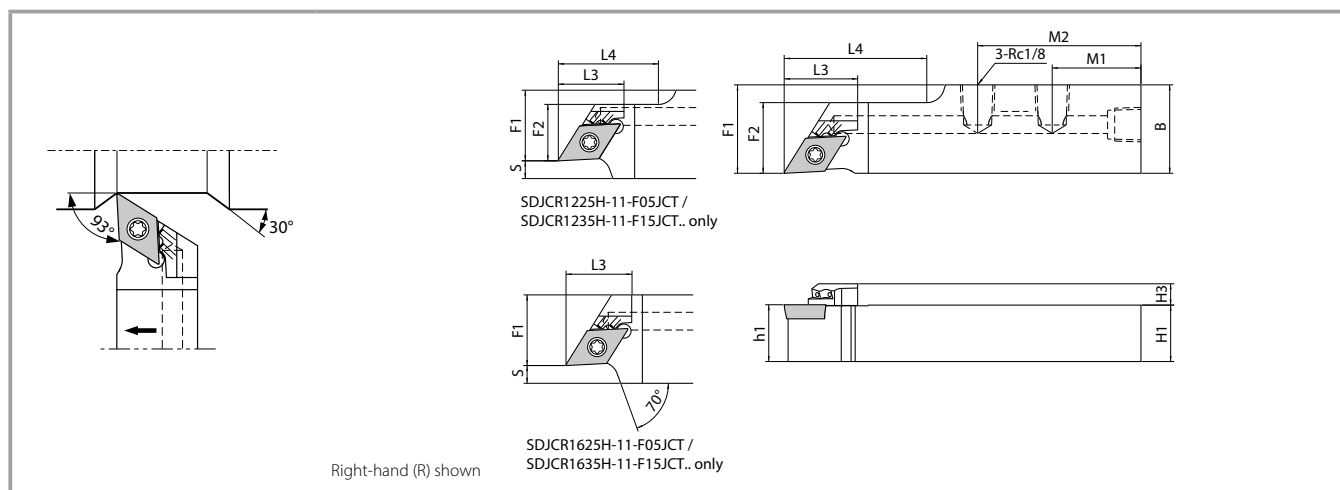


Toolholder dimensions

Description	Avail-ability		Dimensions (mm)										Std. corner-R (rε)	Parts			Applicable inserts
	R	L	H1 = h	H3	B	L1	L3	L4	F1	F2	M1	M2		Clamp screw 	Wrench 	Plug 	
SCLCR 1220H-09FFJCT	●		12	5.5	20	100	12.5	28	20	16	35	—	0.2	SB-4085TR	FT-15	GP-1	CC**09T3 type
1625H-09FFJCT	●		16	6	25	100	13	40	25	20	25	46					
2025H-09FFJCT	●		20	6	25	100	13	40	25	20	25	46					

● : Available

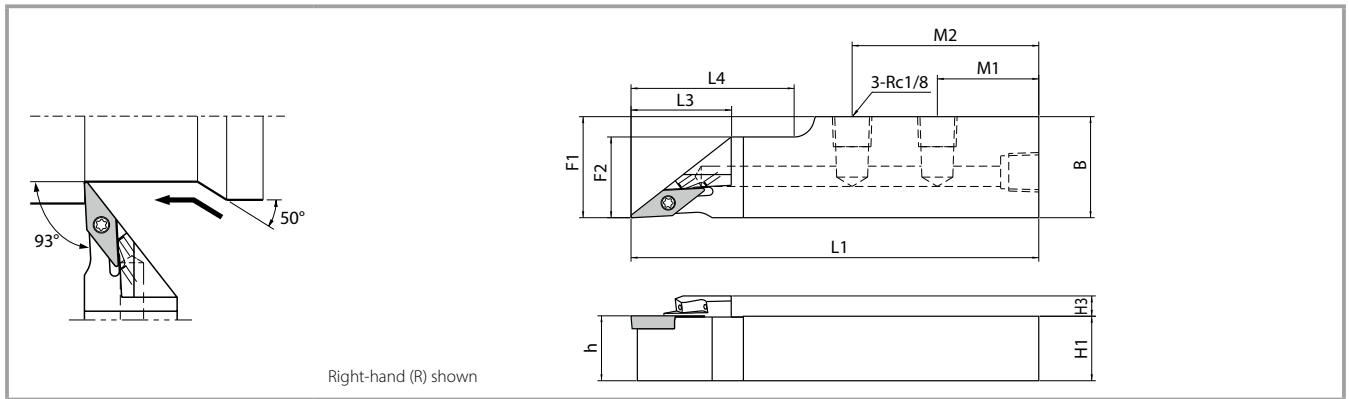
SDJC-JCT



Toolholder dimensions

Description		Avail-ability		Dimensions (mm)										Std. corner-R (rε)	Parts			Applicable inserts					
															Clamp screw	Wrench	Plug						
		R	L	H1 = h	H3	B	L1	L3	L4	F1	F2	S	M1		M2								
SDJCR	1220H-11FFJCT	●		12	5.5	20	100	18.5	28	20	16	—	35	—	0.2	SB-4085TR	FT-15	GP-1	DC**11T3 type				
	1625H-11FFJCT	●		16	6	25		21	40	25	20	—	25	46									
	2025H-11FFJCT	●		20	6	25		21	40	25	20	—	25	46									
SDJCR	1225H-11-F05JCT	●		12	5.5	25	100	18.5	28	20	16	5	35	—	0.2	SB-4085TR	FT-15	GP-1	DC**11T3 type				
	1235H-11-F15JCT	●		12	5.5	35		18.5	28	20	16	15	35	—									
SDJCR	1625H-11-F05JCT	●		16	5.5	25	100	18.5	—	20	—	5	25	46	0.2					SB-4085TR	FT-15	GP-1	DC**11T3 type
	1635H-11-F15JCT	●		16	5.5	35		18.5	—	20	—	15	25	46									

● : Available



Toolholder dimensions

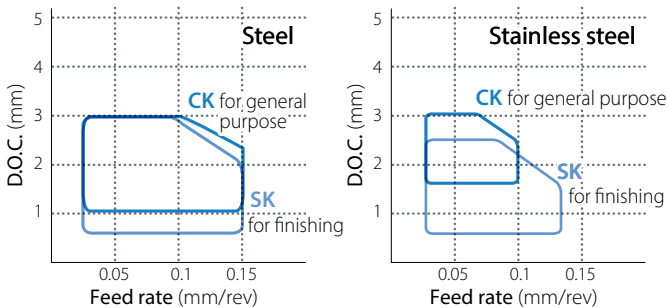
Description		Avail-ability		Dimensions (mm)									Std. corner-R (re)	Parts			Applicable inserts	
		R	L	H1 = h	H3	B	L1	L3	L4	F1	F2	M1		M2	Clamp screw	Wrench		Plug
																		
SVJBR	1220H-11FFJCT	●		12	5	20	100	18.5	28	20	16	35	—	0.4	SB-2570TR	FT-8	GP-1	VB**1103 type
	1625H-11FFJCT	●		16		25		25	40	25	20	25	46					
	2025H-11FFJCT	●		20		25		25	40	25	20	25	46					
SVJPR	1220H-11FFJCT	●		12	5	20	100	18.5	28	20	16	35	—	0.2	SB-2570TR	FT-8	GP-1	VP**1103 type
	1625H-11FFJCT	●		16		25		25	40	25	20	25	46					
	2025H-11FFJCT	●		20		25		25	40	25	20	25	46					

● : Available

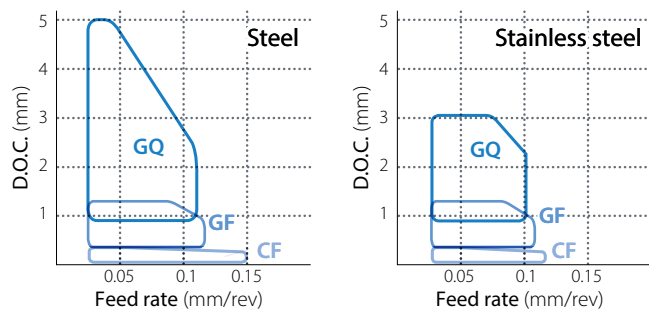
Chipbreaker application map

Molded sharp edge chipbreaker series

Low cutting force oriented



Chip control oriented



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

KGBF-JCT

KGBF-JCT can direct coolant closer to the cutting edge from the top of the insert
Delivers improved chip control and longer tool life while grooving

1 Excellent chip control

2 Superior cooling action Improves tool life

Discharges coolant from the top of the insert. Delivers superior chip control and longer tool life



Coolant hole

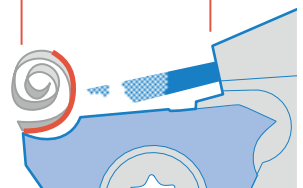
Coolant is discharged to the cutting edge
Prevents coolant stream spreading and
prevents slows the coolant flow

Coolant direction

Sufficient coolant between the
chipbreaker and the chips
Stable chip curls and sufficient
cooling of the insert

Cutting area distance

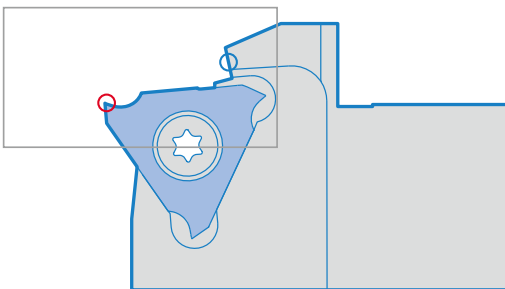
Approx. 10 mm



Coolant discharge comparison (Internal evaluation)

KGBF-JCT can direct coolant closer to the cutting edge than competitor C

- Cutting edge
- Coolant hole



KGBF-JCT

Coolant spread:
Narrow
Coolant density:
High



Without insert

Competitor C

Coolant spread:
Wide
Coolant density:
Low

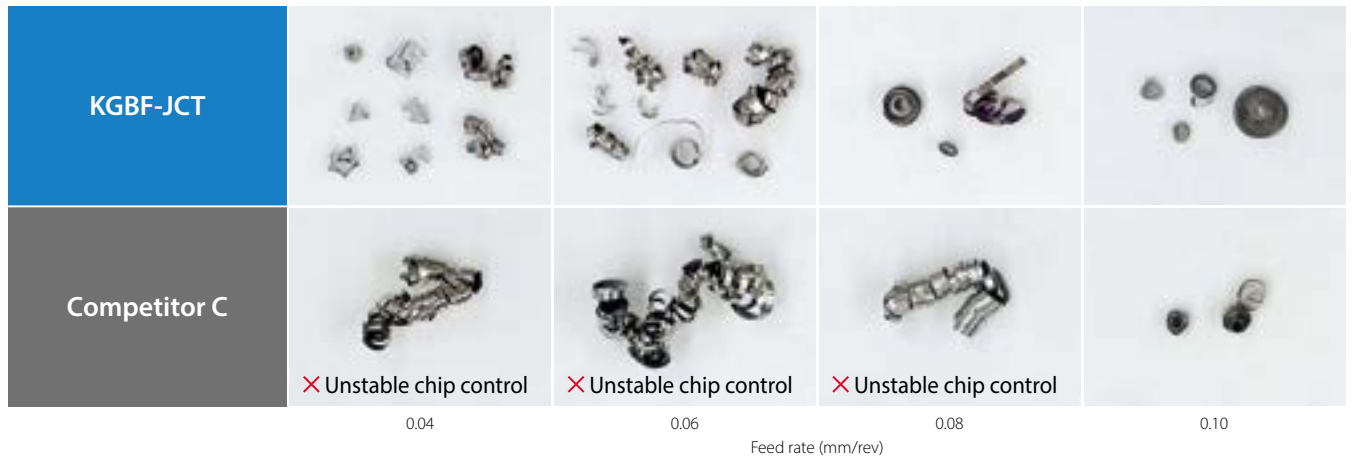


Without insert

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

Chip control comparison (Internal evaluation)

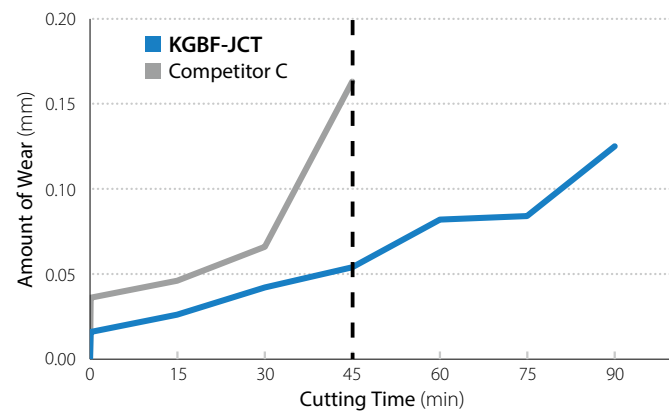
KGBF-JCT provided much better chip control



Cutting conditions: $V_c = 100$ m/min, $a_p = 2.5$ mm, GBF32R200-010 PR1535, KGBFR1625H-16FJCT
Workpiece: TAB6400 (Ti-6Al-4V) external and internal coolant (1.5MPa) external grooving

Wear resistance comparison (Internal evaluation)

KGBF-JCT showed superior wear resistance



Cutting conditions: $V_c = 150$ m/min, $a_p = 1.8$ mm, $f = 0.06$ mm/rev, GBF32R100-005GL PR1535, KGBFR1625H-16FJCT
Workpiece: X5CrNi1810 external and internal coolant (1.5MPa) external grooving

Cutting edge

KGBF-JCT



Competitor C

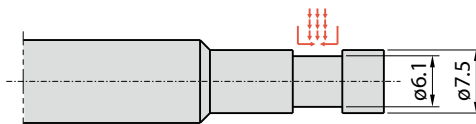


Case studies

Nozzle parts Stainless

$V_c = 55$ m/min
 $a_p = 0.25$ mm
 $f = 0.03$ mm/rev
Wet (Internal coolant: 1.2MPa)

KGBFR1220H-16FJCT
GBF32R100-005GL PR1535



Tool life

KGBF-JCT
Internal coolant

1,200 pcs/edge

x1.6

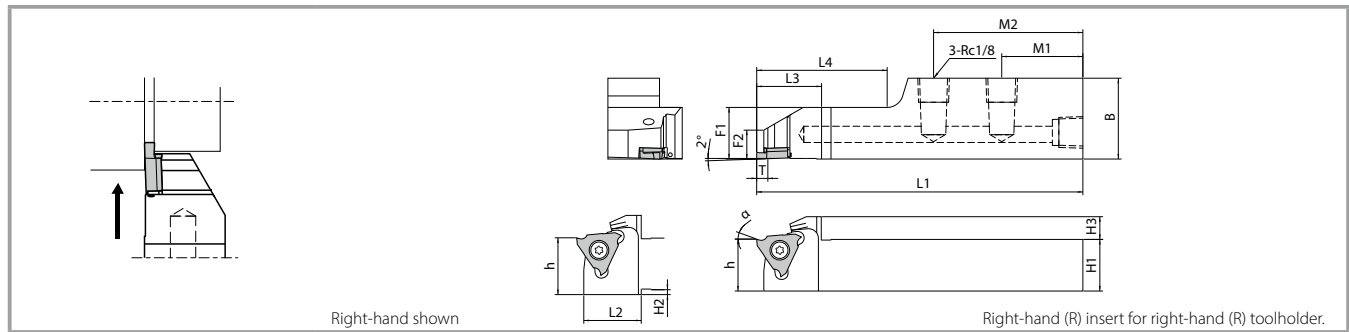
Competitor D
Internal coolant

750 pcs/edge

KGBF-JCT provided much better chip control than competitor with internal coolant and a molded chipbreaker
Lengthened tool life by 60%

User evaluation

KGBF-JCT



Toolholder dimensions

Description	Availability	Dimensions (mm)														Rake angle α	Parts		
		R	L	H1 = h	H2	H3	B	L1	L2	L3	L4	F1	F2	T*	M1	M2	Clamp screw	Wrench	Plug
KGBFR 1220H-16FJCT	●			12	1.5	7	20	100	20	20	28	12	7	3	35	—	SB-4070TRW	FT-8	GP-1
1625H-16FJCT	●			16	—	7	25	100	—	20	40	16	9	3	25	46			
2025H-16FJCT	●			20	—	7	25	100	—	20	40	20	11	3	25	46			

*1 Dimension T shows the distance from the toolholder to the cutting edge. Available grooving depth depends on insert. It is indicated at insert pages as dimension B.

●: Available

Cautions

GBF and GBA compatibility

1 GBF will fit KGBA/KGBAS holders

Caution: The maximum groove depth for KGBA/KGBAS holders is 2.5 mm

2 GBA inserts will also fit KGBF-JCT holders

Caution: The rake angle after installation in the toolholder is 11°

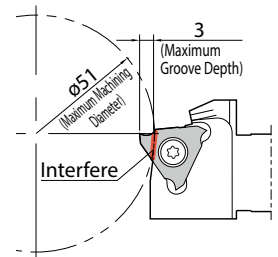
KGBF-JCT holder with GBF insert maximum machining diameter

3 mm groove depth is available on workpiece diameters up to $\phi 51$ mm

2.7 mm groove depth is available on workpiece diameters up to $\phi 100$ mm, 2.5 mm

groove depth is available on workpiece diameters up to $\phi 200$ mm

The workpiece will interfere with the holder at maximum cutting diameters or larger



Recommended cutting conditions ★: 1st recommendation ☆: 2nd recommendation

GBF

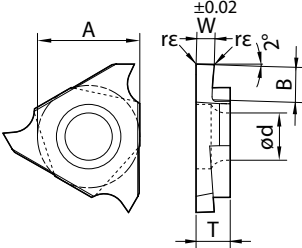
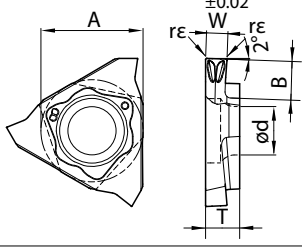
Workpiece	Recommended insert grade (Vc: m/min)			[1] Grooving: f (mm/rev) [2] Traversing: f (mm/rev) [3] Max D.O.C. for traversing (mm)			
	MEGACOAT	MEGACOAT NANO	Carbide				
	PR1215	PR1535	GW15	GBF32R 025 - 053 (~000F)	GBF32R 065 - 095 (~000F)	GBF32R 100 - 145 (~000F)	GBF32R 150 - 300 (~200 - 000F)
Carbon steel	★ 80 - 180	☆ 70 - 160	—	[1] 0.01 - 0.05 (0.005 - 0.03) [2] Not recommended [3] Not recommended	[1] 0.02 - 0.07 (0.01 - 0.04) [2] Not recommended [3] 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] Not recommended [3] Not recommended	[1] 0.02 - 0.06 (0.01 - 0.03) [2] Not recommended [3] 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] Not recommended [3] Not recommended	[1] 0.02 - 0.06 (0.01 - 0.025) [2] Not recommended [3] 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] Not recommended [3] Not recommended	[1] 0.02 - 0.07 (0.01 - 0.04) [2] Not recommended [3] 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] Not recommended [3] Not recommended	[1] 0.02 - 0.07 (0.01 - 0.04) [2] Not recommended [3] 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] Not recommended [3] Not recommended	[1] 0.02 - 0.06 (0.01 - 0.04) [2] Not recommended [3] 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] Grooving: f (mm/rev) [2] Traversing: f (mm/rev) [3] Max D.O.C. for traversing (mm)			
	MEGACOAT	MEGACOAT NANO				
	PR1215	PR1535	GBF32R 075 - 005GL	GBF32R 095 - 100-005GL	GBF32R 150 - 200-010GL	GBF32R 300 - 010GL
Carbon steel	★ 80 - 180	☆ 70 - 160	[1] 0.02 - 0.07 [2] Not recommended [3] 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] Not recommended [3] 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] Not recommended [3] 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

KGBF-JCT applicable inserts

Applicable inserts

Description	A	T	ød				
GBF32	9.525	3.18	4.4				
Shape	Description	Dimensions (mm)			MEGACOAT	MEGACOAT NANO	Carbide
		W	B	rε	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	1.30	2.0	0.1	●	●	●
	130-000F			0.00	●	●	●
	130-005	1.30	2.0	0.05	●	●	●
	130-010			0.1	●	●	●
	140-000F	1.40	2.7	0.00	●	●	●
	140-005			0.05	●	●	●
	140-010	1.45	2.7	0.1	●	●	●
	145-000F			0.00	●	●	●
	145-005	1.45	2.7	0.05	●	●	●
	145-010			0.1	●	●	●
	150-000F	1.50	2.7	0.00	●	●	●
	150-005			0.05	●	●	●
	150-010	1.65	2.7	0.1	●	●	●
	165-000F			0.00	●	●	●
	165-005	1.65	2.7	0.05	●	●	●
	165-010			0.1	●	●	●
	170-000F	1.70	3.0	0.00	●	●	●
	170-005			0.05	●	●	●
	170-010	1.75	3.0	0.1	●	●	●
	175-000F			0.00	●	●	●
	175-005	1.75	3.0	0.05	●	●	●
	175-010			0.1	●	●	●
	200-000F	2.00	3.0	0.00	●	●	●
	200-005			0.05	●	●	●
	200-010	2.25	3.0	0.1	●	●	●
	225-005			0.05	●	●	●
	225-010	2.50	3.0	0.1	●	●	●
	250-005			0.05	●	●	●
	250-010	3.00	3.0	0.1	●	●	●
	300-005			0.05	●	●	●
	300-010	3.00	3.0	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	●	●	

3 mm groove depth is available on workpiece diameters up to ø51 mm (Please check cautions on P.11)

*1. Edge width tolerance of GBF32R 033-000F / 005: 0.33 ^{+0.015}/_{-0.025} *2. Edge width tolerance of GBF32R 043-000F / 005: 0.43 ^{+0.015}/_{-0.025} *3. Edge width tolerance of GBF32R 053-000F / 005: 0.53 ^{+0.015}/_{-0.025}

● : Available

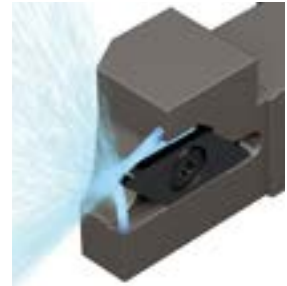
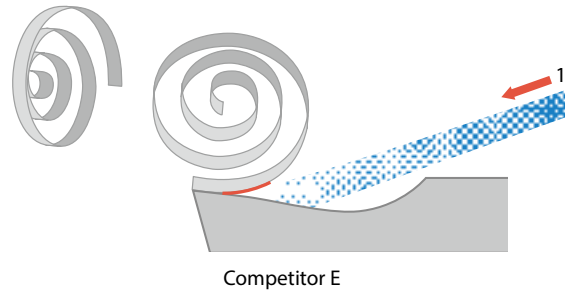
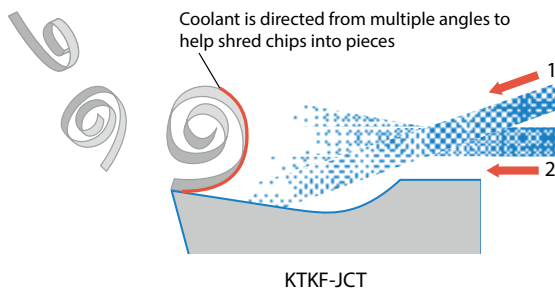
KTKF-JCT

Finely breaks chips into small pieces. Excellent chip control when machining difficult-to-cut material and stainless steel. Superior cooling action improves tool life

1 Superior chip control performance

Discharges coolant in two directions toward rake surface of insert
Finely breaks ships into small pieces

Coolant discharge structure comparison



Chip control comparison (Internal evaluation)

X5CrNi1810

f (mm/rev)	0.01	0.02	0.03
KTKF-JCT			
Comp. E			

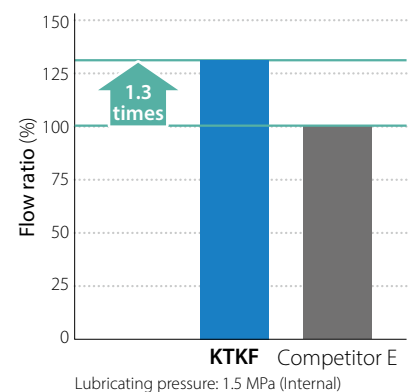
TAB6400 (Ti-6Al-4V)

f (mm/rev)	0.01	0.02	0.03
KTKF-JCT			
Comp. E			

Cutting conditions: $V_c = 80$ m/min, Wet (oil-based) lubricating pressure: 1.5 MPa (Internal) Workpiece: $\phi 12$

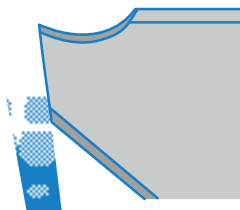
Coolant flow rate comparison

Internal evaluation

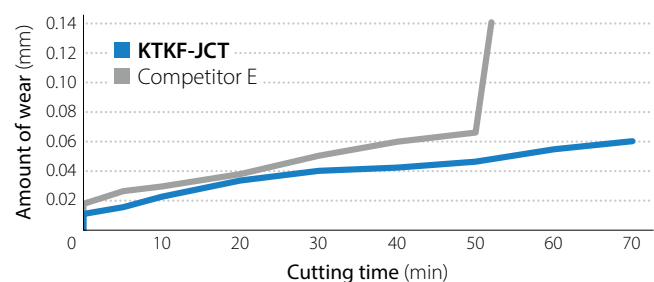


2 Superior cooling action improves tool life

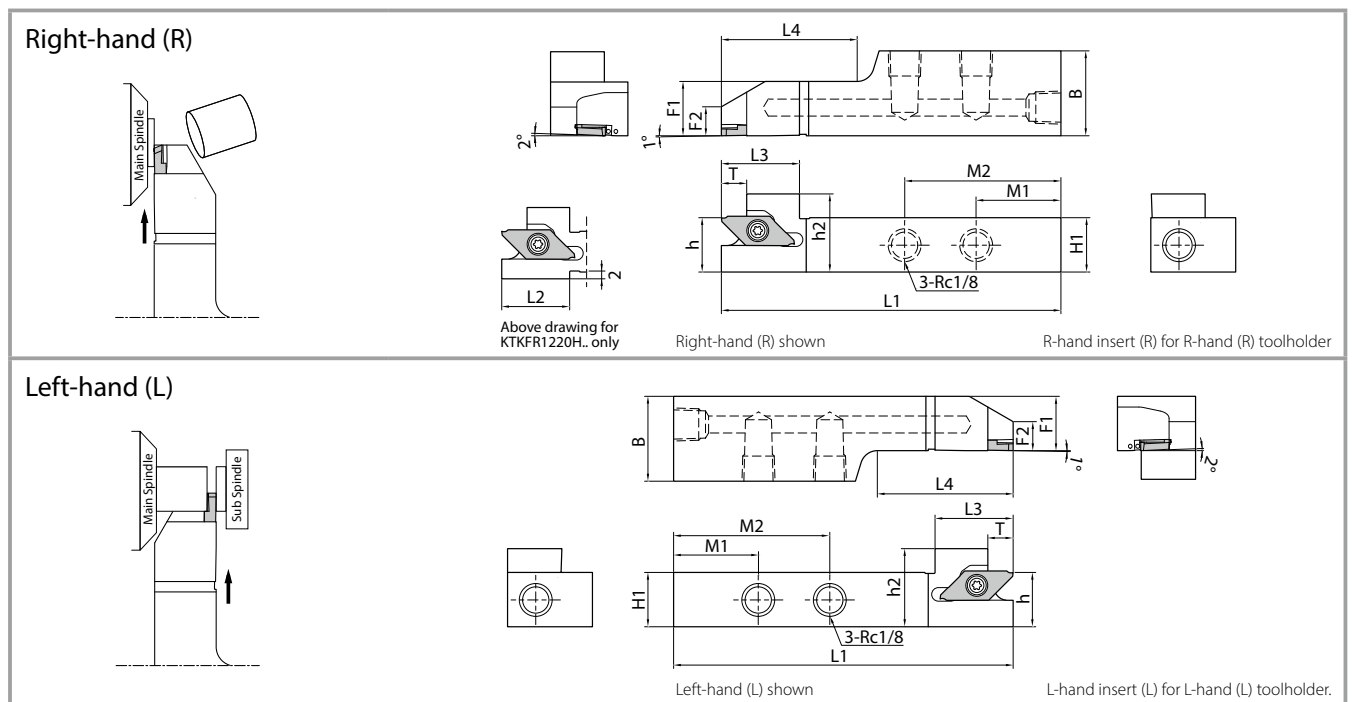
Coolant is directed from the flank face of the insert as well as an ample supply of coolant to the tool edge area helps to further suppress insert wear



Wear resistance comparison (Internal evaluation)



Cutting conditions: $V_c = 100$ m/min, $f = 0.02$ mm/rev, wet (Oil-based)
Lubricating pressure: 1.5 MPa (Internal) Workpiece: TAB6400 (Ti-6Al-4V) $\phi 12$



Toolholder dimensions

Description	Availability		Dimensions (mm)												Parts		
															Clamp screw	Wrench	Plug
	R	L	H1 = h	h2	B	L1	L2	L3	L4	F1	F2	T	M1	M2			
KTGF1220H-12JCT	●		12	19	20	100	20	20	28	12	6.4	7.5	35	—	SB-4590TRWN	FT-10	GP-1
KTGF ^R /L 1625H-12JCT	●	●	16	23	25		—	23	40	16	8.5		25	46			
KTGF ^R /L 2025H-12JCT	●	●	20	27	25	100	—	23	40	16	8.5	9.6	25	46	SB-4590TRWN	FT-10	GP-1
KTGF ^R /L 1625H-16JCT	●	●	16	23	25												
KTGF ^R /L 2025H-16JCT	●	●	20	27	25												

● : Available

Recommended cutting conditions ★: 1st recommendation; ☆: 2nd recommendation

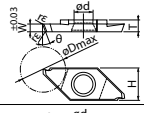
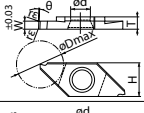
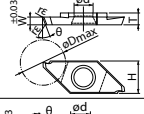
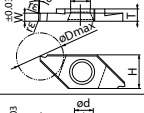
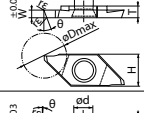
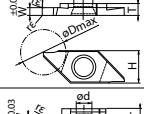
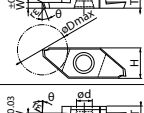
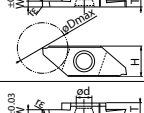
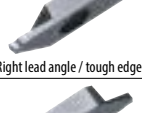
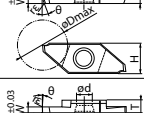
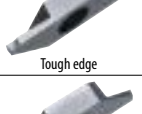
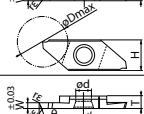
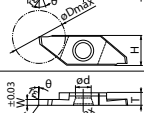
Workpiece	Recommended Insert Grade (Vc: m/min)						TKF12						TKF16		Notes
							Edge width W (mm)						Edge width W (mm)		
	MEGACOAT NANO		MEGACOAT	PVD coated carbide	DLC coated carbide	Carbide	0.5	0.7	1.0	1.25	1.5	2.0	1.5	2.0	
	PR1425	PR1535	PR1225	PR1025	PDL025	KW10	f (mm/rev)						f (mm/rev)		
Carbon steel	★ 70 – 170 (50 – 140)	☆ 70 – 150 (50 – 120)	☆ 70 – 150 (50 – 120)	☆ 60 – 130	–	–	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)	☆ 60 – 130	–	–	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)	☆ 50 – 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	
Aluminum	–	–	–	–	★ 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.)

KTKF-JCT applicable inserts

Applicable inserts (TKF12/TKF16)

Applicable inserts (TKF12/TKF16)		Usage classification		P	Carbon steel & Alloy steel						
				M	Stainless steel						
				K	Cast iron						
				N	Non-ferrous metals						

Shape Right-hand (R) shown (when applicable)		Description	Dimensions (mm)						Angle		MEGACOAT NANO		MEGACOAT		PVD coated carbide		DLC coated carbide		Carbide		
			W	øD max	rε	T	H	ød	θ	PR1425 R L	PR1535 R L	PR1225 R L	PR1025 R L	PDL025 R L	KW10 R L						
		TKF12 ^R /L 050-S-16DR	0.5	5	0.03	3	8.7	5	16°												
		TKF12 ^R /L 070-S-16DR	0.7	8																	
		TKF12 ^R /L 100-S-16DR	1.0	12																	
		TKF12 ^R /L 125-S-16DR	1.25	12																	
		TKF12 ^R /L 150-S-16DR	1.5	12																	
		TKF12 ^R /L 200-S-16DR	2.0	12																	
		TKF12 ^R /L 050-S	0.5	5	0.03	3	8.7	5	0°												
		TKF12 ^R /L 070-S	0.7	8																	
		TKF12 ^R /L 100-S	1.0	12																	
		TKF12 ^R /L 125-S	1.25	12																	
		TKF12 ^R /L 150-S	1.5	12																	
		TKF12 ^R /L 200-S	2.0	12																	
		TKF12 ^R /L 100-T-16DR	1.0	12	0.08	3	8.7	5	16°												
		TKF12 ^R /L 150-T-16DR	1.5	12																	
		TKF12 ^R /L 200-T-16DR	2.0	12																	
		TKF12 ^R /L 100-T	1.0	12	0.08	3	8.7	5	0°												
		TKF12 ^R /L 150-T	1.5	12																	
		TKF12 ^R /L 200-T	2.0	12																	
		TKF12 ^R /L 050-NB-20DR	0.5	5	0	3	8.7	5	20°												
		TKF12 ^R /L 070-NB-20DR	0.7	8																	
		TKF12 ^R /L 100-NB-20DR	1.0	12																	
		TKF12 ^R /L 150-NB-20DR	1.5	12																	
		TKF12 ^R /L 200-NB-20DR	2.0	12																	
		TKF12 ^R /L 050-NB	0.5	5	0	3	8.7	5	0°												
		TKF12 ^R /L 070-NB	0.7	8																	
		TKF12 ^R /L 100-NB	1.0	12																	
		TKF12 ^R /L 150-NB	1.5	12																	
		TKF12 ^R /L 200-NB	2.0	12																	
		TKF16 ^R /L 150-S-16DR	1.5	16	0.05	4	9.5	5	16°												
		TKF16 ^R /L 200-S-16DR	2.0	16																	
		TKF16 ^R /L 150-S	1.5	16	0.05	4	9.5	5	0°												
		TKF16 ^R /L 200-S	2.0	16																	
		TKF16 ^R /L 150-T-16DR	1.5	16	0.08	4	9.5	5	16°												
		TKF16 ^R /L 200-T-16DR	2.0	16																	
		TKF16 ^R /L 150-T	1.5	16	0.08	4	9.5	5	0°												
		TKF16 ^R /L 200-T	2.0	16																	
		TKF16 ^R /L 150-NB-20DR	1.5	16	0	4	9.5	5	20°												
		TKF16 ^R /L 200-NB-20DR	2.0	16																	
		TKF16 ^R /L 150-NB	1.5	16	0	4	9.5	5	0°												
		TKF16 ^R /L 200-NB	2.0	16																	

Lead angle (front cutting edge angle: θ) shows the angle when installed in the toolholder.

Machining diameter of insert (øDmax) indicates the machining diameter when the tool tip has proceeded to the center of workpiece

●: Available