

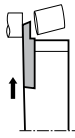
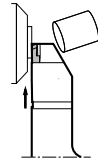
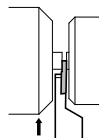
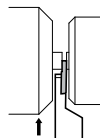
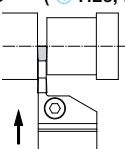
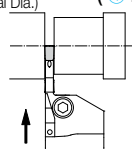
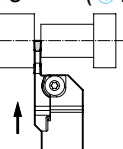
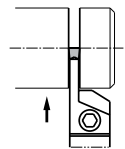
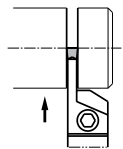
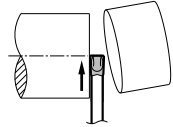
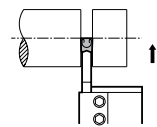
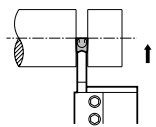
CUT-OFF

H







H1 - H62

PRODUCT LINEUP		H2
GUIDE FOR CUT-OFF		H3
SUMMARY OF CUT-OFF TOOLS		H4 - H5
SMALL DIAMETER CUT-OFF TOOLHOLDERS		H6 - H23
KTKF	Lateral Side Screw Clamp Holder	H8
KTKF-S (Sub Spindle)	Lateral Side Screw Clamp Holder	H10
KTKF-JCT (Coolant-Through)	Lateral Side Screw Clamp Holder	H13
KTKF-JCTM (Coolant-Through)	Lateral Side Screw Clamp Holder	H17
KTKF-Y (Y-Axis Holder)	Lateral Side Screw Clamp Holder	H20
KTKFS (Sub Spindle)	Lateral Side Screw Clamp Holder	H22
CUT-OFF TOOLHOLDERS (2-EDGE INSERT, KGD)		H24 - H39
KGD (Small Parts)	Integral Toolholder	H26
KGDS (Sub Spindle)	Integral Toolholder	H27
KGD-JCT (Small Parts Coolant-Through)	Integral Toolholder	H29
KGD-JCTM (Small Parts Coolant-Through)	Integral Toolholder	H30
KGD	Integral Toolholder	H32
KGD-JCT (Coolant-Through)	Integral Toolholder	H35
KGD-S	SwitchBlade Toolholder	H36
CUT-OFF TOOLHOLDERS (2-EDGE INSERT, KGM)		H40 - H45
KGM (Small Parts)	Integral Toolholder	H42
KGM	Integral Toolholder	H42
KGM-T	Integral Toolholder	H43
CUT-OFF TOOLHOLDERS (1-EDGE INSERT)		H46 - H59
KPKB-JCT / KPKB	Blade	H49
KPKTB-JCT / KTKTB / KTKTBF	Tool Block	H51
KPKH-JCT / KPKH	Integral Toolholder	H52
KTKB-SS / KTKB-S	Blade	H57
KTKH-S	Integral Toolholder	H58
RECOMMENDED CUTTING CONDITIONS		H60 - H61
ALTERNATIVE CUT-OFF TOOLHOLDER REFERENCE		H62

Product Lineup

Small Diameter Cut-Off <i>Cut-Off Diameter</i> Ø0.197"~Ø0.472" ~Ø0.630" (Ø5mm~Ø12mm) (~Ø16mm)	KTKF (H8)  <i>Width</i> : (0.020"~0.079") <i>Width</i> : (0.5mm~2.0mm)	KTKF-JCTM (H17)  <i>Width</i> : (0.020"~0.079") <i>Width</i> : (0.5mm~2.0mm)	Sub Spindle Tooling	KTKF-S (H10)  <i>Width</i> : (0.039"~0.079") <i>Width</i> : (1.0mm~2.0mm)	KTKFS (H22)  <i>Width</i> : (0.039"~0.079") <i>Width</i> : (1.0mm~2.0mm)
	KGD (Bolt Clamp) <i>Cut-Off Diameter</i> Ø0.472"~Ø1.575" (Ø12mm~Ø50mm)	KGD (H26, H32)  <i>Width</i> : (0.079"~0.158") <i>Width</i> : (1.3mm~4.0mm)		KGD-JCTM (Small Dia.) (H30)  <i>Width</i> : (0.079"~0.158") <i>Width</i> : (1.3mm~4.0mm)	KGD-S (H36)  <i>Width</i> : (0.079"~0.158") <i>Width</i> : (1.3mm~4.0mm)
KGM (Bolt Clamp) <i>Cut-Off Diameter</i> Ø0.709"~Ø1.575" (Ø18mm~Ø60mm)	KGM (H42)  <i>Width</i> : 0.059"~0.158", 0.118"~0.236" <i>Width</i> : (1.5mm~4mm, 3mm~8mm)	KGM-T (H43)  <i>Width</i> : 0.079"~0.197" <i>Width</i> : (2mm~6mm)			
KPKB KTKB / KTKH (1-edge Insert) <i>Cut-Off Diameter</i> Ø1.181"~Ø2.441" (Ø30mm~Ø79mm)	Toolholders <i>Cut-Off Diameter</i> Ø1.181"~Ø2.441" (Ø30mm~Ø79mm)	KTKH-S (H58)  <i>Width</i> : (0.020"~0.079") <i>Width</i> : (2.2mm~5.1mm)	Blade Type <i>Cut-Off Diameter</i> Ø0.551"~Ø0.630" (Ø32mm~Ø120mm)	KPK-Series (H46)  <i>Width</i> : (0.079"~0.157") <i>Width</i> : (1.6~6.0mm)	KTKB-S(S) (H57)  <i>Width</i> : (0.063"~0.378") <i>Width</i> : (1.6mm~9.6mm)

Cut-Off Tools

Series Name	Shape	Advantage	Applications
For Small Diameter Cut-Off		1) Insert clamp is side screw type from the side 2) 2-edge insert 3) Max. Cut-off Dia. : Ø0.630" (Ø16mm)	1) For cut-off and grooving of small workpieces 2) For small parts machining
KGD-JCT KGD		1) Insert is clamped from top side 2) 1-edge and 2-edge inserts available 3) Integral type and separate type are available 4) Max. Cut-off Dia. : Ø1.969" (Ø50mm) 5) JCT jet coolant-through styles available	1) PM Chipbreaker ... For Cut-Off 2) PH Chipbreaker ... For Cut-Off (High Feed Rate) / For Grooving 3) PG Chipbreaker ... For Cut-Off (for Small Parts Machining) / Sharp-Cutting Oriented 4) PF Chipbreaker ... For Cut-Off (for Small Parts Machining) / Low Feed 5) PQ Chipbreaker ... For Cut-Off (for Small Parts Machining) / Medium Feed
KGM		1) Insert is clamped from top side 2) 1-edge and 2-edge inserts available 3) Max. Cut-off Dia. : Ø2.362" (Ø60mm)	1) For cut-off and grooving of small workpieces 2) For automatic lathe, small machine 3) TMR-Chipbreaker provides stable chip control up to high feed rate ranges
KPKB-JCT KPKB		1) Easy self-clamping insert replacement (no hammer required) 2) Firm insert clamp ensures safety and security 3) Max. Cut-off Dia. : Ø3.937" (Ø100mm)	1) For cut-off in Steel, Stainless, Cast Iron, and Non-ferrous 2) PM Chipbreaker ... General Purpose Cut-Off (Lead angle styles available) 3) PH Chipbreaker ... Tough Edge
KPKH-JCT KPKH			
KTKB KTKH		1) Self-Clamping System Tap the insert lightly with a plastic hammer to set it in the pocket 2) 1-edge insert 3) Blade type and Integral Shank type 4) Max. Cut-off Dia. : Ø4.724" (Ø120mm)	1) For cut-off and deep grooving 2) Standard chipbreaker is general cut-off type Feed rate: over 0.004ipr P-Chipbreaker is for cut-off at low feed rates Feed rate: 0.001~0.003ipr

Tool Selection

		Small Diameter Cut-Off	KGD	KGM	KPKB / KPKH KTKB / KTKH
Insert	1. Insert's Edge Number 1-edge Insert... For Larger Dia. Workpiece (Max. 4.724" / Ø120mm)	-	-	-	✓
	2-edge Insert... For Smaller Dia. Workpiece Cost per corner is reduced	✓	✓	✓	-
	2. Use a neutral angle insert if there is no restriction to the size of boss left on part. (See Fig.3 Below)	TKF...S TKF...NB TKFS...S	GDM GDMS	GMM	PKM TKN
	3. Use an angled insert to reduce the size of the remaining boss.	TKF...DR	GDM- $\frac{R}{L}$ (Fig. 2)	GMM- $\frac{R}{L}$ (Fig. 2)	PKM $\frac{R}{L}$ / TK $\frac{R}{L}$ (Fig. 1)
	4. Use a sharp-cornered lead-angled insert to make the remaining boss much smaller when machining small parts and thin parts.	TKF...DR	-	GMM- $\frac{R}{L}$ (Fig. 2)	-
Toolholder	5. Use the minimum width insert suitable for the machining.	✓	✓	✓	✓
	1. Use a suitable toolholder (blade) for the workpiece dia.	✓	✓	✓	✓
	2. Use a more rigid toolholder (blade).	✓	✓	✓	✓
	3. Use a side screw or self clamp toolholder if there is no space for clamping tools from top side (for small tools).	✓	-	-	-

How to Select Cut-Off Inserts with or without Lead Angle

- 1) Use a neutral angle insert, when remaining boss is not a concern. (See Fig.1)
- 2) Use an angled insert to reduce the remaining boss. (See Fig.2)
- 3) Use a sharp-edged insert with lead angle to minimize the remaining boss when cutting small parts and thin parts. (See Fig.3)

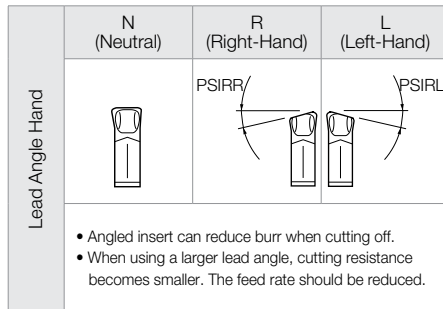


Fig.1

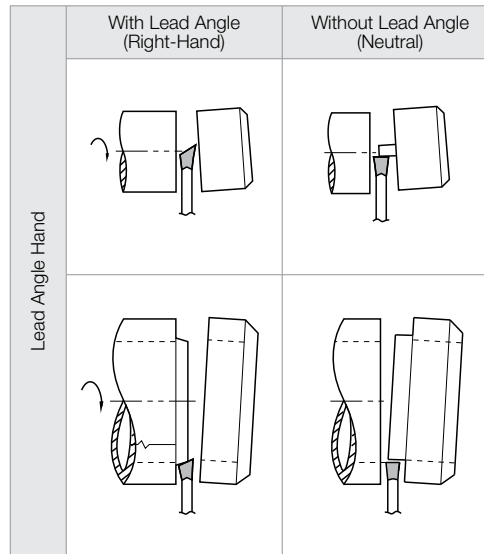


Fig.2

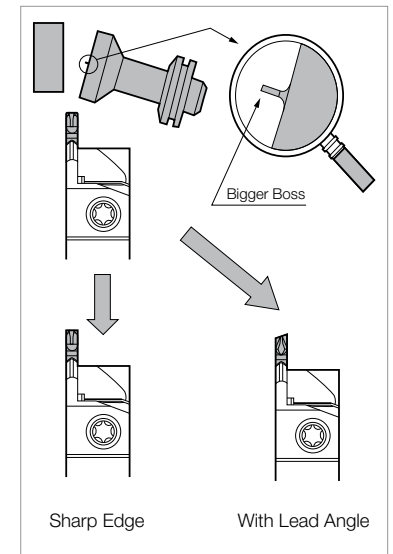


Fig.3

Caution

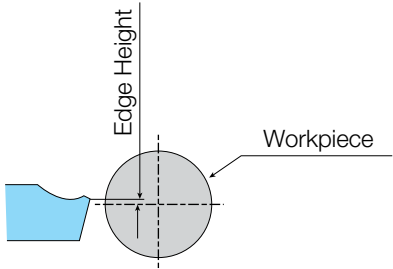
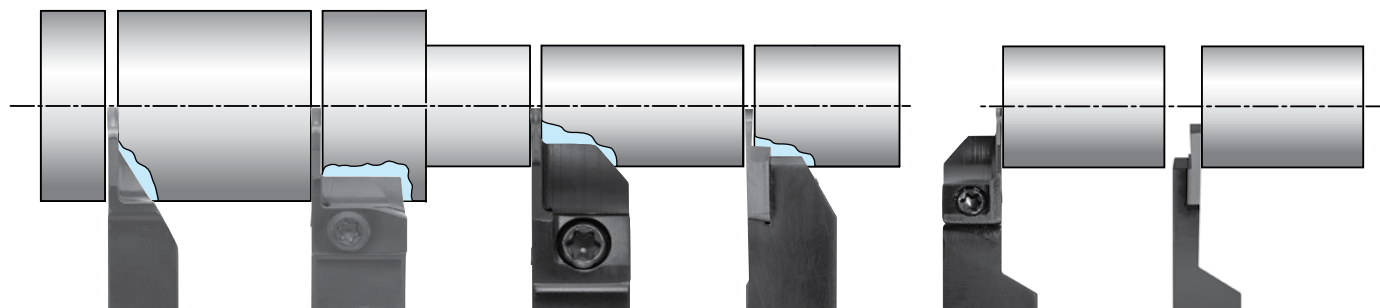
1) Set the cutting edge height 0.004"-0.008" above the center height	 <p>Fig.4</p>
2) Always apply sufficient coolant to the cutting edge	
3) Constant spindle revolution is recommended to obtain stable tool life	
4) Cut-off as close to the chuck as possible	
5) Decrease the feed rate from 1/2 to 1/3 when diameter is same as cut-off width	
<ul style="list-style-type: none">• Overuse of insert and toolholder (blade) may cause insert breakage and toolholder (blade) damage.• Do not rework the insert and toolholder (blade) to prevent damage• Clean the insert pocket well with compressed air when replacing insert	

Fig.4

Small Diameter Cut-Off ~Ø1.653" / ~45mm

Small Shank



KTKH-S	KGM	KGD / KGD-JCT(M)	KTKF / KTKF-JCT(M)	KGDS	KTKF-S/KTKFS
Cut-Off Dia. ~Ø1.300" ~Ø45mm	Cut-Off Dia. ~Ø0.984" ~Ø32mm	Cut-Off Dia. ~Ø1.653" ~Ø42mm	Cut-Off Dia. ~Ø0.625" ~Ø16mm	Cut-Off Dia. ~Ø24mm	Cut-Off Dia. ~Ø0.630" ~Ø16mm
Shank 0.375"~0.500" 10mm~25mm	Shank 0.375"~0.500" 10mm~16mm	Shank 0.0.375"~0.750" 10mm~20mm	Shank 0.375"~0.625" 10mm~25mm	Shank 16mm	Shank 0.375"~0.500" 10mm~12mm
Edge Width 0.063"~0.094" 2.2mm~4.1mm	Edge Width 0.079"~0.118" 1.5mm~4.0mm	Edge Width 0.059"~0.157" 1.3mm~4.0mm	Edge Width 0.020"~0.079" 0.5mm~2.0mm	Edge Width 1.3mm~3.0mm	Edge Width 0.5mm~2.0mm (KTKF-S) 0.059"~0.098" (KTKFS) 1.0mm~2.0mm (KTKFS)
Self Clamp	Top Clamp	Top Clamp	Side Screw Clamp	Top Clamp	Side Screw Clamp

➡ H58 ~ H59

➡ H42

➡ H26 ~ H30

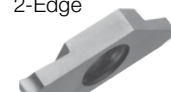
➡ H8

➡ H27

➡ H10, H22

**KTKF / KTKF-S
KTKFS**

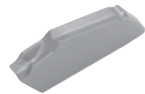
2-Edge



Low Resistance
Cut-Off Chipbreaker

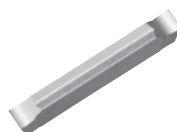


Chipbreaker for
General Cut-Off



Chipbreaker for
Low Feed Cut-Off

2-Edge



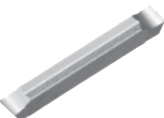
Sharp Cutting
PG Chipbreaker



Low Feed
PF Chipbreaker



Medium Feed
PQ Chipbreaker



(15° Lead Angle)



(15° Lead Angle)



(15° Lead Angle)

Chipbreaker Edge Shape	Cut-Off (Self Clamp) ➡ H56		
	General Cut-Off		Low Feed Cut-Off
	Chamfer + Honed	Sharp Edge	R Honed



KTKH-S ➡ H58
(Self Clamp)

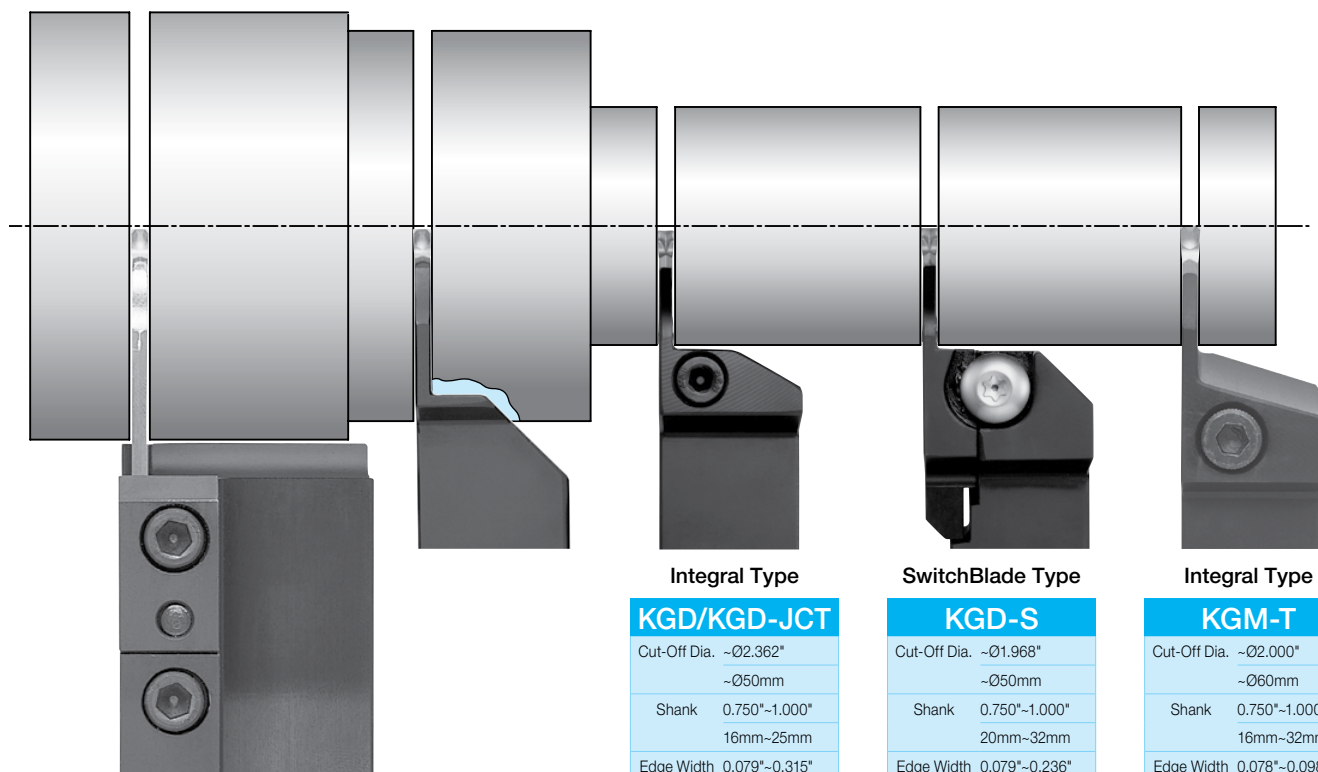


KGD ➡ H26
(Top Clamp)



KTKF ➡ H8
(Side Screw Clamp)

General Cut-Off ~Ø3.100" / ~120mm

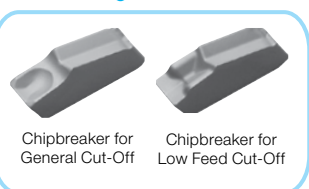
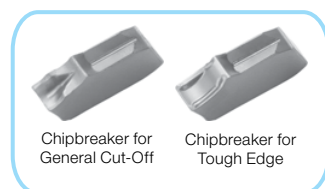


Blade + Toolblock	Blade + Toolblock	Integral Type
KPKB / KPKB-JCT	KTKB	KTKH-S
Cut-Off Dia. ~Ø100mm	Cut-Off Dia. ~Ø120mm	Cut-Off Dia. ~Ø3.100" ~Ø79mm
Block Shank 20mm~25mm	Block Shank 0.750"-1.000" 16mm~32mm	Shank 0.750"-1.000" 20mm~25mm
Edge Width 2.0mm~4.0mm	Edge Width 1.6mm~9.6mm	Edge Width 0.087"-0.201" 3.1mm~5.1mm
Self Clamp	Self Clamp	Self Clamp

→ H49

→ H57

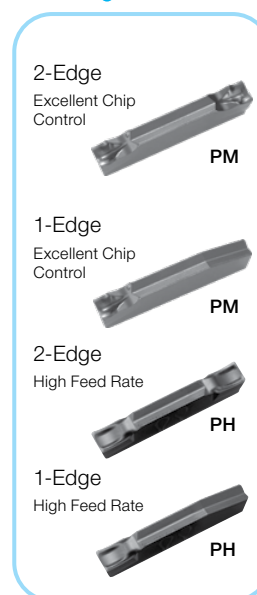
→ H58 ~ H59



→ H32 / H35

→ H36 ~ H37

→ H43









Blade + Toolblock	SwitchBlade Type	Integral Type
KPKB → H49	KTKB → H57	KGD-S → H36
KTKH → H52	KTKH-S → H58	KGD → H32
KGM → H42		

CUT-OFF TOOLHOLDERS (SMALL DIAMETER)

TKF12

Classification of Usage
 ● : Light Interruption / 1st Choice
 ○ : Light Interruption / 2nd Choice
 ● : Continuous / 1st Choice
 ○ : Continuous / 2nd Choice

P	Carbon Steel / Alloy Steel
M	Stainless Steel
K	Cast Iron
N	Non-ferrous Metals

Insert Right-handed Insert Shown		Part Number	Dimensions (in)							Angle (°)	MEGA COAT NANO PLUS	MEGA COAT NANO		MEGA COAT	PVD Coated Carbide	DLC		Carbide	Ref. Page for Tool				
			CW		CUTDIA	RE	W1	S	D1			PSIRR	PR1725			PR1425	PR1535			PR1225	PR1025	PDL025	KW10
			inch	mm																			
 Right Lead Angle	TKF12% 050-S-16DR	0.020	0.50	0.197	0.001	0.118	0.343	0.197	16°	●	●	△	●	△	△	●	●	●					
	070-S-16DR	0.028	0.70	0.315	0.001	0.118	0.343	0.197	16°	●	●	△	●	△	△			●					
	100-S-16DR	0.039	1.00	0.472	0.001	0.118	0.343	0.197	16°	●	●	△	●	△	△	●	●	●					
	125-S-16DR	0.049	1.25	0.472	0.001	0.118	0.343	0.197	16°	●	●	△	●	△	△		●	●					
	150-S-16DR	0.059	1.50	0.472	0.001	0.118	0.343	0.197	16°	●	●	△	●	△	△	●	●	●					
	200-S-16DR	0.079	2.00	0.472	0.001	0.118	0.343	0.197	16°	●	●	△	●	△	△	●	●	●					
 Right Lead Angle Tough Edge	TKF12% 050-S	0.020	0.50	0.197	0.001	0.118	0.343	0.197	0°	●	●	△	●	△	△	●	●	●					
	070-S	0.028	0.70	0.315	0.001	0.118	0.343	0.197	0°	●	●	△	●	△	△	●	●	●					
	100-S	0.039	1.00	0.472	0.001	0.118	0.343	0.197	0°	●	●	△	●	△	△	●	●	●					
	125-S	0.049	1.25	0.472	0.001	0.118	0.343	0.197	0°	●	●	△	●	△	△		●	●					
	150-S	0.059	1.50	0.472	0.001	0.118	0.343	0.197	0°	●	●	△	●	△	△	●	●	●					
	200-S	0.079	2.00	0.472	0.001	0.118	0.343	0.197	0°	●	●	△	●	△	△	●	●	●					
 Right Lead Angle Tough Edge	TKF12% 100-T-16DR	0.039	1.00	0.472	0.003	0.118	0.343	0.197	16°	●	●	△	△	●	●	●							
	150-T-16DR	0.059	1.50	0.472	0.003	0.118	0.343	0.197	16°	●	●	△	△	●	●	●							
	200-T-16DR	0.079	2.00	0.472	0.003	0.118	0.343	0.197	16°	●	●	△	△	●	●	●							
 Tough Edge	TKF12% 100-T	0.039	1.00	0.472	0.003	0.118	0.343	0.197	0°	●	●	△	△	●	●	●							
	150-T	0.059	1.50	0.472	0.003	0.118	0.343	0.197	0°	●	●	△	△	●	●	●							
	200-T	0.079	2.00	0.472	0.003	0.118	0.343	0.197	0°	●	●	△	△	●	●	●							
 Right Lead Angle	TKF12% 050-NB-20DR	0.020	0.50	0.197	0.000	0.118	0.343	0.197	20°	●	●	△	△	●	●		△						
	070-NB-20DR	0.028	0.70	0.315	0.000	0.118	0.343	0.197	20°	●	●	△	△	●	●		△						
	100-NB-20DR	0.039	1.00	0.472	0.000	0.118	0.343	0.197	20°	●	●	△	△	●	●		△	△					
	150-NB-20DR	0.059	1.50	0.472	0.000	0.118	0.343	0.197	20°	●	●	△	△	●	●		△	△					
	200-NB-20DR	0.079	2.00	0.472	0.000	0.118	0.343	0.197	20°	●	●	△	△	●	●		△	△					
 Without Chipbreaker	TKF12% 050-NB	0.020	0.50	0.197	0.000	0.118	0.343	0.197	0°	●	●	△	△	●	●		△						
	070-NB	0.028	0.70	0.315	0.000	0.118	0.343	0.197	0°	●	●	△	△	●	●		△	△					
	100-NB	0.039	1.00	0.472	0.000	0.118	0.343	0.197	0°	●	●	△	△	●	●		△	△					
	150-NB	0.059	1.50	0.472	0.000	0.118	0.343	0.197	0°	●	●	△	△	●	●		△	△					
	200-NB	0.079	2.00	0.472	0.000	0.118	0.343	0.197	0°	●	●	△	△	●	●		△	△					

- Lead angle shows the angle when installed in the toolholder.
- As Fig. 1 of H8 shows, the cutting diameter of the insert is measured when the lead edge passes 0.039" past the center line of part.

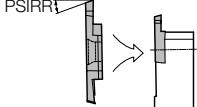
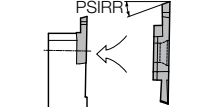
Recommended Cutting Conditions H60

Indication of Description

TKF 12 R 050 - S - 16D R

Insert Name	Insert Size	Width	Insert Hand	Name of Chipbreaker	Lead Angle (PSIRR) (Front Cutting Edge Angle)	Lead Angle Hand
			R: Right-Hand L: Left-Hand	S: S-Chipbreaker T: T-Chipbreaker (Tough Edge) NB: Without Chipbreaker		R: R-Hand L: L-Hand

Table 1

Toolholder	R-Hand (R)	Toolholder	L-Hand (L)
Insert	R-Hand (R)	Insert	L-Hand (L)
Lead Angle	R-Hand (R)	Lead Angle	R-Hand (R)
PSIRR		PSIRR	


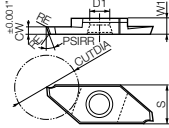

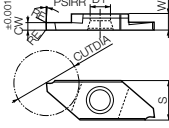

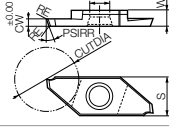

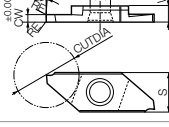

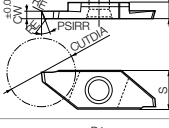

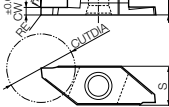
Inserts are sold in 10 piece boxes

CUT-OFF TOOLHOLDERS (SMALL DIAMETER)

TKF16

Classification of Usage
 ● : Light Interruption / 1st Choice
 ○ : Light Interruption / 2nd Choice
 ● : Continuous / 1st Choice
 ○ : Continuous / 2nd Choice

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

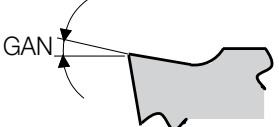
Insert Right-handed Insert Shown		Part Number	Dimensions (in)							Angle (°)	MEGA COAT NANO PLUS	MEGACOAT NANO			MEGACOAT		PVD Coated Carbide		DLC		Carbide		Ref. Page for Toolholder			
			CW		CUTDIA	RE	W1	S	D1			PSIRR	PR1725		PR1425		PR1535		PR1225		PR1025			PDL025		KW10
			inch	mm									R	L	R	L	R	L	R	L	R	L		R	L	
		TKF16% 150-S-16DR	0.059	1.5	0.630	0.002	0.157	0.374	0.197	16°	●	●	△	△	●	●	●	△	△	●	●	●	●			
		200-S-16DR	0.079	2.0	0.630	0.002	0.157	0.374	0.197	16°	●	●	△	△	●	●	●	△	△	●	●	●	●			
		TKF16% 150-S	0.059	1.5	0.630	0.002	0.157	0.374	0.197	0°	●	●	△	△	●	●	●	△	△	●	●	●	●			
		200-S	0.079	2.0	0.630	0.002	0.157	0.374	0.197	0°	●	●	△	△	●	●	●	△	△	●	●	●	●			
		TKF16% 150-T-16DR	0.059	1.5	0.630	0.003	0.157	0.374	0.197	16°	●	●	△	△	●	●	●							H6 H1 H1 H2		
		200-T-16DR	0.079	2.0	0.630	0.003	0.157	0.374	0.197	16°	●	●	△	△	●	●	●									
		TKF16% 150-T	0.059	1.5	0.630	0.003	0.157	0.374	0.197	0°	●	●	△	△	●	●	●									
		200-T	0.079	2.0	0.630	0.003	0.157	0.374	0.197	0°	●	●	△	△	●	●	●									
		TKF16% 150-NB-20DR	0.059	1.5	0.630	0.000	0.157	0.374	0.197	20°	●	●	△	△	●	●		△	△			●	●			
		200-NB-20DR	0.079	2.0	0.630	0.000	0.157	0.374	0.197	20°	●	●	△	△	●	●		△	△			●	●			
		TKF16% 150-NB	0.059	1.5	0.630	0.000	0.157	0.374	0.197	0°	●	●	△	△	●	●		△	△			●	●			
		200-NB	0.079	2.0	0.630	0.000	0.157	0.374	0.197	0°	●	●	△	△	●	●		△	△			●	●			

• Lead angle shows the angle when installed in the toolholder.

• As Fig.1 of H8 shows, the cutting diameter of the insert is measured when the lead edge passes 0.039" past the center line of part.

Recommended Cutting Conditions H60

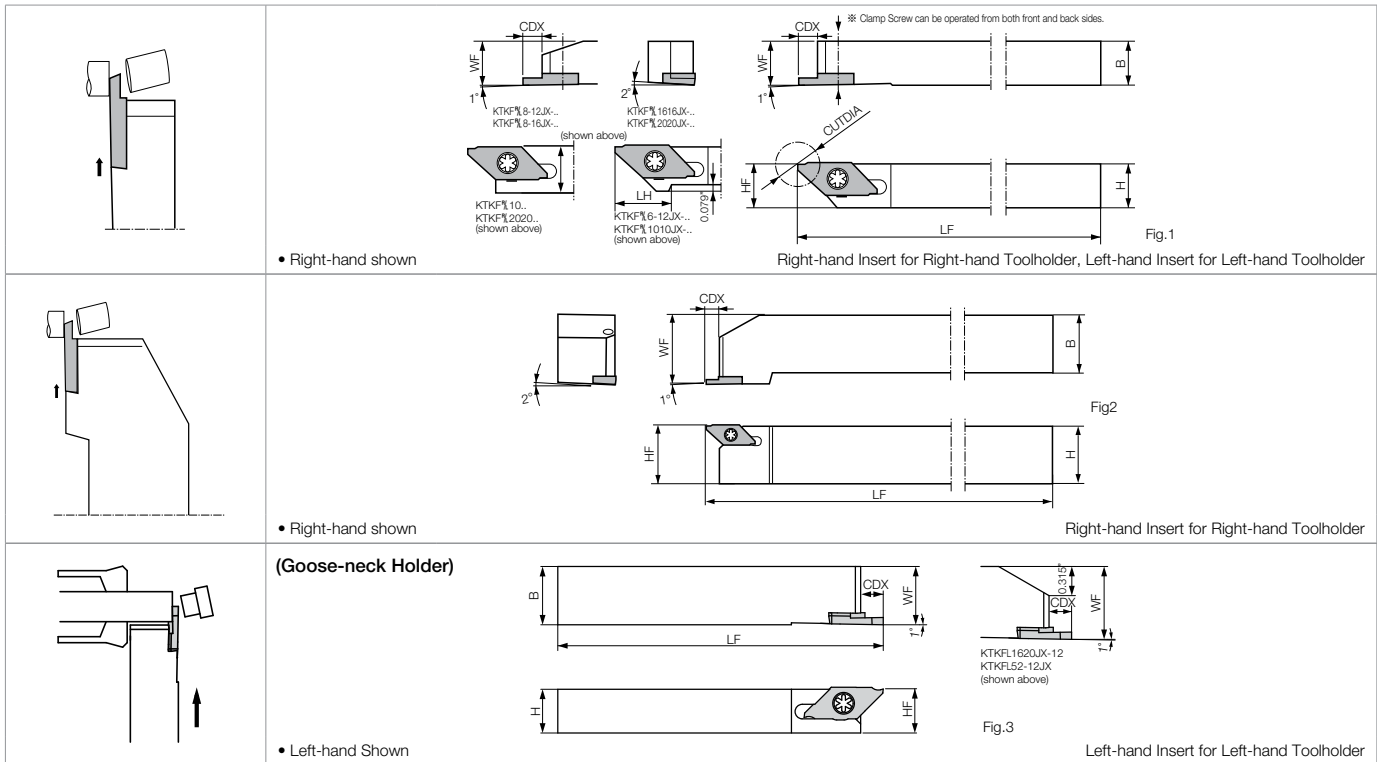
Descriptions of Chipbreaker Edge Shape

Chipbreaker Edge Shape	S-Chipbreaker		T-Chipbreaker (Tough Edge)		NB Chipbreaker	
	GAN	Part Number	GAN	Part Number	GAN	Part Number
	15°	TKF12...-S	12°	TKF...-T TKF...-T-16DR	0°	TKF...-NB TKF...-NB-20DR
	20°	TKF16...-S TKF16...-S-16DR				
	25°	TKF12...-S-16DR				



Inserts are sold in 10 piece boxes

CUT-OFF TOOLHOLDERS (SMALL DIAMETER)

KTKF / KTKF Goose-neck Holder



Toolholder Dimensions

Part Number	Stock		Unit	Dimensions							Drawing	Spare Parts		Applicable Inserts				
	R	L		H	HF	B	LF	LH	WF	CDX		Clamp Screw	Wrench					
																		
KTKF% 6-12JX	●	●	inch	0.375	0.375	0.375	4.750	0.590	0.375	0.236	Fig.1	SB-4590TRWN	LTW-10S	TKF12%...				
8-12JX	●	●		0.500	0.500	0.500	4.750	-	0.500	0.236								
10-12JX	●	●		0.625	0.625	0.625	4.750	-	0.625	0.236								
KTKF% 6-16JX	●	●		0.375	0.375	0.375	4.750	0.787	0.375	0.315	Fig.1				SB-4590TRWN	LTW-10S	TKF16%...	
8-16JX	●	●		0.500	0.500	0.500	4.750	-	0.500	0.315								
10-16JX	●	●		0.625	0.625	0.625	4.750	-	0.625	0.315								
KTKF% 1010JX-12	●	●	mm	10	10	10	120	15	10	6	Fig.1	SB-4590TRWN	LTW-10S	TKF12%...				
1212JX-12	●	●		12	12	12	120	-	12	6								
1616JX-12	●	●		16	16	16	120	-	16	6								
2020JX-12	●	●		20	20	20	120	-	20	6								
KTKF% 1010JX-16	●	●		10	10	10	120	20	10	8	Fig.1			SB-4590TRWN	LTW-10S	TKF16%...		
1212JX-16	●	●		12	12	12	120	-	12	8								
1616JX-16	●	●		16	16	16	120	-	16	8								
2020JX-16	●	●		20	20	20	120	-	20	8								
KTKF% 1212F-12	●	●		12	12	12	85	-	12	6	Fig.1					SB-4590TRWN	LTW-10S	TKF12R...
1212F-16	●	●		12	12	12	85	-	12	8								TKF16R...
KTKFR 2525M-12	●			25	25	25	150	-	30	6	Fig.2					SB-4590TRWN	LTW-10S	TKF12R...
2525M-16	●			25	25	25	150	-	30	8								TKF16R...
KTKFL 52-12JX		●	inch	0.500	0.500	0.625	4.750	-	0.625	0.236	Fig.3	SB-4590TRWN	LTW-10S			TKF12L...		
62.5-12JX		●		0.625	0.625	0.750	4.750	-	0.750	0.236								
KTKFL 1216JX-12		●	mm	12	12	16	120	-	16	6	Fig.3						SB-4590TRWN	LTW-10S
1620JX-12		●		16	16	20	120	-	20	6								

- Dimension CDX shows the distance from the toolholder to the cutting edge.
- See Page H6-H7 for actual cutting diameter.

Note : Cutting diameter of -12 type toolholder (CUTDIA) depends on the insert grooving width.

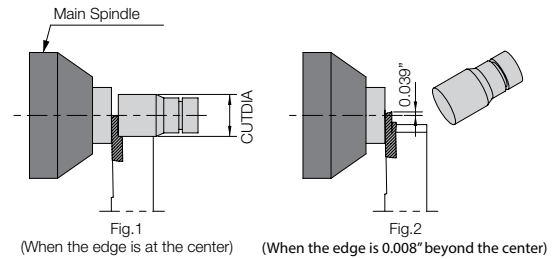
Recommended Cutting Conditions H60

CUT-OFF TOOLHOLDERS (SMALL DIAMETER)

How to Use

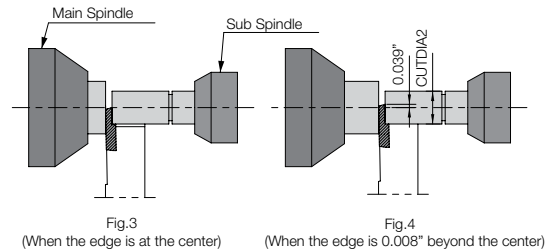
1) When using main spindle only

Workpiece maximum CUTDIA (Fig.1) = CUTDIA in toolholder table
Even if the cutting edge runs beyond the center line, the insert does not contact the workpiece, since the workpiece falls off.
(The clearance between the insert and the workpiece is 0.008")



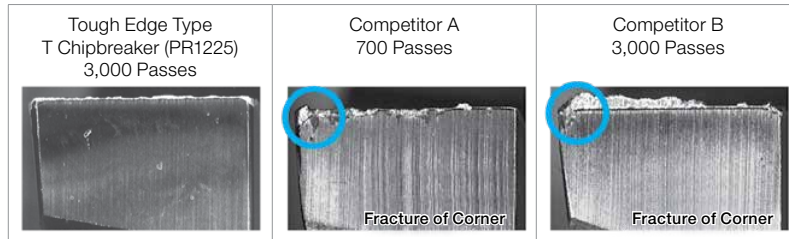
2) When using both Main and Sub spindles

In this case, when the cutting edge runs beyond the center line, the insert will contact the workpiece, since the workpiece does not fall off.
Therefore the programmed distance beyond the center must be considered.
e.g. When the cutting edge is programmed to run 1mm beyond the center.
Workpiece maximum, CUTDIA2 (Fig.4) = [CUTDIA - 0.039" x 2] (in)
(The clearance between the insert and the workpiece is 0.008")

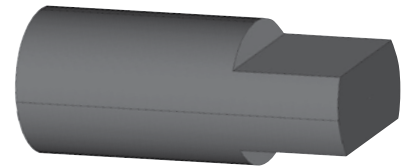


Tough Edge Type T Chipbreaker

Fracture Resistance Comparison (Interrupted Machining)



Cutting Conditions
Vc=250 f=0.0020ipr (Cut-Off 0.0006ipr)
Wet W1-9 (with flat cuts on two sides)
TKF12R200-T-16DR (PR1225)



Workpiece (with flat cuts on two sides)

	1,000 Passes	2,000 Passes	3,000 Passes
Tough Edge Type T Chipbreaker (PR1225)	→		
Competitor A	→ X		
Competitor B	→	→	→ X

Compared to Competitor A and B, Tough Edge "T Chipbreaker" achieves superior fracture resistance during interrupted cutting.

How to Select Edge Preparation

Troubleshooting

Problems	Countermeasures	Countermeasures						
		Lead Angle (PSIRR)		Edge Width		Name of Chipbreaker		
		No (0°)	Yes	Narrower	Wider	S	T	NB
Insert Fracture	Insert Fracture Prevention	Effective			Effective		Effective	Effective
Long Cutting Time	Cutting Time Reduction	Effective			Effective		Effective	Effective
Entangled Chips	Chip Entanglement Prevention	Effective		Effective		Effective		
Large Boss Remains	Small Boss Remains		Effective	Effective		Effective		
Ring Remains (Hollow Workpiece)	Prevention of Ring		Effective	Effective		Effective		
Deformation of thin walled workpiece (pipe)	Preventing Deformation		Effective	Effective		Effective		

KTKF-S

Cut-Off Holders for Small Parts Machining and Sub-Spindle Operations

1 Recommended for Cut-off with Small Sub-Spindle Clearance

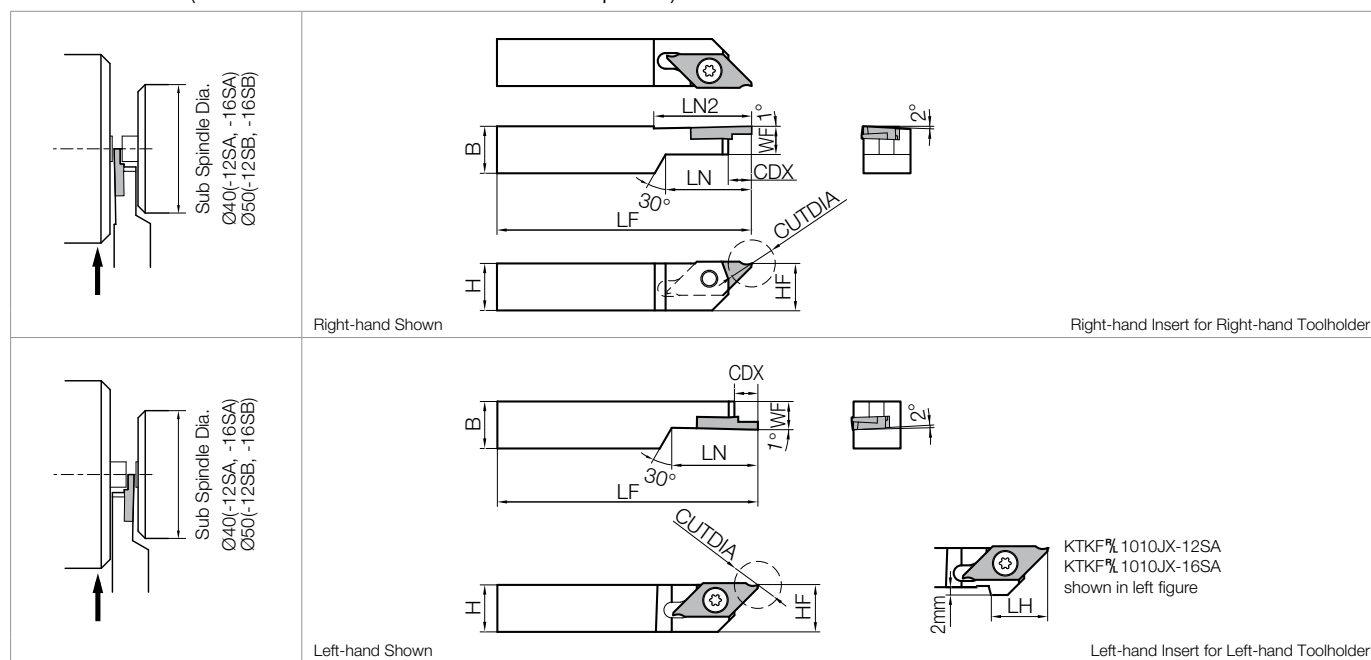
Thin holder head is great for when minimal clearance exists between the main spindle and sub spindle

2 Wide Selection of Inserts for Various Applications

Available Chipbreakers : Right lead angle, S Chipbreaker, T Chipbreaker, Without Chipbreaker

Available Insert Grades : PR1425 for Steel Machining, PR1535 for Stainless Steel Machining, and PDL025 for Aluminum Machining

KTKF-S (For Small Diameter Cut-Off / Sub-Spindle)



Toolholder Dimensions

Part Number	Stock		Cut-Off Dia.	Dimensions (mm)										Spare Parts		Applicable Inserts 🔧 H6~H7
	R	L		H	HF	B	LF	LH	LN	*LN2	WF	CDX	🔩	🔑		
			CUTDIA													
KTKEF% 1010JX-12SA	●	●	5~12	10	10	10	120	15	22	26	7.2	6	SB-4570TRN	LTW-10S	TKF12%...	
1212F-12SA	●	●		12	12	12	85	-								26
KTKEF% 1212JX-12SB	●	●					120									
KTKEF% 1010JX-16SA	●	●	16	10	10	10	120	20	22	30	7.2	8			TKF16%...	
1212F-16SA	●	●		12	12	12	85	-								26
KTKEF% 1212JX-16SB	●	●					120									

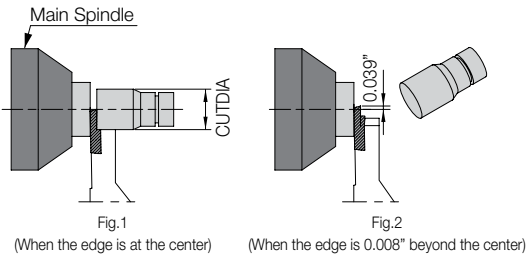
- Dimension CDX shows the distance from the toolholder to the cutting edge.
- CUTDIA dimension differs depending on insert edge width. See Page H6-H7 for actual cutting diameter.
- *LN2 dimension only applies to right-hand toolholders

Recommended Cutting Conditions ● H60

How to Use

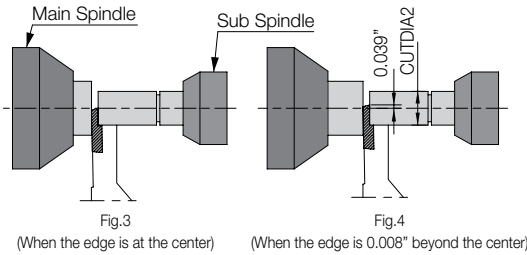
1) When using main spindle only

Workpiece maximum CUTDIA (Fig.1) = CUTDIA in toolholder table
Even if the cutting edge runs beyond the center line, the insert does not contact the workpiece, since the workpiece falls off.
(The clearance between the insert and the workpiece is 0.008")



2) When using both Main and Sub spindles

In this case, when the cutting edge runs beyond the center line, the insert will contact the workpiece, since the workpiece does not fall off.
Therefore, the programmed distance beyond the center must be considered.
e.g. When the cutting edge is programmed to run 1mm beyond the center.
Workpiece maximum, CUTDIA2 (Fig.4) = [CUTDIA - 0.039"x2] (in)
(The clearance between the insert and the workpiece is 0.008")



INSERT GRADES	A
TURNING INSERTS	B
GEN/PCD INSERTS	C
TURNING HOLDERS	D
SMALL TOOLS	E
BORING	F
GROOVING	G
CUT-OFF	H
THREADING	J
DRILLING	K
MILLING	M
QUICK CHANGE TOOLING	N
SPARE PARTS	P
TECHNICAL	R
INDEX	T

KTKF-JCT

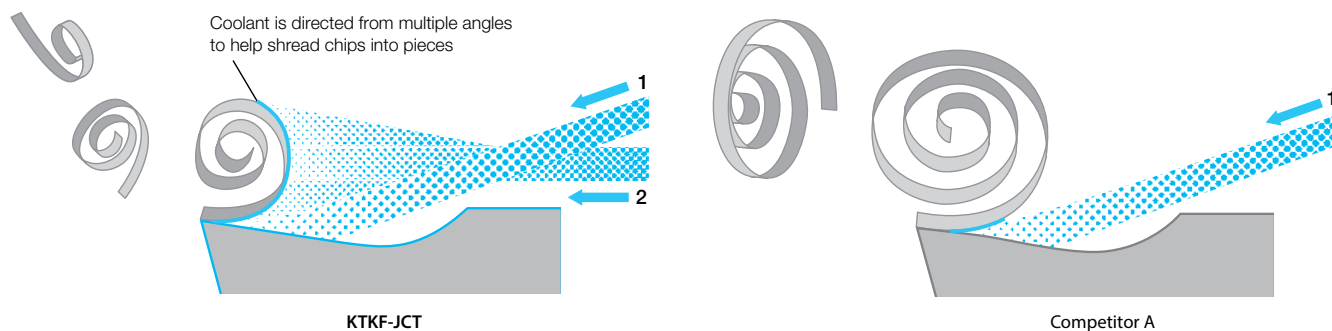
Cut-Off Holders for Small Parts Machining, Great for High Pressure Coolant

KTKF-JCT holders break chips evenly into small pieces with excellent chip control performance when machining difficult-to-cut material and stainless steel.

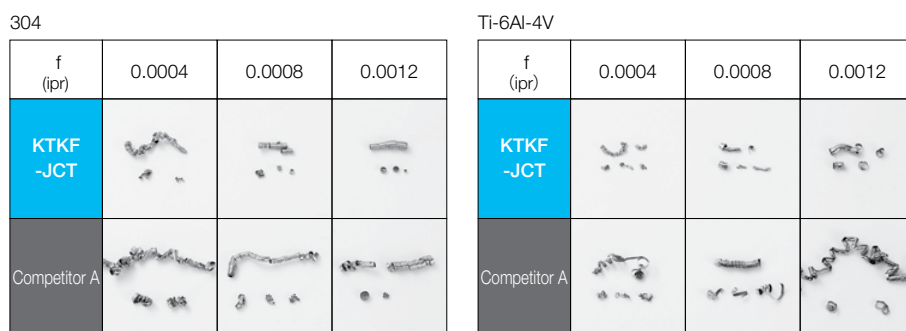
1 Excellent Chip Control Performance

The KTKF-JCT discharges coolant in two directions toward rake surface of insert and breaks chips into small pieces.

Coolant Discharge Structure Comparison

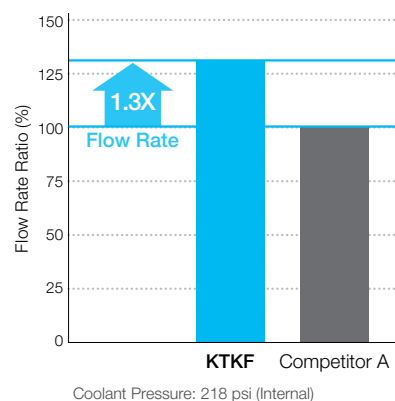


Chip Control Comparison (Internal Evaluation)



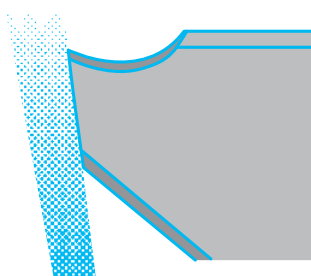
Cutting Conditions: $V_c = 260$ sfm, Wet (Oil-based) Coolant Pressure: 218 psi (Internal)
Workpiece: $\varnothing 0.472"$

Coolant Flow Rate Comparison (Internal Evaluation)

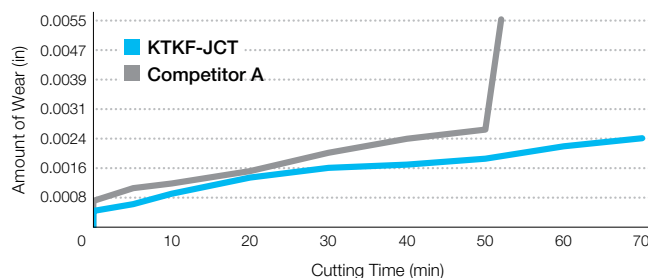


2 Superior Coolant Action Improves Tool Life

Coolant is also directed from the flank face of the insert to supply an ample amount of coolant to the tool edge area to help further suppress insert wear.



Wear Resistance Comparison (Internal Evaluation)

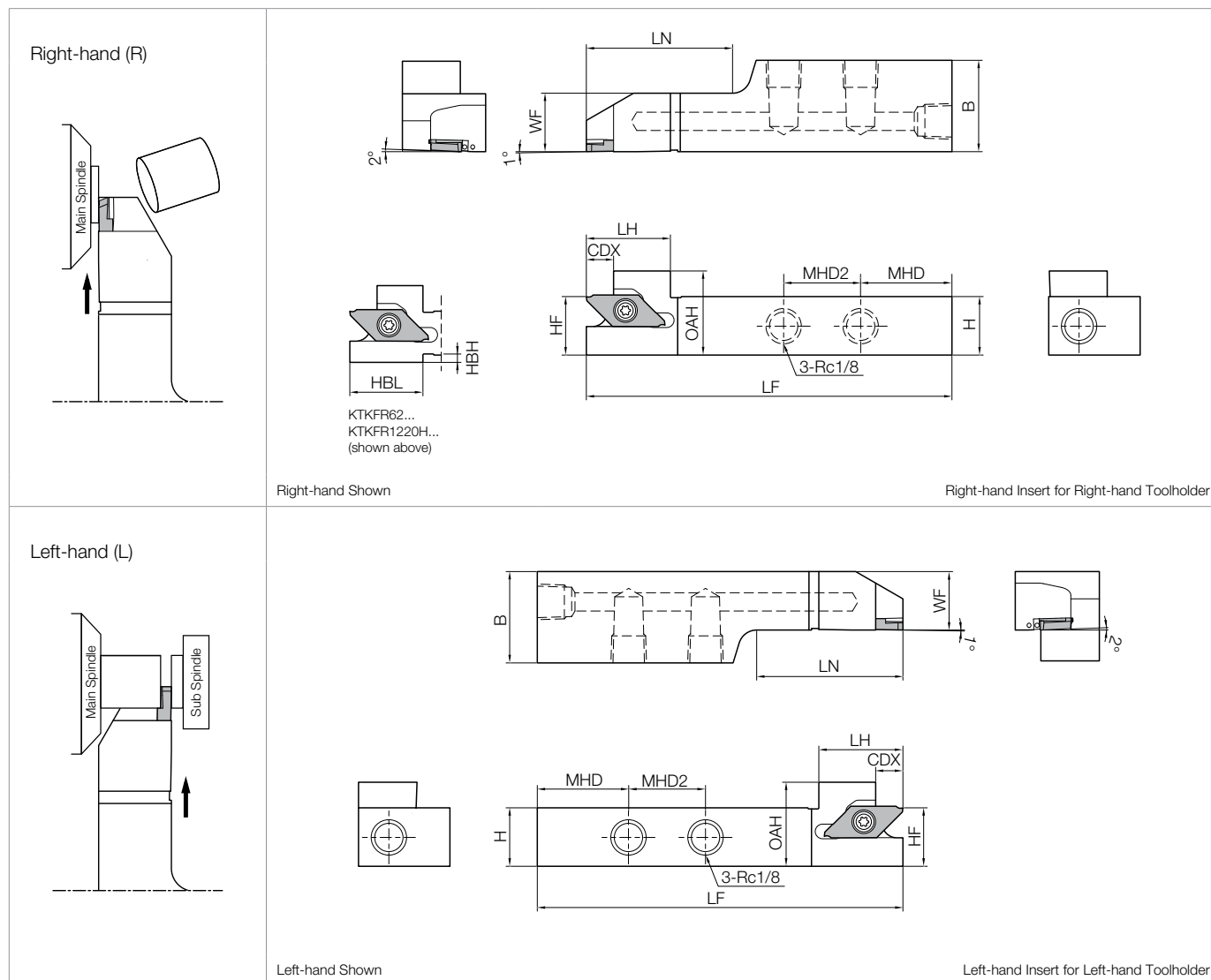


Cutting Conditions: $V_c = 330$ sfm, $f = 0.0008$ ipr, Wet (Oil-based)
Lubricating Pressure: 218 psi (Internal) Workpiece: Ti-6Al-4v $\varnothing 0.472"$




CUT-OFF TOOLHOLDERS - JET COOLANT-THROUGH

KTKF-JCT

KTKF-JCT holders are being phased out.
Switch to KTKF-JCTM style H13



Toolholder Dimensions

Part Number	Stock		Unit	Dimensions												Spare Parts			Applicable Inserts ⚙️ H6-H7	
	R	L		H=HF	OAH	B	LF	HBH	HBL	LH	LN	WF	CDX	MHD	MHD2					
KTKFR 62-12JCT	△		inch	0.500	0.775	0.750	4.750	-	0.783	0.783	1.110	0.500	0.295	1.417	-	SB-4590TRWN	FT-10	GP-1	TKF12R...	
82.5-12JCT	△			0.625	0.900	1.000			-	-	0.901	1.582	0.625	0.295	0.984				1.811	TKF16R...
KTKFR 82.5-16JCT	△			0.625	0.900	1.000			-	-	0.901	1.582	0.625	0.378	0.984				1.811	TKF16R...
KTKFR 1220H-12JCT	△		mm	12	19	20	100	2	20	20	28	12	7.5	35	-	SB-4590TRWN	FT-10	GP-1	TKF12R...	
KTKF% 1625H-12JCT	△	△		16	23	25		-	-	23	40	16		25	46				TKF12%...	
2025H-12JCT	△	△		20	27	25		-	-	23	40	20		25	46				TKF12%...	
KTKF% 1625H-16JCT	△	△		16	23	25		100	-	-	23	40	16	9.6	25	46	SB-4590TRWN	FT-10	GP-1	TKF16%...
2025H-16JCT	△	△		20	27	25	41					20	25		TKF16%...					

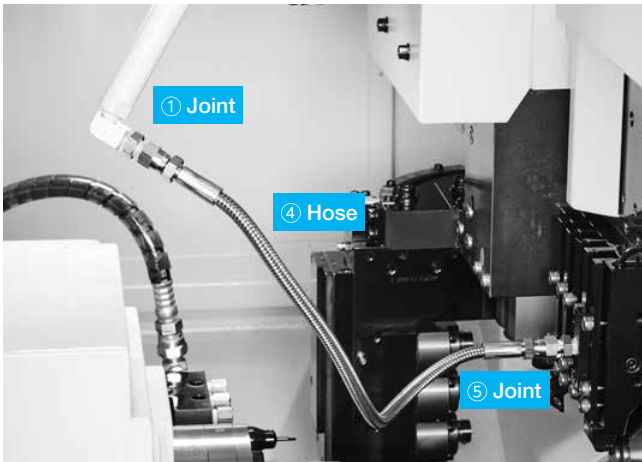
Recommended Cutting Conditions H60

Coolant Pipe Parts

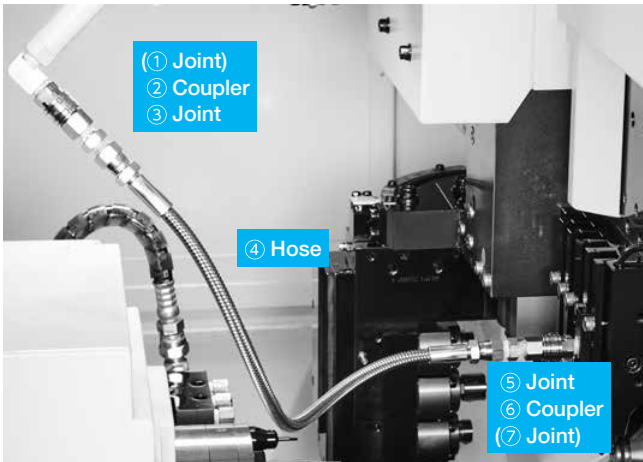
Pipe parts will be required separately if internal coolant is used.

Pump Pressure: up to 2,900 psi
Pump Pressure: up to 1,088 psi if couplers are used

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



With Coupler (Pump Pressure: up to 1,088 psi)



Combination Part Description Example

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

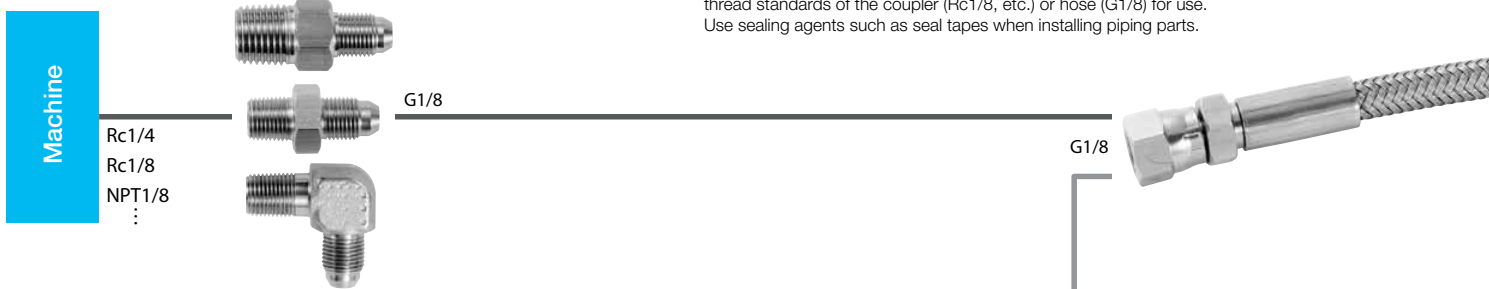
Convert the thread standards on the machine's side (Rc1/4, Rc1/8, NPT1/8, etc.) to the thread standard on the hose side (G1/8) for use.
Use sealing agents such as seal tapes when installing piping parts.

Combination Part Description Example

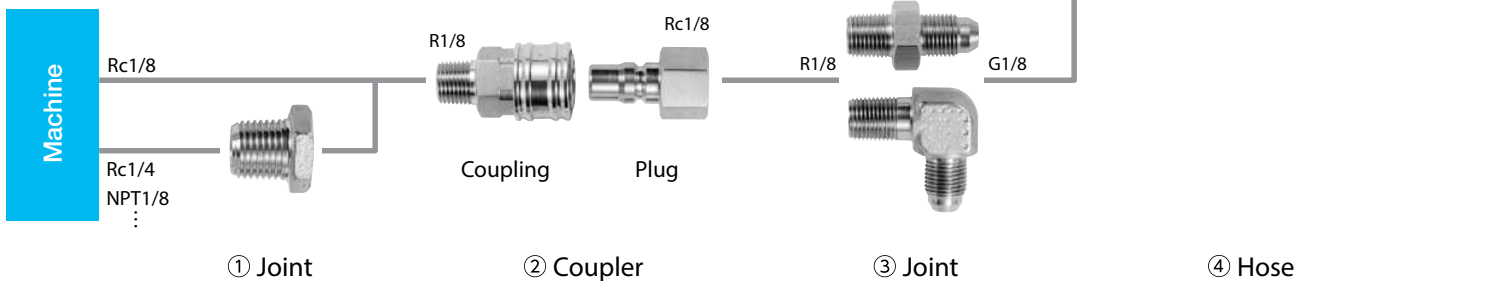
Part	Part Number
(① Joint)	-
② Coupler	CP-ST-R1/8, P-ST-RC1/8
③ Joint	J-ST-R1/8-G1/8
④ Hose	HS-G1/8-G1/8-500
⑤ Joint	J-ST-R1/8-G1/8
⑥ Coupler	P-ST-RC1/8, CP-ST-R1/8
(⑦ Joint)	-

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

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







With Coupler (Pump Pressure: up to 1,088 psi)



Piping Installation Parts Description

Joint (① ③ ⑤ ⑦)



Pressure Resistance: up to 2,900 psi

Exterior	Part Number	Thread Standard	Stock
	J-ST-R1/4-G1/8	R1/4 ⇔ G1/8	●
	J-ST-NPT1/8-G1/8	NPT1/8 ⇔ G1/8	●
	J-ST-R1/8-G1/8	R1/8 ⇔ G1/8	●
	J-AN-R1/8-G1/8		●
	J-ST-R1/4-RC1/8	R1/4 ⇔ Rc1/8	●
	J-ST-NPT1/8-RC1/8	NPT1/8 ⇔ Rc1/8	●
	J-ST-R1/8-RC1/8	Rc1/8 ⇔ R1/8 (Extension Joint)	●

● : U.S. Stock

Coupler (② ⑥)


Pressure Resistance: up to 1,088 psi

Exterior	Part Number	Thread Standard	Stock
	CP-ST-R1/8	R1/8	●
	P-ST-RC1/8	Rc1/8	●

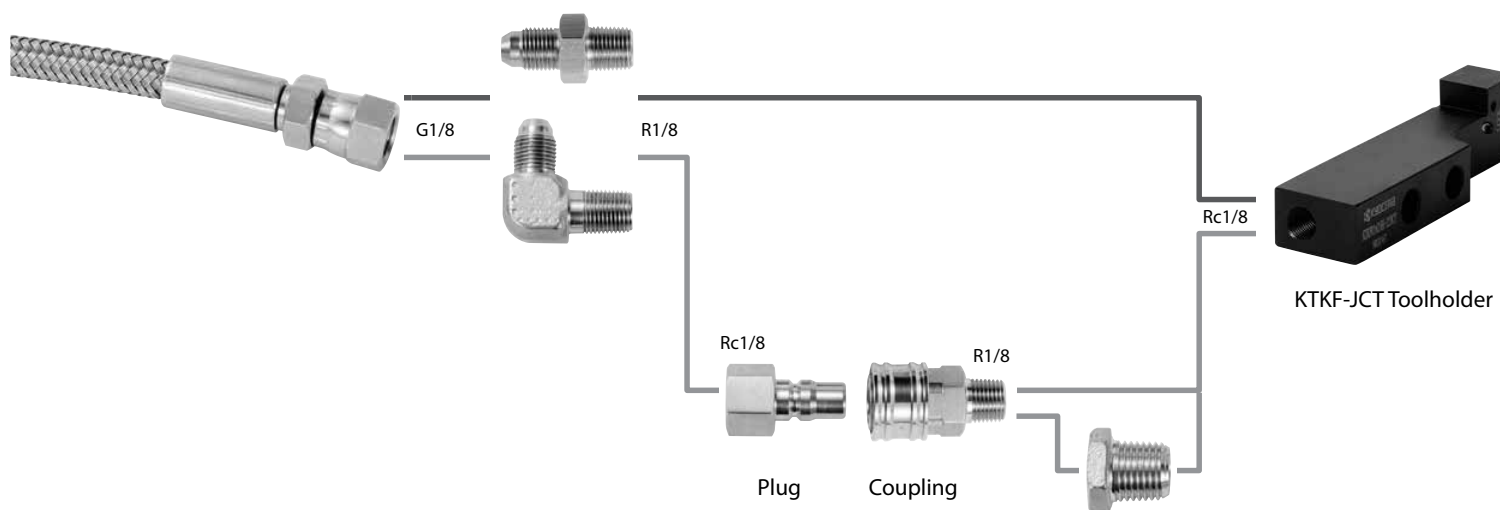
● : U.S. Stock

Hose (④)

Pressure Resistance: up to 2,900 psi

Exterior	Part Number	Thread Standard	Total Length (mm)	Stock
	HS-G1/8-G1/8-200	G1/8	200	●
	HS-G1/8-G1/8-300		300	●
	HS-G1/8-G1/8-400		400	●
	HS-G1/8-G1/8-500		500	●
	HS-G1/8-G1/8-600		600	●
	HS-G1/8-G1/8-800		800	●

● : U.S. Stock



④ Hose

⑤ Joint

⑥ Coupler

⑦ Joint (Extension Joint)

KTKF-JCTM ^{NEW}

Direct from Turret High-Pressure Coolant-Through Cut-Off Holders

Supports Internal Coolant with or without Piping Systems

Internal Coolant without Piping

*When the tool turret supports direct coolant

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

Applicable to Wide Range of Machines

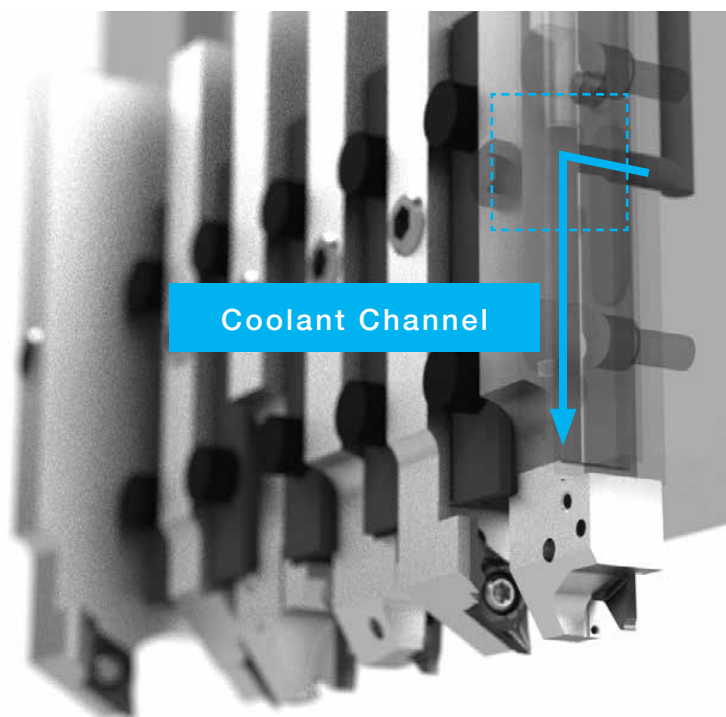
The tool turret is optional. Please contact our company sales representative for details.

CITIZEN MACHINERY CO., LTD. (L20, D25, M32)
STAR MICRONICS CO., LTD. (SB-R series, SR series, SV series)
TSUGAMI CORPORATION (S205/206-II □16 type, S205A/206A-II □16 type)

(Random order)
Based on Kyocera Survey in January 2021

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

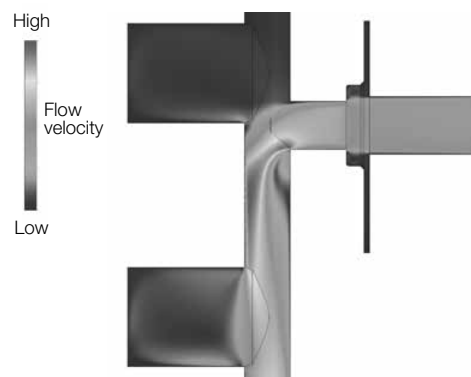
H
CUT-OFF



Optimized Coolant Supply

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

Analysis Image (Internal Evaluation)

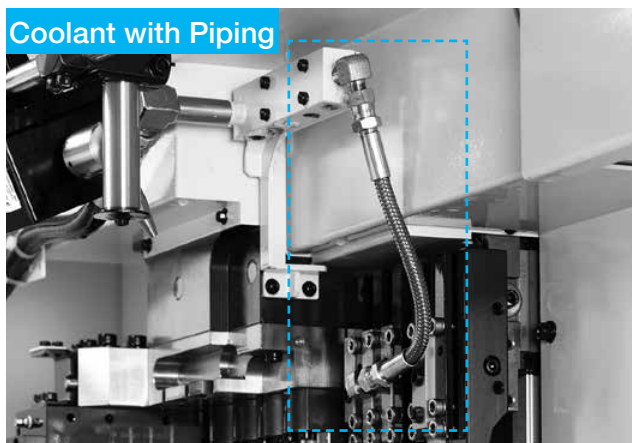


Internal Coolant with Piping

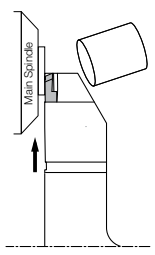
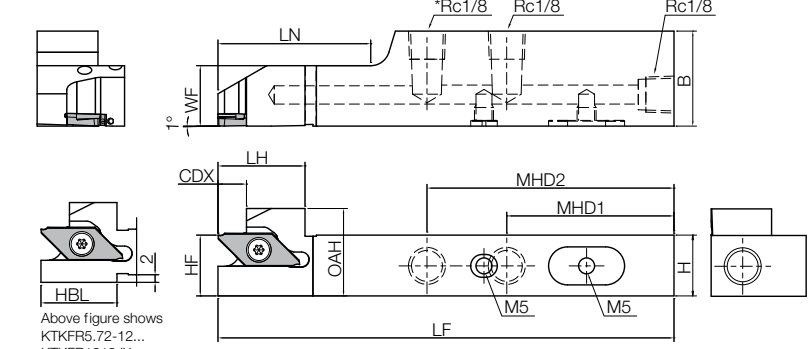
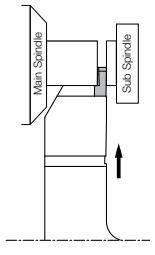
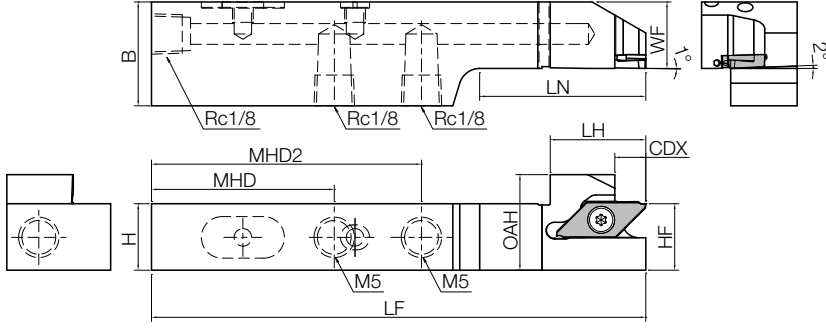
*Piping parts: See pages **H18** and **H19**

Compatible with internal coolant on any machine with standard piping parts

Commercial piping parts are available when using at normal pressure



KTKF-JCTM NEW

<p>Right-hand (R)</p> 	<p>*KTKFR5.72... : 2-Rc1/8 *KTKFR12... : 2-Rc1/8</p>  <p>Above figure shows KTKFR5.72-12... KTKFR1218JX...</p> <p>Right-hand Shown</p> <p>Right-hand Insert for Right-hand Toolholder</p>
<p>Left-hand (L)</p> 	 <p>Left-hand Shown</p> <p>Left-hand Insert for Left-hand Toolholder</p>

Toolholder Dimensions

Part Number	Stock		Unit	Dimensions												Spare Parts				Applicable Inserts H6~H7
	R	L		H=HF	OAH	B	LF	HBH	HBL	LH	LN	WF	CDX	MHD	MHD2	Clamp Screw	Wrench	Plug 1	Plug 2	
KTKFR 5.72-12JCTM	●		inch	0.500	0.500	0.775	0.709	4.750	0.790	0.790	1.110	0.500	0.295	2.125	-	SB-4590TRWN	FT-10	GP-1	HS5X4LP	TKF12R... TKFT12R...
KTKF% 82.5-12JCTM	●	●		0.625	0.625	0.900	1.000	4.750	-	0.905	1.585	0.625	0.295	1.730	2.560					TKF12%... TKFT12%...
82.5-16JCTM	●	●											0.377							
KTKFR 1218JX-12JCTM	●		mm	12	12	19	18		20	20	28	12		54	-	SB-4590TRWN	FT-10	GP-1	HS5X4LP	TKF12R... TKFT12R...
KTKF% 1625JX-12JCTM	●	●		16	16	23	25	120	-	23	40	16	7.5	44	65					TKF12%... TKFT12%...
2025JX-12JCTM	●	●		20	20	27						20								
KTKF% 1625JX-16JCTM	●	●		16	16	23	25	120	-	23	40	16	9.6	44	65					TKF16%... TKFT16%...
2025JX-16JCTM	●	●		20	20	27					41	20								

Recommended Cutting Conditions H60

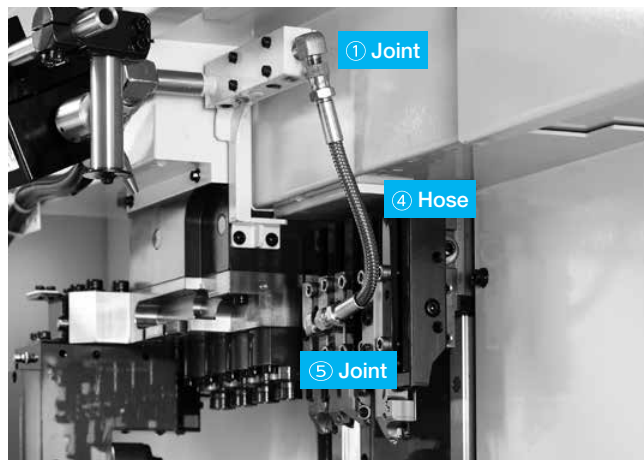
Coolant Pipe Parts

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

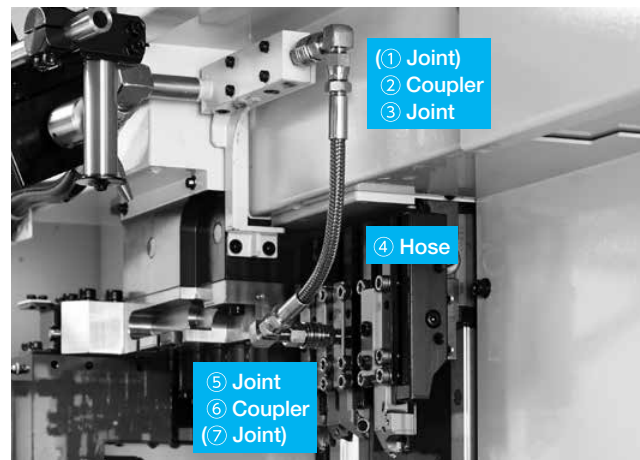
Pump Pressure: up to 2,900 psi

Pump Pressure: up to 1,088 psi if couplers are used

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



With Coupler (Pump Pressure: up to 1,088 psi)



Combination Part Description Example

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

Convert the thread standards on the machine's side (Rc1/4, Rc1/8, NPT1/8, etc.) to the thread standard on the hose side (G1/8) for use.

Use sealing agents such as seal tapes when installing piping parts.

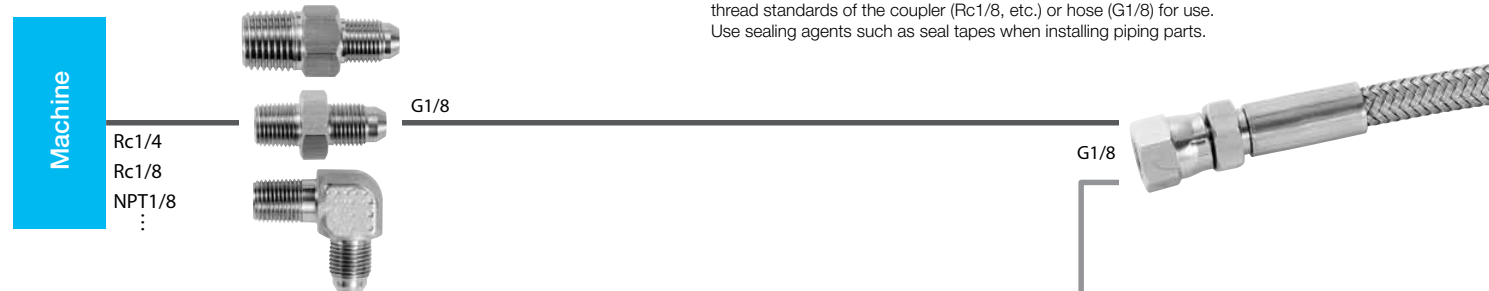
Combination Part Description Example

Part	Part Number
(① Joint)	-
② Coupler	CP-ST-R1/8, P-ST-RC1/8
③ Joint	J-AN-R1/8-G1/8
④ Hose	HS-G1/8-G1/8-200
⑤ Joint	J-AN-R1/8-G1/8
⑥ Coupler	P-ST-RC1/8, CP-ST-R1/8
(⑦ Joint)	-

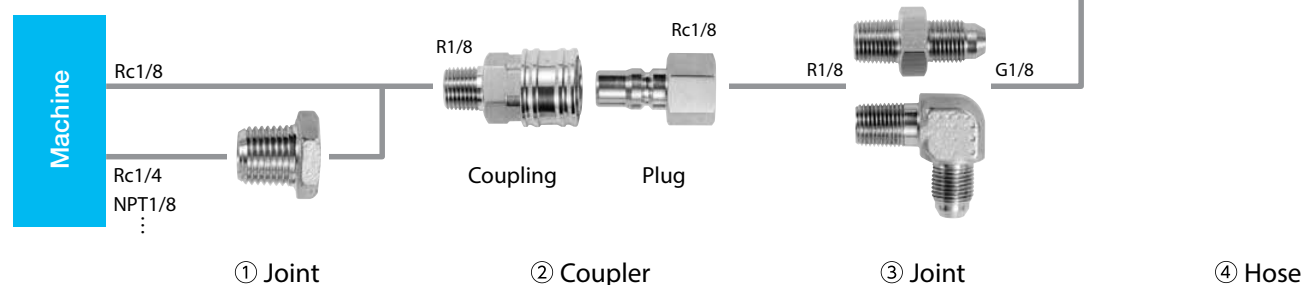
Convert the thread standards on the machine's side (Rc1/4, Rc1/8, NPT1/8, etc.) to thread standards of the coupler (Rc1/8, etc.) or hose (G1/8) for use.

Use sealing agents such as seal tapes when installing piping parts.

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







With Coupler (Pump Pressure: up to 1,088 psi)



Piping Installation Parts Description

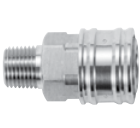

Joint (① ③ ⑤ ⑦)

Pressure Resistance: up to 2,900 psi
(Unit: mm)

Shape	Part Number	Stock	Ød1	Ød2	L	L1	L2	T1	T2
	J-ST-R1/4-G1/8	●	5.5	4.0	34	13	13	R1/4	G1/8
	J-ST-NPT1/8-G1/8	●	3.5	3.5	29	10	13	NPT1/8	G1/8
	J-ST-R1/8-G1/8	●	4.0	4.0	29	10	13	R1/8	G1/8
	J-AN-R1/8-G1/8	●	4.0	4.0	27	14	13	R1/8	G1/8
	J-ST-R1/4-RC1/8	●	-	-	17	12	-	R1/4	Rc1/8
	J-ST-NPT1/8-RC1/8	●	3.5	-	30	10	-	NPT1/8	Rc1/8
	J-ST-R1/8-RC1/8	●	3.5	-	33	13	-	R1/8	Rc1/8


Coupler (② ⑥)

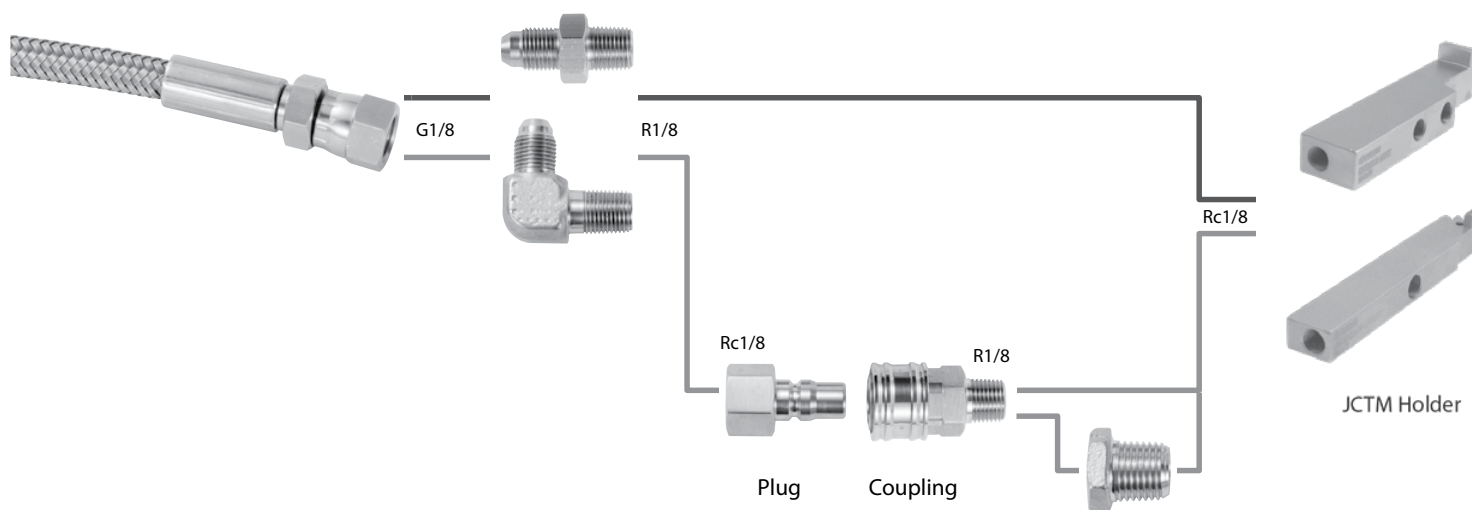
Pressure Resistance: up to 1,088 psi
(Unit: mm)

Shape	Part Number	Stock
	CP-ST-R1/8	●
	P-ST-RC1/8	●

Hose (④)

Pressure Resistance: up to 2,900 psi
(Unit: mm)

Shape	Part Number	Stock	L
	HS-G1/8-G1/8-200	●	200
	HS-G1/8-G1/8-300	●	300
	HS-G1/8-G1/8-400	●	400
	HS-G1/8-G1/8-500	●	500
	HS-G1/8-G1/8-600	●	600
	HS-G1/8-G1/8-800	●	800



④ Hose

⑤ Joint

⑥ Coupler

⑦ Joint (Extension Joint)

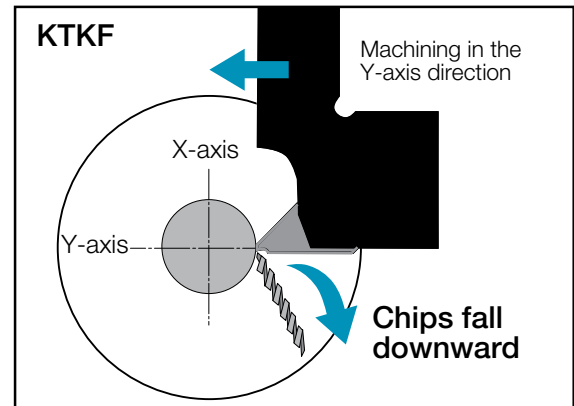
Y-axis Toolholders

Improved Chip Control

New Toolholder Designs for Better Chip Evacuation in Small Parts Machining

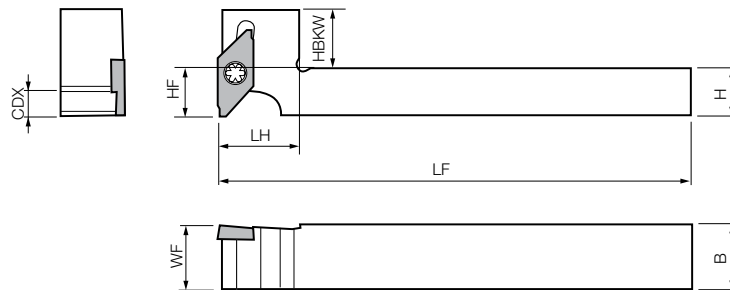


1 Controlled Chip Evacuation for Stable Machining



The Y-axis machining direction allows the chips to fall down and away from the workpiece, improving chip evacuation.

KTKF-Y (Y-axis Holder) NEW



• Right-hand shown

Right-hand Insert for Right-hand Toolholder, Left-hand Insert for Left-hand Toolholder

Toolholder Dimensions

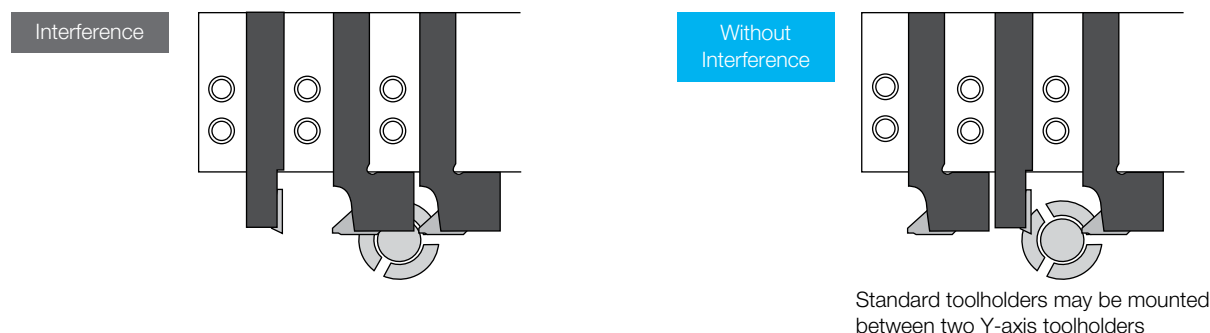
Part Number	Stock		Dimensions (mm)								Spare Parts		Applicable Inserts
	R	L	H	HF	B	LF	LH	WF	LU	HBKW	Clamp Screw	Wrench	
KTKFR 1216JX-12-Y	●		12	12	16	120	20	16	6	15	SB-4590TRWN	FT-10	TKF12R...
1616JX-12-Y	●		16	16	16		25	16		11			

• Dimensions LU shows the distance from the toolholder to the cutting edge

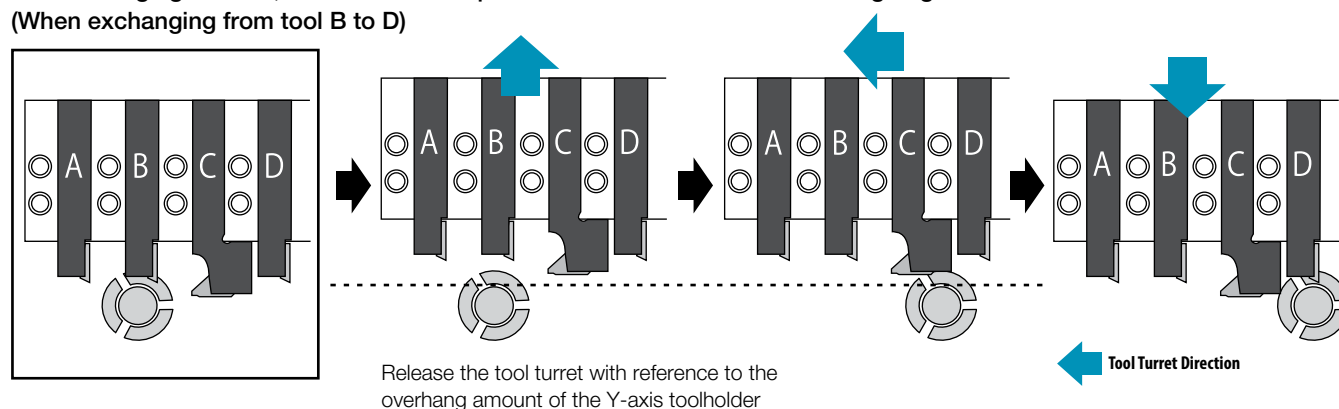
Recommended Cutting Conditions ● H60

Precautions

Do not use Y-axis toolholders side-by-side to prevent interference (Only two Y-axis holders can be used at the same time)



When changing the tool, set the retracted position with reference to the cutting edge of the Y-axis holder (When exchanging from tool B to D)



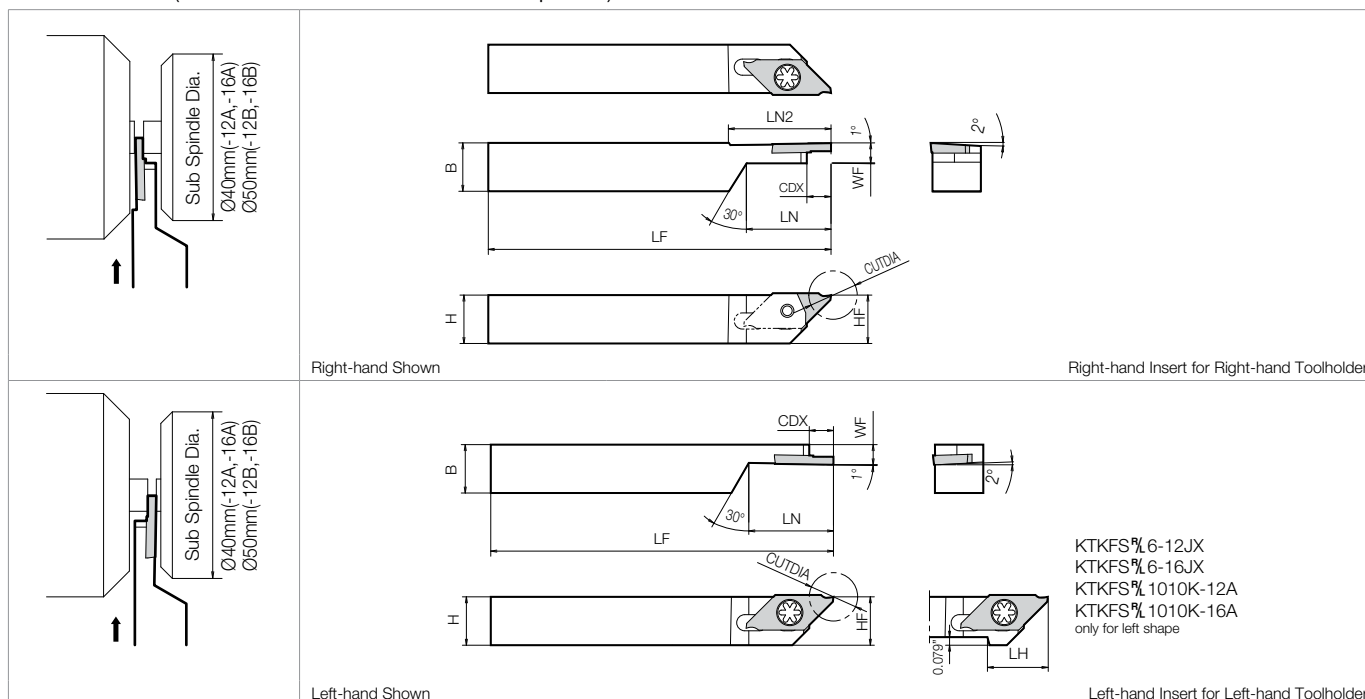
Note that using other toolholder styles together will result in different outside diameters

(Unit: mm)



Y-axis Toolholder Overhang	Examples	Overhang Amount : L			
		Available Outside Cutting Dia. (Ø)	20	22	25
20		A	Without Restriction	Without Restriction	Without Restriction
		B	13.0	13.0	13.0
		C	Without Restriction	Without Restriction	Without Restriction
25		A	38.0	58.0	Without Restriction
		B	14.9	13.6	13.0
		C	45.0	60.0	Without Restriction

CUT-OFF TOOLHOLDERS (SUB SPINDLE TOOLING)

KTKFS (Small Diameter Cut-Off / Sub Spindle)




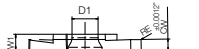
- **Toolholder Dimensions**

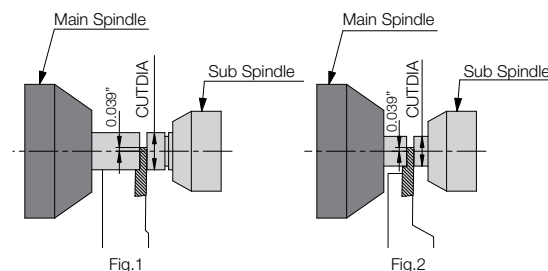
Part Number	Stock		Unit	Cut-Off Dia.	Dimensions									Spare Parts		Applicable Inserts ➡ H23	
	R	L			CUTDIA	H	HF	B	LF	LH	LN	*LN2	WF	CDX	Clamp Screw		Wrench
																	
KTKFS% 6-12JX	△	△	inch	0.236~0.472	0.375	0.375	0.375	4.750	0.590	0.866	1.024	0.197	0.236	SB-4050TRN	LTW-10S	TKFS12%	
8-12JX	△	△		0.236~0.472	0.500	0.500	0.500	4.750	-	1.024	1.024	0.197	0.236				
KTKFS% 6-16JX	△	△		0.551~0.630	0.375	0.375	0.375	4.750	0.787	0.866	1.181	0.197	0.315				
8-16JX	△	△		0.551~0.630	0.500	0.500	0.500	4.750	-	1.024	1.181	0.197	0.315				
KTKFS% 1010K-12A	△	△	mm	6~12	10	10	10	120	15	22	26	5	6	SB-4050TRN	LTW-10S	TKFS12%	
1212F-12A	△	△		6~12	12	12	12	85	-	22	26	5	6				
1212K-12B	△	△		6~12	12	12	12	120	-	26	26	5	6				
KTKFS% 1010K-16A	△	△		14~16	10	10	10	120	20	22	30	5	8				
1212F-16A	△	△		14~16	12	12	12	85	-	22	30	5	8				
1212K-16B	△	△		14~16	12	12	12	120	-	26	30	5	8				

- Dimension **CDX** shows the distance from the toolholder to the cutting edge.
 - **CUTDIA** dimension differs depending on insert edge width. See Page [H23](#) for actual cutting diameter.
- *LN2 dimension only applies to right-hand toolholders

Recommended Cutting Conditions  H23

TKFS (CUTDIA)

Insert Right-handed Insert Shown		Part Number		Dimensions		
				CW		CUTDIA (in)
				inch	mm	
		TKFS12%	100-S	0.039	1.00	0.236
			150-S	0.059	1.50	0.354
			200-S	0.079	2.00	0.472
		TKFS16%	150-S	0.059	1.50	0.551
			200-S	0.079	2.00	0.630




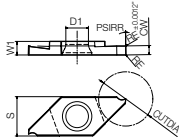
As **Fig.2** shows, the cutting diameter of the insert is measured when the lead edge passes 0.039" past the center line of part.

- As **Fig.1** shows, use KTKFL (Left-hand) when the distance between main spindle and sub spindle are long.
- As **Fig.2** shows, KTKFS is recommended when the workpiece diameters are small and the distance between the main spindle and sub spindle are short

CUT-OFF TOOLHOLDERS (SUB SPINDLE TOOLING)

Applicable Inserts

Applicable Inserts		Classification of Usage ● : Light Interruption / 1st Choice ○ : Light Interruption / 2nd Choice ● : Continuous / 1st Choice ○ : Continuous / 2nd Choice		P Carbon Steel / Alloy Steel		☐	☐	☐	☐	☐	
				M Stainless Steel	☐	☐	●	☐	☐		
				K Cast Iron							●
				N Non-ferrous Metals							●

Insert Right-handed Insert Shown		Part Number	Dimensions (in)							MEGACOAT NANO			MEGACOAT		PVD Coated Carbide		Carbide				
			CW		CUTDIA	RE	W1	S	D1	PR1725	PR1425	PR1535	PR1225	PR1025	KW10						
			inch	mm																	
		TKFS12% 100-S	0.039	1.0	0.236	0.002	0.087	0.343	0.173	△	△	△	△	△	△	△	△	△	△		
			150-S	0.059	1.5					0.354	△	△	△	△	△	△	△	△	△	△	△
			200-S	0.079	2.0					0.472	△	△	△	△	△	△		△	△	△	△
		TKFS16% 150-S	0.059	1.5	0.551	0.002	0.087	0.374	0.173	△	△	△	△	△	△	△	△	△	△		
			200-S	0.079	2.0					0.630	△	△	△	△	△	△	△	△	△	△	

• Lead angle shows the angle when installed in the toolholder.

• As Fig.1 of H22 shows, the cutting diameter of the insert is measured when the lead edge passes 0.039" past the center line of part.

Recommended Cutting Conditions

Workpiece Material	Recommended Grade (Vc sfm)					TKFS12			TKFS16		Notes
						Width			Width		
	MEGACOAT NANO PLUS	MEGACOAT NANO		MEGA COAT	Carbide	0.039" (1.0mm)	0.059" (1.5mm)	0.079" (2.0mm)	0.059" (1.5mm)	0.079" (2.0mm)	
	PR1725	PR1425	PR1535	PR1225	KW10	Feed Rate (ipr)			Feed Rate (ipr)		
Carbon Steel	★ 230~560	☆ 225~550	☆ 230~490	☆ 225~500	-	0.0004~0.0012	0.0004~0.0012	0.0004~0.0012	0.0004~0.0012	0.0004~0.0012	Wet
Alloy Steel	★ 230~560	☆ 225~550	☆ 230~490	☆ 225~500	-	0.0004~0.0012	0.0004~0.0012	0.0004~0.0012	0.0004~0.0012	0.0004~0.0012	
Stainless Steel	☆ 200~460	☆ 200~450	★ 200~400	☆ 200~400	-	0.0004~0.0008	0.0004~0.0008	0.0004~0.0012	0.0004~0.0008	0.0004~0.0012	
Cast Iron	-	-	-	-	★ 175~325	0.0004~0.0012	0.0004~0.0012	0.0004~0.0012	0.0004~0.0012	0.0004~0.0012	
Aluminum	-	-	-	-	★ 650~1475	0.0004~0.0012	0.0004~0.0012	0.0004~0.0012	0.0004~0.0012	0.0004~0.0012	
Brass	-	-	-	-	★ 325~650	0.0004~0.0016	0.0004~0.0016	0.0004~0.0016	0.0004~0.0016	0.0004~0.0016	

★ : 1st Recommendation ☆ : 2nd Recommendation

KTKF / KTKFS Selection Reference

KTKF

- Both Right-hand and Left-hand types are applicable to gang tool post
- Left-hand type is used during cut-off operations using sub spindle

KTKFR Right-Hand Toolholder	KTKFL Left-Hand Toolholder
<p><Recommendation> Use insert without lead angle.</p> <ul style="list-style-type: none"> Not Using Sub Spindle Cut-off operation near main spindle side 	<p><Recommendation> Use insert with lead angle to remove boss.</p> <ul style="list-style-type: none"> Using Sub Spindle Cut-off operation near sub spindle side

KTKFS

- When machining workpiece with small diameter, use KTKFS to reduce overhang distance from the main spindle

KTKFSR Right-Hand Toolholder	KTKFSL Left-Hand Toolholder
<p><How to Select> R-Hand</p> <ul style="list-style-type: none"> Long workpiece and more rigidity Cut-off operation near main spindle side <p><How to Select> LN Dimension</p> <ul style="list-style-type: none"> Sub Spindle Dia. Ø40mm→22 (A type) Ø50mm→26 (B type) 	<p><How to Select> L-Hand</p> <ul style="list-style-type: none"> Short workpiece and less rigidity Cut-off operation near main spindle side <p><How to Select> LN Dimension</p> <ul style="list-style-type: none"> Sub Spindle Dia. Ø40mm→22 (A type) Ø50mm→26 (B type)


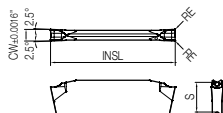

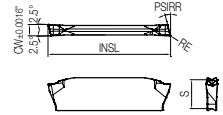

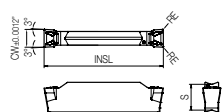

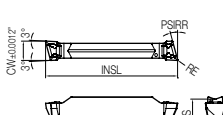

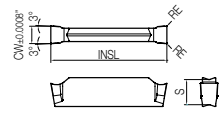

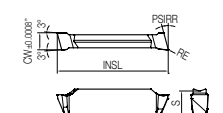
Inserts are sold in 10 piece boxes

CUT-OFF INSERTS

GDM / GDG

Usage Classification
 ● : Light Interruption / 1st Choice
 ○ : Light Interruption / 2nd Choice
 ● : Continuous / 1st Choice
 ○ : Continuous / 2nd Choice

P	Carbon Steel / Alloy Steel	●	●	○		
M	Stainless Steel	●	○	○		
N	Non-ferrous Metals				●	○

Insert Right-handed Insert Shown			Part Number	Dimensions (in)					Lead Angle	MEGA COAT NANO	MEGA COAT		DLC	Carbide	Ref. Page for Toolholder					
				CW			RE	INSL			S	PSIR%				PR1535	PR1225	PR1215	PDL025	GW15
				inch	mm	Tolerance														
Out-off / Low Feed	 Low Feed 2-edge		GDM 1316N-003PF	0.051	1.3	±0.0016	0.0012	0.630	0.146	-	●	●	●			H26 H27				
			1316N-015PF	0.051	1.3		0.0059				●	●	●							
			1516N-003PF	0.059	1.5		0.0012				●	●	●							
			1516N-015PF	0.059	1.5		0.0059				●	●	●							
			2020N-003PF	0.079	2.0	0.0012	0.787	0.169	●		●	●			H29 H37					
			2020N-015PF	0.079	2.0	0.0059			●		●	●								
			2520N-003PF	0.098	2.5	0.0012			●		●	●								
			2520N-015PF	0.098	2.5	0.0059			●		●	●								
			3020N-003PF	0.118	3.0	0.0012			●		●	●								
			3020N-015PF	0.118	3.0	0.0059			●		●	●								
15° Lead Angle Low Feed / 2-edge	 15° Lead Angle Low Feed / 2-edge		GDM 1316%-003PF-15D	0.051	1.3	±0.0016	0.0012	0.630	0.146	15°	●	●	●			H26 H27				
			1516%-003PF-15D	0.059	1.5		0.0012				●	●	●							
			1516R-015PF-15D	0.059	1.5		0.0059				R	R	R							
			2020%-003PF-15D	0.079	2.0		0.0012				●	●	●							
			2020R-015PF-15D	0.079	2.0	0.0059	R	R	R											
			2520%-003PF-15D	0.098	2.5	0.0012	0.787	0.169	●		●	●			H29 H37					
			2520R-015PF-15D	0.098	2.5	0.0059			R		R	R								
			3020%-003PF-15D	0.118	3.0	0.0012			●		●	●								
			3020R-015PF-15D	0.118	3.0	0.0059			R		R	R								
			Out-off / Medium Feed	 Medium Feed 2-edge		GDM 2020N-010PQ			0.079		2.0	±0.0012					-	●	●	●
2520N-010PQ	0.098	2.5				0.0039			0.787	0.169	●		●	●						
3020N-010PQ	0.118	3.0							●	●	●									
15° Lead Angle Medium Feed / 2-edge	 15° Lead Angle Medium Feed / 2-edge		GDM 2020R-010PQ-15D	0.079	2.0	±0.0012				15°	●	●	●			H29 H37				
			2520R-010PQ-15D	0.098	2.5		0.0039	0.787	0.169		●	●	●							
			3020R-010PQ-15D	0.118	3.0						●	●	●							
2-edge	 2-edge		GDG 2020N-005PG	0.079	2.0	±0.0008				-	●	●		●	●					
			2520N-005PG	0.098	2.5		0.0020	0.787	0.169		●	●		●	●					
			3020N-005PG	0.118	3.0						●	●		●	●					
15° Lead Angle 2-edge	 15° Lead Angle 2-edge		GDG 2020R-005PG-15D	0.079	2.0	±0.0008				15°	●	●		●	●					
			2520R-005PG-15D	0.098	2.5		0.0020	0.787	0.169		●	●		●	●					
			3020R-005PG-15D	0.118	3.0						●	●		●	●					

Using PM/PF Chipbreaker (designed for cut-off) for grooving will not create a flat bottom (See Fig.)



Recommended Cutting Conditions H38~H39


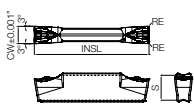

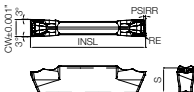

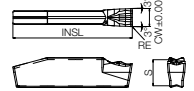

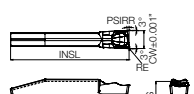

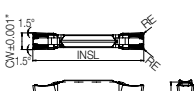

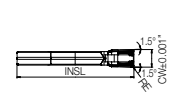
Inserts are sold in 10 piece boxes

CUT-OFF INSERTS

GDM / GDMS

Classification of Usage
 ● : Light Interruption / 1st Choice
 ○ : Light Interruption / 2nd Choice
 ● : Continuous / 1st Choice
 ○ : Continuous / 2nd Choice

P	Carbon Steel / Alloy Steel	☺	●	☺
M	Stainless Steel	●	☺	☺
K	Cast Iron			

Insert Right-handed Insert Shown			Part Number	Dimensions (in)					Lead Angle	MEGA COAT NANO	MEGACOAT			Ref. Page for Tool		
				CW			RE	INSL			S	PSIR%	PR1535		PR1225	PR1215
				inch	mm	Tolerance										
Cut-off / General Purpose	 2-edge		GDM 2020N-020PM	0.079	2.0	±0.0012	0.008	0.787	0.169	-	●	●	●			
			2520N-020PM	0.098	2.5		0.008				●	●	●			
			3020N-025PM	0.118	3.0		0.010				●	●	●			
			4020N-030PM	0.157	4.0		0.012				●	●	●			
	 2-edge		GDM 2020R-020PM-6D	0.079	2.0	±0.0012	0.008	0.787	0.169	6°	●	●	●			
			2520R-020PM-6D	0.098	2.5		0.008				●	●	●			
			3020R-025PM-6D	0.118	3.0		0.010				●	●	●			
	 1-edge		GDMS 2020N-020PM	0.079	2.0	±0.0012	0.008	0.787	0.169	-	●	●	●			
			3020N-025PM	0.118	3.0		0.010				●	●	●			
			4020N-030PM	0.157	4.0		0.012				●	●	●			
	 1-edge		GDMS 2020R-020PM-6D	0.079	2.0	±0.0012	0.008	0.787	0.169	6°	●	●	●			
			3020R-025PM-6D	0.118	3.0		0.010				●	●	●			
4020R-030PM-6D			0.157	4.0	0.012		●				●	●				
Grooving & Cut-Off / High Feed Rate	 High feed 2-edge		GDM 2020N-020PH	0.079	2.0	±0.0012	0.008	0.787	0.169	-	●	●	●			
			3020N-030PH	0.118	3.0		0.012				●	●	●			
			4020N-030PH	0.157	4.0		0.012				●	●	●			
	 High feed 1-edge		GDMS 2020N-020PH	0.079	2.0	±0.0012	0.008	0.787	0.169	-	●	●	●			
			3020N-030PH	0.118	3.0		0.012				●	●	●			
			4020N-030PH	0.157	4.0		0.012				●	●	●			

Using PM/PF Chipbreaker (designed for cut-off) for grooving will not create a flat bottom (See Fig.)



Recommended Cutting Conditions ☺ H38~H39

Inserts are sold in 10 piece boxes

Insert Identification System

Insert Identification System

② Tolerance Symbol G: Ground Insert M: M Class		④ Width 13 : 1.3mm 15 : 1.5mm 20 : 2mm 25 : 2.5mm 30 : 3mm 40 : 4mm		⑥ Hand of Tool R : Right-hand L : Left-hand N : Neutral		⑧ Chipbreaker Symbol PF : Cut-Off (Low Feed) PQ : Cut-Off (Medium Feed) PG : Cut-Off (Low Cutting Force) PM : Cut-Off (General Purpose) PH : Grooving and Cut-off (High Feed Rate)		
G D		M	S	30	20	R - 025	PM - 6D	
① Series Grooving / Cut-off GD Series		③ No. of Edges (No Indication) : 2-edge S : 1-edge		⑤ Insert Length 16 : 16mm 20 : 20mm		⑦ Corner-R (RE) 003 : 0.03mm 005 : 0.05mm 010 : 0.1mm 015 : 0.15mm 020 : 0.2mm 025 : 0.25mm 030 : 0.3mm		⑨ Lead Angle No Indication : 0° 6D : 6° 15D : 15°

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

(Customer Service) 800.823.7284 - Option 1
 (Technical Support) 800.823.7284 - Option 2
 Visit us online at KyoceraPrecisionTools.com

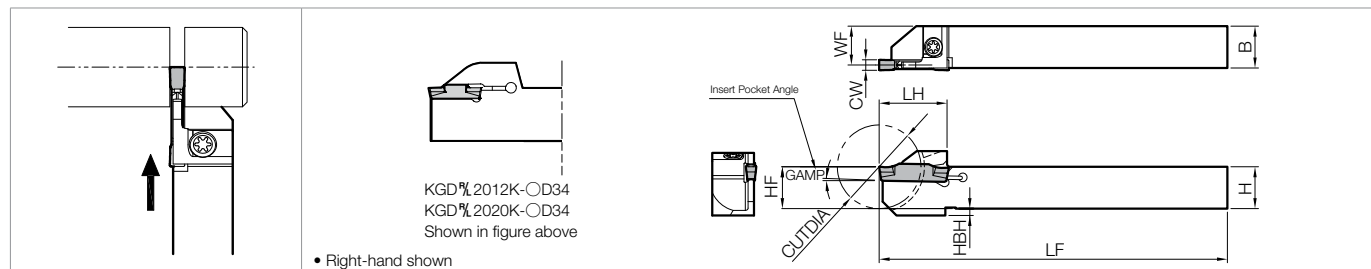
KYOCERA

H25

INSERT GRADES	A
TURNING INSERTS	B
GEN/PCD INSERTS	C
TURNING HOLDERS	D
SMALL TOOLS	E
BORING	F
GROOVING	G
CUT-OFF	H
THREADING	J
DRILLING	K
MILLING	M
QUICK CHANGE TOOLING	N
SPARE PARTS	P
TECHNICAL	R
INDEX	T

KGD (for Small Parts Machining)

Insert Width: 0.059"~0.157" / 1.3mm~4.0mm



Toolholder Dimensions (Inch Size)

Part Number	Stock		Cut-Off Dia.	Dimensions (in)								Insert Width CW (in)		Spare Parts	
	R	L		H	HF	HBH	B	LF	LH	WF	GAMP	MIN	MAX	Clamp Bolt	Wrench
NEW KGD% 6-1.3JX	●	●	0.787	0.375	0.375	0.098	0.375	4.75	0.709	0.356	1°	-	0.051	SB-40120TR	LTW-15S
8-1.3JX	●	●	0.944	0.500	0.500	0.051	0.500	4.75	0.768	0.481	1°	-	0.059		
KGD% 6-1.5JX	●	●	0.787	0.375	0.375	0.098	0.375	4.75	0.709	0.351	1°	-	0.059		
8-1.5JX	●	●	0.944	0.500	0.500	0.051	0.500	4.75	0.768	0.476	1°	-	0.059		
KGD% 6-2JX	●	●	0.787	0.375	0.375	0.098	0.375	4.75	0.709	0.342	1°	0.079	0.118		
8-2JX	●	●	0.944	0.500	0.500	0.051	0.500	4.75	0.768	0.467	1°	0.079	0.118		
10-2JX	●	●	1.259	0.625	0.625	-	0.625	4.75	0.965	0.592	1°	0.079	0.118		
KGD% 6-2.4JX	●	●	0.787	0.375	0.375	0.098	0.375	4.75	0.709	0.336	1°	0.094	0.118		
8-2.4JX	●	●	0.944	0.500	0.500	0.051	0.500	4.75	0.768	0.461	1°	0.094	0.118		
10-2.4JX	●	●	1.259	0.625	0.625	-	0.625	4.75	0.965	0.586	1°	0.094	0.118		
KGD% 8-3JX	●	●	0.944	0.500	0.500	0.051	0.500	4.75	0.768	0.453	1°	0.118	0.157	SE-50125TR	LTW-20
10-3JX	●	●	1.259	0.625	0.625	-	0.625	4.75	0.965	0.578	1°	0.118	0.157		
KGD% 10-3D38JX	●	●	1.496	0.625	0.625	-	0.625	4.75	1.142	0.578	1°	0.118	0.157		
12-3D42JX	●	●	1.653	0.750	0.750	-	0.750	4.75	1.220	0.703	1°	0.118	0.157		
43-3D42JX	●	●	1.653	0.750	0.750	-	0.500	4.75	1.220	0.453	1°	0.118	0.157		

Toolholder Dimensions (Metric Size)

Part Number	Stock		Cut-Off Dia.	Dimensions (mm)								Insert Width CW (mm)		Spare Parts	
	R	L		H	HF	HBH	B	LF	LH	WF	GAMP	MIN	MAX	Clamp Bolt/Screw	Wrench
KGD% 1010JX-1.3D16	●	●	16	10	10	2	10	120	18.0	9.9	5°	1.3	1.3	SB-40120TR	LTW-15S
1010JX-1.3	●	●	20	10	10	2	10	120	18.0	9.5					
1212F-1.3D16	●	●	16	12	12	2	12	85	19.5	11.9					
1212JX-1.3D16	●	●	16	12	12	2	12	120	19.5	11.9					
1212F-1.3	●	●	24	12	12	2	12	85	19.5	11.5					
1212JX-1.3	●	●	24	12	12	2	12	120	19.5	11.5	5°	1.5	1.5	SB-40120TR	LTW-15S
KGD% 1010JX-1.5D16	●	●	16	10	10	2	10	120	18.0	9.7					
1010JX-1.5	●	●	20	10	10	2	10	120	18.0	9.4					
1212F-1.5D16	●	●	16	12	12	2	12	85	19.5	11.7					
1212JX-1.5D16	●	●	16	12	12	2	12	120	19.5	11.7					
1212F-1.5	●	●	24	12	12	2	12	85	19.5	11.4	1°	2.0	3.0	SB-40120TR	LTW-15S
1212JX-1.5	●	●	24	12	12	2	12	120	19.5	11.4					
KGD% 1010JX-2	●	●	20	10	10	2	10	120	18.0	9.2					
1212F-2	●	●	24	12	12	2	12	85	19.5	11.2					
1212JX-2	●	●	24	12	12	2	12	120	19.5	11.2					
1616JX-2	●	●	32	16	16	-	16	120	24.5	15.2	0°			HH5X16	LW-4
2012K-2D34	●	●	34	20	20	-	12	125	32.5	11.2					
2020K-2D34	●	●	34	20	20	-	20	125	32.5	19.2					
KGD% 1010JX-2.4	●	●	20	10	10	2	10	120	18.0	9.0	1°	2.4	3.0	SB-40120TR	LTW-15S
1212F-2.4	●	●	24	12	12	2	12	85	19.5	11.0					
1212JX-2.4	●	●	24	12	12	2	12	120	19.5	11.0					
1616JX-2.4	●	●	32	16	16	-	16	120	24.5	15.0					
2012K-2.4D34	●	●	34	20	20	-	12	125	32.5	11					
2020K-2.4D34	●	●	34	20	20	-	20	125	32.5	19	1°	3.0	4.0	SB-40120TR	LTW-15S
KGD% 1212JX-3	●	●	24	12	12	2	12	120	19.5	10.8					
1212JX-3W	●	●	24	12	12	2	12	120	19.5	10.8					
1616JX-3	●	●	32	16	16	-	16	120	24.5	14.8					
1616JX-3D38	●	●	38	16	16	-	16	120	29.0	14.8					
1913K-3D38	●	●	38	19	19	-	13	125	29.0	11.8	1°	3.0	4.0	SE-50125TR	LTW-20
2012JX-3D42	●	●	42	20	20	-	12	120	31.0	10.8					
2012JX-3D51	●	●	51	20	20	-	12	120	36.0	10.8					
2020JX-3D42	●	●	42	20	20	-	20	120	31.0	18.8					
2020JX-3D51	●	●	51	20	20	-	20	120	36.0	18.8					

Note 1) 0.157" (4mm) width insert can be installed in KGD% 8-3JX and KGD% 1212JX-3, but is not recommended due to the toolholder's rigidity.

2) Recommended tightening torque for clamp screw is 2.0Nm for SB-40120TR and 2.5Nm for SE-50125TR.

3) When machining material greater than Ø1.417" (36mm) with KGD%3D38(JX), KGD%3D42(JX), or KGD%3D51 toolholders, use 1-edge inserts.

Max. workpiece diameter for 2-edge inserts is Ø1.417" (36mm)

Choose insert with width that falls within **MIN** and **MAX** parameters shown in table above. Insert table [H24-H25](#)

(Customer Service) 800.823.7284 - Option 1

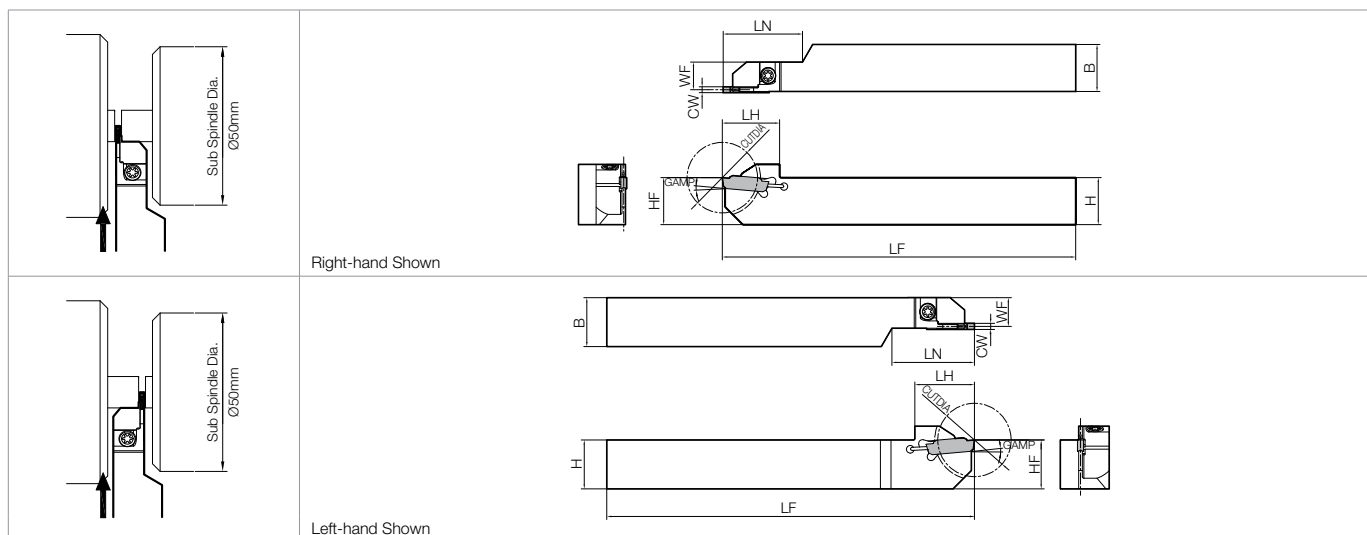
(Technical Support) 800.823.7284 - Option 2



Visit us online at KyoceraPrecisionTools.com

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

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

- **Toolholder Dimensions**

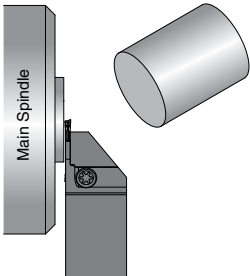
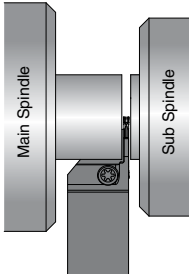


Part Number	Stock		Cut-Off Dia.	Dimensions (mm)							Angle (°)	Insert Width CW (mm)		Spare Parts	
	R	L	CUTDIA	H	HF	B	LF	LH	LN	WF	GAMP	MIN	MAX	Clamp Screw 	Wrench 
KGDS% 1616JX-1.3B 1616JX-1.5B 1616JX-2B	●	●	24	16	16	16	120	19.5	27	9.50	5°	1.3	1.3	SB-40120TR	LTW-15S
	●	●								9.40		1.5	1.5		
	●	●								9.20	1°	2.0	3.0		

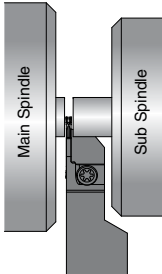
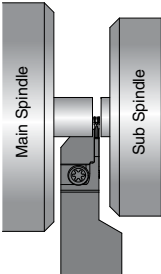
Choose insert with width that falls within **MIN** and **MAX** parameters shown in table above. Insert table [🔗 H24-H25](#)

■ KGD / KGDS Selection Reference

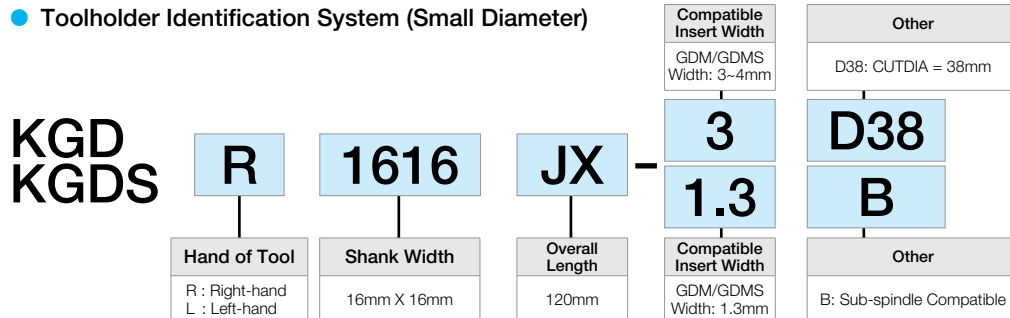
● KGD

Standard Type	
<ul style="list-style-type: none"> Both Right-hand and Left-hand types are applicable to gang tool post. Left-hand type is used during cut-off operation using sub spindle. 	
KGDR (Right-hand Toolholder)	KGDL (Left-hand Toolholder)
	
<p><1st. Recommendation> Use insert with lead angle to remove boss.</p> <ul style="list-style-type: none"> Not using sub spindle Cut-off operation near main spindle side 	<p><1st. Recommendation> Use insert without lead angle.</p> <ul style="list-style-type: none"> Using sub spindle Cut-off operation near sub spindle side

● KGDS

Sub Spindle Type	
<ul style="list-style-type: none"> When machining a workpiece with a small diameter, use KGDS to reduce overhang distance from the main spindle. 	
KGDSR (Right-hand Toolholder)	KGDSL (Left-hand Toolholder)
	
<ul style="list-style-type: none"> Long workpiece and more rigidity Cut-off operation near main spindle side 	<ul style="list-style-type: none"> Short workpiece and less rigidity Cut-off operation near sub spindle side

- **Toolholder Identification System (Small Diameter)**



Small Parts Grooving & Cut-Off

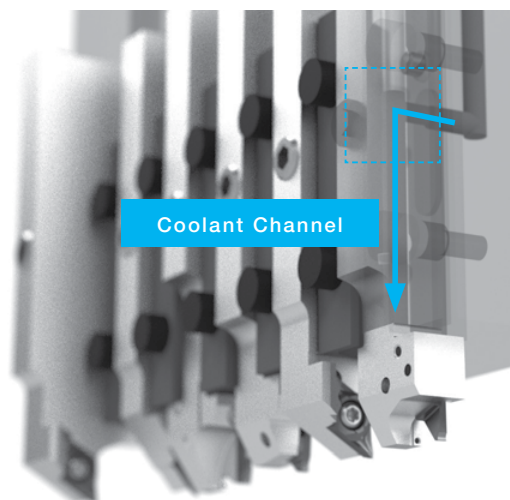
KGD-JCT

Jet Coolant-Through Cut-Off Holders for Small Parts Machining

KGD-JCTM ^{NEW}

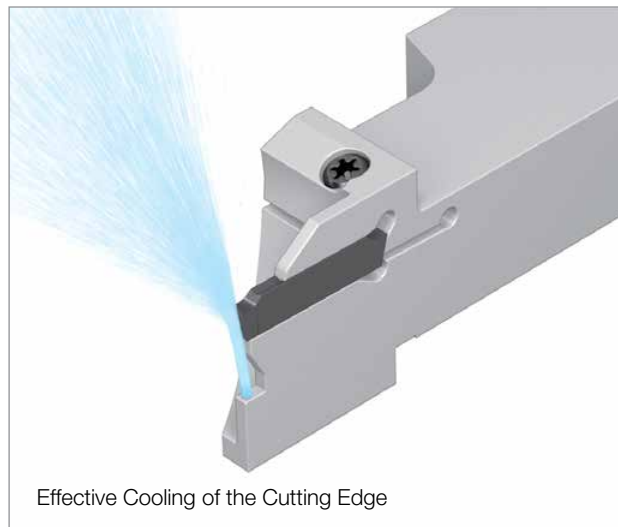
Direct from Turret Jet Coolant-Through Cut-Off Holders for Small Parts Machining

New JCTM-Series Direct Coolant System



Small Diameter
Grooving / Cut-Off

Improved Tool Life Lowers Machining Costs

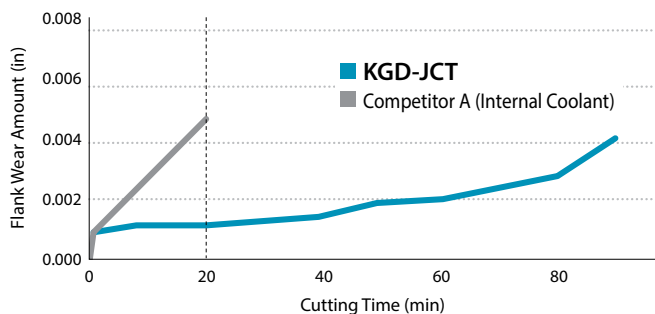


Optimized Coolant Hole Position

Discharges Coolant towards the Flank Face of the Insert

Wear Resistance Comparison

(Internal Evaluation)



Cutting Conditions : $V_c = 260$ sfm, $f = 0.0024$ ipr (at- $\phi 0.079$ " : $f = 0.0007$ (ipr)
 KGD-R1625H-2JCT, GDM2020N-015PF PR1535 (Insert Width : 0.079 ")
 Workpiece : 304 ($\phi 0.984$ ")
 Internal Coolant(218 psi) Cut-off

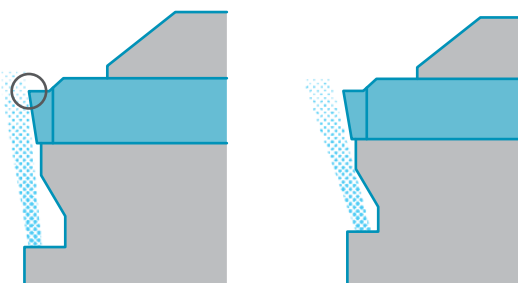
Coolant Discharge

KGD-JCT / KGD-JCTM

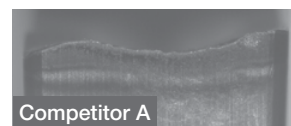
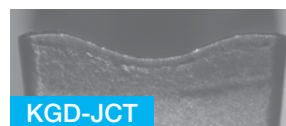
Sufficient cooling towards the cutting edge

Competitor A

Coolant does not flow directly towards the cutting edge



Cutting Edge (After Machining 20 min)

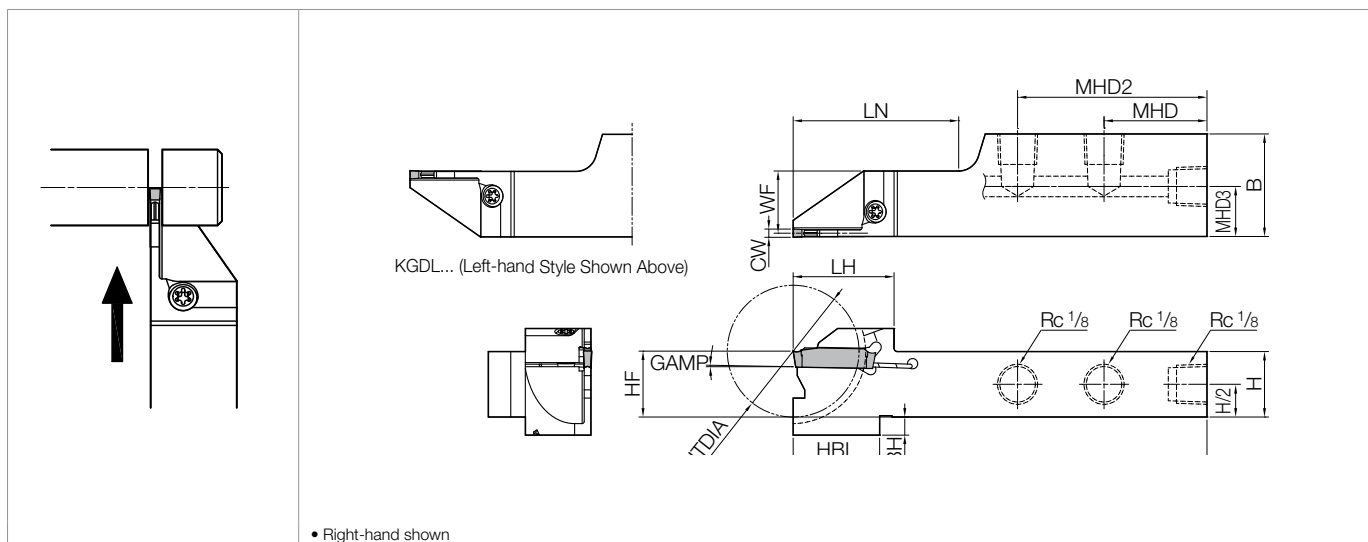


High density and high speeds coolant provides effective cooling of the cutting edge




Superior cooling action improves tool life

KGD-JCT (for Small Parts Machining / Jet Coolant-Through)

Insert Width: 0.079"~0.157" / 2.0mm~4.0mm



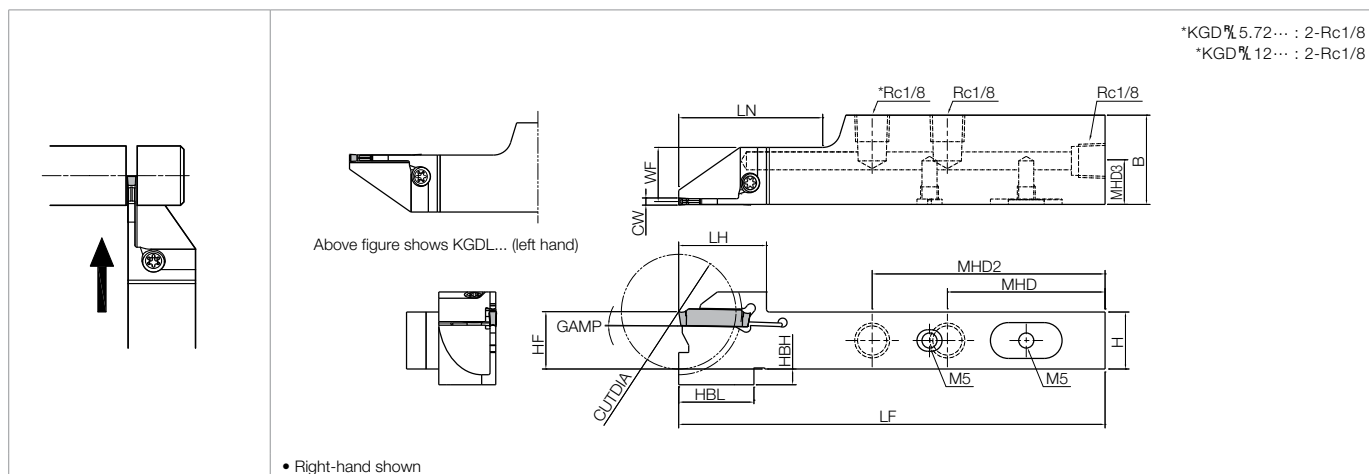
Toolholder Dimensions (Metric Size)














Part Number	Stock		Cut-Off Dia.	Dimensions (mm)												Insert Width CW (mm)		Spare Parts		
	R	L		CUTDIA	H=HF	HBH	B	LF	LH	HBL	LN	WF	MHD	MHD2	MHD3	GAMP	MIN	MAX	Clamp Bolt	Wrench
																				
KGDR 1220H-2JCT	△		24	12	8.5	20	100	19.5	21	44	11.2	35	-	8.4	1°	2.0	3.0	SB-40120TR	LTW-15S	GP-1
KGDL 1220H-2JCT		△							21.5					7.7						
KGDR 1625H-2JCT	△		32	16	4.5	25		24.5	21	40	15.2	25	46	12.2						
KGDL 1625H-2JCT		△							7.7											
KGDR 1220H-2.4JCT	△		24	12	8.5	20	100	19.5	21	44	11	35	-	8.4	1°	2.4	3.0			
KGDL 1220H-2.4JCT		△							21.5					7.7						
KGDR 1625H-2.4JCT	△		32	16	4.5	25		24.5	21	40	15	25	46	12.2						
KGDL 1625H-2.4JCT		△							7.7											
KGDR 1220H-3JCT	△		24	12	8.5	20	100	19.5	21	44	10.8	35	-	8.6	1°	3.0	3.0			
KGDL 1220H-3JCT		△							21.5					7.7						
KGDR 1625H-3JCT	△		32	16	4.5	25		24.5	21	40	14.8	25	46	12.2			4.0			
KGDL 1625H-3JCT		△							7.7											

Choose insert with width that falls within **MIN** and **MAX** parameters shown in table above. Insert table [H24-H25](#)Coolant Connections and Pipe Parts [H14-H15](#)Recommended Cutting Conditions [H38-H39](#)














KGD-JCTM (for Small Parts Machining / Direct from Turret Jet Coolant-Through) **NEW**

Insert Width: 0.079"~0.157" / 2.0mm~4.0mm

**Toolholder Dimensions (Inch Size)**

Part Number	Stock		Unit	Cut-Off Dia.	Dimensions										Angle	Edge Width CW		Spare Parts													
	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 5.72-2JCTM	●		in	0.945	0.500	0.330	0.709	4.750	0.770	0.825	1.725	0.500	2.125	-	0.331	1°	0.079	0.118	SB-40120TR												
KGDL 5.72-2JCTM		●								0.843													0.303								
KGDR 82.5-2JCTM	●			1.260	0.625	0.175	1.000			0.965	0.825	1.585	0.625	1.730	2.560								0.480								
KGDL 82.5-2JCTM		●																					0.303								
KGDR 5.72-2.4JCTM	●			0.945	0.500	0.330	0.709	4.750	0.770	0.825	1.725	0.500	2.125	-	0.331	1°	0.094	0.118					SB-40120TR								
KGDL 5.72-2.4JCTM		●								0.843																	0.303				
KGDR 82.5-2.4JCTM	●			1.260	0.625	0.175	1.000			0.965	0.825	1.585	0.625	1.730	2.560												0.480				
KGDL 82.5-2.4JCTM		●																									0.303				
KGDR 5.72-3JCTM	●			0.945	0.500	0.330	0.709	4.750	0.770	0.825	1.725	0.500	2.125	-	0.331	1°	0.118	0.118									SB-40120TR				
KGDL 5.72-3JCTM		●								0.843																					0.303
KGDR 82.5-3JCTM	●			1.260	0.625	0.175	1.000			0.965	0.825	1.585	0.625	1.730	2.560			0.480													0.157
KGDL 82.5-3JCTM		●																0.303													

Toolholder Dimensions (Metric Size)

Part Number	Stock		Unit	Cut-Off Dia.	Dimensions										Angle	Edge Width CW		Spare Parts																
	R	L			CUTDIA	H=HF	HBH	B	LF	LH	HBL	LN	WF	MHD		MHD2	MHD3	GAMP	MIN	MAX														
KGDR 1218JX-2JCTM	●		mm	24	12	8.5	18	120	19.5	21	44	11.2	54	-	8.4	1°	2.0	3.0	SB-40120TR															
KGDL 1218JX-2JCTM		●								21.5					7.7																			
KGDR 1625JX-2JCTM	●								32	16	4.5	25	24.5	21	40								15.2	44	65	12.2								
KGDL 1625JX-2JCTM		●																								7.7								
KGDR 1218JX-2.4JCTM	●			24	12	8.5	18	120	19.5	21	44	11	54	-	8.4	1°	2.4	3.0					SB-40120TR											
KGDL 1218JX-2.4JCTM		●								21.5					7.7																			
KGDR 1625JX-2.4JCTM	●								32	16	4.5	25	24.5	21	40												15	44	65	12.2				
KGDL 1625JX-2.4JCTM		●																												7.7				
KGDR 1218JX-3JCTM	●			24	12	8.5	18	120	19.5	21	44	10.8	54	-	8.6	1°	3.0	4.0									SB-40120TR							
KGDL 1218JX-3JCTM		●								21.5					7.7																			
KGDR 1625JX-3JCTM	●								32	16	4.5	25	24.5	21	40																14.8	44	65	12.2
KGDL 1625JX-3JCTM		●																																7.7

Choose insert with width that falls within **MIN** and **MAX** parameters shown in table above. Insert table **H24-H25**Coolant Connections and Pipe Parts **H18-H19**

JCTM CUT-OFF TOOLHOLDERS

◆ Recommended Cutting Conditions

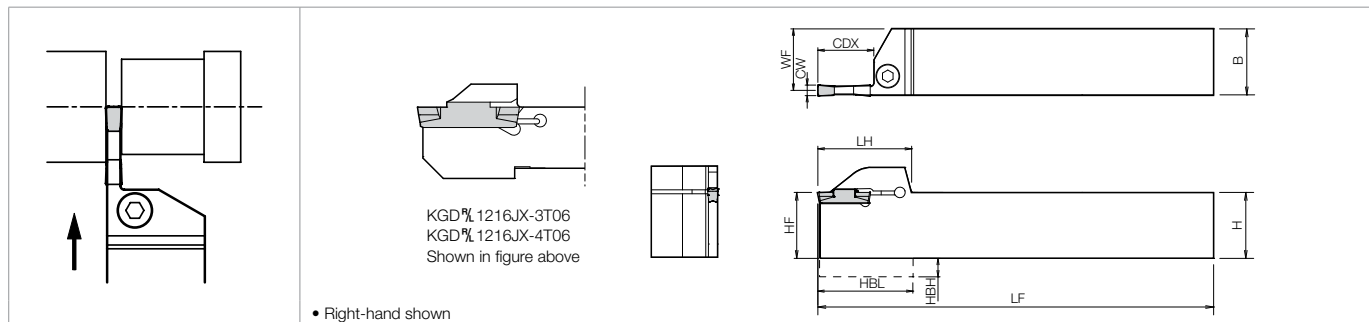
Workpiece	Chipbreaker	Recommended Insert Grade (Cutting Speed Vc: sfm)					f (ipr)				Notes
		MEGACOAT NANO	MEGACOAT		DLC Coating	Carbide	Edge Width CW (in)				
		PR1535	PR1225	PR1215	PDL025	GW15	0.079 (2.0mm)	0.079 - 0.157 (2.0 - 4.0mm)	0.098 / 0.118 (2.5mm / 3.0mm)	0.118 - 0.157 (3.0mm - 4.0mm)	
Carbon Steel	PF (RE = 0.0012)	☆ 230 – 490	★ 230 – 490	☆ 230 – 590	-	-	0.0008 – 0.0024	-	0.0008 – 0.0031	-	Wet
	PF (RE = 0.0059)						0.0012 – 0.0031		0.0016 – 0.0039		
	PQ						0.0012 – 0.0039		0.0016 – 0.0047		
	PG						0.0004 – 0.0016		0.0004 – 0.0020		
	PM	-	0.0031 – 0.0071	-			-				
	PH	0.0039 – 0.0098	-	-			0.0059 – 0.0110				
Alloy Steel	PF (RE = 0.0012)	☆ 230 – 490	★ 230 – 490	☆ 230 – 590	-	-	0.0008 – 0.0024	-	0.0008 – 0.0031	-	
	PF (RE = 0.0059)						0.0012 – 0.0031		0.0016 – 0.0039		
	PQ						0.0012 – 0.0039		0.0016 – 0.0047		
	PG						0.0004 – 0.0016		0.0004 – 0.0020		
	PM	-	0.0031 – 0.0071	-			-				
	PH	0.0039 – 0.0098	-	-			0.0059 – 0.0110				
Stainless Steel	PF (RE = 0.0012)	★ 200 – 390	☆ 200 – 390	☆ 200 – 490	-	-	0.0004 – 0.0016	-	0.0004 – 0.0020	-	
	PF (RE = 0.0059)						0.0012 – 0.0028		0.0016 – 0.0031		
	PQ						0.0008 – 0.0028		0.0008 – 0.0031		
	PG						0.0004 – 0.0012		0.0004 – 0.0016		
	PM	-	0.0024 – 0.0047	-			-				
	PH	0.0020 – 0.0047	-	-			0.0031 – 0.0059				
Cast Iron	PF (RE = 0.0012)	-	-	★ 260 – 660	-	-	0.0008 – 0.0028	-	0.0012 – 0.0031	-	
	PF (RE = 0.0059)						0.0012 – 0.0035		0.0016 – 0.0039		
	PQ						0.0016 – 0.0039		0.0016 – 0.0047		
	PG						0.0004 – 0.0016		0.0004 – 0.0020		
	PM			-			0.0031 – 0.0071	-	-		
	PH			0.0039 – 0.0098			-	-	0.0059 – 0.0110		
Aluminum Alloy	PQ	-	-	-	660 – 1,640	660 – 1,480	-	-	-	-	
	PG						0.0004 – 0.0020		0.0004 – 0.0024		
Brass	PQ	-	-	-	-	★ 330 – 660	-	-	-	-	
	PG						0.0004 – 0.0028		0.0004 – 0.0031		

★ : 1st Recommendation ☆ : 2nd Recommendation



INSERT GRADES	A
TURNING INSERTS	B
GEN/PCD INSERTS	C
TURNING HOLDERS	D
SMALL TOOLS	E
BORING	F
GROOVING	G
CUT-OFF	H
THREADING	J
DRILLING	K
MILLING	M
QUICK CHANGE TOOLING	N
SPARE PARTS	P
TECHNICAL	R
INDEX	T

CUT-OFF TOOLHOLDERS

KGD (Integral-Style)



Toolholder Dimensions (Inch Size)

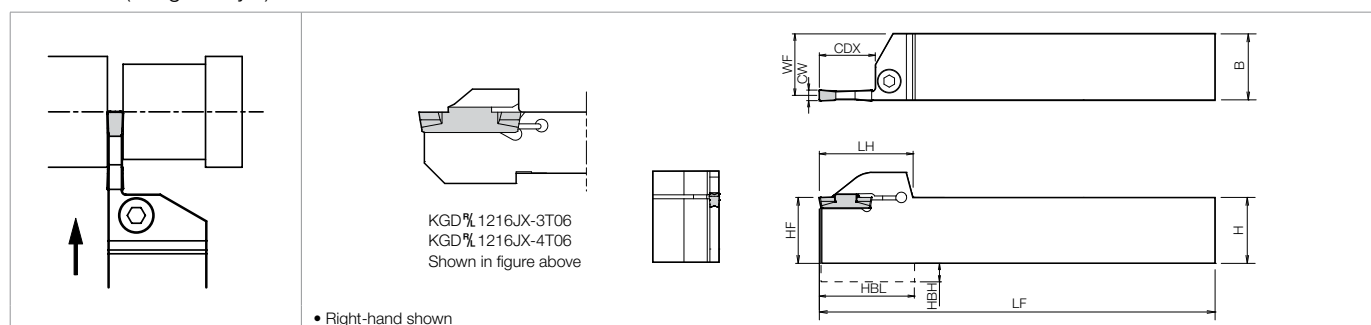
Width (in)	Max D.O.C. (in)	Part Number	Stock		Dimensions (in)										Insert Width CW (in)		Spare Parts	
			R	L	H	HF	HBH	B	LF	LH	HBL	WF	CDX*	MIN	MAX			
0.079* (2mm)	0.669* (17mm)	KGD 12-2T17	●	●	0.75	0.75	-	0.75	4.92	1.28	-	0.71	0.669* (17mm)	0.079* (2mm)	0.118* (3mm)	HH5X16	LW-4	
		16-2T17	●	●	1.00	1.00	-	1.00	5.90	1.28	-	0.96	HH5X25					
0.118* (3mm)	0.393* (10mm)	KGD 12-3T10	●	●	0.75	0.75	-	0.75	4.92	1.20	-	0.70	0.393* (10mm)	0.118* (3mm)	0.157* (4mm)	HH5X16	LW-4	
		16-3T10	●	●	1.00	1.00	-	1.00	5.90	1.20	-	0.95	HH5X25					
	0.787* (20mm)	KGD 12-3T20	●	●	0.75	0.75	-	0.75	4.92	1.35	-	0.70	0.787* (20mm)			HH5X16	LW-4	
		16-3T20	●	●	1.00	1.00	-	1.00	5.90	1.39	-	0.95	HH5X25					
	1.000* (25.4mm)	KGD 12-3T254	●	●	0.75	0.75	-	0.75	4.92	1.52	-	0.70	1.000* (25.4mm)			HH5X16	LW-4	
		16-3T254	●	●	1.00	1.00	-	1.00	5.90	1.52	-	0.95	HH5X25					
0.157* (4mm)	0.393* (10mm)	KGD 12-4T10	●	●	0.75	0.75	-	0.75	4.92	1.20	-	0.68	0.393* (10mm)	0.157* (4mm)	0.197* (5mm)	HH5X16	LW-4	
		16-4T10	●	●	1.00	1.00	-	1.00	5.90	1.20	-	0.93	HH5X25					
	0.787 (20mm)	KGD 12-4T20	●	●	0.75	0.75	-	0.75	4.92	1.35	-	0.68	0.787 (20mm)			HH5X16	LW-4	
		16-4T20	●	●	1.00	1.00	-	1.00	5.90	1.39	-	0.93	HH5X25					
	0.984 (25mm)	KGD 16-4T25	●	●	1.00	1.00	-	1.00	5.90	1.59	-	0.93	0.984 (25mm)			HH5X25	LW-4	
0.197* (5mm)	0.393 (10mm)	KGD 12-5T10	●	●	0.75	0.75	-	0.75	4.92	1.20	-	0.66	0.393 (10mm)	0.197* (5mm)	0.236* (6mm)	HH5X16	LW-4	
		16-5T10	●	●	1.00	1.00	-	1.00	5.90	1.20	-	0.91	HH5X25					
	0.669 (17mm)	KGD 12-5T17	●	●	0.75	0.75	-	0.75	4.92	1.47	-	0.66	0.669 (17mm)			HH5X16	LW-4	
		16-5T17	●	●	1.00	1.00	-	1.00	5.90	1.47	-	0.91	HH5X25					
	0.984 (25mm)	KGD 16-5T25	●	●	1.00	1.00	-	1.00	5.90	1.59	-	0.91	0.984 (25mm)			HH5X25	LW-4	
0.236* (6mm)	0.591 (15mm)	KGD 16-6T15	●	●	1.00	1.00	-	1.00	5.90	1.28	-	0.89	0.591 (15mm)	0.236* (6mm)	0.236* (6mm)	HH5X25	LW-4	
	1.181 (30mm)	KGD 16-6T30	●	●	1.00	1.00	-	1.00	5.90	1.79	-	0.89	1.181 (30mm)					
0.315* (8mm)	0.984 (25mm)	KGD 16-8T25	●	●	1.00	1.00	0.26	1.00	5.90	1.65	1.69	0.88	0.984 (25mm)	0.315* (8mm)	0.315* (8mm)	HH6X25	LW-5	

Note 1) Dimension CDX* : Shows the maximum grooving depth. If the dimension CDX is 0.787" (20mm) or more, using a 2-edge insert, the maximum grooving depth is 0.709" (18mm).
 2) Recommended tightening torque for clamp bolt is 6.5Nm for HH5X○○ and 8.0Nm for HH6X25.
 3) Above toolholders can also be used for cut-off applications.



Choose insert with width that falls within **MIN** and **MAX** parameters shown in table above. Insert table [H24-H25](#)

CUT-OFF TOOLHOLDERS

KGD (Integral-Style)



Toolholder Dimensions (Metric Size)

Width (mm)	Max. D.O.C. (mm)	Part Number	Stock		Dimensions (mm)										Insert Width CW (mm)		Spare Parts			
			R	L	H	HF	HBH	B	LF	LH	HBL	WF	CDX*	MIN	MAX	Clamp Bolt/Screw	Wrench			
																				
2.0	6	KGD% 1616H-2T06	●	●	16	16	4.0	16	100	27.7	28.0	15.2	6	2.0	3.0	HH5X16	LW-4			
		2020K-2T06	●	●	20	20	-	20	125	28.0	-	19.2				HH5X16				
		2525M-2T06	●	●	25	25	-	25	150	28.0	-	24.2				HH5X25				
	10	KGD% 1616H-2T10	●	●	16	16	4.0	16	100	30.2	30.5	15.2	10			HH5X16	LW-4			
		2020K-2T10	●	●	20	20	-	20	125	30.5	-	19.2				HH5X16				
		2525M-2T10	●	●	25	25	-	25	150	30.5	-	24.2				HH5X25				
	17	KGD% 1616H-2T17	●	●	16	16	4.0	16	100	31.2	31.5	15.2	17			HH5X16	LW-4			
		2012K-2T17	●	●	20	20	-	12	125	32.5	-	11.2				HH5X16				
		2020K-2T17	●	●	20	20	-	20	125	32.5	-	19.2				HH5X16				
		2525M-2T17	●	●	25	25	-	25	150	32.5	-	24.2				HH5X25				
	2.4	17	KGD% 2012K-2.4T17	●	●	20	20	-	12	125	32.5	-	11.0			17	2.4	3.0	HH5X16	LW-4
			2020K-2.4T17	●	●	20	20	-	20	125	32.5	-	19.0						HH5X16	
3.0	6	KGD% 1216JX-3T06	●	●	12	12	2.0	16	120	19.5	19.0	14.8	6	3.0	4.0	SE-50125TR	LTW-20			
		1616H-3T06	●	●	16	16	4.0	16	100	27.7	28.0	14.8				HH5X16				
		2020K-3T06	●	●	20	20	-	20	125	28.0	-	18.8				HH5X16				
		2525M-3T06	●	●	25	25	-	25	150	28.0	-	23.8				HH5X25				
	10	KGD% 1616H-3T10	●	●	16	16	4.0	16	100	30.2	30.5	14.8	10			HH5X16	LW-4			
		2020K-3T10	●	●	20	20	-	20	125	30.5	-	18.8				HH5X16				
		2525M-3T10	●	●	25	25	-	25	150	30.5	-	23.8				HH5X25				
	20	KGD% 1616H-3T20	●	●	16	16	4.0	16	100	34.2	34.5	14.8	20			HH5X16	LW-4			
		2012K-3T20	●	●	20	20	-	12	125	34.5	-	10.8				HH5X16				
		2020K-3T20	●	●	20	20	-	20	125	34.5	-	18.8				HH5X16				
		2525M-3T20	●	●	25	25	-	25	150	35.5	-	23.8				HH5X25				
	4.0	6	KGD% 1216JX-4T06	●	●	12	12	2.0	16	120	19.5	19.0	14.3			6	4.0	5.0	SE-50125TR	LTW-20
10		KGD% 2020K-4T10	●	●	20	20	-	20	125	30.5	-	18.3	10	HH5X16						
		2525M-4T10	●	●	25	25	-	25	150	30.5	-	23.3		HH5X25						
20		KGD% 2020K-4T20	●	●	20	20	-	20	125	34.5	-	18.3	20	HH5X16						
		2525M-4T20	●	●	25	25	-	25	150	35.5	-	23.3		HH5X25						
25	KGD% 2525M-4T25	●	●	25	25	-	25	150	40.5	-	23.3	25	HH5X25							

- Note 1) Dimension CDX* : Shows the maximum grooving depth. If the dimension CDX is 0.787" (20mm) or more, using a 2-edge insert, the maximum grooving depth is 0.709" (18mm).
 2) Recommended tightening torque for clamp bolt/screw is 6.5Nm for HH5X16, 8.0Nm for HH6X25 and 2.5Nm for SE-50125TR.
 3) Above toolholders can also be used for cut-off applications.

Choose insert with width that falls within **MIN** and **MAX** parameters shown in table above. Insert table [H24-H25](#)

KGD-JCT

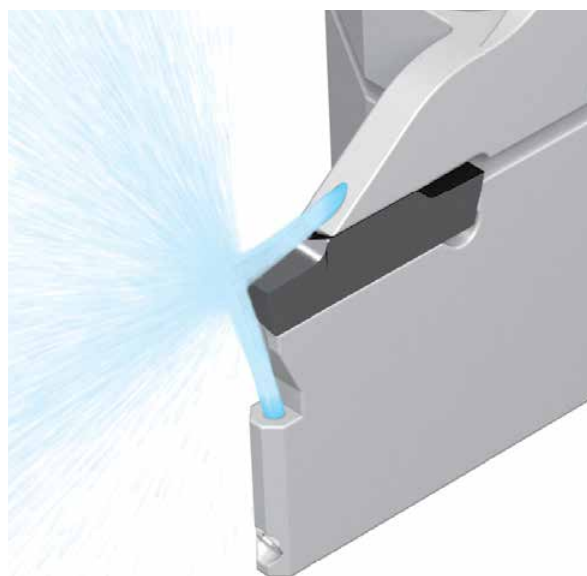
Coolant-Through Holders for External Grooving and Cut-Off

Coolant is Directed from the Rake Surface and the Flank Face of the Insert
Improved Chip Control and Longer Tool Life for External Grooving and Cut-off

1 Superior Chip Control Performance

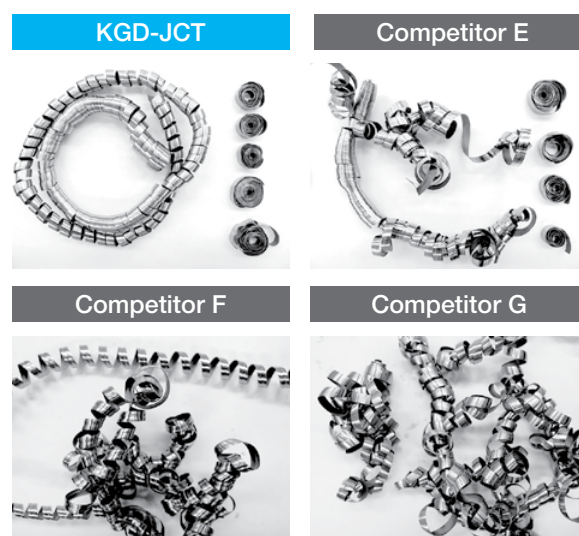
Coolant towards the rake face

Coolant hole position and angle improve chip control



Chip Control Comparison (Internal Evaluation)

KGD-JCT showed better chip control performance even at lower feed rates
 $f = 0.002$ ipr (218 psi)



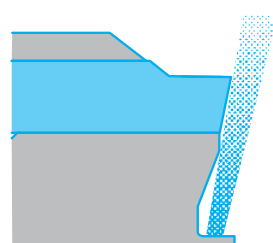
Cutting Conditions: $V_c = 490$ sfm, $f = 0.002$ ipr, $d = 0.315$ ", Wet
Edge Width 4 mm (0.157") Workpiece: 4131 Grooving

2 Keeping the Cutting Edge Cool Leads to Longer Tool Life

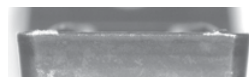
Coolant towards the rake surface and the flank face of the insert

Directing coolant towards the cutting edge lengthens tool life

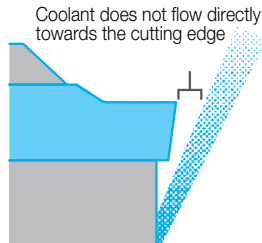
KGD-JCT



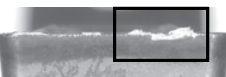
After Machining 39 min



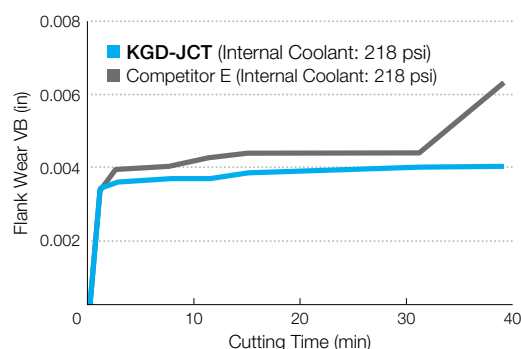
Competitor E



Defect



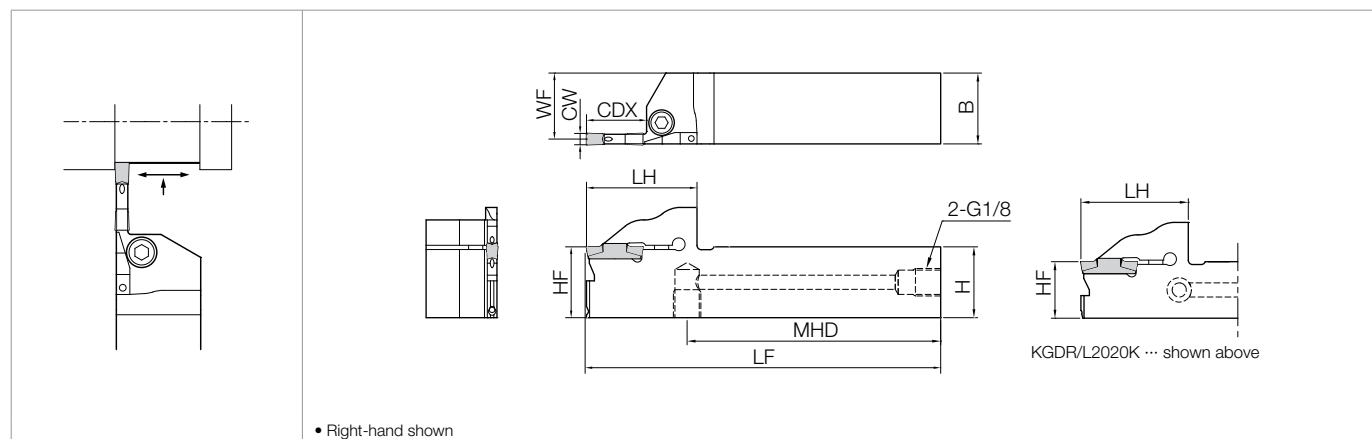
Wear Resistance Comparison (Internal Evaluation)



Cutting Conditions: $V_c = 590$ sfm, $f = 0.006$ ipr, $d = 0.354$ ", Wet
Edge Width 0.158" Workpiece: 4131 Grooving

KGD-JCT Minimizes Wear and Provides Longer Tool Life without Insert Fracturing

KGD-JCT (Integral Style / Jet Coolant-Through)



Toolholder Dimensions (Inch Size)

Pressure Resistance: up to 2,175 psi

Width (mm)	Max. Grooving Depth (mm)	Part Number	Stock		Dimensions (in)								Insert Width CW (in)		Spare Parts		
			R	L	H	HF	B	LF	LH	WF	CDX	MHD	MIN	MAX	Clamp Bolt	Wrench	Plug
0.118 (3mm)	0.787 (20mm)	KGD% 12-3T20JCT	●	●	0.750	0.750	0.750	5.000	1.496	0.702	0.787 (20mm)	3.590	0.118 (3mm)	0.157 (4mm)	HH5X16	LW-4	HSG1/8X8.0
		16-3T20JCT	●	●	1.000	1.000	1.000	5.000	1.535	0.952	0.787 (20mm)	3.551			HH5X25		
0.157 (4mm)	0.787 (20mm)	KGD% 12-4T20JCT	●	●	0.750	0.750	0.750	5.000	1.496	0.683	0.787 (20mm)	3.590	0.157 (4mm)	0.197 (5mm)	HH5X16		
		16-4T20JCT	●	●	1.000	1.000	1.000	5.000	1.535	0.933	0.787 (20mm)	3.551			HH5X25		
	1.000 (25.4mm)	KGD% 16-4T25.4JCT	●	●	1.000	1.000	1.000	5.000	1.732	0.933	1.000 (25.4mm)	3.354			HH5X25		

Toolholder Dimensions (Metric Size)

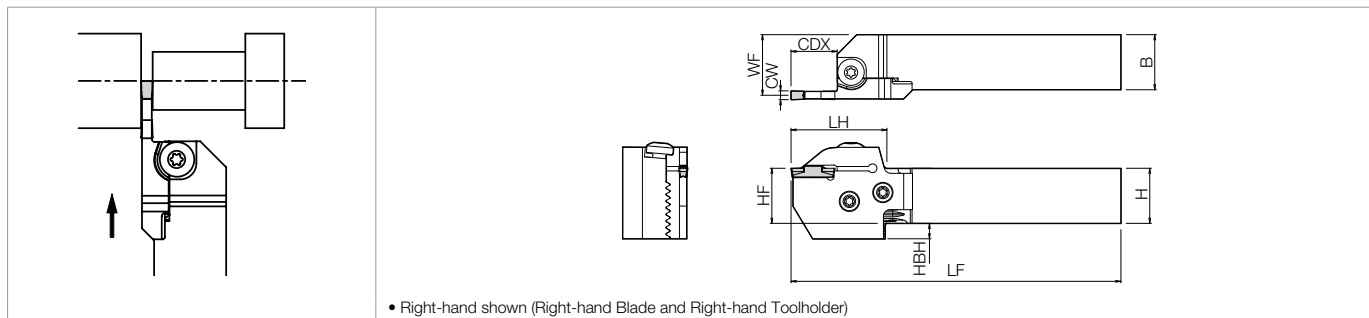
Pressure Resistance: up to 2,175 psi

Width (mm)	Max. Grooving Depth (mm)	Part Number	Stock		Dimensions (mm)								Insert Width CW (mm)		Spare Parts		
			R	L	H	HF	B	LF	LH	WF	CDX	MHD	MIN	MAX	Clamp Bolt	Wrench	Plug
3	6	KGD% 2020K-3T06JCT	●	●	20	20	20	125	31.5	18.8	6	96.2	3.0	4.0	HH5X16	LW-4	HSG1/8X8.0
		2525K-3T06JCT	●	●	25	25	25		31.5	23.8		96.5			HH5X25		
	10	2020K-3T10JCT	●	●	20	20	20		34.0	18.8	10	94.2			HH5X16		
		2525K-3T10JCT	●	●	25	25	25		34.0	23.8		94.5			HH5X25		
	20	2020K-3T20JCT	●	●	20	20	20		38.0	18.8	20	90.2			HH5X16		
		2525K-3T20JCT	●	●	25	25	25		39.0	23.8		89.5			HH5X25		
		2020K-4T10JCT	●	●	20	20	20		34.0	18.8	10	94.2			HH5X16		
		2525K-4T10JCT	●	●	25	25	25		34.0	23.8		94.5			HH5X25		
	20	2020K-4T20JCT	●	●	20	20	20		38.0	18.8	20	90.2	4.0	5.0	HH5X16	LW-4	HSG1/8X8.0
		2525K-4T20JCT	●	●	25	25	25		39.0	23.8		89.5			HH5X25		
4	25	KGD% 2525K-4T25JCT	●	●	25	25	25		44.0	23.8	25	84.5			HH5X25		

Choose insert with width that falls within **MIN** and **MAX** parameters shown in table above. Insert table [H24-H25](#)Coolant Connections and Pipe Parts [G37](#)
Recommended Cutting Conditions [H38-H39](#)

EXTERNAL GROOVING / CUT-OFF TOOLHOLDERS

KGD-S (0° SwitchBlade Type)



Toolholder + Blade Dimensions (Inch Size)

(Choose **Right-hand** Blade for **Right-hand** Toolholder and **Left-hand** Blade for **Left-hand** Toolholder)

Shank Angle	Width (in)	Max. D.O.C. (in)	Shank Size (in)	Unit Part Number (Toolholder + Blade)	Stock		Toolholder Part Number ➔ G41	Blade Part Number ➔ G41	Dimensions (in)								Insert Width CW (in)	
					R	L			H	HF	HBH	B	LF	LH	WF	CDX*	MIN.	MAX.
0°	0.079 (2mm)	0.669 (17mm)	□ 0.75	KGD [®] / 12X-2T17S	●	●	KGD [®] / 12-C	KGD [®] / -2T17-C	0.75	0.75	0.472	0.75	4.80	1.57	0.88	0.669 (17mm)	0.079 (2mm)	0.118 (3mm)
			□ 1.00	16X-2T17S	●	●	KGD [®] / 16-C		1.00	1.00	0.276	1.00	5.78	1.57	1.13			
	0.118 (3mm)	0.394 (10mm)	□ 0.75	KGD [®] / 12X-3T10S	●	●	KGD [®] / 12-C	KGD [®] / -3T10-C	0.75	0.75	0.472	0.75	4.52	1.29	0.86	0.394 (10mm)	0.118 (3mm)	0.157 (4mm)
			□ 1.00	16X-3T10S	●	●	KGD [®] / 16-C		1.00	1.00	0.276	1.00	5.51	1.29	1.11			
		0.787 (20mm)	□ 0.75	KGD [®] / 12X-3T20S	●	●	KGD [®] / 12-C	KGD [®] / -3T20-C	0.75	0.75	0.472	0.75	4.92	1.68	0.86	0.787 (20mm)		
			□ 1.00	16X-3T20S	●	●	KGD [®] / 16-C		1.00	1.00	0.276	1.00	5.90	1.68	1.11			
	0.157 (4mm)	0.394 (10mm)	□ 0.75	KGD [®] / 12X-4T10S	●	●	KGD [®] / 12-C	KGD [®] / -4T10-C	0.75	0.75	0.472	0.75	4.52	1.29	0.84	0.394 (10mm)	0.157 (4mm)	0.197 (5mm)
			□ 1.00	16X-4T10S	●	●	KGD [®] / 16-C		1.00	1.00	0.276	1.00	5.51	1.29	1.09			
		0.787 (20mm)	□ 0.75	KGD [®] / 12X-4T20S	●	●	KGD [®] / 12-C	KGD [®] / -4T20-C	0.75	0.75	0.472	0.75	4.92	1.68	0.84	0.787 (20mm)		
			□ 1.00	16X-4T20S	●	●	KGD [®] / 16-C		1.00	1.00	0.276	1.00	5.90	1.68	1.09			
		0.984 (25mm)	□ 0.75	KGD [®] / 12X-4T25S	●	●	KGD [®] / 12-C	KGD [®] / -4T25-C	0.75	0.75	0.472	0.75	5.11	1.88	0.84	0.984 (25mm)		
			□ 1.00	16X-4T25S	●	●	KGD [®] / 16-C		1.00	1.00	0.276	1.00	6.10	1.88	1.09			

Note 1) When using the toolholder in normal mounting position, the lower jaw of the toolholder may interfere with the tool presetter.

2) The toolholder and blade part numbers are printed on the toolholder body. (Unit part numbers are not printed)

KGD-S: Right-hand blades for right-hand toolholders, and left-hand blades for left-hand toolholders.

3) If the unit part number is not listed (No Unit Part Number), please purchase toolholder and blade separately.

4) Dimension CDX*: Shows the maximum grooving depth. If the dimension CDX is 0.787" (20mm) or more, using a 2-edge insert, the maximum grooving depth is 0.709" (18mm).

Choose insert with width that falls within **MIN** and **MAX** parameters shown in table above. Insert table [H24-H25](#)

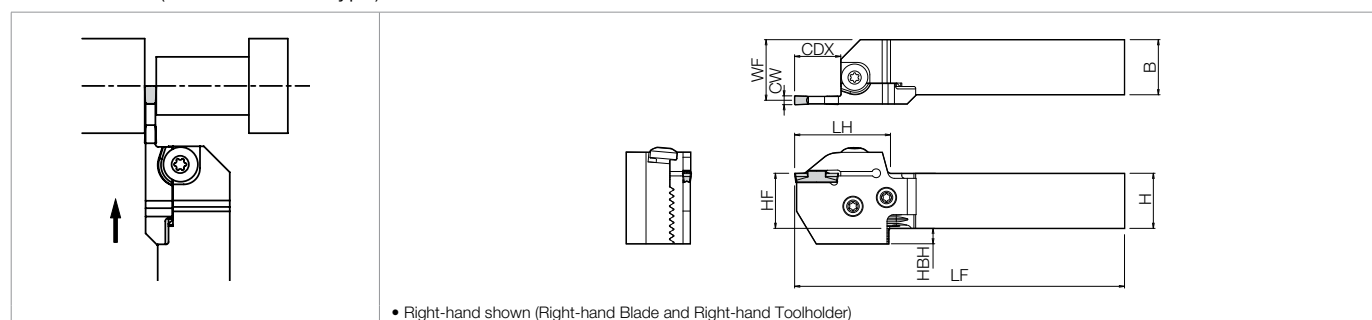
Spare Parts (Common with SwitchBlade Types)

* The parts are included in the toolholder and unit.

Unit Part Number	Spare Parts		
	Clamp Bolt (for Insert Clamp)	Clamp Screw (for Blade)	Wrench
KGD [®] /.....S	BH6X10TR	SB-60120TR	LTW-25

EXTERNAL GROOVING / CUT-OFF TOOLHOLDERS

KGD-S (0° SwitchBlade Type)



Toolholder + Blade Dimensions (Metric Size)

(Choose **Right-hand** Blade for **Right-hand** Toolholder and **Left-hand** Blade for **Left-hand** Toolholder)

Shank Angle	Width (mm)	Max. D.O.C. (mm)	Shank Size (mm)	Unit Part Number (Toolholder + Blade)	Stock		Toolholder Part Number ➡ G41	Blade Part Number ➡ G41	Dimensions (mm)								Insert Width CW (mm)		
					R	L			H	HF	HBH	B	LF	LH	WF	CDX*	MIN.	MAX.	
0°	2	17	□20	KGD % 2020X-2T17S	●		KGD % 2020-C	KGD % -2T17-C	20	20	12	20	122	40	23.4	17	2.0	3.0	
			□25	2525X-2T17S	●	●	KGD % 2525-C		25	25	7	25	147	40	28.4				
			□32	No Unit Part Number ➡			KGD % 3232-C		32	32	-	32	167	40	35.4				
	3	10	□20	KGD % 2020X-3T10S	●		KGD % 2020-C	KGD % -3T10-C	20	20	12	20	115	33	23.0	10	3.0	4.0	
			□25	2525X-3T10S	●		KGD % 2525-C		25	25	7	25	140	33	28.0				
			□32	No Unit Part Number ➡			KGD % 3232-C		32	32	-	32	160	33	35.0				
		20	□20	KGD % 2020X-3T20S	●	●	KGD % 2020-C	KGD % -3T20-C	20	20	12	20	125	43	23.0	20			
			□25	2525X-3T20S	●	●	KGD % 2525-C		25	25	7	25	150	43	28.0				
			□32	3232X-3T20S	●		KGD % 3232-C		32	32	-	32	170	43	35.0				
		4	10	□20	KGD % 2020X-4T10S	●		KGD % 2020-C	KGD % -4T10-C	20	20	12	20	115	33	22.5			10
				□25	2525X-4T10S	●		KGD % 2525-C		25	25	7	25	140	33	27.5			
				□32	No Unit Part Number ➡			KGD % 3232-C		32	32	-	32	160	33	34.5			
	20		□20	KGD % 2020X-4T20S	●		KGD % 2020-C	KGD % -4T20-C	20	20	12	20	125	43	22.5	20			
			□25	2525X-4T20S	●	●	KGD % 2525-C		25	25	7	25	150	43	27.5				
			□32	3232X-4T20S	●		KGD % 3232-C		32	32	-	32	170	43	34.5				
	25		□20	KGD % 2020X-4T25S	●	●	KGD % 2020-C	KGD % -4T25-C	20	20	12	20	130	48	22.5	25			
			□25	2525X-4T25S	●	●	KGD % 2525-C		25	25	7	25	155	48	27.5				
			□32	3232X-4T25S	●		KGD % 3232-C		32	32	-	32	175	48	34.5				

Note 1) When using the toolholder in normal mounting position, the lower jaw of the toolholder may interfere with the tool presetter.

2) The toolholder and blade part numbers are printed on the toolholder body. (Unit part numbers are not printed)

KGD-S: Right-hand blades for right-hand toolholders, and left-hand blades for left-hand toolholders.




3) If the unit part number is not listed (No Unit Part Number), please purchase toolholder and blade separately.

4) Dimension CDX*: Shows the maximum grooving depth. If the dimension CDX is 0.787" (20mm) or more, using a 2-edge insert, the maximum grooving depth is 0.709" (18mm).

Choose insert with width that falls within MIN and MAX parameters shown in table above. Insert table ➡ H24-H25

Spare Parts (Common with SwitchBlade Types)

* The parts are included in the toolholder and unit.

Unit Part Number	Spare Parts		
	Clamp Bolt (for Insert Clamp)	Clamp Screw (for Blade)	Wrench
KGD%S	 BH6X10TR	 SB-60120TR	 LTW-25

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

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

(Customer Service) 800.823.7284 - Option 1
(Technical Support) 800.823.7284 - Option 2
Visit us online at KyoceraPrecisionTools.com

KYOCERA

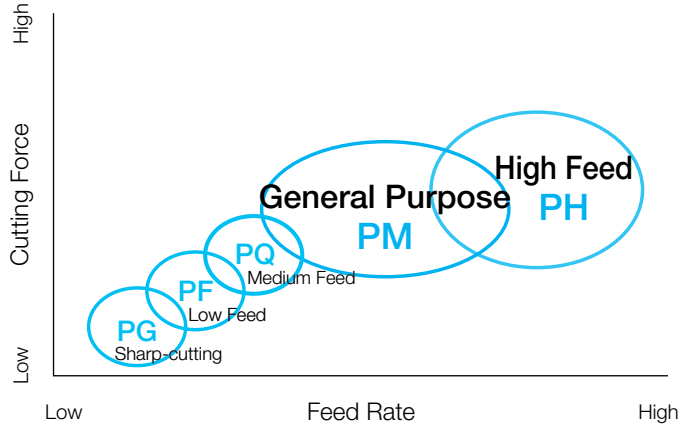
H37

INSERT GRADES	A
TURNING INSERTS	B
GEN/PCD INSERTS	C
TURNING HOLDERS	D
SMALL TOOLS	E
BORING	F
GROOVING	G
CUT-OFF	H
THREADING	J
DILLING	K
MILLING	M
QUICK CHANGE TOOLING	N
SPARE PARTS	P
TECHNICAL	R
INDEX	T

KGD RECOMMENDED CUTTING CONDITIONS

Application Map

Cut-Off



Recommended Cutting Conditions (PF / PQ / PG Chipbreakers) ★ : 1st Recommendation ☆ : 2nd Recommendation

PF Chipbreaker

Workpiece	Cutting Conditions (Vc : sfm)			Feed Rate (f : ipr)						Notes
	Recommended Insert Grade			PF (RE = 0.0012)			PF (RE = 0.0059)			
	MEGACOAT NANO	MEGACOAT		CW (Insert Width)			CW (Insert Width)			
	PR1535	PR1225	PR1215	0.051" - 0.059" 1.3mm - 1.5mm	0.079" 2.0mm	0.098" - 0.118" 2.5mm - 3.0mm	0.051" - 0.059" 1.3mm - 1.5mm	0.079" 2.0mm	0.098" - 0.118" 2.5mm - 3.0mm	
Carbon Steel	☆ 230 - 490	★ 230 - 490	☆ 230 - 590	0.0004 - 0.0016	0.0008 - 0.0024	0.0008 - 0.0031	0.0004 - 0.0020	0.0012 - 0.0031	0.0016 - 0.0039	Coolant
Alloy Steel	☆ 230 - 490	★ 230 - 490	☆ 230 - 590							
Stainless Steel	★ 200 - 390	☆ 200 - 390	☆ 200 - 490	0.0004 - 0.0012	0.0004 - 0.0016	0.0004 - 0.0020	0.0004 - 0.0016	0.0012 - 0.0028	0.0016 - 0.0031	
Cast Iron	-	-	★ 260 - 660	0.0004 - 0.0020	0.0008 - 0.0028	0.0012 - 0.0031	0.0004 - 0.0024	0.0012 - 0.0035	0.0016 - 0.0039	

PQ / PG Chipbreaker

Workpiece	Cutting Conditions (Vc : sfm)					Feed Rate (f : ipr)				Notes
	Recommended Insert Grade					PQ		PG		
	MEGACOAT NANO	MEGACOAT		DLC Coated Carbide	Carbide	CW (Insert Width)		CW (Insert Width)		
	PR1535	PR1225	PR1215	PDL025	GW15	0.079" 2.0mm	0.098" - 0.118" 2.5mm - 3.0mm	0.079" 2.0mm	0.098" - 0.118" 2.5mm - 3.0mm	
Carbon Steel	☆ 230 - 490	★ 230 - 490	☆ 230 - 590	-	-	0.0012 - 0.0039	0.0016 - 0.0047	0.0004 - 0.0016	0.0004 - 0.0020	Coolant
Alloy Steel	☆ 230 - 490	★ 230 - 490	☆ 230 - 590	-	-					
Stainless Steel	★ 200 - 390	☆ 200 - 390	☆ 200 - 490	-	-	0.0008 - 0.0028	0.0008 - 0.0031	0.0004 - 0.0012	0.0004 - 0.0016	
Cast Iron	-	-	★ 260 - 660	-	☆ 160 - 330	0.0016 - 0.0039	0.0016 - 0.0047	0.0004 - 0.0016	0.0004 - 0.0020	
Aluminum Alloy	-	-	-	★ 660 - 1,640	☆ 660 - 1,480	-	-	0.0004 - 0.0020	0.0004 - 0.0024	
Brass	-	-	-	-	★ 330 - 660	-	-	0.0004 - 0.0028	0.0004 - 0.0031	

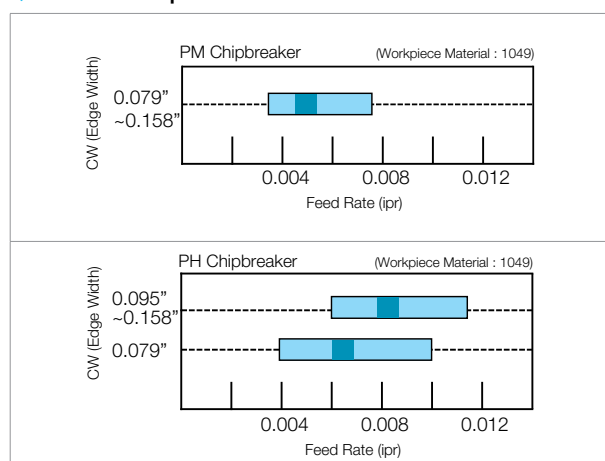
KGD RECOMMENDED CUTTING CONDITIONS

Recommended Cutting Conditions (PM / PH Chipbreakers) ★ : 1st Recommendation ☆ : 2nd Recommendation

Workpiece Material	Recommended Insert Grade (Vc sfm)			Feed Rate (ipr)			Remarks
				PM	PH		
	MEGACOAT NANO	MEGACOAT		CW (Insert Width)	CW (Insert Width)		
				0.079"~0.158" (2mm~4mm)	0.079" (2mm)	0.095"~0.158" (3mm~4mm)	
Carbon Steel	☆ 260~660	★ 260~660	☆ 330~660	0.0031~0.0071	0.0039~0.0098	0.0059~0.0110	Wet
Alloy Steel	☆ 230~590	★ 230~590	☆ 260~590				
Stainless Steel	★ 200~490	☆ 200~490	☆ 200~490	0.0024~0.0047	0.0020~0.0047	0.0031~0.0059	
Cast Iron	-	-	★ 330~660	0.0031~0.0071	0.0039~0.0098	0.0059~0.0110	

★ : 1st Recommendation ☆ : 2nd Recommendation

Feed Examples



■ : Indicates the center value of feed (f)

CAUTION During Cut-Off

- 1) Flood coolant is recommended. Apply enough coolant to the cutting edge
- 2) Keep spindle revolution constant during processing to achieve longer tool life
- 3) Cut off as close to the chuck as possible
- 4) Reduce feed rate by 30-50% when diameter is same as cut-off insert width to prevent impact

INSERT GRADES	A
TURNING INSERTS	B
GEN/PCD INSERTS	C
TURNING HOLDERS	D
SMALL TOOLS	E
BORING	F
GROOVING	G
CUT-OFF	H
THREADING	J
DRILLING	K
MILLING	M
QUICK CHANGE TOOLING	N
SPARE PARTS	P
TECHNICAL	R
INDEX	T


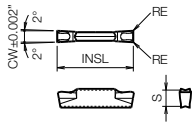

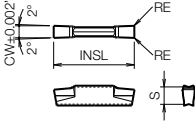

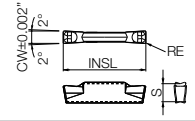

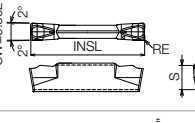

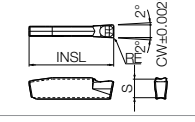
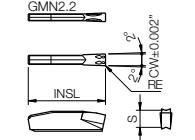

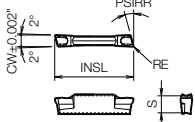

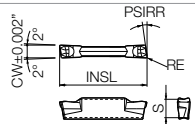

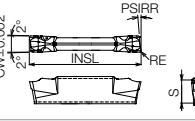

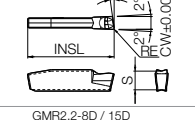

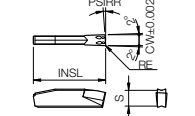
CUT-OFF INSERTS

GMM / GMN / GM^RL

Classification of Usage

- : Light Interruption / 1st Choice
- : Light Interruption / 2nd Choice
- : Continuous / 1st Choice
- : Continuous / 2nd Choice

P	Carbon Steel / Alloy Steel
M	Stainless Steel
K	Cast Iron
N	Non-ferrous Metals








Insert		Part Number	Dimensions (in)						Lead Angle	Cermat	CVD Coated Carbide	PVD Coated Carbide					Carbide	Ref. Page for Tool	
			CW		RE	INSL	S	PSIR%				TN90	CR9025	PR915	PR930	PR115			KW10
			inch	mm															
Right-handed Insert Shown																			
Neutral			GMM 1520-MT	0.059	1.5	0.002	0.787	0.169	-									H42	
			2020-MT	0.079	2.0	0.002	0.787	0.169	-									H42	
			2520-MT	0.098	2.5	0.002	0.787	0.169	-									H43	
			3020-MT	0.118	3.0	0.002	0.787	0.169	-										
			GMM 1520-NB	0.059	1.5	0.002	0.787	0.169	-									H42	
			2020-NB	0.079	2.0	0.002	0.787	0.169	-										
			2520-NB	0.098	2.5	0.002	0.787	0.169	-										
			3020-NB	0.118	3.0	0.002	0.787	0.169	-										
			GMM 2020-TK	0.079	2.0	0.008	0.787	0.169	-										
			2520-TK	0.098	2.5	0.008	0.787	0.169	-										
			3020-TK	0.118	3.0	0.010	0.787	0.169	-										
			GMM 2020-TMR	0.079	2.0	0.008	0.169	0.059	-									H42	
		2520-TMR	0.098	2.5	0.008	0.169	0.075	-									H43		
		3020-TMR	0.118	3.0	0.010	0.169	0.091	-											
		GMN 2-TK	0.079	2.0	0.008	0.787	0.169	-											
		3-TK	0.118	3.0	0.010	0.787	0.169	-											
		4-TK	0.158	4.0	0.012	0.787	0.169	-											
Deep Grooving / Cut-Off 1-Edge		GMN 2.2	0.087	2.2	0.007	0.787	0.169	-											
		3	0.118	3.0	0.008	0.787	0.169	-											
		4	0.158	4.0	0.010	0.787	0.169	-											
		5	0.197	5.0	0.031	0.787	0.169	-											
		6	0.236	6.0	0.031	0.787	0.169	-											
With Lead Angle			GMM 1520%-MT-15D	0.059	1.5	0.002	0.787	0.169	15°									H42	
			2020%-MT-15D	0.079	2.0	0.002	0.787	0.169	15°										
			2520%-MT-15D	0.098	2.5	0.002	0.787	0.169	15°										
			3020%-MT-15D	0.118	3.0	0.002	0.787	0.169	15°										
			GMM 2020%-TK-8D	0.079	2.0	0.008	0.787	0.169	8°										
			2520%-TK-8D	0.098	2.5	0.008	0.787	0.169	8°										
			3020%-TK-8D	0.118	3.0	0.010	0.787	0.169	8°										
			GMM 2020%-TMR-6D	0.079	2.0	0.008	0.169	0.059	6°									H42	
			2520%-TMR-6D	0.098	2.5	0.008	0.169	0.075	6°									H43	
			3020%-TMR-6D	0.118	3.0	0.010	0.169	0.091	6°										
			GMR 2-TK-8D	0.079	2.0	0.008	0.787	0.169	8°										
			3-TK-8D	0.118	3.0	0.010	0.787	0.169	8°										
			4-TK-8D	0.158	4.0	0.012	0.787	0.169	8°										
			GM% 2.2-8D	0.087	2.2	0.007	0.787	0.169	8°										
			2.2-15D	0.087	2.2	0.000	0.787	0.169	15°										
			3-4D	0.118	3.0	0.008	0.787	0.169	4°										
			4-4D	0.158	4.0	0.010	0.787	0.169	4°										

* Corner-R (RE) varies based on grade

(Customer Service) 800.823.7284 - Option 1
(Technical Support) 800.823.7284 - Option 2
Visit us online at KyoceraPrecisionTools.com

Inserts are sold in 10 piece boxes

Edge Prep. and Chipbreakers (CERACUT Plunge & Turn)

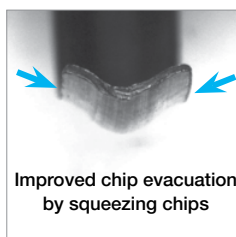
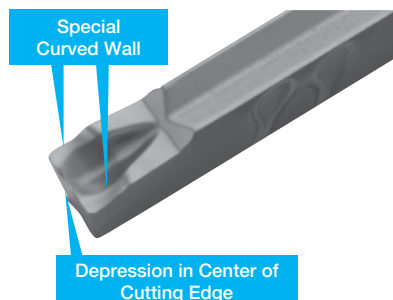
Name	MT Chipbreaker		TK Chipbreaker		TMR Chipbreaker	Without Chipbreaker (NB)	
Edge Preparation	Chamfered + Honed	Chamfered + Honed	Chamfered + Honed	Sharp Edge	Chamfered + Honed	Honed Cutting Edge	Sharp Edge
	Corner-R 0.002" 0.05mm	Sharp Edge	Corner-R 0.008"~0.012" 0.20~0.30mm	Corner-R 0.008"~0.012" 0.20~0.30mm	Corner-R 0.008" 0.20mm	Corner-R 0.002" 0.05mm	Sharp Edge
							
	CR9025 / PR915	PR930 / KW10	CR9025 / PR915	PR930 / KW10	PR1115	CR9025	PR930 / KW10

• Sharp Edge can reduce cutting resistance by 40%, compared with chamfered edge

Name	Advantages
GMM-MT	Specific chipbreaker for cut-off operations requiring sharp cutting performance Minimizes the boss
GMM-NB	Cutting edge is flat with no chipbreaker. Good performance for brass, etc.
GMM-TK	Stable design with chipbreaker for cut-off. Large corner-R 2-edge for economical performance
GMM-TK	Same chipbreaker geometry as GMM-TK 1-edge. Wide application range.
GMM (Std.)	Mainly for deep grooving, but available for groove widening and traversing due to projection near side cutting edge. 1-edge and wide application range. Available for cut-off applications.

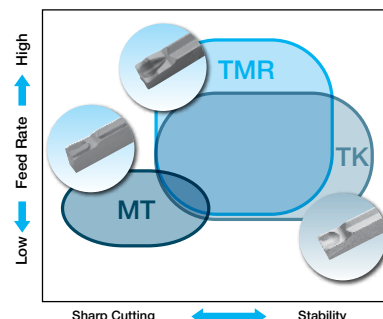
TMR Chipbreaker

Chipbreaker Advantages



Chip Width < Grooving Width









GMM Chipbreaker Map

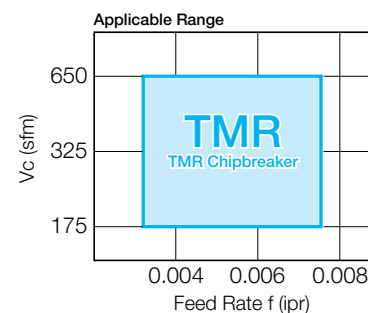


The TMR Chipbreaker Provides Stable Chip Control at High Feed Rates

Good chip control even when cutting speed (spindle revolution) is increased

(Cutting Conditions : 15CrMo4, Ø30, Constant Spindle Revolution)

Part Number	n=1060min ⁻¹ (Vc=325sfm)		n=2123min ⁻¹ (Vc=650sfm)	
	f=0.0008ipr	f=0.0047ipr	f=0.0008ipr	f=0.0047ipr
GMM 3020-TMR (Neutral)				
GMM 3020R-TMR-6D (Right-Hand)				

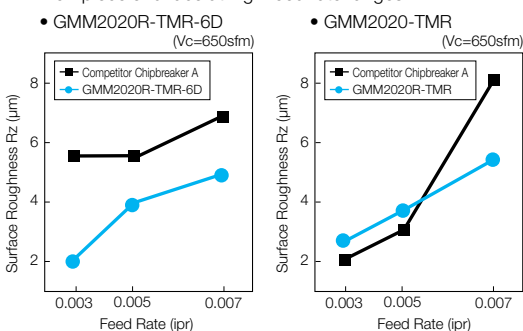


Recommended Cutting Conditions

Workpiece Material	Vc (sfm)	Feed Rate (ipr)
Carbon Steel	200~650	0.003~0.007
Alloy Steel	200~500	
Stainless Steel	175~450	

Workpiece Surface Roughness

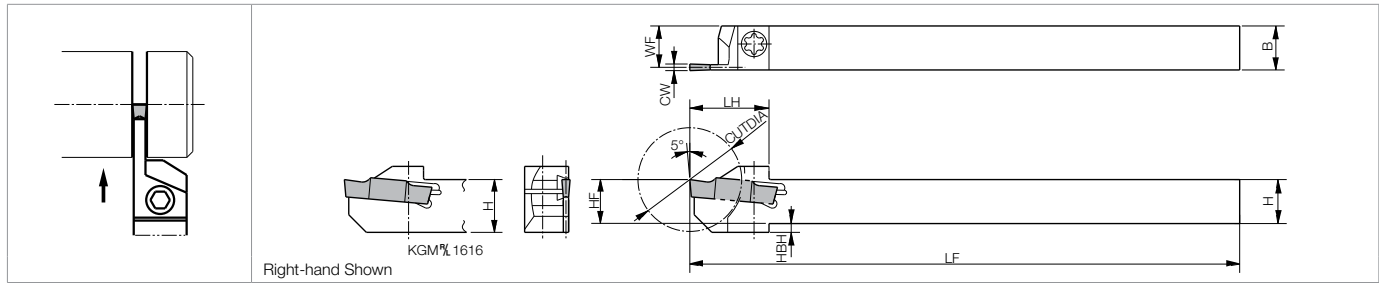
TMR Chipbreaker provides good surface roughness on the workpiece end face at high feed rate ranges.




CUT-OFF TOOLHOLDERS

KGM (Small Parts) - Will be phased out and removed from catalog. Switch to KGD [H26](#)

Insert Width : 0.079"~0.118" / 1.5mm~4.0mm



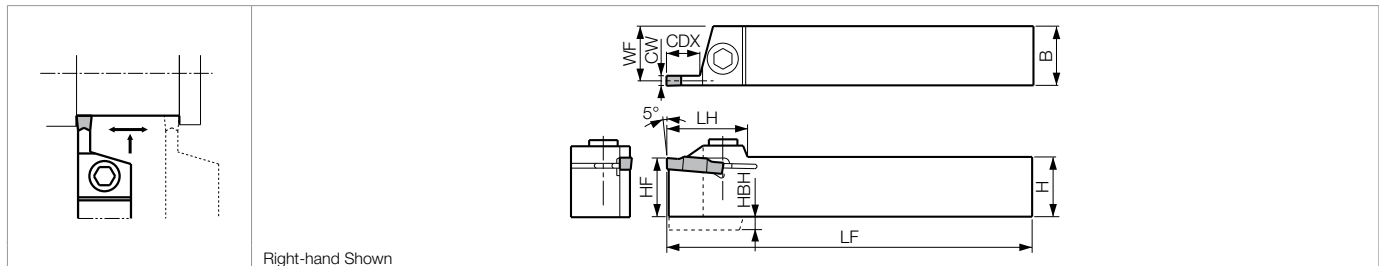
Toolholder Dimensions

Part Number	Stock		Unit	Cut-Off Dia.	Dimensions							Insert Width CW		Spare Parts	
	R	L			CUTDIA	H	HF	HBH	B	LF	LH	WF	MIN	MAX	
KGM% 6-2-5	●	●	inch	0.787	0.375	0.375	0.079	0.375	5.000	0.750	0.342	0.079	0.118	SE-40120TR	LTW-15S
8-2-6	●	●		0.984	0.500	0.500	0.051	0.500	6.000	0.830	0.467	0.079	0.118		
KGM% 1010JX-1.5	●	●	mm	18	10	10	2	10	120	18.0	9.40	1.5	2.0	SE-40120TR	LTW-15S
1212JX-1.5	●	●		23	12	12	2	12	120	20.5	11.40	1.5	2.0		
KGM% 1010JX-2	●	●		18	10	10	2	10	120	18.0	9.15	2.0	3.0	SE-40120TR	LTW-15S
1212JX-2	●	●		23	12	12	2	12	120	19.0	11.15	2.0	3.0		
1616JX-2	●	●		30	16	16	-	16	120	24.5	15.15	2.0	3.0	SE-50125TR	LTW-20
KGM% 1212JX-2.5	●	●		23	12	12	2	12	120	20.5	11.00	2.4	3.0	SE-40120TR	LTW-15S
1616JX-2.5	●	●		30	16	16	-	16	120	25.5	15.00	2.4	3.0	SE-50125TR	LTW-20
KGM% 1616JX-3	●	●		30	16	16	-	16	120	25.5	14.80	3.0	4.0	SE-50125TR	LTW-20
KGM% 1212F-1.5-85	●	●		23	12	12	2	12	85	19.0	11.40	1.5	2.0	SE-40120TR	LTW-15S
1212F-2-85	●	●		23	12	12	2	12	85	19.0	11.15	2.0	3.0		
1212F-2.5-85	●	●	23	12	12	2	12	85	19.0	11.00	2.4	3.0			





Choose insert with width that falls within **MIN** and **MAX** parameters shown in table above. Insert table [H40](#)

KGM - Will be phased out and removed from catalog. Switch to KGD [H26-H35](#)

Insert Width : 0.750"~1.000" / 3mm~8mm



Toolholder Dimensions

Part Number	Stock		Unit	Dimensions							Insert Width CW		Spare Parts						
	R	L		H	HF	HBH	B	LF	LH	WF	CDX	MIN	MAX	Clamp Screw		Wrench	Wrench		
																			
KGM% 12-3	●		inch	0.750	0.750	-	0.750	5.000	1.070	0.702	0.354	0.118	0.157	-	HH5X16	-	LW-4		
16-3	●			1.000	1.000	-	1.000	6.000	1.070	0.953	0.354	0.118	0.157		HH5X25				
KGM% 1212H-3	●		mm	12	12	4	12	100	27	10.8	9	3.0	3.0	SB-5TR	-	LTW-20	-		
1616H-3	●			16	16	4	16	100	27	14.8	9	3.0	4.0		-			HH5X16	
2020K-3	●	●		20	20	-	20	125	27	18.8	9	3.0	4.0						
2525M-3	●	●		25	25	-	25	150	27	23.8	9	3.0	4.0						HH5X25
KGM% 2020K-4	●			20	20	-	20	125	27	18.3	10	4.0	5.0						-
2525M-4	●	●	25	25	-	25	150	27	23.3	10	4.0	5.0	HH5X25						
KGM% 2020K-5	●	△	mm	20	20	-	20	125	27	17.8	10	5.0	6.0	-	HH5X16	-	LW-4		
2525M-5	●			25	25	-	25	150	27	22.8	10	5.0	6.0		HH5X25				
KGM% 2525M-8	●	●		mm	25	25	7.5	25	150	40	22.0	25	8.0	8.0	-	HH6X25	-	LW-5	

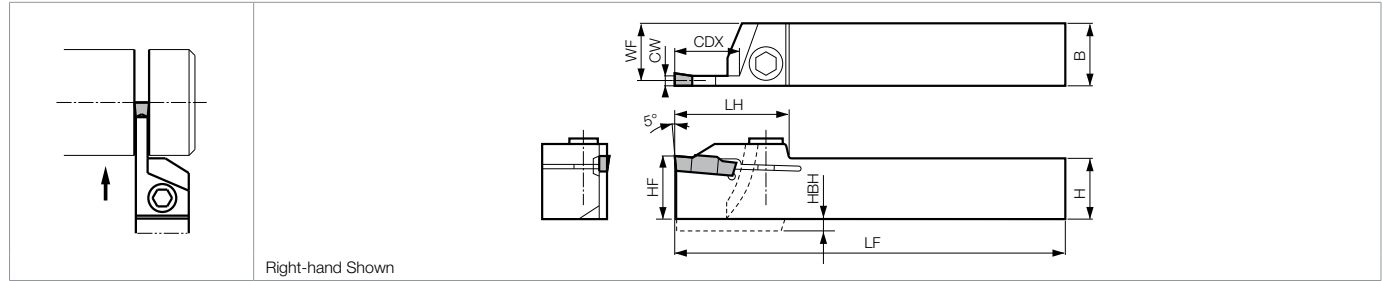
- Dimension **CDX** shows available grooving depth
- 4.0mm width insert can be installed in KGM% 1212H-3, but is not recommended due to the toolholder's rigidity

Choose insert with width that falls within **MIN** and **MAX** parameters shown in table above. Insert table [H40](#)

CUT-OFF TOOLHOLDERS

KGM-T - Will be phased out and removed from catalog. Switch to KGD **H26~H35**

Insert Width : 0.078"~0.236" / 2.0mm~6.0mm



Toolholder Dimensions

Part Number	Stock		Unit	Dimensions							Insert Width CW		Spare Parts			
	R	L		H	HF	HBH	B	LF	LH	WF	CDX	MIN	MAX	Clamp Screw	Wrench	Wrench
KGM% 12-2T	●	●	inch	0.75	0.75	-	0.75	5.0	1.30	0.717	0.669	0.078	0.118	-	HH5X16	-
16-2T	●	●		1.00	1.00	-	1.00	6.0	1.30	0.967	0.669	0.078	0.118	-	HH5X25	-
KGM% 12-3T	●	●		0.75	0.75	-	0.75	5.0	1.42	0.702	0.787	0.118	0.157	-	HH5X16	-
16-3T	●	●		1.00	1.00	-	1.00	6.0	1.42	0.953	0.787	0.118	0.157	-	HH5X25	-
KGM% 12-4T	●	●		0.75	0.75	-	0.75	5.0	1.42	0.683	0.787	0.157	0.197	-	HH5X16	-
16-4T	●	●		1.00	1.00	-	1.00	6.0	1.22	0.933	0.984	0.157	0.197	-	HH5X25	-
KGM% 16-5T	●	●	mm	1.00	1.00	-	1.00	6.0	1.22	0.913	0.984	0.197	0.236	-	HH5X25	-
KGM% 2012K-2T17	●	●		20	20	-	12	125	33	11.15	17	2.0	3.0	SB-5TR	-	LTW-20
2020K-2T17	●	●		20	20	-	20	125	33	19.15	17	2.0	3.0	-	HH5X16	-
2525M-2T17	●	●		25	25	-	25	150	33	24.15	17	2.0	3.0	-	HH5X25	-
KGM% 1616H-3T20	●	●		16	16	4	16	100	36	14.8	20	3.0	4.0	-	HH5X16	-
2012K-3T20	●	●		20	20	-	12	125	36	10.8	20	3.0	4.0	SB-5TR	-	LTW-20
2020K-3T20	●	●		20	20	-	20	125	36	18.8	20	3.0	4.0	-	HH5X16	-
2525M-3T20	●	●		25	25	-	25	150	36	23.8	20	3.0	4.0	-	HH5X25	-
KGM% 2020K-4T20	●	●		20	20	-	20	125	36	18.3	20	4.0	5.0	-	HH5X16	-
2525M-4T20	●	●		25	25	-	25	150	41	23.3	25	4.0	5.0	-	HH5X25	-
2525M-4T25	●	●		25	25	-	25	150	41	23.3	25	4.0	5.0	-	HH5X25	-
KGM% 2525M-5T25	●	●		25	25	-	25	150	42	22.8	25	5.0	6.0	-	HH5X25	-
3232P-5T25	●	●		32	32	-	32	170	42	29.8	25	5.0	6.0	-	HH5X25	-
KGM% 2525M-6T30	●	●		25	25	-	25	150	45	22.4	30	6.0	6.0	-	HH5X25	-

- Dimension CDX shows the distance from the toolholder to the cutting edge. Refer to the table (H34) for the relationship between available grooving depth and cutting diameter
- When using GMG / GMM type 2-edge insert, set groove depth under 0.591"(15mm)

Choose insert with width that falls within **MIN** and **MAX** parameters shown in table above. Insert table **H40**

Applicable Inserts

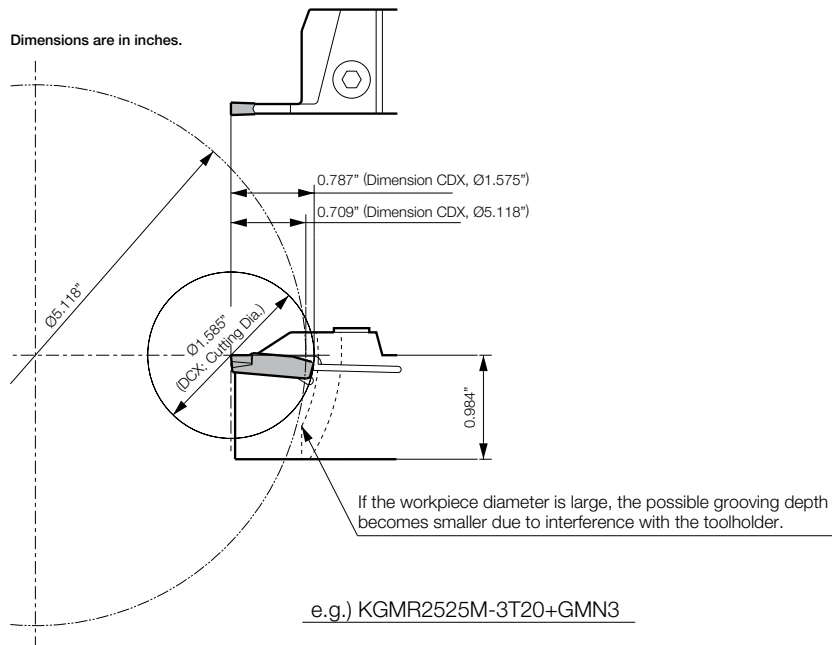
Application	Grooving / Traversing	Grooving / Traversing	Grooving	Full-R / Copying	Full-R / Copying	Cut-Off / Deep Grooving	Cut-Off / Deep Grooving	Cut-Off / Deep Grooving	Cut-Off / Deep Grooving	Cut-Off / Deep Grooving
Ref. Page	G48	G48	G48	G48	G49	H40	H40	H40	H40	H40
Shape	MW	MS	MG			MT	NB	TK	TK	
Toolholder										
KGM% ...1.5	-	-	-	-	-	GMM1520...MT GMM2020...MT GMM1520%...MT GMM2020%...MT	GMM1520...NB GMM2020...NB	GMM2020...T.. GMM2020%...T..	GMN2...TK GM%2...TK	-
KGM% ...-2- KGM% ...-2(T)	GMM2420...MW GMM3020...MW	GMG3020...MS GMM3020...MS	GMG2520...MG GMG3020...MG	GMG3020...R GMM3020...R	-	GMM2020...MT GMM2520...MT GMM3020...MT GMM2020%...MT GMM2520%...MT GMM3020%...MT	GMM2020...NB GMM2520...NB GMM3020...NB	GMM2020...T.. GMM2520...T.. GMM3020...T.. GMM2020%...T.. GMM2520%...T.. GMM3020%...T..	GMN2...TK GMN3...TK GM%2...TK GM%3...TK	GMN2.2 GMN3 GM%2.2 GM%3
KGM% ...2.5	GMM2420...MW GMM3020...MW	GMG3020...MS GMM3020...MS	GMG2520...MG GMG3020...MG	GMG3020...R GMM3020...R	-	GMM2520...MT GMM3020...MT GMM2520%...MT GMM3020%...MT	GMM2520...NB GMM3020...NB	GMM2520...T.. GMM3020...T.. GMM2520%...T.. GMM3020%...T..	GMN3...TK GM%3...TK	GMN3 GM%3
KGM% ...-3(T)	GMM3020...MW GMM4020...MW	GMG3020...MS GMM3020...MS GMM4020...MS	GMG3020...MG GMG3520...MG GMG4020...MG	GMG3020...R GMM3020...R GMG4020...R GMM4020...R	-	GMM3020...MT GMM3020%...MT	GMM3020...NB	GMM3020...T.. GMM3020%...T..	GMN3...TK GMN4...TK GM%3...TK GM%4...TK	GMN3 GMN4 GM%3 GM%4
KGM% ...-4(T)	GMM4020...MW GMM5020...MW	GMG4020...MS GMM4020...MS GMM5020...MS	GMG4020...MG GMG5020...MG	GMG4020...R GMM4020...R GMG5020...R GMM5020...R	-	-	-	-	GMN4...TK GM%4...TK	GMN4 GMN5 GM%4
KGM% ...-5(T)	GMM5020...MW GMM6020...MW	GMG5020...MS GMM5020...MS GMG6020...MS GMM6020...MS	GMG5020...MG GMG6020...MG	GMG5020...R GMM5020...R GMG6020...R GMM6020...R	GMGA6020...R	-	-	-	-	GMN5 GMN6
KGM% ...-6T	GMM6020...MW	GMG6020...MS GMM6020...MS	GMG6020...MG	GMG6020...R GMM6020...R	GMGA6020...R	-	-	-	-	GMN6
KGM% ...8	GMM8030...MW	-	GMG8030...MG	-	GMGA8030...R	-	-	-	-	-

Recommended Cutting Conditions **H60**

RECOMMENDED CUTTING CONDITIONS

KGM • KGM-T Available Cutting Diameter

There is a limit to available grooving depth depending on the workpiece diameter



KGM Available Cutting Diameter Table

Toolholders		DCX Cutting Diameter																	
KGM%	0810K-1.5-125	-	-	-	-	-	-	-	-	-	-	-	-	-	10mm	14mm	16mm	32mm	∞
	1010○-1.5...	-	-	-	-	-	-	-	20mm	25mm	32mm	40mm	60mm	∞	∞	∞	∞		
	1212○-1.5...	-	-	-	-	25mm	26mm	28mm	32mm	36mm	40mm	60mm	100mm						
	0810K-2-125	-	-	-	-	-	-	-	-	-	-	-	-	10mm	14mm	16mm	32mm		
	6-2-5								0.80"	1.00"	1.28"	1.60"	2.40"	∞	∞	∞	∞		
	1010○-2...	-	-	-	-	-	-	-	20mm	25mm	32mm	40mm	60mm						
	8-2-6					1.00"	1.04"	1.12"	2.00"										
	1212○-2...	-	-	-	-	25mm	26mm	28mm	50mm	∞	∞	∞	∞						
	1616○-2...	32mm	40mm	50mm	60mm	80mm	100mm	∞	∞										
	1010○-2.5...	-	-	-	-	-	-	-	20mm	25mm	32mm	40mm	60mm					∞	
	1212○-2.5...	-	-	-	-	25mm	26mm	28mm	32mm	36mm	40mm	60mm	100mm						
	1616○-2.5...	32mm	40mm	50mm	60mm	80mm	100mm	∞	∞	∞	∞	∞	∞						
1616○-3...	32mm	40mm	50mm	60mm	80mm	100mm													
Available Grooving Depth CDX (in)		0.64"	0.60"	0.56"	0.52"	0.50"	0.48"	0.44"	0.40"	0.36"	0.32"	0.28"	0.24"	0.20"	0.16"	0.12"	0.08"	0.04"	
Available Grooving Depth CDX (mm)		16mm	15mm	14mm	13mm	12.5mm	12mm	11mm	10mm	9mm	8mm	7mm	6mm	5mm	4mm	3mm	2mm	1mm	

◆ KGM-T Available Cutting Diameter Table (GMN, GM[®]/ When Using 1-edge Insert)

Toolholders		DCX Cutting Diameter											
KGM [®] /		-	-	-	-	-	-	-	66mm	80mm	130mm	260mm	
2012K-2T17		-	-	-	-	-	-	-	2.64"	3.20"	5.20"	10.40"	
12-2T		-	-	-	-	-	-	-	66mm	80mm	130mm	260mm	
2020K-2T17		-	-	-	-	-	-	-	2.64"	3.20"	5.20"	10.40"	
16-2T		-	-	-	-	-	-	-	66mm	80mm	130mm	260mm	
2525M-2T1710		-	-	-	-	-	-	-	66mm	80mm	130mm	260mm	
1616H-3T20		-	-	-	-	-	40mm	54mm	70mm	100mm	180mm		
2012K-3T20		-	-	-	-	-	40mm	90mm	130mm	240mm			
12-3T		-	-	-	-	-	1.60"	3.60"	5.20"	9.60"			
2020K-3T20		-	-	-	-	-	40mm	90mm	130mm	240mm			
16-3T		-	-	-	-	-	1.60"	3.60"	5.20"	9.60"			
2525M-3T20		-	-	-	-	-	40mm	90mm	130mm	240mm			
12-4T		-	-	-	-	-	1.60"	3.60"	5.20"	9.60"			
2020K-4T20		-	-	-	-	-	40mm	90mm	130mm	240mm			
2525M-4T20		-	-	-	-	-	40mm	90mm	130mm	240mm			
16-4T		-	-	2.00"	5.60"	9.60"							
2525M-4T25		-	-	50mm	140mm	240mm							
16-5T		-	-	2.00"	5.60"	9.60"							
2525M-5T25		-	-	50mm	140mm	240mm							
3232P-5T25		-	-	50mm	280mm	600mm							
2525M-6T30		100mm	300mm	∞	∞	∞							
Available Grooving Depth CDX (in)		1.20"	1.08"	1.00"	0.92"	0.88"	0.80"	0.76"	0.72"	0.68"	0.64"	0.60"	0.56"
Available Grooving Depth CDX (mm)		30mm	27mm	25mm	23mm	22mm	20mm	19mm	18mm	17mm	16mm	15mm	14mm
													<0.52"
													<13mm

INSERT GRADES	A
TURNING INSERTS	B
GEN/PCD INSERTS	C
TURNING HOLDERS	D
SMALL TOOLS	E
BORING	F
GROOVING	G
CUT-OFF	H
THREADING	J
DRILLING	K
MILLING	M
QUICK CHANGE TOOLING	N
SPARE PARTS	P
TECHNICAL	R
INDEX	T

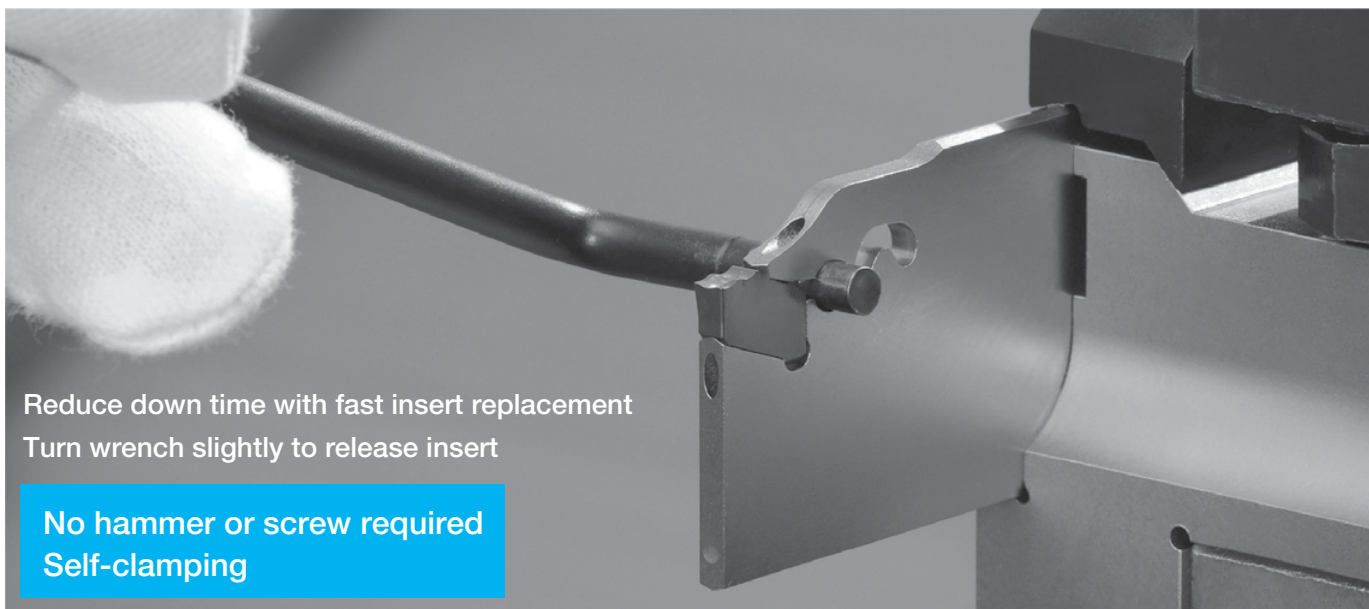
KPK Series

High-Performance Cut-Off Solutions

Easy Insert Replacement Reduces Downtime

High-Performance, Long Tool Life and Stable Machining with Strong Clamping Mechanism

1 Easy Insert Replacement

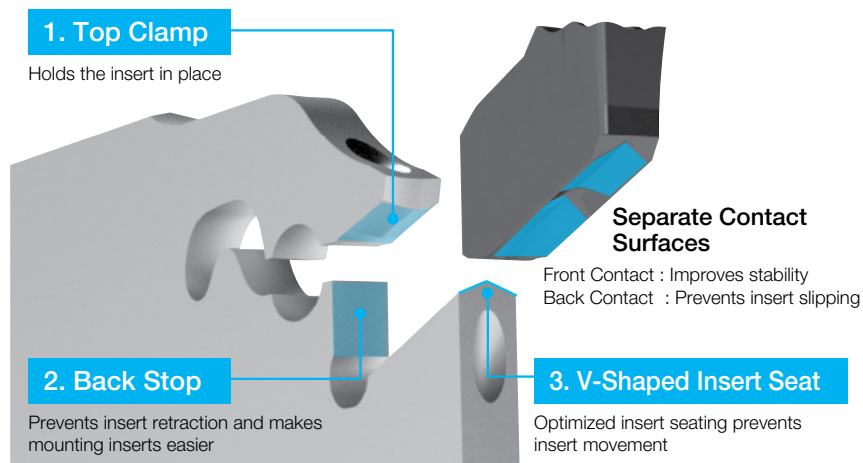


Reduce down time with fast insert replacement
Turn wrench slightly to release insert

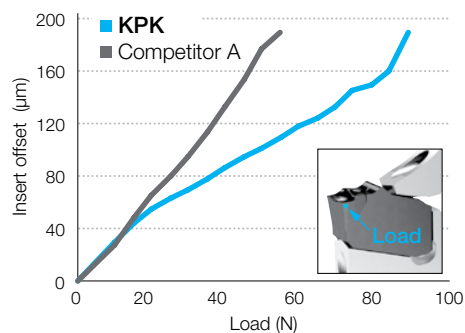
No hammer or screw required
Self-clamping

2 Firm Insert Clamp Ensures Added Safety and Security

The firmly secured insert uses three contact surfaces to eliminate sliding or chattering



Insert Deviation Comparison (Internal Evaluation)



Measured tool : KPKB32-3 PKM30N-025PM

3 Unique Chipbreaker Designs for Long Tool Life and Stable Machining

Advanced chipbreaker technology inherited from KGD lineup provides excellent chip control



PM Chipbreaker General Purpose

Insert Grades

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

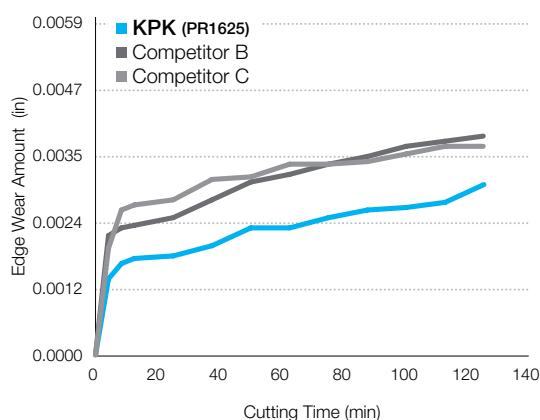


PH Chipbreaker Tough Edge High-Feed

Insert Grades

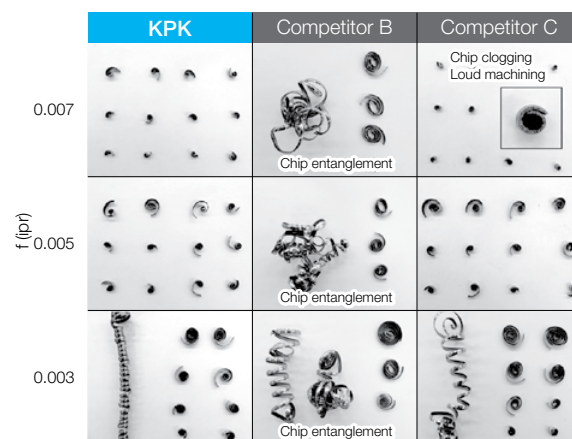
Steel : PR1625
Stainless Steel : PR1535

Wear Resistance Comparison (Internal Evaluation)



Cutting Conditions : $n = 955$ RPM (constant), $V_c \sim 490$ sfm
 $f = 0.005$ ipr ($\sim \phi 0.394''$: $f = 0.002$ ipr) Wet (External Coolant)
Workpiece : 4131 ($\phi 1.969''$) Cutting Width : 0.118" (3mm), PM Chipbreaker

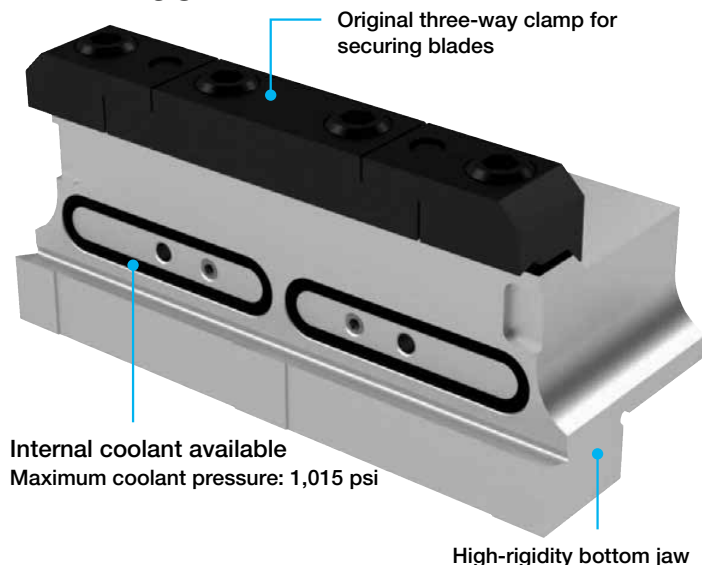
Chip Control Comparison (Internal Evaluation)



Cutting Conditions : $n =$ RPM (constant), $V_c \sim 390$ sfm, Wet (External Coolant)
Workpiece : 4131 ($\phi 1.969''$) Cutting Width : 0.118" (3mm), PM Chipbreaker

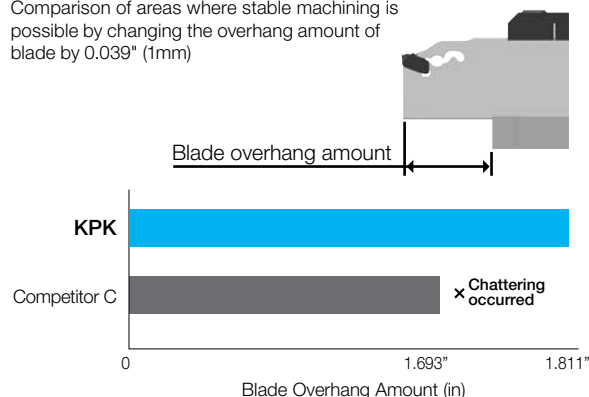
4 Rigid Tool Holder Block Prevents Chattering and Provides Internal Coolant

KPKTB-JCT



Chatter Resistance Comparison (Internal evaluation)

Comparison of areas where stable machining is possible by changing the overhang amount of blade by 0.039" (1mm)



Cutting Conditions : $n = 650$ RPM (Constant), $V_c \sim 330$ sfm, $f = 0.005$ ipr
Wet (Internal Coolant : Normal Pressure), Workpiece : 4137 ($\phi 1.969''$)
Cutting Width : 0.118" (3mm), PM Chipbreaker

KTKTB block is compatible with internal coolant with an optional internal connector. (~ 145 psi)

See Coolant Supply Method (Type C) H53

■ PKM Inserts

PKM Inserts

Classification of Usage

● : Light Interruption / 1st Choice

○ : Light Interruption / 2nd Choice

● : Continuous / 1st Choice

○ : Continuous / 2nd Choice

P

Carbon Steel / Alloy Steel

M

Stainless Steel

K

Cast Iron

N

Non-ferrous Metals

Insert		Part Number	Dimensions (in)			Angle (°)	MEGACOAT NANO		Carbide	Ref. Page for Toolholder
			CW		RE	PSIR %	PR1625	PR1535	GW15	
			inch	mm						
Neutral	<div><div></div><div>General Purpose</div></div> <div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><</div>									

◆ Recommended Cutting Conditions

PM Chipbreaker

Workpiece	Cutting Speed Vc (sfm)			Feed f (ipr)			Notes
	MEGACOAT NANO		Carbide	Edge Width CW (mm)			
	PR1625	PR1535	GW15	1.6	2 ~ 4	4.8 ~ 6	
Carbon Steel	260 [★] - 720	260 [☆] - 720	-	0.001 - 0.005	0.003 - 0.007	0.004 - 0.009	Wet
Alloy Steel	230 [★] - 660	230 [☆] - 660	-				
Stainless Steel	200 [☆] - 490	200 [★] - 490	-	0.001 - 0.003	0.002 - 0.005	0.003 - 0.006	
Cast Iron	-	-	160 [★] - 330	0.001 - 0.003	0.003 - 0.007	0.004 - 0.009	
Aluminum Alloy	-	-	660 [★] - 1480	0.001 - 0.003	0.003 - 0.007	0.004 - 0.009	
Brass	-	-	330 [★] - 660				

Reduce feed to $1/2 \sim 1/3$ at the center of the workpiece.

PH Chipbreaker

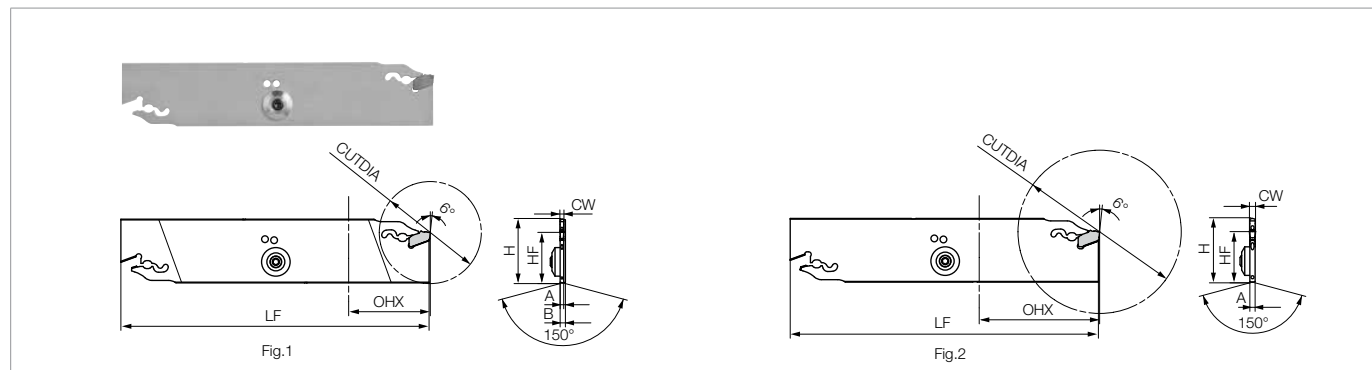
Workpiece	Cutting Speed Vc (sfm)			Feed f (ipr)			Notes
	MEGACOAT NANO		Carbide	Edge Width CW (mm)			
	PR1625	PR1535	GW15	2	3 ~ 4	5 ~ 6	
Carbon Steel	260 [★] - 720	260 [☆] - 720	-	0.004 - 0.009	0.006 - 0.011	0.006 - 0.014	Wet
Alloy Steel	230 [★] - 660	230 [☆] - 660	-				
Stainless Steel	200 [☆] - 490	200 [★] - 490	-	0.002 - 0.005	0.003 - 0.006	0.003 - 0.007	
Cast Iron	-	-	-	-	-	-	
Aluminum Alloy	-	-	-	-	-	-	
Brass	-	-	-				

Reduce feed to $1/2 \sim 1/3$ at the center of the workpiece.



























★ : 1st Recommendation ☆ : 2nd Recommendation

KPKB-JCT (Jet Coolant-Through)

Coolant Piping Parts **H54** Pressure Resistance: ~1,015 psi



Blade Dimensions (Metric Sizes)

Part Number	Stock	Cut-Off Dia.	Dimensions (mm)					Insert Width	Drawing	Spare Parts				Applicable Inserts  H49	Applicable Blocks  H51					
			CUTDIA	H*	HF	B	LF			A	CW	Insert Wrench	Coolant Plug			Screw	Wrench			
																				
 KPKB 26-1JCT		35	26	21.4	2.6	110	1.4	1.6	Fig.1					PKM16...	KPKTB00-26JCT KTKTB00-26					
26-2JCT		50						1.8 2.0 2.4						PKM20... PKM24...						
26-3JCT		75			-		2.6 3.4	3.0 4.0	Fig.2					4.2 4.8 5.0		PKM48... PKM50...				
26-4JCT		80																		
 26-5JCT																				
 KPKB 32-1JCT		35	32	25.0	2.6	150	1.4	1.6	Fig.1					<div>Coolant Plug Screw Tightening Torque 3.0 Nm</div>			FT-15	PKM16...	KPKTB00-32JCT KTKTB00-32 KTKTBF00-32	
32-2JCT		50						1.8 2.0 2.4										PKM20... PKM24...		
32-3JCT		100			-		2.6 3.4	3.0 4.0	Fig.2									4.2 4.8 5.0		PKM48... PKM50...
32-4JCT		100																		
 32-5JCT																				
 32-6JCT																		5.4 6.0		

See Page **H55** for insert mounting and removal instructions.

When using internal coolant with KTKTB, KTKTBF type tool holder blocks, coolant supply piping (CCN -5) sold separately.

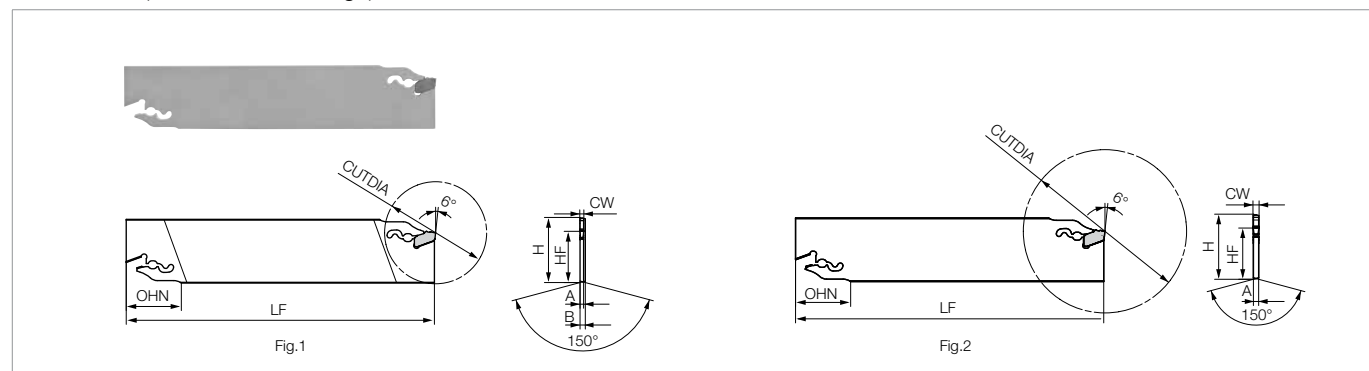
*H: Length between virtual apex

Minimum / Maximum Overhang Length While Using Internal Coolant
























Part Number		Overhang Length	
Blade	Tool Holder Block	Min.	Max.
KPKB26-1JCT	KPKTB20-26JCT	15	34.5
KPKB26-2/3/4JCT		20	40
KPKB26-5JCT		23	43
KPKB32-1JCT	KPKTB20-32JCT	18	49
	KPKTB25-32JCT	13	
	KPKTB32-32JCT		
KPKB32-2/3/4JCT	KPKTB20-32JCT	27.5	59
	KPKTB25-32JCT	22.5	
	KPKTB32-32JCT		
KPKB32-5/6JCT	KPKTB20-32JCT	31.5	63
	KPKTB25-32JCT	26.5	
	KPKTB32-32JCT		

KPK CUT-OFF SYSTEM

KPKB (Not Coolant-Through)



Blade Dimensions (Metric Sizes)

Part Number	Stock	Cut-Off Dia.	Dimensions (mm)					Insert Width	Drawing	Spare Parts		Applicable Inserts  H49	Applicable Blocks  H51
			CUTDIA	H*	HF	B	LF			A	CW		
													
 KPKB 19-1		32	19	15.7	2.6	86	1.4	1.6	Fig.1	LPW-5	PKM16...	KTKTB○○-19	
 19-2		40			-		1.8	2.0 2.4	Fig.2		PKM20... PKM24...		
 KPKB 26-1		35	26	21.4	2.6	110	1.4	1.6	Fig.1		PKM16...	KPKTB○○-26JCT KTKTB○○-26	
26-2		50			-		1.8	2.0 2.4	Fig.2		PKM20... PKM24...		
26-3		75					2.6	3.0			PKM30...		
26-4		80					3.4	4.0			PKM40...		
 26-5		80					4.2	4.8 5.0			PKM48... PKM50...		
 KPKB 32-1		35	32	25.0	2.6	150	1.4	1.6	Fig.1		PKM16...	KPKTB○○-32JCT KTKTB○○-32 KTKTBF○○-32	
32-2		50					-		1.8		2.0 2.4		Fig.2
32-3		100			2.6	3.0			PKM30...				
32-4		100			3.4	4.0			PKM40...				
 32-5		120			4.2	4.8 5.0			PKM48... PKM50...				
 32-6		120			5.4	6.0			PKM60...				

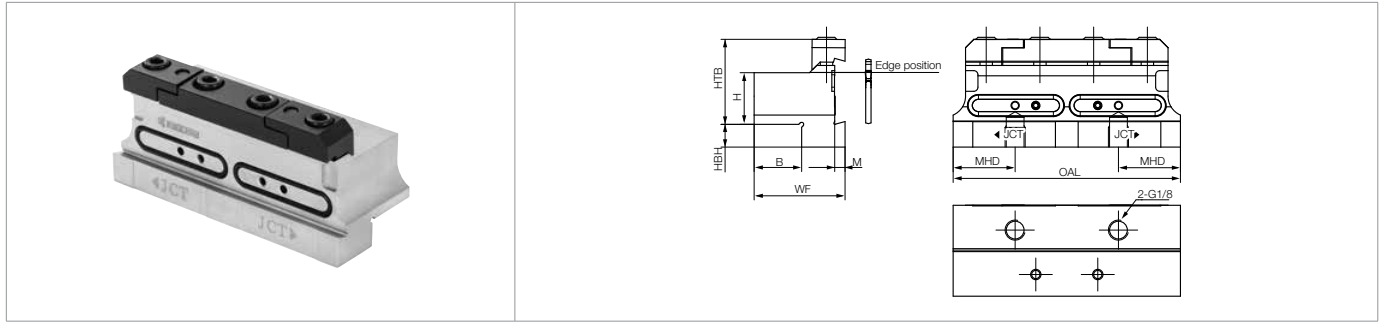
See Page H55 for insert mounting and removal instructions.

*H: Length between virtual apex

TOOL BLOCKS (BLADE HOLDER)

KPKTB-JCT (Jet Coolant-Through)

Coolant Piping Parts **H54** Pressure Resistance: ~1,015 psi



Toolblock Dimensions (Metric Sizes)

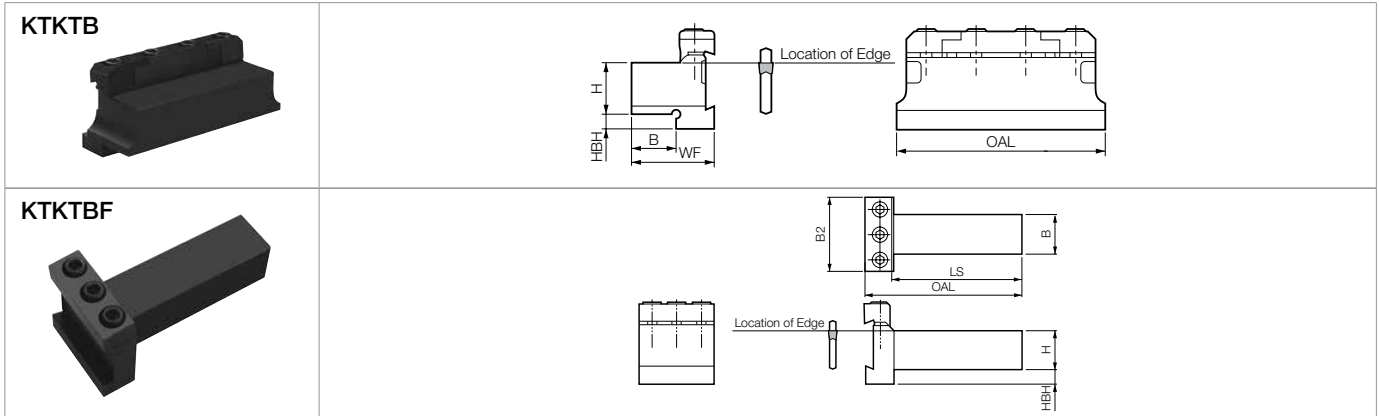
Part Number	Stock	Dimensions (mm)								Spare Parts						Applicable Blades H49~H50, H57 G143
		H	HTB	HBH	B	WF	M	MHD	OAL	Clamp Set Switchblade type	Screw	Wrench	O-ring	Plug 1	Plug 2	
KPKTB 20-26JCT	●	20	33	12.4	19	39	4	23.5	86	BCS-2	HH6x16	LW-5	GR-020	HS3x4	HSG1/8X8.0	KPKB26-○JCT KTKB26-○
20-32JCT	●	20		16		40		25	100	BCS-3			GR-026			KPKB32-○JCT KTKB32-○
25-32JCT	●	25	41	11	23	44	5	30	110	BCS-4				HS4x4		KFTB%.....4S KFTB%.....5S
32-32JCT	●	32		5	29	50							GR-029			

Includes only one HSG1/8X8.0 plug.

KPKTB-JCT type block is also compatible with conventional KTKB type blades.

When using internal coolant, the coolant may appear to leak slightly, but this should not affect machining performance. (If the O-ring is damaged, order a new one separately.)

KTKTB / KTKTBF (Separate Toolblock Holder / Perpendicular Type)



Toolblock Dimensions

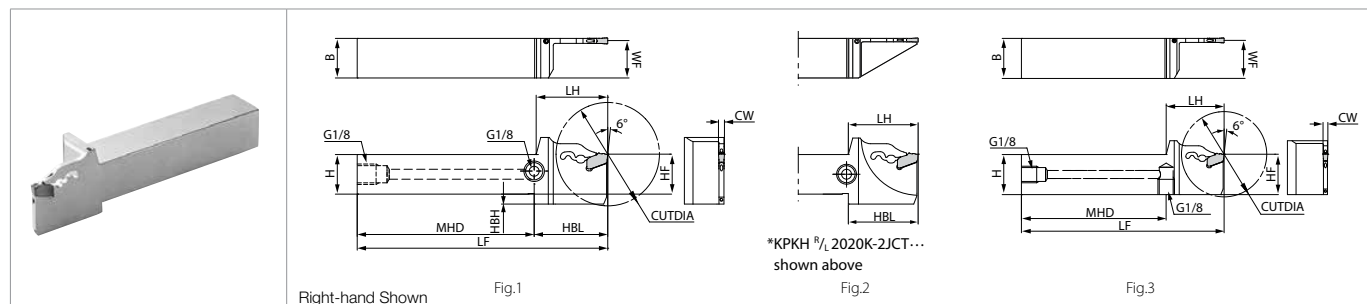
Part Number	Stock	Unit	Dimensions							Spare Parts				Applicable Blade	
			H	HBH	B	B2	OAL	LS		Clamp Set Separate Type	Integral Type	Screw	Wrench	Cut-Off H49~H50 H57	Face Grooving G143
KTKTB 19-19	●	Inch	0.75	0.19	0.720	1.31	2.99	-	-	-	BCS-1	HH5X25	LW-4	KTKB19-OS KTKB19-1SS	-
19-26	●		0.75	0.39	0.720	1.39	3.39	-	BCS-2	-	HH6X30	LW-5	* KPKB26-○ (JCT) KTKB26-OS KTKB26-1SS	-	
25.4-32	●		1.00	0.30	0.905	1.65	4.33	-	BCS-4	-	HH6X30	LW-5	* KPKB32-○ (JCT) KTKB32-OS KTKB32-1SS KTKB%32-OS	KFTB%.....4S KFTB%.....5S	
KTKTB 16-19	●	mm	16	4	15.5	29.5	76	-	-	BCS-1	HH5X25	LW-4	KTKB19-OS KTKB19-1SS	-	-
20-19	●		20	4	19	34	76	-							
16-26	●		16	13	15.5	31.5	86	-	BCS-2	-	HH6X30	LW-5	* KPKB26-○ (JCT) KTKB26-OS KTKB26-1SS	-	-
20-26	●		20	9	19	36	86	-							
20-32	●		20	13	19	38	100	-	BCS-3	-	HH6X30	LW-5	* KPKB32-○ (JCT) KTKB32-OS KTKB32-1SS KTKB%32-OS	KFTB%.....4S KFTB%.....5S	-
25-32	●		25	8	23	42	110	-							
32-32	●		32	5	29	48	110	-	BCS-4	-					
KTKTBF 25-32	●	mm	25	9.5	25	48	102	84.5	-	BCS-5	HH6X30	LW-5	* KPKB32-○ (JCT) KTKB32-OS KTKB32-1SS KTKB%32-OS	KFTB%.....4S KFTB%.....5S	-
32-32	●		32	2.5	32	48	117	99.5							

* KPKB-JCT Blades can be used with internal coolant by utilizing compatible coolant piping (CCN-5). See Page **H54**

KPK CUT-OFF SYSTEM (SHANK STYLE)

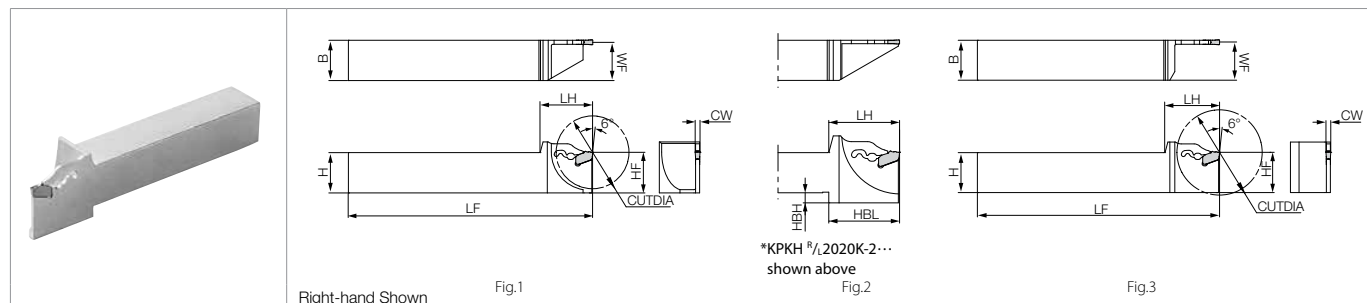
KPKH-JCT (Coolant-Through) **NEW**

Pressure Resistance: ~2,175 psi




























● Toolholder Dimensions (Metric Sizes)

Part Number	Stock		Cut-Off Dia.	Dimensions (mm)										Insert Width	Drawing	Spare Parts		Applicable Inserts ● H49
																Insert Wrench	Plug	
	R	L	CUTDIA	H	HF	HBH	B	LF	LH	WF	HBL	MHD	CW					
KPKH R/L 2020K-2JCT	●	●	38	20	20	5	20	125	35.1	19.15	35.1	89	2.0 2.4	Fig.2	LPW-5	HSG1/8X8.0		PKM20... PKM24...
2020K-3JCT	●	●	52						36	18.75	37	88	3.0	Fig.1				PKM30...
2525K-3JCT	●	●	53	25	25	-	25		42.5	23.75	-	89	4.0	Fig.3				PKM40...
2020K-4JCT	●	●	62	20	20	5	20			18.35	42	83		Fig.1				
2525K-4JCT	●	●	68	25	25	-	25			23.35	-	82		Fig.3				

See Page ● **H55** for insert mounting and removal instructions.See Page ● **H54** for coolant piping partsKPKH (Not Coolant-Through) **NEW**

● Toolholder Dimensions (Metric Sizes)

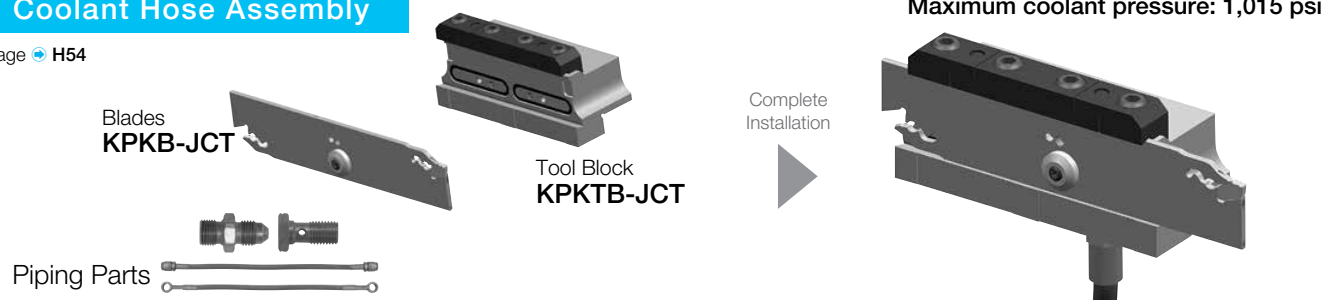
Part Number	Stock		Cut-Off Dia.	Dimensions (mm)								Insert Width	Drawing	Spare Parts		Applicable Inserts 
				Insert Wrench												
	R	L	CUTDIA	H	HF	HBH	B	LF	LH	WF	HBL	CW				
KPKH% 2020K-2			38	20	20	5	20	125	33.1	19.15	33.1	2.0 2.4	Fig.2	LPW-5		PKM20... PKM24...
			52			-			34	18.75	-	3.0	PKM30...			
			53	25	25	-	25	150	34	23.75	-	3.0	PKM40...			
			62	20	20	-	20	125	40.5	18.35	-	4.0	PKM48... PKM50...			
			68	25	25	-	25	150	40.5	23.35	-	4.0	PKM30...			
			79	25	25	-	25	150	45.9	22.95	-	4.8 5.0	PKM40...			
KPKH% 2020K-3D35			35	20	20	-	20	125	32.5	18.75	-	3.0	Fig.1			PKM30...
			45	25	25	-	25	150		23.75						PKM40...
			45	20	20	-	20	125	35	18.35	-	4.0				PKM40...
			45	25	25	-	25	150		23.35						

See Page ● **H55** for insert mounting and removal instructions.

Internal Coolant Connection Methods (Method will be determined by machine specifications and requirements)

A : Coolant Hose Assembly

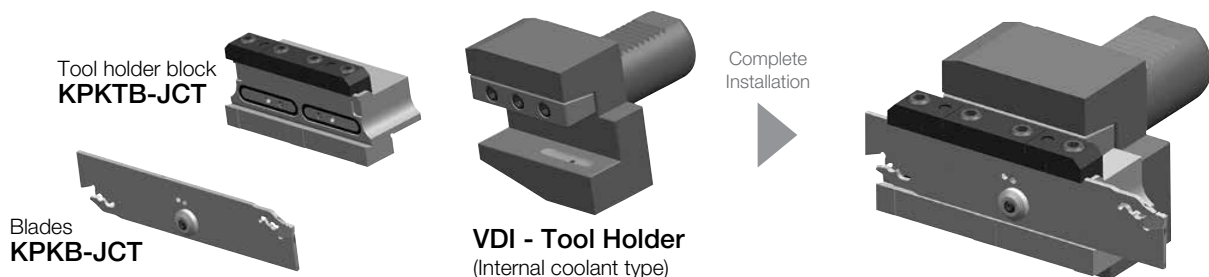
See Page [H54](#)



B : VDI Holder Assembly

(Internal coolant type)

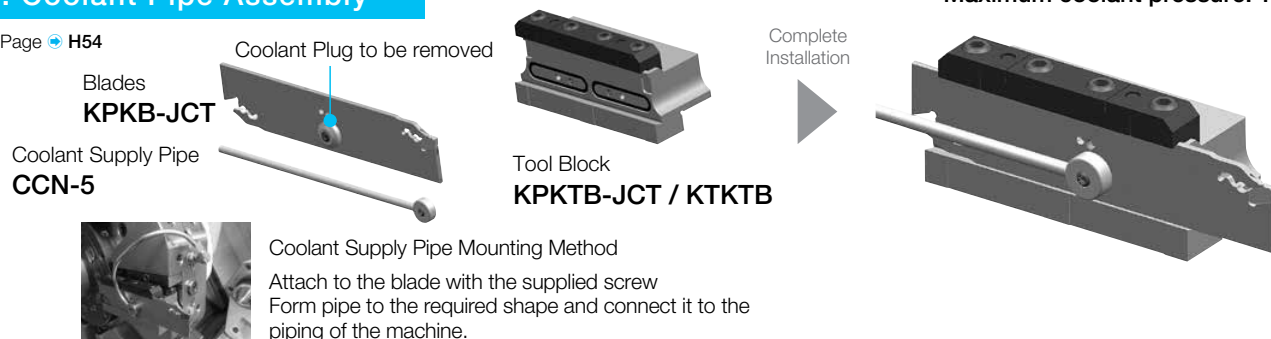
Maximum coolant pressure: 1,015 psi



C: Coolant Pipe Assembly

See Page [H54](#)

Maximum coolant pressure: 145 psi



Precautions

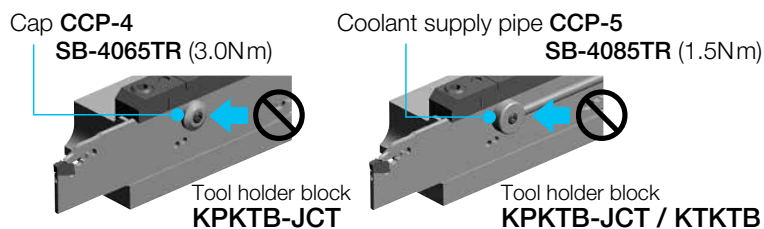
When mounting KPKB-JCT blade

When using internal coolant, keep the arrow (▼) on the blade within the range marked on the tool holder block.



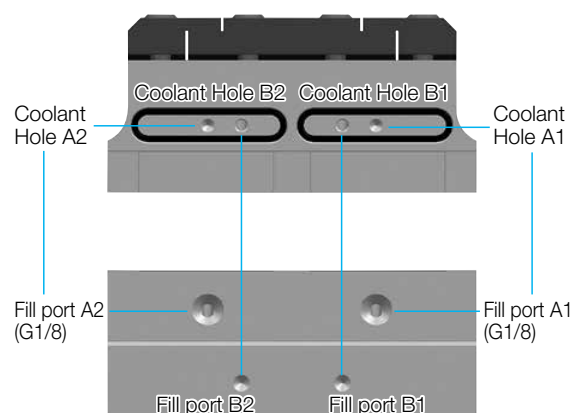
When the cap and coolant supply pipe are mounted

Coolant cannot be supplied correctly if it is mounted in the wrong position.



When using a tool block

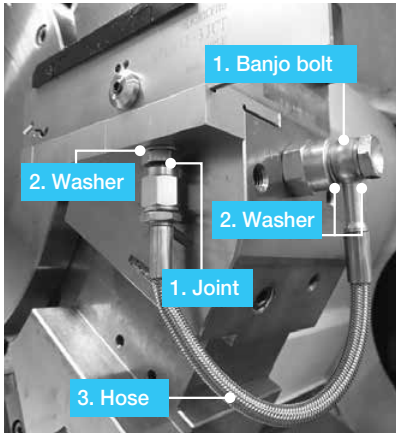
When using the discharge port B1 (B2), use a sealant for the filler cap (HSG 1/8 X 8.0) of the accessory part of the coolant supply port A1 (A2).



INSERT GRADES	A
TURNING INSERTS	B
GEN/PCD INSERTS	C
TURNING HOLDERS	D
SMALL TOOLS	E
BORING	F
GROOVING	G
CUT-OFF	H
THREADING	J
DRILLING	K
MILLING	M
QUICK CHANGE TOOLING	N
SPARE PARTS	P
TECHNICAL	R
INDEX	T

A : Coolant Hose Assembly

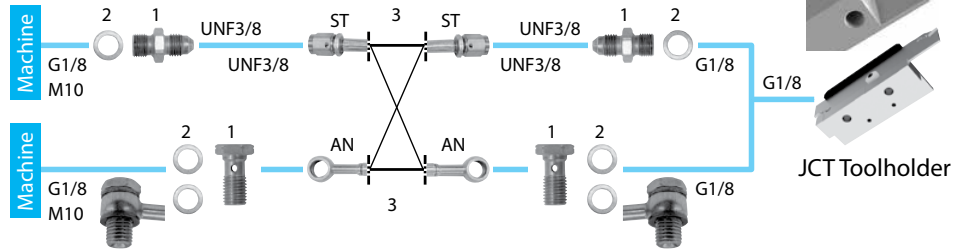
Connection Method and Piping Parts



Easy to use with high-pressure hose and joint

Can be used for internal coolant at normal pressure without a high pressure pump unit
Banjo bolts (for angled hoses) are also available.



<Piping Installation Guide>



Depending on machine specifications and piping methods, **1.Joint/Banjo bolt x2 2.Washer x2-4 3.Hose x1**


1. Joint / Banjo Bolt (Sold Separately)

Pressure Resistance: ~ 4,350 psi

Shape	Part Number	Stock	Thread Standard Toolholder Machine Connection Side
 Banjo Bolt (for Angled Hoses)	J-G1/8-UNF3/8	●	G1/8
	J-M10X1.5-UNF3/8	●	M10X1.5
	BB-G1/8	●	G1/8
	BB-M10X1.5	●	M10X1.5

2. Washer (Sold Separately)




Pressure Resistance: ~ 4,350 psi

Shape	Part Number	Stock
	WS-10	●

*If you are using a banjo bolt, two washers are needed.

3. Hose (Sold Separately)

Pressure Resistance: ~ 4,350 psi

Shape	Part Number	Stock	Thread Standard	Dimensions (mm) L
	HS-ST-ST-200	●	UNF3/8	200
	HS-ST-ST-250	●	UNF3/8	250
	HS-ST-AN-200	●	UNF3/8	200
	HS-ST-AN-250	●	(Banjo Bolt)	250
	HS-AN-AN-200	●	—	200
	HS-AN-AN-250	●	(Banjo Bolt)	250

Precautions


1. Make sure machine door is completely closed before use of these parts.
2. Use appropriate seal for the male thread of the piping parts and make sure the connection is secure. Use plugs to seal off unused coolant holes.
3. Connect and fasten the coolant hose firmly.
4. The use of copper washers may cause leakage but will have no effect on the performance.
5. Commercial piping parts can be used if the thread standards are same. Check the pressure resistance before use.
6. Regularly changing the coolant filter is recommended.

C: Coolant Pipe Assembly

Piping Parts

Coolant Supply Pipe (Sold Separately)

Pressure Resistance: 145 psi

Shape	Part Number	Stock	Dimensions (mm) A B C D	Spare Parts (Screw)
	CCN-5	●	190 16 5 6	SB-4085TR

Use wrench (FT -15) supplied with the blade when connecting.

(Customer Service) 800.823.7284 - Option 1
(Technical Support) 800.823.7284 - Option 2
Visit us online at KyoceraPrecisionTools.com

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

How to Mount and Remove Inserts from Blade

1. Insert provided wrench and turn upwards as shown in (Fig. 1)
2. Slide insert into the blade's insert pocket from the front and push in until the back of the insert contacts the blade's back stop surface. (Fig. 2)

Completely eliminate chips from the insert pocket and the wrench insertion area by using compressed air.
Check to make sure the insert is straight and not tilted.

When removing the insert, follow the same procedure as shown in Fig. 2

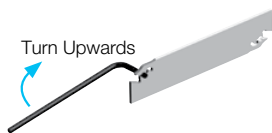


Fig. 1 Wrench Usage

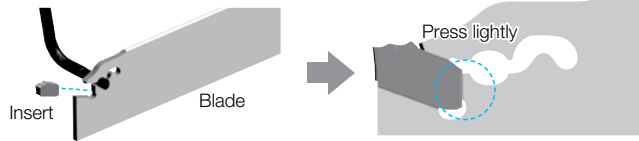
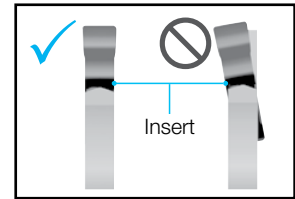
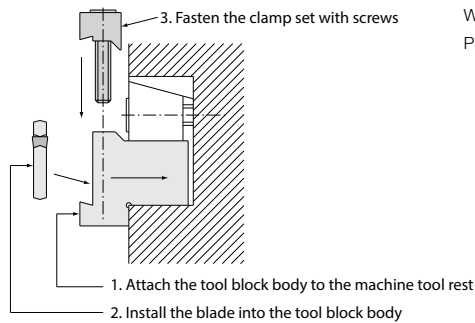


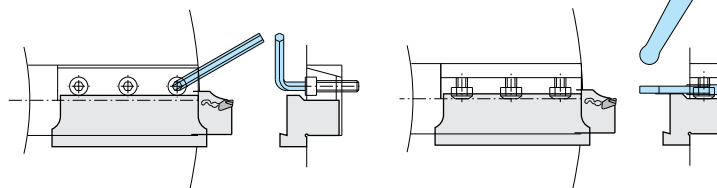
Fig. 2 Mounting Method



Tool Block and Blade Installation Guide

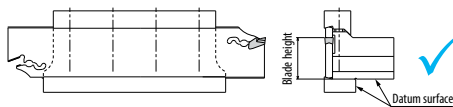


When mounting the tool holder block, use a wrench or spanner as shown below for a small lathe.
Please note that the space for fastening may be small.

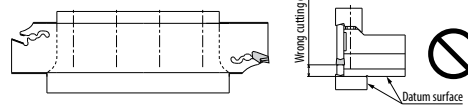


How to Install the Tool Block and Blade

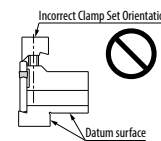
Correct blade installation



Incorrect blade installation



Incorrect Clamp Set Orientation



If the clamp set is mounted in the reverse direction, a large gap is created between the tool holder block main body and the clamp set as shown in the left figure. If you continue to use the product, the blade may break off. Reinstall in the correct orientation.

Lead Angle Direction and Usage

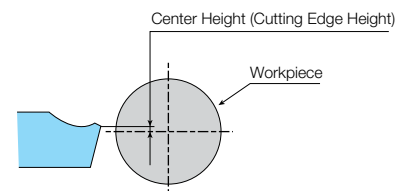
1. If there is no restriction on the finished shape, use an insert without lead angle.
2. Insert with lead angle is recommended to prevent remaining boss.
3. If you want to make the remaining boss smaller when machining small or thin parts, use insert with lead angle.

	N (Neutral)	R (Right-hand)	L (Left-hand)
Handed insert with lead angle			
	<ul style="list-style-type: none"> • Inserts with lead angle (PSIR^{R/L}) reduce burrs in cut-off machining. • The larger the lead angle (PSIR^{R/L}), the smaller the cutting force. The feed also needs to be lower. 		

	Right-hand (R) Lead Neutral	Neutral	Right-hand (R) Lead Neutral	Neutral
Solid Workpiece				
Hollow Workpiece (Pipe)				

Machining Precautions

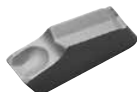
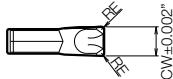
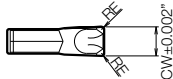

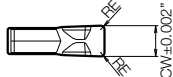
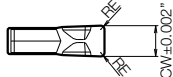

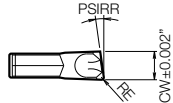
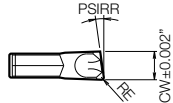

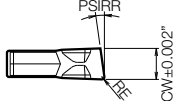
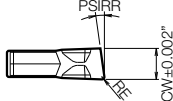
1. Set cutting edge height 0.004" (0.1mm) above core height.
 2. Machining with ample supply of coolant is recommended
 3. Machine at constant speeds to gain stable tool life
 4. Make the cut-off as close as possible to the chuck
 5. To prevent impacts, reduce feed rate by 1/2 ~ 1/3 when nearing the center of the workpiece
- Excessive use of the insert may cause chipping or damage to the holder



TKN / TK^{RL}



Classification of Usage	
●	Light Interruption / 1st Choice
○	Light Interruption / 2nd Choice
●	Continuous / 1st Choice
○	Continuous / 2nd Choice

P	Carbon Steel / Alloy Steel
M	Stainless Steel
K	Cast Iron
N	Non-ferrous Metals




Insert Right-handed Insert Shown			Part Number	Dimensions (in)		Angle (°)	Cermet		CVD Coated Carbide	MEGACOAT NANO	PVD Coated Carbide		Carbide	Ref. Page for Tool				
				CW		RE	PSIR ^{RL}	TN620	TN90	CR9025	PR1535	PR660	PR930		KW10			
				inch	mm													
<div>Neutral</div>  		TKN 1.6	0.063	1.6	0.006	-		●	●	●		●	●	→ H57				
		2	0.087	2.2	0.008		●	●	●	●		●	●	→ H57 → H58				
		2.4	0.094	2.4	0.008		●	●	●	●		●	●					
		3	0.122	3.1	0.010		●	●	●	●		●	●					
		4	0.161	4.1	0.012		●	●	●	●		●	●					
		4.8	0.189	4.8	0.012				●	●								
		5	0.201	5.1	0.012				●	●		●	●					
		6	0.252	6.4	0.014				●	●			●					
		8	0.315	8.0	0.016				●	●								
9	0.378	9.6	0.018			●	●				→ H57							
<div>Low Feed</div>  		TKN 1.6-P	0.063	1.6	0.008	-			●	●			●	→ H57 → H58				
		2-P	0.087	2.2	0.008		●	●	●	●		●	●					
		3-P	0.122	3.1	0.010		●	●	●	●		●	●					
							R	L	R	L	R	L	R	L				
<div>With Lead Angle</div>  		TK ^{RL} 1.6	0.063	1.6	0.006	8°				●		●	●		→ H57			
		2	0.087	2.2	0.008		●		●		●	●	●		●	●	→ H57 → H58	
		2.4	0.094	2.4	0.008			●		●	●	●		●	●			
		3	0.122	3.1	0.010		●		●		●	●	●		●	●		
		4	0.161	4.1	0.012		●	●		●	●	●		●	●			
	5	0.201	5.1	0.012			●		●	●			●					
	<div>Low Feed</div>  		TK ^{RL} 1.6-P	0.063	1.6	0.008	8°				●		●	●		→ H57 → H58		
			2-P	0.087	2.2	0.008					●		●	●			●	●
			3-P	0.122	3.1	0.010		●	●		●		●	●			●	●

Recommended Cutting Conditions ● H61

Cut-Off Tools

Name	Chipbreaker	Advantages
General Cut-Off	Standard (No Indication) 	General cut-off type for feed rates over 0.004ipr Superior chip evacuation
Low Feed Cut-Off	P 	Chipbreaker specially designed for low feed machining on automatic lathes, etc. Chips are controlled at feed rates between 0.0012~0.0032ipr

Insert's Edge Shape (CERACUT Cut-Off)

Edge Preparation	Chamfered + Honed	Sharp Edge	Honed Cutting Edge
			
Standard Chipbreaker	TN90 CR9025 / PR660	PR1535 PR930 / KW10	-
P-Chipbreaker	-	-	TN620 / TN90 / CR9025 / PR1535 PR660 / PR930 / KW10

• Sharp edge can reduce cutting resistance by 40%, compared with chamfered edge.

TKN / TK^{RL} Setup

- Tap the insert lightly with a plastic hammer to push it tight enough that it cannot be removed by hand. (Fig.1)
- Remove the insert with the supplied wrench. (Fig.2)

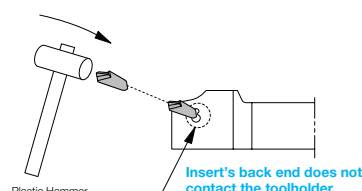


Fig. 1 How to Attach Inserts

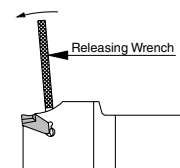
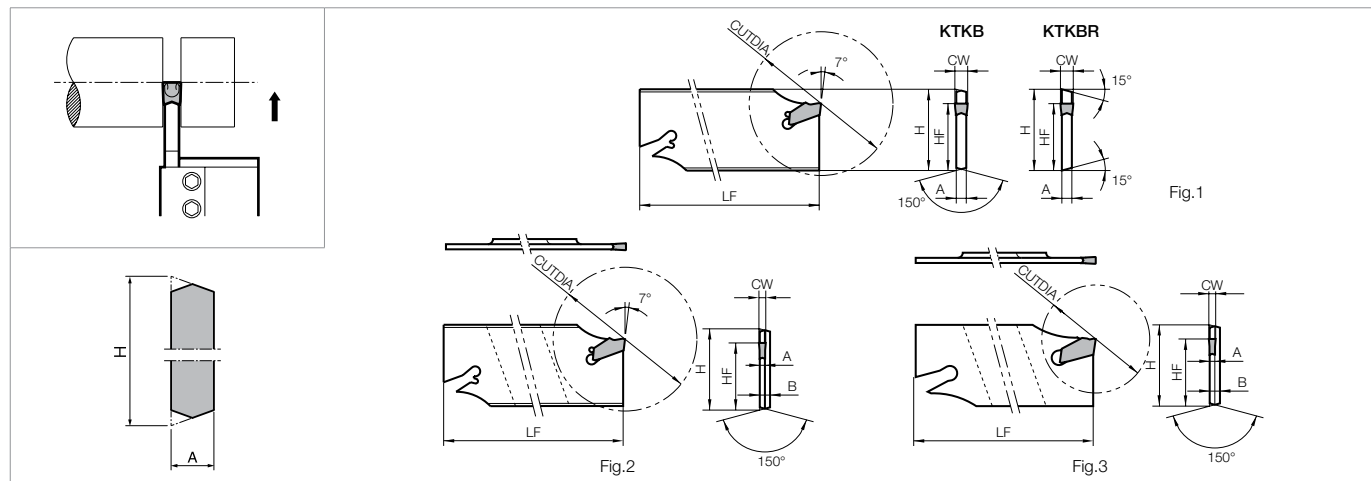






Fig. 2 How to Detach Inserts

Inserts are sold in 10 piece boxes

■ KTKB-SS / KTKB-S



● Blade Dimensions

Part Number		Stock	Cut-Off Dia.	Dimensions (mm)					Insert Width	Drawing	Applicable Inserts  H56				Applicable Blocks  H51	
				CUTDIA	*H	HF	B	LF			A	CW		 Low Feed		
KTKB	19-1SS	●	32	19	15.7	2.4	86	1.2	1.6	Fig. 3	TKN1.6	TKN1.6-P	TK%1.6	TK%1.6-P	KTKTB	16-19 20-19
KTKB	26-1SS	●	35	26	21.4	2.4	110	1.2	1.6	Fig. 3	TKN1.6	TKN1.6-P	TK%1.6	TK%1.6-P	KTKTB KPKTB	16-26 20-26 20-26JCT
KTKB	32-1SS	●	35	32	25	2.4	150	1.2	1.6	Fig. 3	TKN1.6	TKN1.6-P	TK%1.6	TK%1.6-P	KTKTB KTKTBF KPKTB	20-32 25-32 32-32 25-32 32-32 20-32JCT 25-32JCT 32-32JCT
KTKB	19-2S	●	40	19	15.7	-	86	1.8	2.2 2.4	Fig. 1	TKN2 TKN2.4	TKN2-P	TK%2 TK%2.4	TK%2-P	KTKTB	16-19 20-19
KTKB	26-2S	●	50	26	21.4	-	110	1.8	2.2 2.4		TKN2 TKN2.4	TKN2-P	TK%2 TK%2.4	TK%2-P	KTKTB KPKTB	16-26 20-26 20-26JCT
	26-3S	●	75					2.6	3.1		TKN3	TKN3-P	TK%3	TK%3-P		
	26-4S	●	80					3.4	4.1		TKN4	-	TK%4	-		
	26-5S	●	80					4.2	4.8 5.1		TKN4.8 TKN5	-	TK%5	-		
KTKB	32-2S	●	50	32	25	2.6	150	1.8	2.2 2.4	Fig. 2	TKN2 TKN2.4	TKN2-P	TK%2 TK%2.4	TK%2-P	KTKTB KTKTBF KPKTB	20-32 25-32 32-32 25-32 32-32 20-32JCT 25-32JCT 32-32JCT
	32-3S	●	100					2.6	3.1	TKN3	TKN3-P	TK%3	TK%3-P			
	32-4S	●	100					3.4	4.1	TKN4	-	TK%4	-			
	32-5S	●	120					4.2	4.8 5.1	TKN4.8 TKN5	-	TK%5	-			
	32-6S	●	120					5.4	6.4	TKN6	-	-	-			
KTKB%	32-8S	●	120	32	25	-	150	6.8	8.0	Fig. 1	TKN8	-	-	-		
KTKBR	32-9S	●	120					8.0	9.6	TKN9	-	-	-			

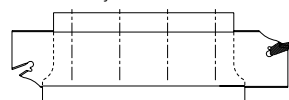
Note) 1. "-SS" means hard coated
2. Releasing wrench is "LTK-5"

* Dimension H shows virtual apex distance.

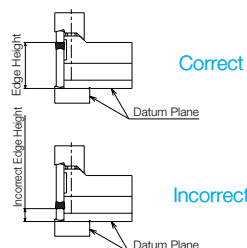
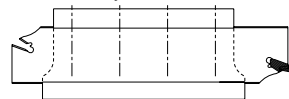
Recommended Cutting Conditions **H61**

◆ Toolblock and Blade Installation

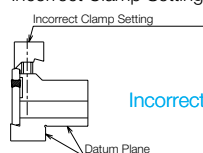
Correct Way



Incorrect Way

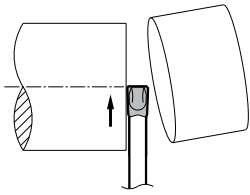


Incorrect Clamp Setting

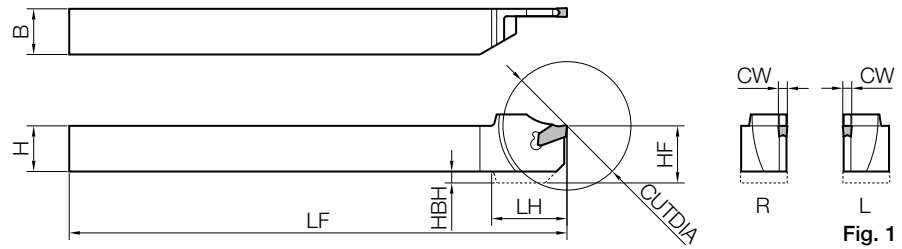


If the clamp element is mounted backward, a large gap will occur between the clamp and the toolblock, and the blade may come off during machining. Be careful when installing the clamp for safety.

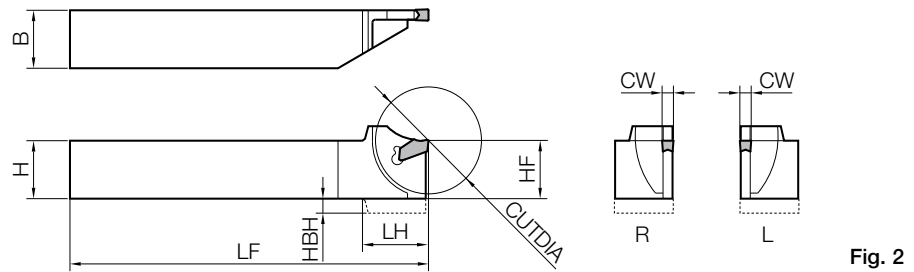
KTKH-S



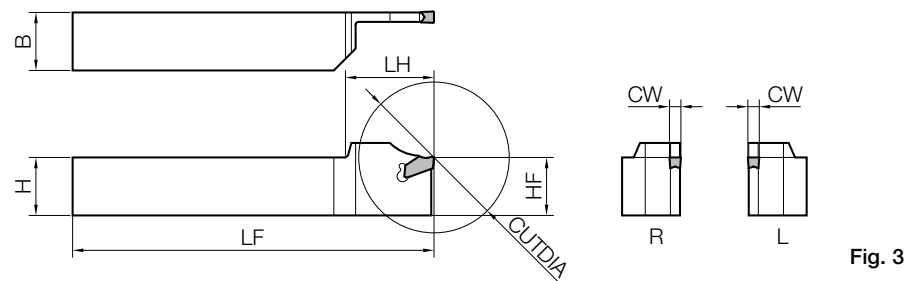
For Small Parts Machining (Long Shank)



For General Cut-Off



For General Cut-Off



Right-hand Shown


Toolholder Dimensions for Small Parts Machining (Long Shank Type)

Part Number	Stock		Unit	Cut-Off Dia.	Dimensions (in)						Insert Width	Drawing	Spare Parts Supplied Wrench
	R	L		CUTDIA	H	HF	HBH	B	LF	LH	CW		
KTKH% 8-1.6-6S	●	●	inch	1.100	0.500	0.500	0.000	0.500	6.000	0.670	0.063	Fig.1	LTK-5
6-2-5S	●	●		1.100	0.375	0.375	0.200	0.375	5.000	0.690	0.087		
8-2-6S	●	●		1.100	0.500	0.500	0.160	0.500	6.000	0.700	0.094		

Recommended Cutting Conditions ● H61

CUT-OFF TOOLHOLDERS (INTEGRAL SHANK)

● Toolholder Dimensions for General Cut-Off

Part Number	Stock		Unit	Cut-Off Dia.	Dimensions						Insert Width	Drawing	Spare Parts
	R	L		CUTDIA	H	HF	HBH	B	LF	LH	CW		Supplied Wrench
													
KTKH% 12-2S	●		inch	1.400	0.750	0.750	0.000	0.750	5.000	0.870	0.087 0.094	Fig.2	LTK-5
	●	●		2.000	0.750	0.750	-	0.750	5.000	1.190	0.122	Fig.3	
	●	□		2.000	1.000	1.000		1.000	6.000	1.210	0.122		
	●			2.300	0.750	0.750		0.750	5.000	1.350	0.161		
	●			2.600	1.000	1.000		1.000	6.000	1.360	0.161		
	●	□		3.000	1.000	1.000		1.000	6.000	1.560	0.189 0.201		
KTKH% 1010F-2S	●	●	mm	28	10	10	5	10	80	18.6	2.2 2.4	Fig.2	LTK-5
	●	●		31	12	12	4	12	100	19.8			
	●	●		31	16	16	-	12	100	19.8			
	●	●		31	16	16	-	16	100	19.8			
	●	●		36	20	20	-	12	125	22.8			
	●	●		36	20	20	-	20	125	22.8			
	●	●		35	16	16	4	12	100	21.7	3.1	Fig.2	
	●	●		35	16	16	4	16	100	21.7			
	●	●		40	20	20	-	12	125	25.3		Fig.3	
	●	●		51	20	20	-	20	125	31.0			
	●	●		52	25	25	-	25	150	31.5			
	●	●		43	20	20	-	12	125	26.3		4.1	
	●	●		59	20	20	-	20	125	35.0	Fig.3		
	●	●		66	25	25	-	25	150	38.0			
	●	●		77	25	25	-	25	150	43.5	4.8, 5.1	Fig.3	
KTKH% 2020K-3T17S	●	●		33	20	20	-	20	125	21.8	3.1	Fig.2	LTK-5
	●	●		43	25	25	-	25	150	26.8			
	●	●		44	20	20	-	20	125	26.8	4.1		
	●	●		44	25	25	-	25	150	26.8			

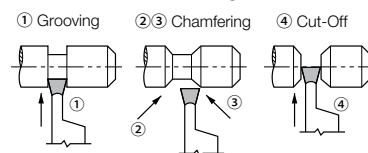
Recommended Cutting Conditions ● H61

● Applicable Inserts

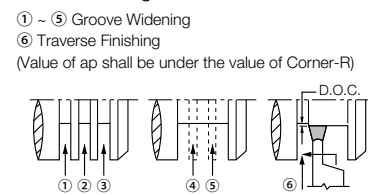
Ref. Page	H56			
Shape				
Toolholder				
				
	TKN1.6	TKN1.6-P	TK% 1.6	TK% 1.6-P
	TKN2 TKN2.4	TKN2-P	TK% 2 TK% 2.4	TK% 2-P
	TKN3	TKN3-P	TK% 3	TK% 3-P
	TKN4	-	TK% 4	-
	TKN4.8 TKN5	-	TK% 5	-

◆ Usage Example of Cut-Off

1. Cut-Off after chamfering



2. Wide Grooving



In order to maintain equal wear on both corners

RECOMMENDED CUTTING CONDITIONS

TKF12

Workpiece Material	Recommended Grade (Vc sfm)							TKF12						Notes
								Width (CW)						
	MEGACOAT NANO			MEGA COAT	PVD Coated Carbide	DLC	Carbide	0.020" (0.50mm)	0.028" (0.70mm)	0.039" (1.00mm)	0.049" (1.25mm)	0.059" (1.50mm)	0.079" (2.00mm)	
	PR1725	PR1425	PR1535	PR1225	PR1025	PDL025	KW10	Feed Rate (ipr)						
Carbon Steel	★ 230~560 (160~460)	☆ 225~550 (175~450)	☆ 230~500 (160~400)	☆ 225~500 (175~400)	☆ 200~425	-	-	0.0004~0.0008	0.0004~0.0012	0.0004~0.0016 (0.0004~0.0020)	0.0004~0.0016	0.0004~0.0016 (0.0008~0.0039)	0.0004~0.0016 (0.0008~0.0039)	Wet
Alloy Steel	★ 230~560 (160~460)	☆ 225~550 (175~450)	☆ 230~500 (160~400)	☆ 225~500 (175~400)	☆ 200~425	-	-	0.0004~0.0008	0.0004~0.0012	0.0004~0.0016 (0.0004~0.0020)	0.0004~0.0016	0.0004~0.0016 (0.0008~0.0039)	0.0004~0.0016 (0.0008~0.0039)	
Stainless Steel	☆ 200~460 (130~390)	☆ 200~450 (125~400)	★ 200~400 (130~330)	☆ 200~400 (125~325)	☆ 175~325	-	-	0.0002~0.0006	0.0004~0.0008	0.0004~0.0008 (0.0004~0.0012)	0.0004~0.0008	0.0004~0.0008 (0.0004~0.0020)	0.0004~0.0008 (0.0004~0.0020)	
Cast Iron	-	-	-	-	-	-	★ 175~325	0.0004~0.0012	0.0004~0.0016	0.0004~0.0020	0.0004~0.0020	0.0004~0.0020	0.0004~0.0020	
Aluminum	-	-	-	-	-	★ 660~1640	☆ 650~1475	0.0004~0.0012	0.0004~0.0016	0.0004~0.0020	0.0004~0.0020	0.0004~0.0020	0.0004~0.0020	
Brass	-	-	-	-	-		★ 325~650	0.0004~0.0012	0.0004~0.0016	0.0004~0.0024	0.0004~0.0024	0.0004~0.0024	0.0004~0.0024	

Values in parentheses () are cutting conditions for tough edge inserts style TKF..T..

★ : 1st Recommendation ☆ : 2nd Recommendation

TKF16

Workpiece Material	Recommended Grade (Vc sfm)							TKF16		Notes
								Width (CW)		
	MEGACOAT NANO			MEGA COAT	PVD Coated Carbide	DLC	Carbide	0.059" (1.50mm)	0.079" (2.00mm)	
	PR1725	PR1425	PR1535	PR1225	PR1025	PDL025	KW10	Feed Rate (ipr)		
Carbon Steel	★ 230~560 (160~460)	☆ 225~550 (175~450)	☆ 230~500 (160~400)	☆ 225~500 (175~400)	☆ 200~425	-	-	0.0008-0.0028 (0.0008-0.0039)	0.0008-0.0028 (0.0008-0.0039)	Wet
Alloy Steel	★ 230~560 (160~460)	☆ 225~550 (175~450)	☆ 230~500 (160~400)	☆ 225~500 (175~400)	☆ 200~425	-	-	0.0008-0.0028 (0.0008-0.0039)	0.0008-0.0028 (0.0008-0.0039)	
Stainless Steel	☆ 200~460 (130~390)	☆ 200~450 (125~400)	★ 200~400 (130~330)	☆ 200~400 (125~325)	☆ 175~325	-	-	0.0004-0.0016 (0.0004-0.0020)	0.0004-0.0016 (0.0004-0.0020)	
Cast Iron	-	-	-	-	-	-	★ 175~325	0.0008-0.0032	0.0008-0.0032	
Aluminum	-	-	-	-	-	★ 660~1640	☆ 650~1475	0.0008-0.0032	0.0008-0.0032	
Brass	-	-	-	-	-	-	★ 325~650	0.0008-0.0039	0.0008-0.0039	

Values in parentheses () are cutting conditions for tough edge inserts style TKF..T..

★ : 1st Recommendation ☆ : 2nd Recommendation

GMM-MT / GMM-TK / GMM-NB

Workpiece Material	Recommended Grade (Vc sfm)				Width (CW)				Notes
	CVD Coated Carbide	PVD Coated Carbide		Carbide	0.059" (1.5mm)	0.079"~0.098" (2.0mm~2.5mm)	0.118" (3.0mm)	0.158" (4.0mm)	
	CR9025	PR915	PR930	KW10	Feed Rate (ipr)				
Carbon Steel	☆ 250~600	★ 200~500	☆ 200~425	-	0.0004~0.0016	0.0008~0.0059	0.0012~0.0079	0.0032~0.0118	Wet
Alloy Steel	☆ 225~500	★ 200~500	☆ 200~425	-	0.0004~0.0016	0.0008~0.0059	0.0012~0.0079	0.0032~0.0118	
Stainless Steel	☆ 200~450	★ 175~450	☆ 175~400	-	0.0004~0.0012	0.0008~0.0039	0.0012~0.0059	0.0032~0.0098	
Cast Iron	-	-	-	★ 175~325	0.0004~0.0020	0.0020~0.0047	0.0039~0.0098	0.0039~0.0118	
Aluminum	-	-	-	★ 650~1475	0.0004~0.0020	0.0020~0.0039	0.0020~0.0079	0.0020~0.0098	
Brass	-	-	-	★ 325~650	0.0004~0.0020	0.0020~0.0039	0.0020~0.0059	0.0020~0.0079	

• When using PR930, decrease the feed rate by 20%

★ : 1st Recommendation ☆ : 2nd Recommendation

GMM-TMR (PR1115)

Workpiece Material	Vc (sfm)	Notes
Carbon Steel	200~650	Wet
Alloy Steel	225~500	
Stainless Steel	175~450	

RECOMMENDED CUTTING CONDITIONS

PKM

Workpiece Material	Recommended Grade (Vc sfm)			PM	PH		Notes
				Width (CW)			
	MEGACOAT NANO		Carbide	0.079"~0.157" (2.00mm~4.00mm)	0.079" (2.00mm)	0.118"~0.157" (3.00mm~4.00mm)	
	PR1625	PR1535	GW15	Feed Rate (ipr)			
Carbon Steel	★ 260 ~ 720	☆ 260 ~ 720	-	0.003 ~ 0.007	0.004 ~ 0.009	0.006 ~ 0.011	Wet
Alloy Steel	★ 230 ~ 660	☆ 230 ~ 660	-				
Stainless Steel	☆ 200 ~ 490	★ 200 ~ 490	-	0.002 ~ 0.005	0.002 ~ 0.005	0.003 ~ 0.006	
Cast Iron	-	-	★ 160 ~ 330	0.003 ~ 0.007	-	-	
Aluminum	-	-	★ 660 ~ 1,480	0.003 ~ 0.007	-	-	
Brass	-	-	★ 330 ~ 660	0.003 ~ 0.007	-	-	

Reduce feed to 1/2 ~ 1/3 when nearing the center of the workpiece.

★ : 1st Recommendation ☆ : 2nd Recommendation



TKN / TK^R /

Workpiece Material	Recommended Grade (Vc sfm)							Width (CW)					Notes
	Cermet		CVD Coated Carbide	MEGACOAT NANO	PVD Coated Carbide		Carbide	1.6mm	2.0~2.4mm	3.1mm	4.1mm	4.8~9.6mm	
	TN620	TN90	CR9025	PR1535	PR660	PR930	KW10	Feed Rate (ipr)					
Carbon Steel	☆ 200~660	☆ 400~650	★ 250~600	☆ 200~490	☆ 200~425	☆ 200~425	-	0.0008~0.0032	0.0016~0.0071	0.0020~0.0098	0.0032~0.0118	0.0059~0.0157	Wet
Alloy Steel	☆ 200~530	☆ 325~525	★ 225~500	☆ 200~490	☆ 200~425	☆ 200~425	-	0.0008~0.0032	0.0016~0.0071	0.0020~0.0098	0.0032~0.0118	0.0059~0.0157	
Stainless Steel	☆ 200~490	☆ 250~500	☆ 200~450	★ 160~390	☆ 175~400	☆ 200~450	-	0.0008~0.0012	0.0016~0.0047	0.0020~0.0071	0.0032~0.0098	0.0039~0.0118	
Cast Iron			-		-	-	★ 175~325	0.0008~0.0032	0.0020~0.0047	0.0039~0.0098	0.0039~0.0118	0.0059~0.0138	
Aluminum			-		-	-	★ 325~1475	0.0008~0.0039	0.0020~0.0039	0.0020~0.0079	0.0020~0.0098	0.0039~0.0787	
Brass			-		-	-	★ 325~650	0.0008~0.0039	0.0020~0.0039	0.0020~0.0059	0.0020~0.0079	0.0039~0.0787	

★ : 1st Recommendation ☆ : 2nd Recommendation



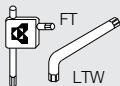

ALTERNATIVE CUT-OFF TOOLHOLDER REFERENCE

Swiss Style Length Toolholder Reference Table (KTKF / KGM)

Conventional Toolholder				Alternative Toolholder			
Part Number	Overall Length (mm)	Spare Parts		Part Number	Overall Length (mm)	Notes	Reference Page
		Clamp Screw	Wrench				
							
KTKF% 1010K-12	125	SB-4590TRWN	LTW-10S	KTKF% 1010JX-12	120		H8
KTKF% 1212M-12	150			KTKF% 1212JX-12	120		
KTKF% 1616M-12	150			KTKF% 1616JX-12	120		
KTKF% 1010K-16	125			KTKF% 1010JX-16	120		
KTKF% 1212M-16	150			KTKF% 1212JX-16	120		
KTKF% 1616M-16	150			KTKF% 1616JX-16	120		
KGM% 0810K-1.5-125	125	SE-40120TR	LTW-15S	-	-	No Replacement	H42
KGM% 1010K-1.5-125	125			KGM% 1010JX-1.5	120		
KGM% 1212M-1.5-150	150			KGM% 1212JX-1.5	120		
KGM% 0810K-2-125	125	SE-40120TR	LTW-15S	-	-	No Replacement	
KGM% 1010K-2-125	125			KGM% 1010JX-2	120		
KGM% 1212M-2-150	150			KGM% 1212JX-2	120		
KGM% 1616M-2-150	150	SE-50125TR	LTW-20	KGM% 1616JX-2	120		
KGM% 1010K-2.5-125	125	SE-40120TR	LTW-15S	-	-	No Replacement	
KGM% 1212M-2.5-150	150			KGM% 1212JX-2.5	120		
KGM% 1616M-2.5-150	150	SE-50125TR	LTW-20	KGM% 1616JX-2.5	120		
KGM% 1616M-3-150	150	SE-50125TR	LTW-20	KGM% 1616JX-3	120		

Note) The corresponding alternative toolholder may be different from the conventional toolholder in insert clamping system or insert size.
Make sure of their specifications by referring to the catalog or other documents.

Swiss Style Length Toolholder Reference Table (KTKH-B / KTKH-S)

Conventional Toolholder					Alternative Toolholder			
Part Number	Cut-Off Diameter (mm)	Spare Parts			Part Number	Cut-Off Diameter (mm)	Notes	Reference Page
		Releasing Wrench	Clamp Screw	Wrench				
				 FT  LTW				
KTKH% 0808K-1.6-125B	Ø10	-	SE-40120TR	FT-15	-	-	No Replacement	H42
KTKH% 1010K-1.6-125B	Ø20				KGM% 1010JX-1.5	Ø20		
KTKH% 1212M-1.6-150B	Ø25				KGM% 1212JX-1.5	Ø25		
KTKH% 1414M-1.6-150B	Ø26				-	-	No Replacement	
KTKH% 1010K-2-125B	Ø20	-	SE-40120TR	FT-15	KGM% 1010JX-2	Ø20		
KTKH% 1212M-2-150B	Ø25				KGM% 1212JX-2	Ø25		
KTKH% 1616M-2-150B	Ø32				KGM% 1616JX-2	Ø32		
KTKH% 1616M-3-150B	Ø32	-	SE-50125TR	LTW-20	KGM% 1616JX-3	Ø32		
KTKHR 1010K-2-125S	Ø30				KGMR 1010JX-2	Ø20	Small Machining Dia.	
KTKH% 1212M-2-150S	Ø30				KGM% 1212JX-2	Ø25	Small Machining Dia.	
KTKH% 1616M-2-150S	Ø36				KGM% 1616JX-2	Ø32	Small Machining Dia.	
KTKH% 1616M-3-150S	Ø45				KGM% 1616JX-3	Ø32	Small Machining Dia.	

Note) The corresponding alternative toolholder may be different from the conventional toolholder in insert clamping system or insert size.
Make sure of their specifications by referring to the catalog or other documents.