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# KGD/KGDF

Grooving & Cut-Off Series



**Improved Grooving Performance with Expansive Tooling System Lineup**

**Good Chip Control**

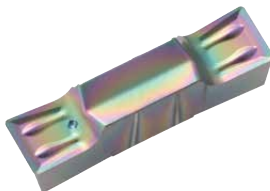
**MEGACOAT / MEGACOAT NANO Coating Technology for Long Tool Life and High Efficiency Machining**

**Comprehensive Toolholder Lineup**



**Inserts for External Grooving  
(For Aluminium)**

**AM Chipbreaker**



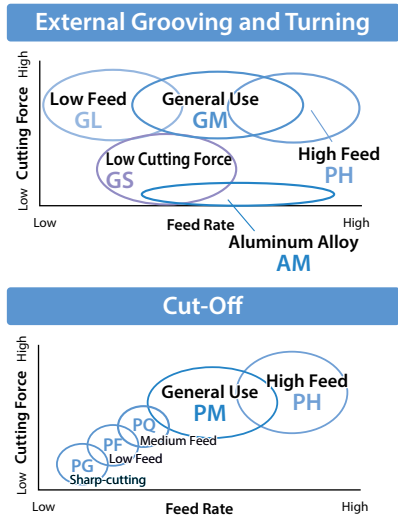
# KGD External Grooving / Cut-Off

Good Chip Control

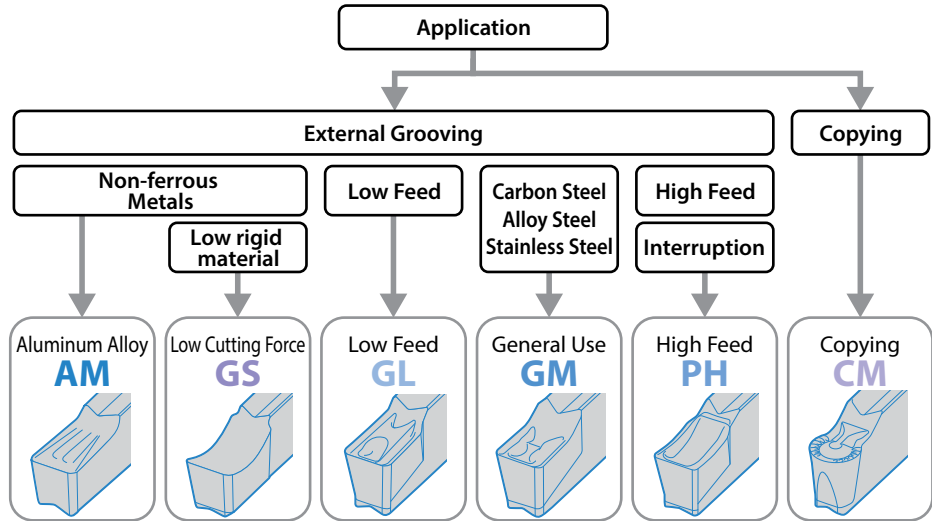
MEGACOAT / MEGACOAT NANO Coating Technology for Long Tool Life and High Efficiency Machining

## 1 Wide Range of Chipbreakers

### Application Maps



### Chipbreaker Selection(External)



### Chip Control Comparison (In-house Evaluation)

Cutting Conditions :  $V_c = 490$  sfm,  $f = 0.006$  ipr Workpiece : Chromium Molybdenum Steel

### Better Chip Control than Competitors

Reduces Damage of Cutting Edge Caused by Crushing Chips

GM Chipbreaker



Competitor A

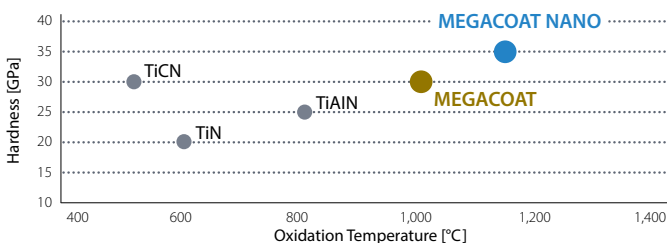


Competitor B



## 2 MEGACOAT / MEGACOAT NANO Coating Technology for Long Tool Life

### Coating Properties



### PR1225 (MEGACOAT)

For Steel Grooving and Cut-off

### PR1215 (MEGACOAT)

Superior wear resistance  
For machining of cast iron

### PR1535 (MEGACOAT NANO)

For machining of stainless steel



### 3 Expansive Toolholder Lineup

Available two types of toolholder, Integral type and SwitchBlade type

#### Integral Type [P7](#)



**Integral type toolholder**  
with wide lineup (for various groove width and depth)

#### SwitchBlade Type [P12](#)



**SwitchBlade type toolholder**  
Applicable for various types of grooving and cut-off, such as external and face grooving by replacing blade parts

#### High Pressure Coolant Toolholder Lineup

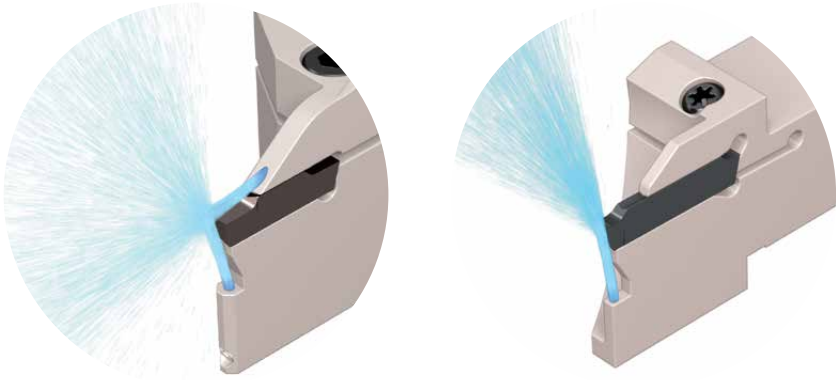
##### JCT [P9](#)



Coolant is directed from two directions

Discharges coolant in two directions toward both the rake surface and the flank face of the insert  
Excellent Chip Control and Long Tool Life

##### JCTM for Small Parts Machining [P20](#)



Delivers coolant directly to front flank face

Cooling the cutting edge leads to longer tool life

#### Integral type / SwitchBlade type Selection Reference

Integral	SwitchBlade
<ul style="list-style-type: none"> <li>• Various toolholder lineup Available for various grooving depths (shallow / medium / deep) Optimum overhang length</li> <li>• Available for low-rigidity machines and workpieces</li> <li>• For small machines with limited work space (Automatic lathe, small lathe, etc.)</li> <li>• Coolant-through holders for high pressure coolant</li> </ul>	<ul style="list-style-type: none"> <li>• Good for high-mix low-volume production Good for various groove widths by replacing blades</li> <li>• Good for difficult-to-cut material Tough cutting conditions Toolholder cost reduction with replaceable blades</li> <li>• Face grooving is possible by changing blade * Be sure to check the hand compatibility of the blade and toolholder</li> </ul>








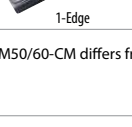
Face Grooving KGDF Toolholder and GDFM Inserts [P28](#)



# GDM / GDMS / GDG (External Grooving & Turning)

## Applicable Inserts

Usage Classification	P	Carbon Steel / Alloy Steel	●	○	●	☉		
		M	Stainless Steel			●	☉	☉
	K	Cast Iron					●	
	N	Non-ferrous Metals						●
	S	Titanium Alloy			●			☉
	H	Hard Materials (≤40HRC)				○		
		Hard Materials (≥40HRC)						☉

Insert	Part Number	Dimensions (in)			Cermet			MEGA COAT NANO	MEGACOAT	DLC	Carbide			
		Edge Width (CW)			RE	INSL	S	TN620	TN90	PR1535	PR1225	PR1215	PDL015	GW15
		inch	mm	Tolerance										
 General Purpose	GDM 2420N-020GM	0.094	2.4	±0.0012	0.008	0.787	0.169	●	●	●	●	●		
	3020N-020GM	0.118	3.0		0.008			●	●	●	●	●		
	3020N-040GM	0.118	3.0		0.016			●	●	●	●	●		
	4020N-020GM	0.157	4.0		0.008			●	●	●	●	●		
	4020N-040GM	0.157	4.0	0.016	●			●	●	●	●			
	4020N-080GM	0.157	4.0	0.032	●			●	●	●	●			
	5020N-040GM	0.197	5.0	0.016	●			●	●	●	●			
	5020N-080GM	0.197	5.0	0.032	●			●	●	●	●			
	6020N-040GM	0.236	6.0	0.016	●			●	●	●	●			
	6020N-080GM	0.236	6.0	0.032	●			●	●	●	●			
	8030N-080GM	0.315	8.0	±0.0020	0.032			1.181	0.217					
	GDG 3120N-020GM	0.125	3.18	±0.0008	0.008			0.787	0.169	●				
 General Purpose 1-Edge	GDMS 2220N-020GM	0.087	2.2	±0.0012	0.008	0.787	0.169	●	●	●	●			
	3020N-040GM	0.118	3.0		0.016			●	●	●	●			
	4020N-040GM	0.157	4.0		0.016			●	●	●	●			
	5020N-080GM	0.197	5.0	0.032	●			●	●	●				
	6020N-080GM	0.236	6.0	±0.0016	0.032			●	●	●	●			
 Low Feed	GDM 2420N-020GL	0.094	2.4	±0.0012	0.008	0.787	0.169	●	●	●	●			
	3020N-020GL	0.118	3.0		0.008			●	●	●	●			
	3020N-040GL	0.118	3.0		0.016			●	●	●	●			
	4020N-020GL	0.157	4.0		0.008			●	●	●	●			
	4020N-040GL	0.157	4.0	0.016	●			●	●	●				
	5020N-040GL	0.197	5.0	±0.0016	0.016			●	●	●	●			
 Aluminum Alloy	GDG 3020N-020AM	0.118	3.0	±0.0008	0.008	0.787	0.169					●	●	
	4020N-040AM	0.157	4.0		0.016								●	●
	5020N-040AM	0.197	5.0		0.016								●	●
	6020N-040AM	0.236	6.0		0.016								●	●
 Low Cutting Force	GDG 2520N-020GS	0.098	2.5	±0.0008	0.008	0.787	0.169	●	●	●	●		●	
	3020N-020GS	0.118	3.0		0.008			●	●	●	●		●	
	3520N-020GS	0.138	3.5		0.008			●	●	●	●		●	
	4020N-040GS	0.157	4.0		0.016			●	●	●	●		●	
	5020N-040GS	0.197	5.0		0.016			●	●	●	●		●	
	6020N-040GS	0.236	6.0		0.016			●	●	●	●		●	
	8030N-040GS	0.315	8.0		0.016			1.181	0.217	●	●	●	●	●
 Full-R / Copying	GDM 3020N-150R-CM	0.118	3.0	±0.0012	0.059	0.787	0.169	●	●	●	●			
	4020N-200R-CM	0.157	4.0	0.079	●			●	●	●				
	5020N-250R-CM	0.197	5.0	±0.0016	0.098			*0.827	●	●	●	●		
	6020N-300R-CM	0.236	6.0		0.118			●	●	●	●			
 Grooving and Cut-Off (High Feed)	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				●	●	●			
 Grooving and Cut-Off (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				●	●	●			

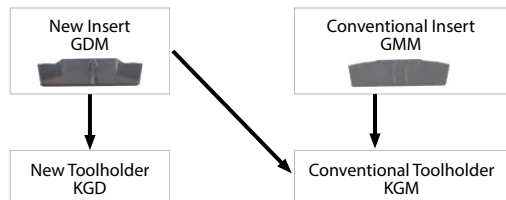
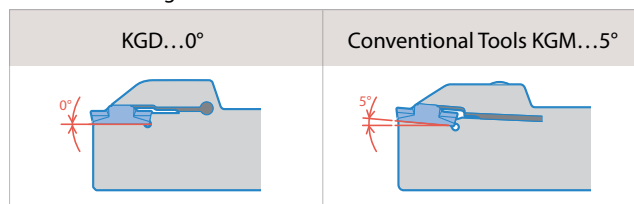
\* GDM50/60-CM differs from other part numbers in length (INSL) to avoid interference of the toolholder with workpiece.

Recommended Cutting Conditions [Page 25-27](#) ● : Standard Item

Inserts sold in 10 piece boxes

### \* KGD / KGM Combinations

#### Insert Pocket Angle of KGD / KGM Toolholders





Installing conventional inserts into new KGD toolholder is not recommended.



# GDGS (CBN & PCD) / GDM / GDG (Cut-Off)



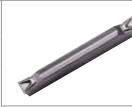


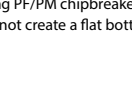

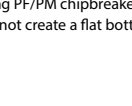

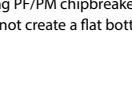
## Applicable Inserts

Insert		Part Number	Dimensions (in)		RE	INSL	S	LE	Angle θ	MEGACOAT			
			Edge Width (CW)							CBN	PCD		
			inch	mm						Tolerance	KBN05M	KBN570	KPD001
Grooving 	1-Edge 	GDGS 2020N-020NB	0.079	2.0	±0.0012	0.008	0.787	0.169	0.114	-	●	●	●
		3020N-020NB	0.118	3.0		0.008					●	●	●
		3020N-040NB	0.118	3.0		0.016					●	●	●
		4020N-020NB	0.157	4.0		0.008					●	●	●
		4020N-040NB	0.157	4.0		0.016					●	●	●
		5020N-020NB	0.197	5.0		0.008					●	●	●
		5020N-040NB	0.197	5.0		0.016					●	●	●
		6020N-020NB	0.236	6.0		0.008					●	●	●
		6020N-040NB	0.236	6.0		0.016					●	●	●

Recommended Cutting Conditions [Page 25-27](#) ● : Standard Item

PCD & CBN Inserts sold in 1 piece boxes

## Applicable Inserts

Insert		Part Number	Dimensions (in)		RE	INSL	S	PSIR/L	Angle	MEGA COAT NANO		MEGACOAT		DLC Coated Carbide	Carbide			
			Edge Width (CW)							PR1535	PR1225	PR1215	PD1025	GW15				
			inch	mm						Tolerance								
Cut-Off (Low Feed) 	15° Lead Angle 	GDM 1316N-003PF	0.051	1.3	±0.0016	0.0012	0.630	0.146	-	●	●	●						
		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				●	●	●						
		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				●	●	●						
		GDM 1316% -003PF-15D	0.051	1.3		±0.0016				0.0012	0.630	0.146	15°	●	●	●		
		1516% -003PF-15D	0.059	1.5						0.0012				●	●	●		
1516% -015PF-15D	0.059	1.5	0.0059	●	●		●											
2020% -003PF-15D	0.079	2.0	0.0012	●	●		●											
2020% -015PF-15D	0.079	2.0	0.0059	●	●		●											
2520% -003PF-15D	0.098	2.5	0.0012	●	●		●											
2520% -015PF-15D	0.098	2.5	0.0059	●	●		●											
3020% -003PF-15D	0.118	3.0	0.0012	●	●		●											
3020% -015PF-15D	0.118	3.0	0.0059	●	●		●											
Cut-Off (Medium Feed) 	15° Lead Angle 	GDM 2020N-010PQ	0.079	2.0	±0.0012		0.0039	0.787	0.169	-				●	●	●		
		2520N-010PQ	0.098	2.5										●	●	●		
		3020N-010PQ	0.118	3.0										●	●	●		
Cut-Off (Low Cutting Force) 	15° Lead Angle 	GDM 2020R-010PQ-15D	0.079	2.0	±0.0012	0.0039	0.787	0.169	15°	●	●	●						
		2520R-010PQ-15D	0.098	2.5						●	●	●						
		3020R-010PQ-15D	0.118	3.0						●	●	●						
Cut-Off (Low Cutting Force) 	15° Lead Angle 	GDG 2020N-005PG	0.079	2.0	±0.0008	0.0020	0.787	0.169	-	●	●	●	●	●				
		2520N-005PG	0.098	2.5						●	●	●	●	●				
		3020N-005PG	0.118	3.0						●	●	●	●	●				
Cut-Off (Low Cutting Force) 	15° Lead Angle 	GDG 2020R-005PG-15D	0.079	2.0	±0.0008	0.0020	0.787	0.169	15°	●	●	●	●	●				
		2520R-005PG-15D	0.098	2.5						●	●	●	●	●				
		3020R-005PG-15D	0.118	3.0						●	●	●	●	●				

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



Recommended Cutting Conditions [Page 25-27](#) ● : Standard Item ● : Standard Item (R-hand Only)

Inserts sold in 10 piece boxes

Applicable Inserts

Usage Classification	P	Carbon Steel / Alloy Steel	☺	☹	☺
● : Light Interruption / 1st Choice	M	Stainless Steel	☹	☺	☺
☺ : Light Interruption / 2nd Choice	N	Non-ferrous Metals			

Insert	Part Number	Dimensions (in)				RE	INSL	S	PSIR/L	Angle	MEGA COAT NANO		
		Edge Width (CW)			PR1335						PR1225	PR1215	
		inch	mm	Tolerance									
	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					●	●	●	
	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				☺	☺	☺		
	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				●	●	●		
	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				☺	☺	☺		
	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				●	●	●		
	GDMS 2020N-020PH	0.079	2.0		±0.0012				0.008	0.787	-	●	●
3020N-030PH	0.118	3.0	0.012	●		●	●						
	4020N-030PH	0.157	4.0	0.012	0.012	0.787	-	●	●	●			

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



● : Standard Item ☺ : Standard Item (R-hand Only)

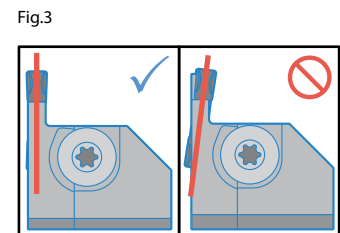
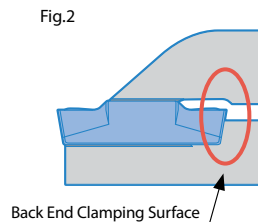
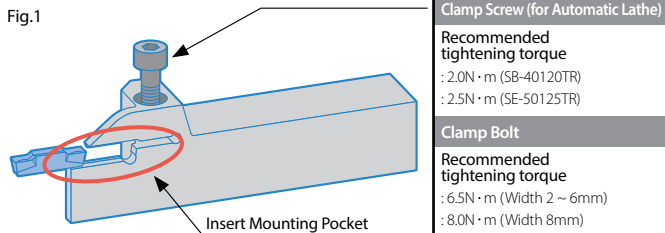
Inserts sold in 10 piece boxes

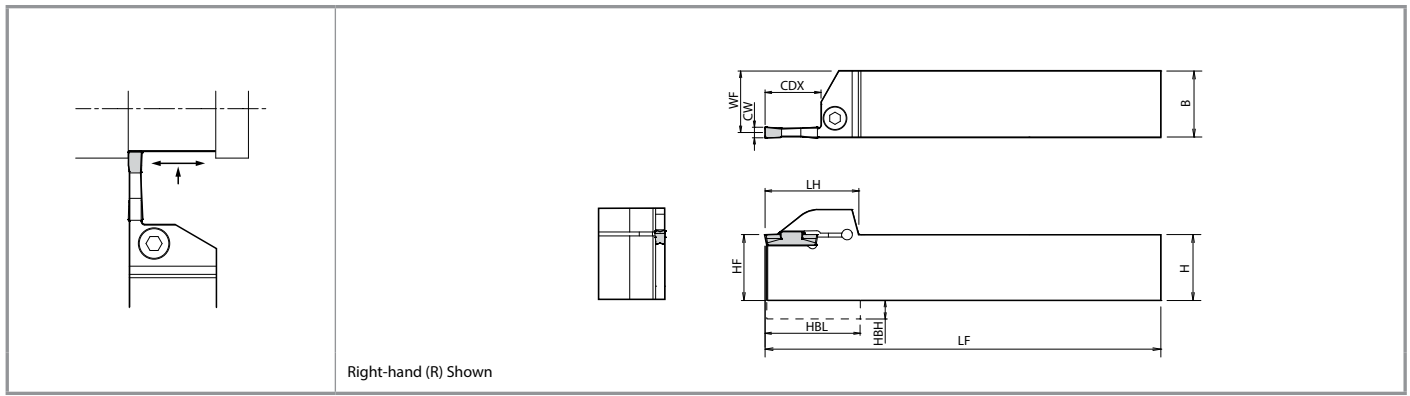
Insert Identification System

<b>Tolerance</b> M : M-Class G : G-Class	<b>Edge Width</b> 13 : 1.3 mm    25 : 2.5mm 15 : 1.5 mm    30 : 3 mm 20 : 2 mm        40 : 4 mm	<b>Hand of Tool</b> R : Right-hand L : Left-hand N : Neutral	<b>Chipbreaker (External Grooving / Cut-Off)</b> GM : Grooving and Traversing GL : Low Feed GS : Low Cutting Force CM : Copying PH : High Feed PM : Cut-Off (General Purpose) PF : Cut-Off (Low Feed) PQ : Cut-Off (Medium Feed) PG : Cut-Off (Low Cutting Force) NB : Without Chipbreaker AM : Aluminum Alloy							
<b>GD</b>	<b>M</b>	<b>S</b>	<b>30</b>	<b>20</b>	<b>N</b>	<b>-</b>	<b>025</b>	<b>GM</b>	<b>-</b>	<b>6D</b>
<b>Series</b> GD : External Grooving / Cut-Off GDF : Face Grooving	<b>No. of Edges</b> No Indication : 2-edge S : 1-edge	<b>Insert Length</b> 16 : 16 mm 20 : 20 mm 30 : 30 mm	<b>Corner-R(RE)</b> 003 : 0.03 mm    030 : 0.3 mm 015 : 0.15 mm   150R- : 1.5 mm (Full-R) 020 : 0.2 mm		<b>Chipbreaker (Face Grooving)</b> GM : Grooving and Traversing DM : Grooving GH : High Feed CM : Full-R GS : Aluminum / Non-ferrous metals		<b>Lead Angle</b> No Indication : 0° 6D : 6° 15D : 15°			

Setting the Insert

1. Completely eliminate chips from the insert mounting part. (see Fig.1)
2. Put the insert into the toolholder and push until it contacts the holder's surface for fixing the insert's back end. (see Fig.1, Fig.2)
3. Keeping the insert pushed against the toolholder's locating surface, tighten the insert clamp bolt at an appropriate torque.
4. Make sure there is no gap between the insert and the toolholder's locating surface and that the insert is set straight. (see Fig.2, Fig.3)





Toolholder Dimensions (Inch Size)

Width	Max. Grooving Depth (in)	Part Number	Stock		Dimensions (in)										Insert Width CW		Spare Parts		
			R	L	H	HF	HBH	B	LF	LH	HBL	WF	CDX*	MIN	MAX	Clamp Bolt	Wrench		
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	0.118" (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	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	0.157" (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	16-4T25	●	●	1.00	1.00	-	1.00	5.90	1.59	-	0.93	0.984" (25mm)	HH5X25			LW-4	

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).

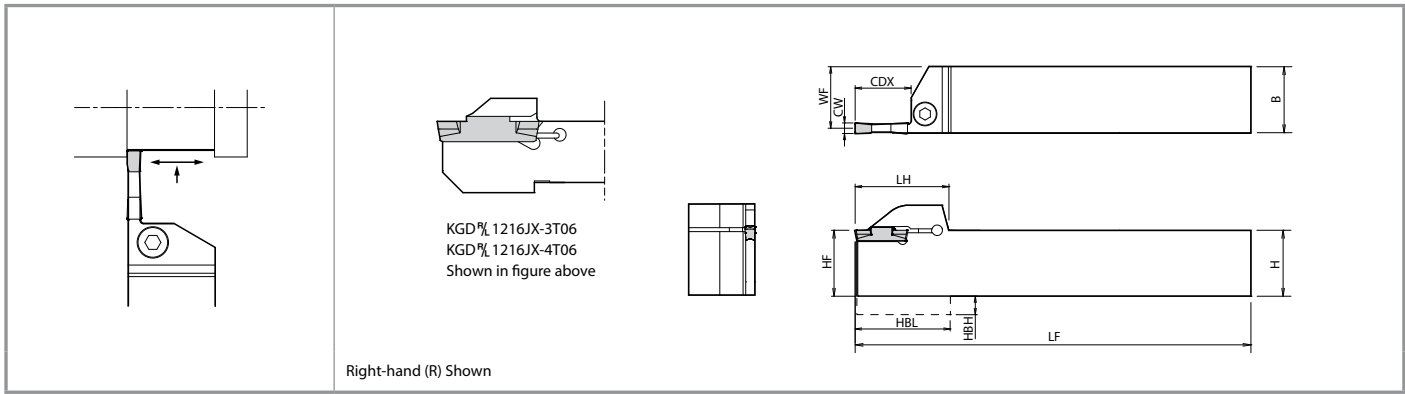
2) Recommended tightening torque for clamp bolt/screw is 6.5Nm for HH5X□□, 8.0Nm for HH6X25 and 2.5Nm for SE-50125TR.

3) Above toolholders can also be used for cut-off applications.

Choose an insert with a width that falls within the MIN and MAX parameters shown in table above.

● : Standard Item

Applicable Inserts See [Page 4-6](#)



Toolholder Dimensions (Metric Size)

Width	Max. Grooving Depth (mm)	Part Number	Stock		Dimensions (mm)									Insert Width CW		Spare Parts				
			R	L	H	HF	HBH	B	LF	LH	HBL	WF	CDX*	MIN	MAX	Clamp Bolt/Screw	Wrench			
0.079" (2mm)	6	KGD% 1616H-2T06	●	●	16	16	4.0	16	100	27.7	28.0	15.2	6	0.079" (2mm)	0.118" (3mm)	HH5X16	LW-4			
		KGD% 2020K-2T06	●	●	20	20	-	20	125	28.0	-	19.2				HH5X16				
		KGD% 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			
		KGD% 2020K-2T10	●	●	20	20	-	20	125	30.5	-	19.2				HH5X16				
		KGD% 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			
		KGD% 2012K-2T17	●	●	20	20	-	12	125	32.5	-	11.2				HH5X16				
		KGD% 2020K-2T17	●	●	20	20	-	20	125	32.5	-	19.2				HH5X16				
		KGD% 2525M-2T17	●	●	25	25	-	25	150	32.5	-	24.2				HH5X25				
	0.094" (2.4mm)	17	KGD% 2012K-2.4T17	●	●	20	20	-	12	125	32.5	-	11.0			17	0.094" (2.4mm)	0.118" (3mm)	HH5X16	LW-4
			KGD% 2020K-2.4T17	●	●	20	20	-	20	125	32.5	-	19.0						HH5X16	
0.118" (3mm)	6	KGD% 1216JX-3T06	●	●	12	12	2.0	16	120	19.5	19.0	14.8	6	0.118" (3mm)	0.157" (4mm)	SE-50125TR	LTW-20			
		KGD% 1616H-3T06	●	●	16	16	4.0	16	100	27.7	28.0	14.8				HH5X16				
		KGD% 2020K-3T06	●	●	20	20	-	20	125	28.0	-	18.8				HH5X16				
		KGD% 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			
		KGD% 2020K-3T10	●	●	20	20	-	20	125	30.5	-	18.8				HH5X16				
		KGD% 2525M-3T10	●	●	25	25	-	25	150	30.5	-	23.8				HH5X25				
		KGD% 1616H-3T20	●	●	16	16	4.0	16	100	34.2	34.5	14.8				HH5X16				
	20	KGD% 2012K-3T20	●	●	20	20	-	12	125	34.5	-	10.8	20			HH5X16	LW-4			
		KGD% 2020K-3T20	●	●	20	20	-	20	125	34.5	-	18.8				HH5X16				
		KGD% 2525M-3T20	●	●	25	25	-	25	150	35.5	-	23.8				HH5X25				
		KGD% 1216JX-4T06	●	●	12	12	2.0	16	120	19.5	19.0	14.3				6		0.157" (4mm)	0.197" (5mm)	SE-50125TR
KGD% 2020K-4T10	●	●	20	20	-	20	125	30.5	-	18.3	10	HH5X16								
KGD% 2525M-4T10	●	●	25	25	-	25	150	30.5	-	23.3		HH5X25								
KGD% 2020K-4T20	●	●	20	20	-	20	125	34.5	-	18.3		20	HH5X16							
KGD% 2525M-4T20	●	●	25	25	-	25	150	35.5	-	23.3			HH5X25							
KGD% 2525M-4T25	●	●	25	25	-	25	150	40.5	-	23.3	HH5X25									
0.157" (4mm)	6	KGD% 1216JX-4T06	●	●	12	12	2.0	16	120	19.5	19.0		14.3	6	0.157" (4mm)	0.197" (5mm)	SE-50125TR			LTW-20
		KGD% 2020K-4T10	●	●	20	20	-	20	125	30.5	-	18.3	HH5X16							
	10	KGD% 2525M-4T10	●	●	25	25	-	25	150	30.5	-	23.3	10	HH5X25						
		KGD% 2020K-4T20	●	●	20	20	-	20	125	34.5	-	18.3		20			HH5X16			
20	KGD% 2525M-4T20	●	●	25	25	-	25	150	35.5	-	23.3	20	HH5X25							
	KGD% 2525M-4T25	●	●	25	25	-	25	150	40.5	-	23.3		HH5X25							
0.197" (5mm)	10	KGD% 2020K-5T10	●	●	20	20	-	20	125	30.5	-	17.8	10	0.197" (5mm)			0.236" (6mm)	HH5X16	LW-4	
		KGD% 2525M-5T10	●	●	25	25	-	25	150	30.5	-	22.8						HH5X25		
	17	KGD% 2020K-5T17	●	●	20	20	-	20	125	37.5	-	17.8	17					HH5X25		
		KGD% 2525M-5T17	●	●	25	25	-	25	150	37.5	-	22.8						HH5X25		
25	KGD% 2525M-5T25	●	●	25	25	-	25	150	40.5	-	22.8	25	HH5X25							
	KGD% 2525M-6T15	●	●	25	25	-	25	150	32.5	-	22.4		15					0.236" (6mm)	0.236" (6mm)	HH5X25
0.236" (6mm)	30	KGD% 2525M-6T30	●	●	25	25	-	25	150	45.5	-	22.4			30	HH5X25				
		0.315" (8mm)	25	KGD% 2525M-8T25	●	●	25	25	7.0	25	150	43.3	44.2			22.0		25	0.315" (8mm)	0.315" (8mm)
KGD% 3232P-8T25	●			●	32	32	-	32	170	43.3	-	29.0	HH6X25							

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).

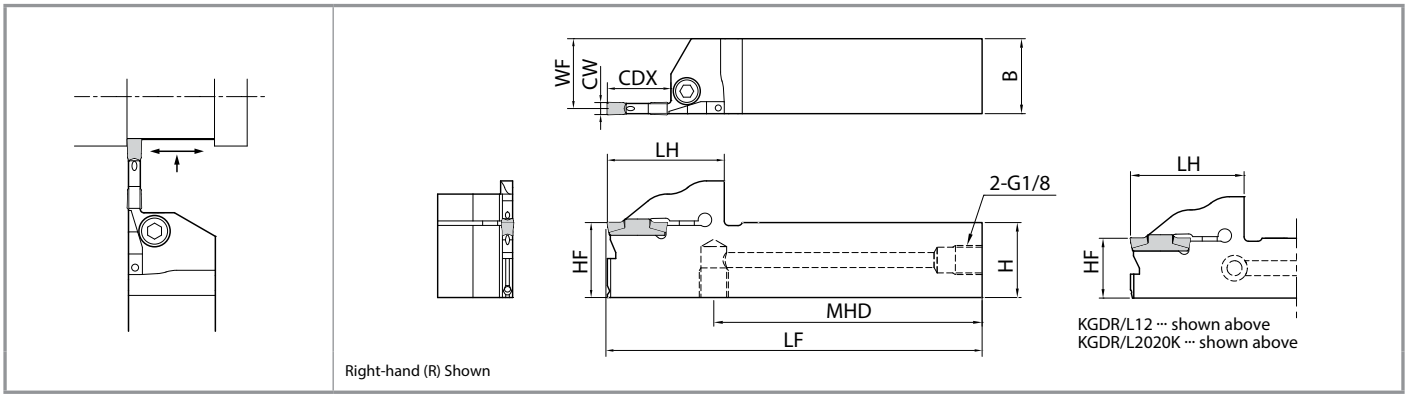
2) Recommended tightening torque for clamp bolt/screw is 6.5Nm for HH5X○○, 8.0Nm for HH6X25 and 2.5Nm for SE-50125TR.

3) Above toolholders can also be used for cut-off applications.

Choose an insert with a width that falls within the MIN and MAX parameters shown in table above.

● : Standard Item

Applicable Inserts See [Page 4-6](#)



Toolholder Dimensions (Inch Size)

Pressure Resistance: up to 2,175 psi

Width	Max. Grooving Depth (in)	Part Number	Stock		Dimensions (in)								Insert Width CW		Spare Parts		
			R	L	H	HF	B	LF	LH	WF	CDX	MHD	MIN	MAX	Clamp Screw	Wrench	Plug
0.118" (3mm)	0.787" (20mm)	KGD <sup>®</sup> L 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		3.551			HH5X25	LW-4	HSG1/8X8.0
0.157" (4mm)	0.787" (20mm)	KGD <sup>®</sup> L 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	LW-4	HSG1/8X8.0
		16-4T20JCT	●	●	1.000	1.000	1.000	5.000	1.535	0.933		3.551			HH5X25	LW-4	HSG1/8X8.0
	1.000" (25.4mm)	KGD <sup>®</sup> L 16-4T25.4JCT	●	●	1.000	1.000	1.000	5.000	1.732	0.933	1.000" (25.4mm)	3.354			HH5X25	LW-4	HSG1/8X8.0

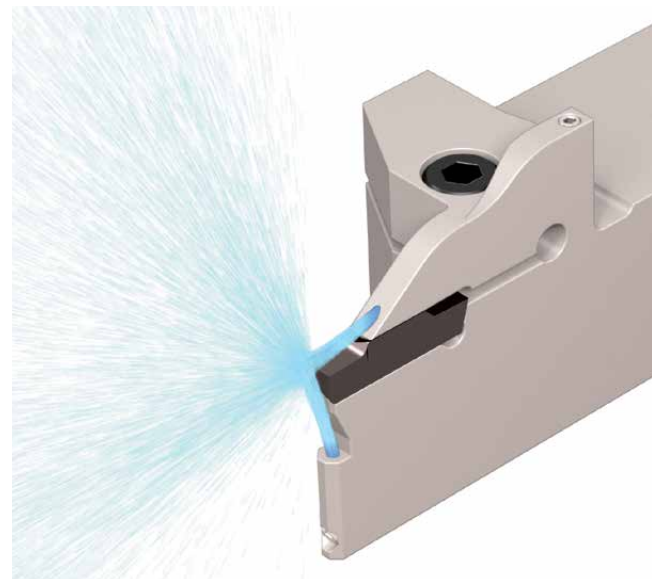
Choose an insert with a width that falls within the MIN and MAX parameters shown in table above.  
 Applicable Inserts See [Page 4-6](#)

● : Standard Item

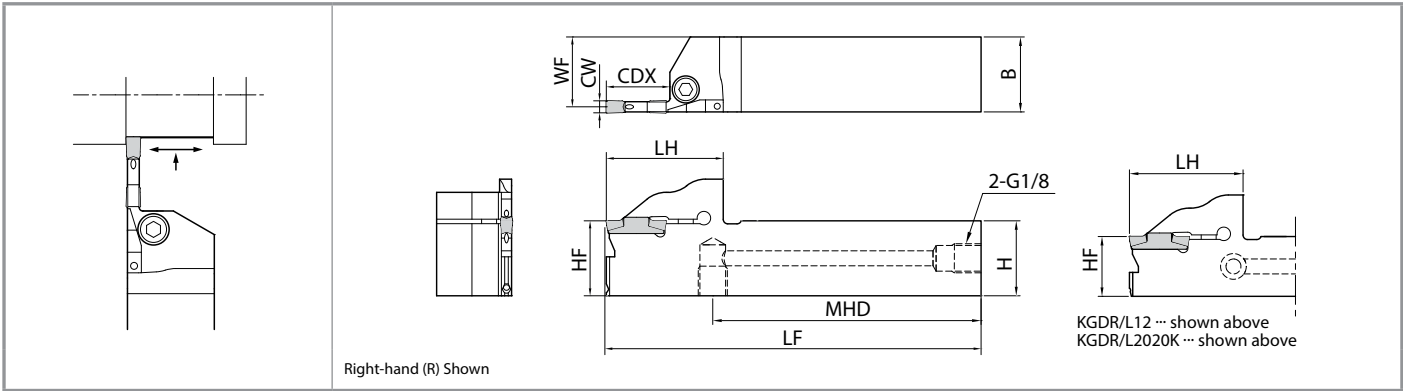
**Coolant is directed from two directions**

**Discharges coolant in two directions toward both the rake surface and the flank face of the insert**

**Excellent Chip Control and Long Tool Life**







Toolholder Dimensions (Metric Size)

Pressure Resistance: up to 2,175 psi

Width	Max. Grooving Depth (mm)	Part Number	Stock		Dimensions (mm)								Edge Width CW		Spare Parts		
			R	L	H	HF	B	LF	LH	WF	CDX	MHD	MIN	MAX	Clamp Screw	Wrench	Plug
0.118" (3mm)	6	KGD % 2020K-3T06JCT	●	●	20	20	20	125	31.5	18.8	6	96.2	0.118" (3mm)	0.157" (4mm)	HH5X16	LW-4	HSG1/8X8.0
		2525K-3T06JCT	●	●	25	25	25			23.8		96.5			HH5X25		
	10	2020K-3T10JCT	●	●	20	20	20		34.0	18.8	10	94.2			HH5X16		
		2525K-3T10JCT	●	●	25	25	25		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		
0.157" (4mm)	10	KGD % 2020K-4T10JCT	●	●	20	20	20	125	34.0	18.3	10	94.2	0.157" (4mm)	0.197" (5mm)	HH5X16	LW-4	HSG1/8X8.0
		2525K-4T10JCT	●	●	25	25	25			23.3		94.5			HH5X25		
	20	KGD % 2020K-4T20JCT	●	●	20	20	20		38.0	18.3	20	90.2			HH5X16		
		2525K-4T20JCT	●	●	25	25	25		39.0	23.3		89.5			HH5X25		
	25	KGD % 2525K-4T25JCT	●	●	25	25	25		44.0	23.3	25	84.5			HH5X25		

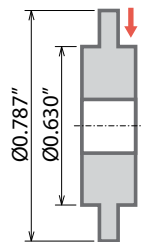
Choose an insert with a width that falls within the MIN and MAX parameters shown in table above.  
Applicable Inserts See [Page 4-6](#)

● : Standard Item

Case Studies

Ring - 5120 (Equivalent)

Vc = 525 sfm  
(n = 3,200 rpm)  
D.O.C. = 0.098"  
f = 0.0028 ipr  
Wet (Water Soluble), Normal Pressure  
KGDR2020K-3T10JCT  
GDM3020M-025PM PR1225



Tool Life

**KGD-JCT**  
(Internal Coolant)

**9,000 pcs / edge**

Tool Life  
**x1.5**

Competitor H  
(External Coolant)

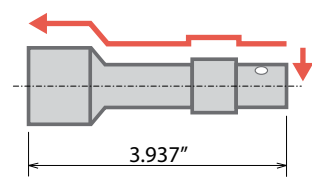
**6,000 pcs / edge**

Change to KGD-JCT (internal coolant) from Competitor H (external coolant) extended tool life by 1.5 times.

(User Evaluation)

Valve - Free Cutting Steel

Vc = 525 sfm  
D.O.C. = 0.551"  
f = 0.0047-0.0059 ipr  
Wet (Water Soluble), Normal Pressure  
KGDR2525K-3T20JCT  
GDM3020M-040GM PR1535



Tool Life

**KGD-JCT**  
(Internal Coolant)

**1,000 pcs / edge**

Chip Control  
**Good**

Surface Finish  
**Good**

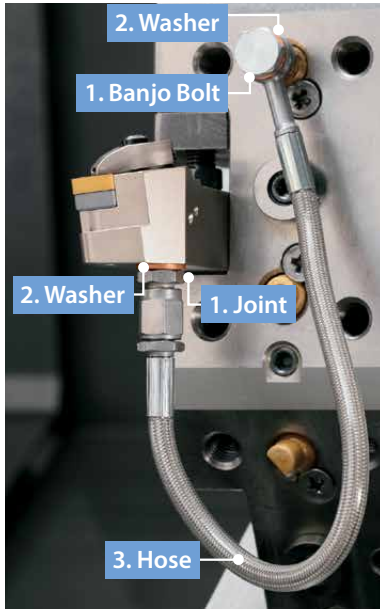
Competitor I  
(Internal Coolant)

**1,000 pcs / edge**

KGD-JCT maintained stable machining for the required number of pieces  
Better chip control and surface finish

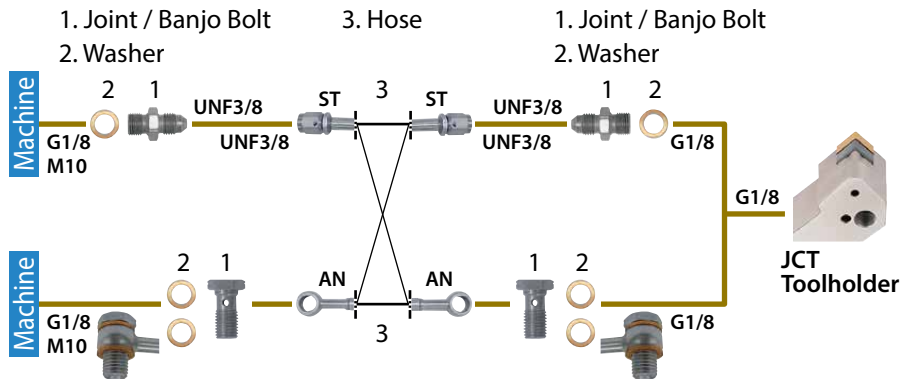
(User Evaluation)

## Easy Connection with High Pressure Hose and Joint



- Even without a high pressure pump, internal coolant can be used at a normal pressure
- Banjo bolt available for angled hose connection and can be used in a variety of machines

### Piping Installation Guide



## Piping Parts

### Optional Piping Parts Available

Choose from parts below to match your machine specifications

1. **Joint / Banjo bolt** × 2

2. **Washer** × 2-4

3. **Hose** × 1

#### 1. Joint / Banjo Bolt

Pressure Resistance: up to 4,350 psi

Shape	Part Number	Stock	Thread Standard
	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

Pressure Resistance: up to 4,350 psi

Shape	Part Number	Stock
	WS-10	●

\* Use 2 washers for a banjo bolt

#### 3. Hose

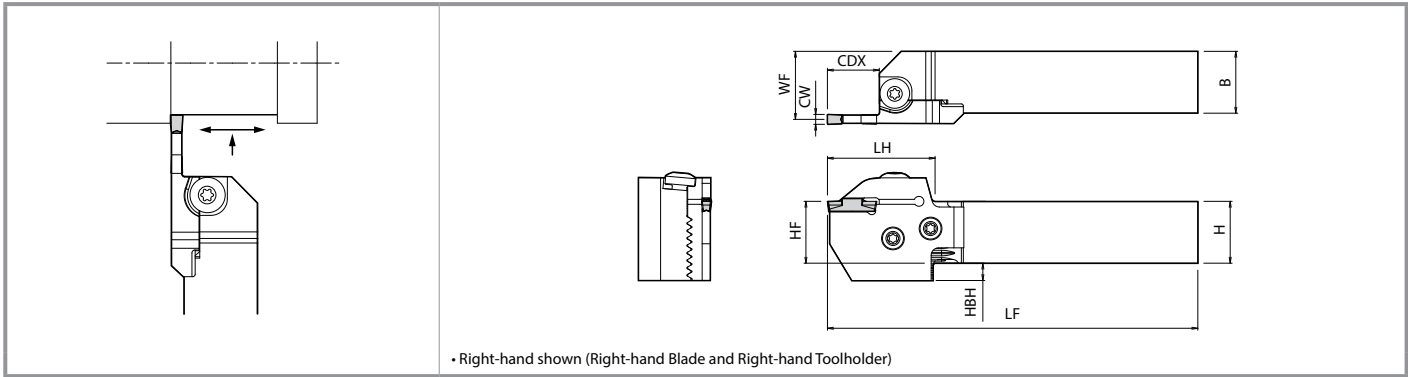
Pressure Resistance: up to 4,350 psi

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

● : Standard Item

### 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 the same. Check the pressure resistance before use.
6. Regularly changing the coolant filter is recommended.



Toolholder + Blade Dimensions (Inch Size)

Shank Angle	Width	Max. Grooving Depth	Shank Size (in)	Unit Part Number (Toolholder + Blade)	Stock		Toolholder Part Number P17	Blade Part Number P17	Dimensions (in)							Insert Width CW				
					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 12-T17-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	KGD 16-T17-C	1.00	1.00	0.276	1.00	5.78	1.57	1.13					
	0.118" (3mm)	0.394" (10mm)	0.394" (10mm)	0.75	KGD 12X-3T10S	●	●	KGD 12-C	KGD 12-T10-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	KGD 16-T10-C	1.00	1.00	0.276	1.00	5.51	1.29	1.11				
		0.787" (20mm)	0.787" (20mm)	0.75	KGD 12X-3T20S	●	●	KGD 12-C	KGD 12-T20-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	KGD 16-T20-C	1.00	1.00	0.276	1.00	5.90	1.68	1.11				
	0.157" (4mm)	0.394" (10mm)	0.394" (10mm)	0.75	KGD 12X-4T10S	●	●	KGD 12-C	KGD 12-T10-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	KGD 16-T10-C	1.00	1.00	0.276	1.00	5.51	1.29	1.09				
		0.787" (20mm)	0.787" (20mm)	0.75	KGD 12X-4T20S	●	●	KGD 12-C	KGD 12-T20-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	KGD 16-T20-C	1.00	1.00	0.276	1.00	5.90	1.68	1.09				
		0.984" (25mm)	0.984" (25mm)	0.984" (25mm)	0.75	KGD 12X-4T25S	●	●	KGD 12-C	KGD 12-T25-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	KGD 16-T25-C	1.00	1.00	0.276	1.00	6.10	1.88	1.09			
0.197" (5mm)	0.394" (10mm)	0.394" (10mm)	0.75	KGD 12X-5T10S	●	●	KGD 12-C	KGD 12-T10-C	0.75	0.75	0.472	0.75	4.52	1.29	0.82	0.394" (10mm)				
			1.00	16X-5T10S	●	●	KGD 16-C	KGD 16-T10-C	1.00	1.00	0.276	1.00	5.51	1.29	1.07					
	0.984" (25mm)	0.984" (25mm)	0.984" (25mm)	0.75	KGD 12X-5T25S	●	●	KGD 12-C	KGD 12-T25-C	0.75	0.75	0.472	0.75	5.11	1.88	0.84	0.984" (25mm)			
				1.00	16X-5T25S	●	●	KGD 16-C	KGD 16-T25-C	1.00	1.00	0.276	1.00	6.10	1.88	1.07				

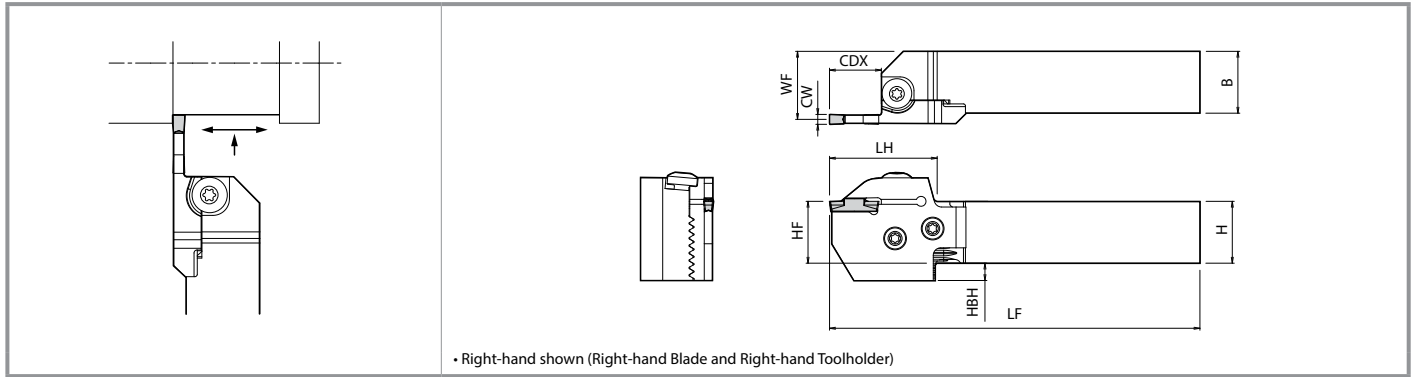
- Note 1) When using the toolholder in normal mounting position, the lower jaw of the toolholder may interfere with the tool presetter.  
 2) The toolholder and blade part numbers are printed on the toolholder body. (Unit part numbers are not printed)  
**KGD-S: Right-hand blades for right-hand toolholders, 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 an insert with a width that falls within the MIN and MAX parameters shown in table above.  
 Applicable Inserts See [Page 4-6](#)

● : Standard Item

Spare Parts (Common with SwitchBlade types) \* The parts are included in the toolholder and unit.

Unit Description	Spare Parts		
	Clamp Bolt (for Insert Clamp)	Clamp Screw (for Blade)	Wrench
KGD 12...S	BH6X10TR	SB-60120TR	LTW-25



Toolholder + Blade Dimensions (Metric Size)




Shank Angle	Width	Max. Grooving Depth	Shank Size (mm)	Unit Part Number (Toolholder + Blade)	Stock		Toolholder Part Number P17	Blade Part Number P17	Dimensions (mm)							Insert Width CW			
					R	L			H	HF	HBH	B	LF	LH	WF	CDX*	MIN.	MAX.	
0°	0.079" (2mm)	0.669" (17mm)	20	KGD P/L 2020X-2T17S	●		KGD P/L 2020-C	KGD P/L -2T17-C	20	20	12	20	122	40	23.4	0.669" (17mm)	0.079" (2mm)	0.118" (3mm)	
			25	2525X-2T17S	●	●	KGD P/L 2525-C		25	25	7	25	147	40	28.4				
			32	No Unit Part Number →			KGD P/L 3232-C		32	32	-	32	167	40	35.4				
	0.118" (3mm)	0.394 (10mm)	20	KGD P/L 2020X-3T10S	●		KGD P/L 2020-C	KGD P/L -3T10-C	20	20	12	20	115	33	23.0	0.394 (10mm)	0.118" (3mm)	0.157" (4mm)	
			25	2525X-3T10S	●		KGD P/L 2525-C		25	25	7	25	140	33	28.0				
			32	No Unit Part Number →			KGD P/L 3232-C		32	32	-	32	160	33	35.0				
		20	KGD P/L 2020X-3T20S	●	●	KGD P/L 2020-C	KGD P/L -3T20-C	20	20	12	20	125	43	23.0	0.787" (20mm)				
		25	2525X-3T20S	●	●	KGD P/L 2525-C		25	25	7	25	150	43	28.0					
		32	3232X-3T20S	●		KGD P/L 3232-C		32	32	-	32	170	43	35.0					
	0.157" (4mm)	0.394" (10mm)	20	KGD P/L 2020X-4T10S	●		KGD P/L 2020-C	KGD P/L -4T10-C	20	20	12	20	115	33	22.5	0.394" (10mm)	0.157" (4mm)	0.197" (5mm)	
			25	2525X-4T10S	●		KGD P/L 2525-C		25	25	7	25	140	33	27.5				
			32	No Unit Part Number →			KGD P/L 3232-C		32	32	-	32	160	33	34.5				
		20	KGD P/L 2020X-4T20S	●		KGD P/L 2020-C	KGD P/L -4T20-C	20	20	12	20	125	43	22.5	0.787" (20mm)				
		25	2525X-4T20S	●	●	KGD P/L 2525-C		25	25	7	25	150	43	27.5					
		32	3232X-4T20S	●		KGD P/L 3232-C		32	32	-	32	170	43	34.5					
		0.984" (25mm)	0.787" (20mm)	20	KGD P/L 2020X-4T25S	●	●	KGD P/L 2020-C	KGD P/L -4T25-C	20	20	12	20	130	48	22.5			0.984" (25mm)
				25	2525X-4T25S	●	●	KGD P/L 2525-C		25	25	7	25	155	48	27.5			
				32	3232X-4T25S	●		KGD P/L 3232-C		32	32	-	32	175	48	34.5			
	0.197" (5mm)	0.787" (20mm)	20	KGD P/L 2020X-5T10S	●	●	KGD P/L 2020-C	KGD P/L -5T10-C	20	20	12	20	115	33	22.0	0.787" (20mm)	0.197" (5mm)	0.236" (6mm)	
			25	2525X-5T10S	●		KGD P/L 2525-C		25	25	7	25	140	33	27.0				
			32	No Unit Part Number →			KGD P/L 3232-C		32	32	-	32	160	33	34.0				
		20	No Unit Part Number →			KGD P/L 2020-C	KGD P/L -5T25-C	20	20	12	20	130	48	22.0	0.984" (25mm)				
		25	KGD P/L 2525X-5T25S	●	●	KGD P/L 2525-C		25	25	7	25	155	48	27.0					
		32	3232X-5T25S	●		KGD P/L 3232-C		32	32	-	32	175	48	34.0					

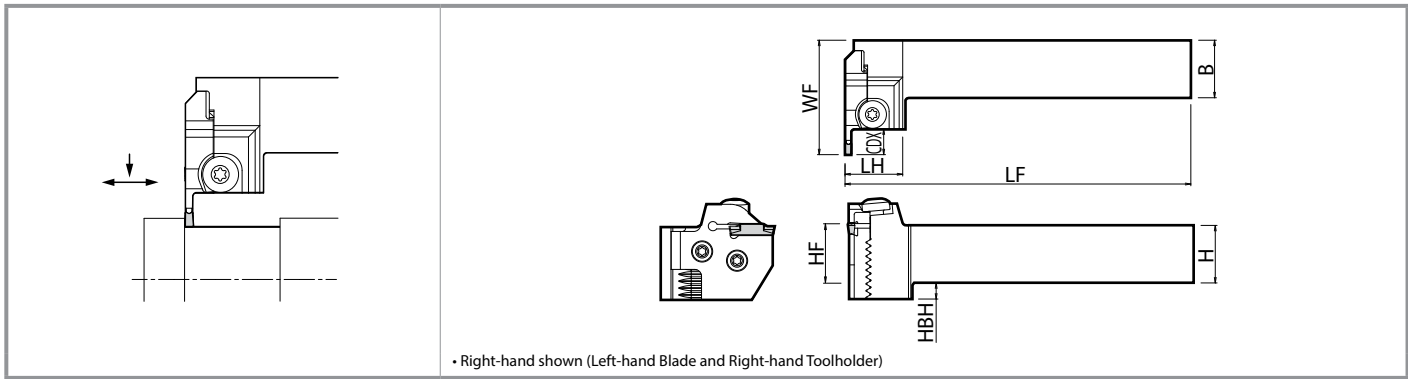
- Note 1) When using the toolholder in normal mounting position, the lower jaw of the toolholder may interfere with the tool presetter.  
 2) The toolholder and blade part numbers are printed on the toolholder body. (Unit part numbers are not printed)  
**KGD-S: Right-hand blades for right-hand toolholders, 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 an insert with a width that falls within the MIN and MAX parameters shown in table above.  
 Applicable Inserts See Page 4-6

● : Standard Item

Spare Parts (Common with SwitchBlade types) \*The parts are included in the toolholder and unit.

Unit Description	Spare Parts		
	Clamp Bolt (for Insert Clamp)	Clamp Screw (for Blade)	Wrench
KGD P/L ...S	 BH6X10TR	 SB-60120TR	 LTW-25



Toolholder + Blade Dimensions (Inch Size)

Shank Angle	Width	Max. Grooving Depth	Shank Size (in)	Unit Part Number (Toolholder + Blade)	Stock	Toolholder Part Number P17	Blade Part Number P17	Dimensions (in)							Insert Width CW		
								R	L	H	HF	HBH	B	LF	LH	WF	CDX*
90°	0.079" (2mm)	0.669" (17mm)	<input type="checkbox"/> 0.75	No Unit Part Number ➔		KGDS% 12-C	KGD%L-2T17-C	0.75	0.75	0.472	0.75	4.92	1.09	2.19	0.669" (17mm)	0.079" (2mm)	0.118" (3mm)
			<input type="checkbox"/> 1.00					1.00	1.00	0.276	1.00	5.91	1.09	2.25			
	0.118" (3mm)	0.394" (10mm)	<input type="checkbox"/> 0.75		KGDS% 12-C	KGD%L-3T10-C	0.75	0.75	0.472	0.75	4.92	1.09	1.92	0.394" (10mm)	0.118" (3mm)	0.157" (4mm)	
			<input type="checkbox"/> 1.00		KGDS% 16-C	KGD%L-3T10-C	1.00	1.00	0.276	1.00	5.91	1.09	1.97				
		0.787" (20mm)	<input type="checkbox"/> 0.75		KGDS% 12-C	KGD%L-3T20-C	0.75	0.75	0.472	0.75	4.92	1.09	2.31	0.787" (20mm)			
			<input type="checkbox"/> 1.00		KGDS% 16-C	KGD%L-3T20-C	1.00	1.00	0.276	1.00	5.91	1.09	2.37				
	0.157" (4mm)	0.394" (10mm)	<input type="checkbox"/> 0.75		KGDS% 12-C	KGD%L-4T10-C	0.75	0.75	0.472	0.75	4.92	1.09	1.92	0.394" (10mm)	0.157" (4mm)	0.197" (5mm)	
			<input type="checkbox"/> 1.00		KGDS% 16-C	KGD%L-4T10-C	1.00	1.00	0.276	1.00	5.91	1.09	1.97				
		0.787" (20mm)	<input type="checkbox"/> 0.75		KGDS% 12-C	KGD%L-4T20-C	0.75	0.75	0.472	0.75	4.92	1.09	2.31	0.787" (20mm)			
			<input type="checkbox"/> 1.00		KGDS% 16-C	KGD%L-4T20-C	1.00	1.00	0.276	1.00	5.91	1.09	2.37				
		0.984" (25mm)	<input type="checkbox"/> 0.75		KGDS% 12-C	KGD%L-4T25-C	0.75	0.75	0.472	0.75	4.92	1.09	2.51	0.984" (25mm)			
			<input type="checkbox"/> 1.00		KGDS% 16-C	KGD%L-4T25-C	1.00	1.00	0.276	1.00	5.91	1.09	2.56				
	0.197" (5mm)	0.394" (10mm)	<input type="checkbox"/> 0.75		KGDS% 12-C	KGD%L-5T10-C	0.75	0.75	0.472	0.75	4.92	1.09	1.92	0.394" (10mm)	0.197" (5mm)	0.236" (6mm)	
			<input type="checkbox"/> 1.00		KGDS% 16-C	KGD%L-5T10-C	1.00	1.00	0.276	1.00	5.91	1.09	1.97				
		0.984" (25mm)	<input type="checkbox"/> 0.75		KGDS% 12-C	KGD%L-5T25-C	0.75	0.75	0.472	0.75	4.92	1.09	2.51	0.984" (25mm)			
			<input type="checkbox"/> 1.00		KGDS% 16-C	KGD%L-5T25-C	1.00	1.00	0.276	1.00	5.91	1.09	2.56				




- 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)  
KGDS-S: Left-hand blades for right-hand toolholders, and right-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 an insert with a width that falls within the MIN and MAX parameters shown in table above.

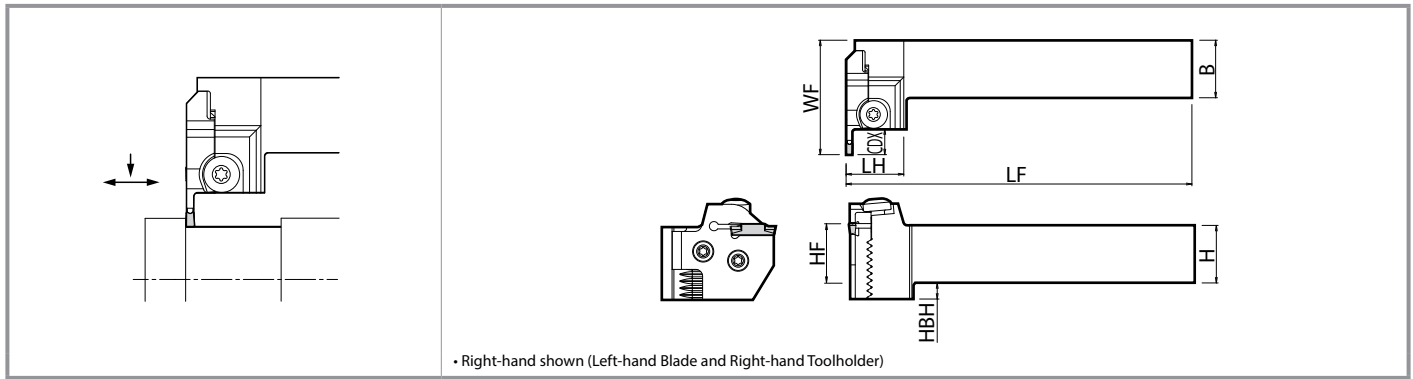
● : Standard Item

Applicable Inserts See [Page 4-6](#)

Spare Parts (Common with SwitchBlade types) \* The parts are included in the toolholder and unit.

Unit Description	Spare Parts		
	Clamp Bolt (for Insert Clamp)	Clamp Screw (for Blade)	Wrench
KGDS%L...S	 BH6X10TR	 SB-60120TR	 LTW-25





Toolholder + Blade Dimensions (Metric Size)




Shank Angle	Width	Max. Grooving Depth	Shank Size (mm)	Unit Part Number (Toolholder + Blade)	Stock		Toolholder Part Number P17	Blade Part Number P17	Dimensions (mm)							Insert Width CW			
					R	L			H	HF	HBH	B	LF	LH	WF	CDX*	MIN.	MAX.	
90°	0.079" (2mm)	0.669" (17mm)	20	No Unit Part Number →			KGDS% 2020-C	KGD% -2T17-C	20	20	12	20	125	27.7	56.7	0.669" (17mm)	0.079" (2mm)	0.118" (3mm)	
			25						25	7	25	150	27.7	56.7					
	0.118" (3mm)	0.394" (10mm)	20	KGDS% 2020X-3T10S	●	●	KGDS% 2020-C	KGD% -3T10-C	20	20	12	20	125	27.7	49.7	0.394" (10mm)	0.118" (3mm)	0.157" (4mm)	
			25	2525X-3T10S	●	●	KGDS% 2525-C	KGD% -3T10-C	25	25	7	25	150	27.7	49.7				
		0.787" (20mm)	20	No Unit Part Number →				KGDS% 2020-C	KGD% -3T20-C	20	20	12	20	125	27.7	59.7			0.787" (20mm)
			25					KGDS% 2525-C	KGD% -3T20-C	25	25	7	25	150	27.7	59.7			
	0.157" (4mm)	0.394" (10mm)	20	No Unit Part Number →				KGDS% 2020-C	KGD% -4T10-C	20	20	12	20	125	27.7	49.7	0.394" (10mm)		
			25					KGDS% 2525-C	KGD% -4T10-C	25	25	7	25	150	27.7	49.7			
		0.787" (20mm)	20					KGDS% 2020-C	KGD% -4T20-C	20	20	12	20	125	27.7	59.7	0.787" (20mm)		
			25					KGDS% 2525-C	KGD% -4T20-C	25	25	7	25	150	27.7	59.7			
		0.984" (25mm)	20					KGDS% 2020-C	KGD% -4T25-C	20	20	12	20	125	27.7	64.7	0.984" (25mm)		
			25					KGDS% 2525-C	KGD% -4T25-C	25	25	7	25	150	27.7	64.7			
	0.197" (5mm)	0.394" (10mm)	20	No Unit Part Number →				KGDS% 2020-C	KGD% -5T10-C	20	20	12	20	125	27.7	49.7	0.394" (10mm)	0.197" (5mm)	0.236" (6mm)
			25					KGDS% 2525-C	KGD% -5T10-C	25	25	7	25	150	27.7	49.7			
		0.984" (25mm)	20					KGDS% 2020-C	KGD% -5T25-C	20	20	12	20	125	27.7	64.7	0.984" (25mm)		
			25					KGDS% 2525-C	KGD% -5T25-C	25	25	7	25	150	27.7	64.7			

- 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)  
**KGDS-S: Left-hand blades for right-hand toolholders, and right-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 an insert with a width that falls within the MIN and MAX parameters shown in table above.  
 Applicable Inserts See [Page 4-6](#)

● : Standard Item

Spare Parts (Common with SwitchBlade types) \*The parts are included in the toolholder and unit.

Unit Description	Spare Parts		
	Clamp Bolt (for Insert Clamp)	Clamp Screw (for Blade)	Wrench
KGDS% ...S	 BH6X10TR	 SB-60120TR	 LTW-25

## Toolholder Identification System (External Grooving, Cut-Off | Integral, SwitchBlade)

**KGD**

<b>R</b>	<b>1616</b>	<b>H</b>	<b>- 3</b>	<b>T</b>	<b>06</b> (Integral Type)
Toolholder hand R: Right-hand L: Left-hand	Shank Size 16 × 16 mm	Toolholder Length H: 100 mm	Applicable Inserts GDM/GDMS 3 ~ 4 mm	Max. Grooving Depth 06: 6 mm	

**KGD**

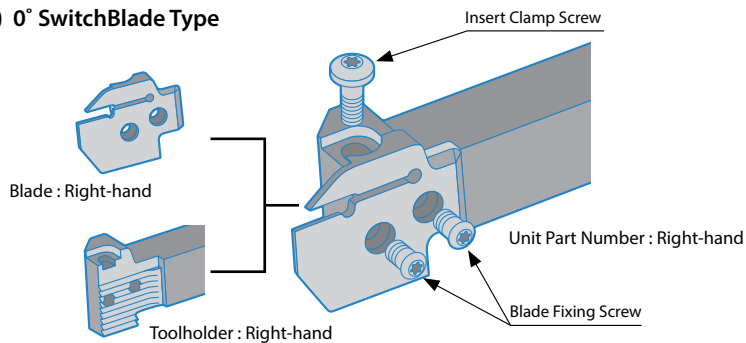
<b>R</b>	<b>2020</b>	<b>K</b>	<b>- 3</b>	<b>T</b>	<b>06</b>	<b>JCT</b> (Coolant-through Holders)
Toolholder hand R: Right-hand L: Left-hand	Shank Size 20 × 20 mm	Toolholder Length K: 125 mm	Applicable Inserts GDM/GDMS 3 ~ 4 mm	Max. Grooving Depth 06: 6 mm	Others Coolant-through Holders	

**KGD**  
**KGDS**

<b>R</b>	<b>2020</b>	<b>X</b>	<b>- 3</b>	<b>T</b>	<b>10</b>	<b>S</b> (SwitchBlade Type / Unit Description)
Toolholder hand R: Right-hand L: Left-hand	Shank Size 20 × 20 mm	Toolholder Length Unit Description	Applicable Inserts GDM/GDMS 3 ~ 4 mm	Max. Grooving Depth 10: 10 mm		

## SwitchBlade Toolholder Unit Structure (External Grooving, Cut-Off)

### 1) 0° SwitchBlade Type



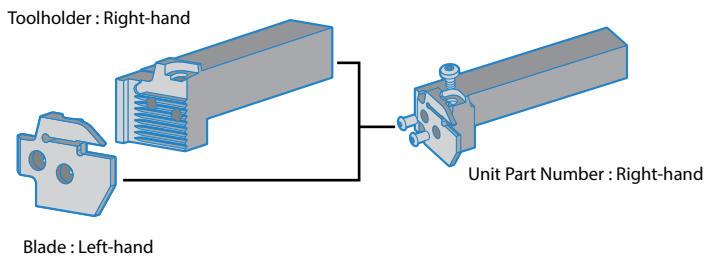
Toolholder (KGD<sup>%/L</sup>○○-C)

+

Blade (KGD<sup>%/L</sup>-○○○○-C)

⇒ Right-hand Blade for Right-hand Toolholder,  
Left-hand Blade for Left-hand Toolholder.

### 2) 90° SwitchBlade Type



Toolholder (KGDS<sup>%/L</sup>○○-C)

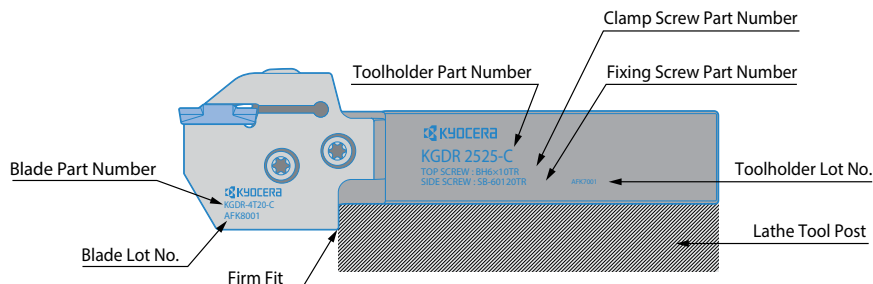
+

Blade (KGD<sup>%/L</sup>-○○○○-C)

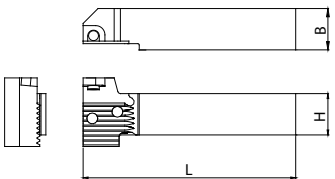
⇒ Left-hand Blade for Right-hand Toolholder,  
Right-hand Blade for Left-hand Toolholder.

## SwitchBlade Toolholder Identification System and Lathe Setting

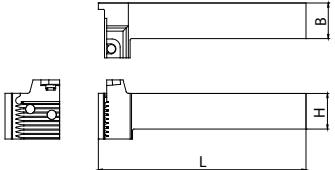
Firmly fit the lower jaw to the tool post of the lathe.



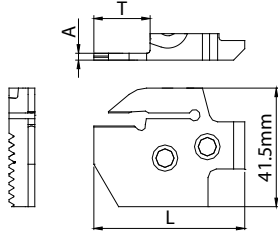
Toolholder Dimensions

<b>KGD-S (0° SwitchBlade Type)</b> Right-hand shown 	Toolholder Part Number	Stock		Unit	Dimensions		
		R	L		L	B	H1
	KGD <sup>®</sup> /L 12-C	●	●	inch	4.09	0.75	0.75
		●	●		5.08	1.00	1.00
	KGD <sup>®</sup> /L 2020-C	●	●	mm	104	20	20
		●	●		129	25	25
	3232-C	●	●		149	32	32

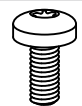

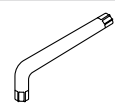
<b>KGDS-S (90° SwitchBlade Type)</b> Right-hand shown 	Toolholder Part Number	Stock		Unit	Dimensions		
		R	L		L	B	H1
	KGDS <sup>®</sup> /L 12-C	●	●	inch	4.80	0.75	0.75
		●	●		5.79	1.00	1.00
	KGDS <sup>®</sup> /L 2020-C	●	●	mm	122	20	20
		●	●		147	25	25

Blade Dimensions

<b>Blade</b> Right-hand shown 	Blade Part Number	Stock		Unit	Dimensions		
		R	L		L	T	A
	KGD <sup>®</sup> /L	●	●	mm	51.2	17.2	1.7
		●	●		44.2	10.2	2.4
		●	●		53.2	20.2	2.4
		●	●		44.2	10.2	3.4
		●	●		54.2	20.2	3.4
		●	●		59.2	25.2	3.4
		●	●		44.2	10.2	4.4
		●	●		59.2	25.2	4.4
		●	●				

● : Standard Item

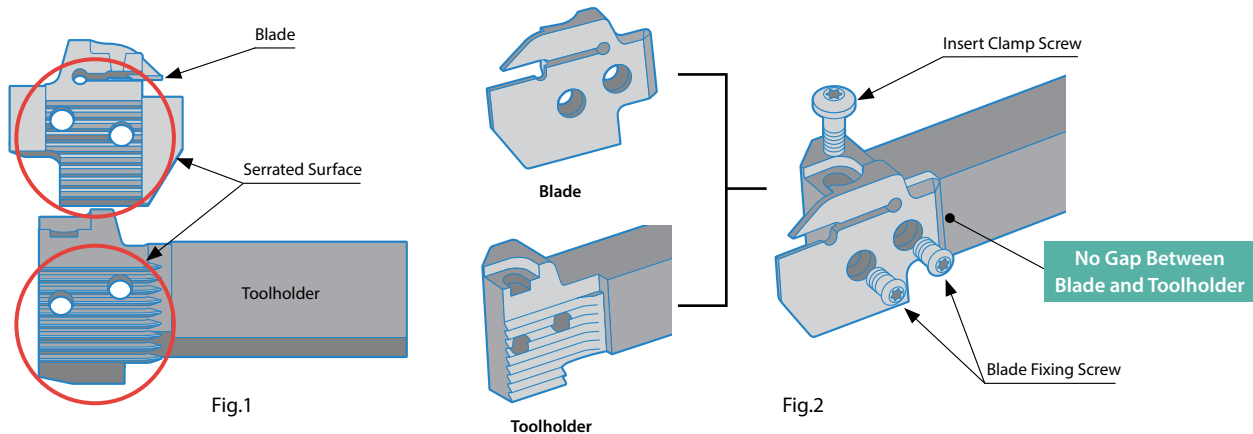
Spare Parts (Common with SwitchBlade Types)

Unit Part Number	Spare Parts		
	Clamp Screw (for Insert Clamp)	Clamp Screw (for Blade)	Wrench
			
KGD <sup>®</sup> /L .....S KGDS <sup>®</sup> /L .....S	BH6X10TR	SB-60120TR	LTW-25

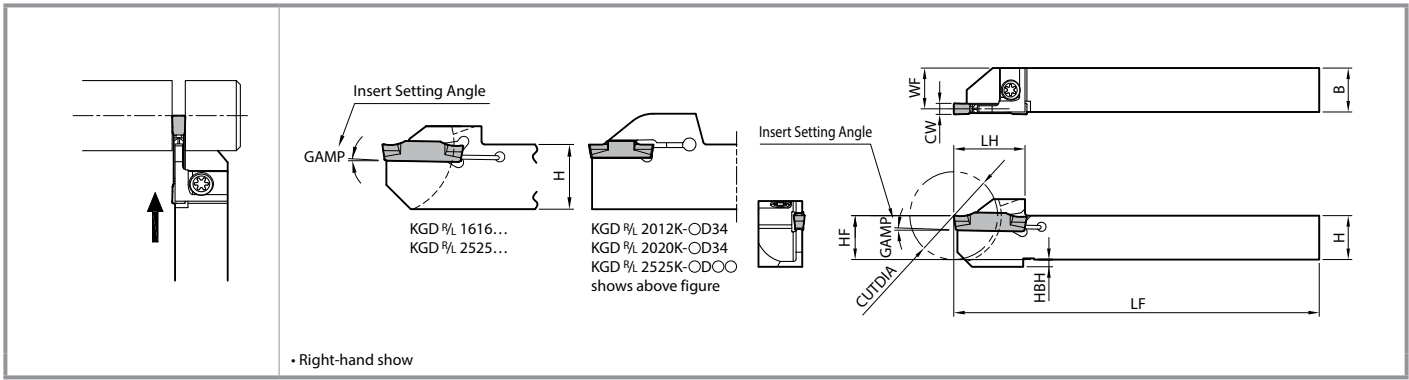
\* Parts are included with the toolholder and unit.

Setting the Blade Into the Toolholder (SwitchBlade Type)

1. Use compressed air or other measures to remove chips and dust from the serrated surface. (See Fig.1)
2. Mate and fit the serrations of the blade and toolholder, and also fit the blade end to the toolholder. (See Fig.2)
3. Tighten the blade fixing screws at an appropriate torque. You can tighten them in any order. (See Fig.2) (Recommended tightening torque : 8Nm)
4. Set the insert after setting the blade. (See Page 6 for insert setting instructions)



Insert Width: 0.051" ~ 0.157" / 1.3mm ~ 4.0mm



Toolholder Dimensions (Inch Size)

Part Number	Stock		Cut-Off Dia.	Dimensions (in)							Angle	Insert Width CW		Spare Parts	
	R	L		CUTDIA	H	HF	HBH	B	LF	LH		WF	MIN	MAX	Clamp Screw/Bolt
KGD %/ 6-1.3JX	●	●	0.787	0.375	0.375	0.098	0.375	4.75	0.709	0.356	1°	0.051" (1.3mm)	0.051" (1.3mm)	SB-40120TR	LTW-15S
8-1.3JX	●	●	0.944	0.500	0.500	0.051	0.500	4.75	0.768	0.481					
KGD %/ 6-1.5JX	●	●	0.787	0.375	0.375	0.098	0.375	4.75	0.709	0.351	1°	0.051" (1.5mm)	0.051" (1.5mm)	SB-40120TR	LTW-15S
8-1.5JX	●	●	0.944	0.500	0.500	0.051	0.500	4.75	0.768	0.476					
KGD %/ 6-2JX	●	●	0.787	0.375	0.375	0.098	0.375	4.75	0.709	0.342	1°	0.079" (2mm)	0.118" (3mm)	SB-40120TR	LTW-15S
8-2JX	●	●	0.944	0.500	0.500	0.051	0.500	4.75	0.768	0.467					
10-2JX	●	●	1.259	0.625	0.625	-	0.625	4.75	0.965	0.592					
KGD %/ 6-2.4JX	●	●	0.787	0.375	0.375	0.098	0.375	4.75	0.709	0.336	1°	0.094" (2.4mm)	0.118" (3mm)	SB-40120TR	LTW-15S
8-2.4JX	●	●	0.944	0.500	0.500	0.051	0.500	4.75	0.768	0.461					
10-2.4JX	●	●	1.259	0.625	0.625	-	0.625	4.75	0.965	0.586					
KGD %/ 8-3JX	●	●	0.944	0.500	0.500	0.051	0.500	4.75	0.768	0.453	1°	0.118" (3mm)	0.118" (3mm) 0.157" (4mm)	SB-40120TR	LTW-15S
10-3JX	●	●	1.259	0.625	0.625	-	0.625	4.75	0.965	0.578					
KGD %/ 10-3D38JX	●	●	1.496	0.625	0.625	-	0.625	4.75	1.142	0.578	1°	0.118" (3mm)	0.157" (4mm)	SE-50125TR	LTW-20
12-3D42JX	●	●	1.653	0.750	0.750	-	0.750	4.75	1.220	0.703					
43-3D42JX	●	●	1.653	0.750	0.750	-	0.500	4.75	1.220	0.453					

Note 1) 0.157" (4mm) width insert can be installed in KGD %/ 8-3JX, 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.

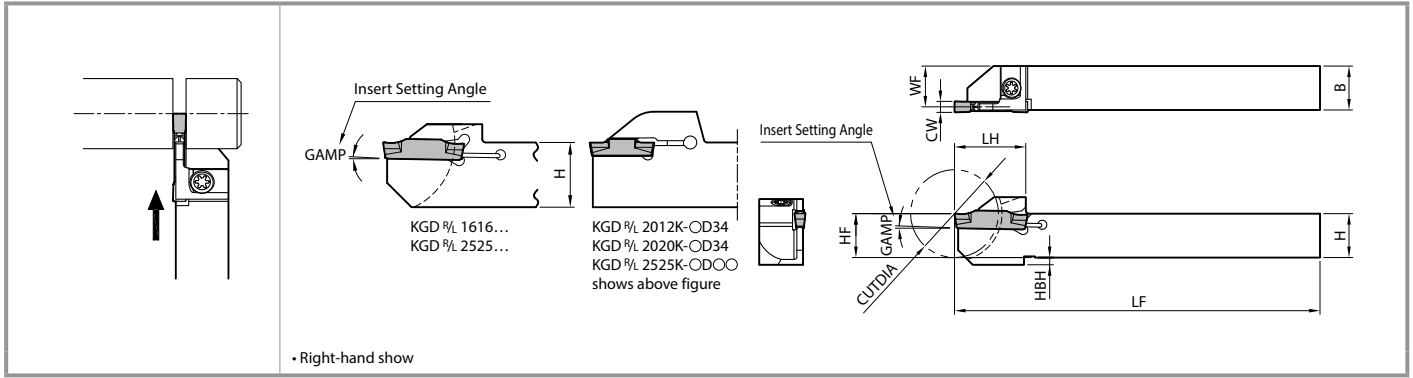
3) When machining material greater than Ø1.417" (36mm) with KGD %/ 10-3D38JX, KGD %/ 12-3D42JX, or KGD %/ 43-3D42JX toolholders, use 1-edge inserts. Max. workpiece diameter for 2-edge inserts is Ø1.417" (36mm)

Choose an insert with a width that falls within the MIN and MAX parameters shown in table above.

Applicable Inserts See [Page 4-6](#)

● : Standard Item

Insert Width: 0.051" ~ 0.157" / 1.3mm ~ 4.0mm



Toolholder Dimensions (Metric Size)

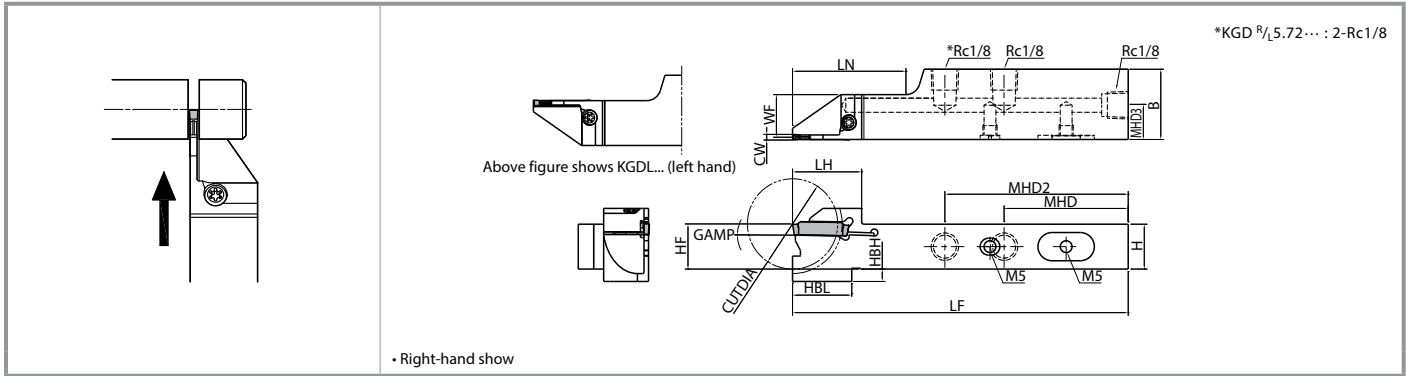
Part Number	Stock		Cut-Off Dia.	Dimensions (mm)							Angle	Insert Width CW		Spare Parts				
	R	L		CUTDIA	H	HF	HBH	B	LF	LH		WF	GAMP	MIN	MAX	Clamp Screw/Bolt	Wrench	
KGD % 1010JX-1.3D16	●	●	16	10	10	2	10	120	18	9.9	5°	0.051" (1.3mm)	0.051" (1.3mm)	SB-40120TR	LTW-15S			
1010JX-1.3	●	●	20	10	10	2	10	120	18	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								
KGD % 1010JX-1.5D16	●	●	16	10	10	2	10	120	18	9.7	5°	0.051" (1.5mm)	0.051" (1.5mm)	SB-40120TR	LTW-15S			
1010JX-1.5	●	●	20	10	10	2	10	120	18	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								
1212JX-1.5	●	●	24	12	12	2	12	120	19.5	11.4								
KGD % 1010JX-2	●	●	20	10	10	2	10	120	18	9.2	1°	0.079" (2mm)	0.118" (3mm)	SB-40120TR	LTW-15S			
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°			0.094" (2.4mm)	0.118" (3mm)	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	9	1°	0.094" (2.4mm)	0.118" (3mm)			SB-40120TR	LTW-15S	
1212F-2.4	●	●	24	12	12	2	12	85	19.5	11								
1212JX-2.4	●	●	24	12	12	2	12	120	19.5	11								
1616JX-2.4	●	●	32	16	16	-	16	120	24.5	15				0°	0.118" (3mm)	0.157" (4mm)	HH5X16	LW-4
2012K-2.4D34	●	●	34	20	20	-	12	125	32.5	11								
2020K-2.4D34	●	●	34	20	20	-	20	125	32.5	19								
KGD % 1212JX-3	●	●	24	12	12	2	12	120	19.5	10.8	1°	0.118" (3mm)	0.118" (3mm)	SB-40120TR			LTW-15S	
1616JX-3	●	●	32	16	16	-	16	120	24.5	14.8								
1616JX-3D38	●	●	38	16	16	-	16	120	29	14.8		0.118" (3mm)	0.157" (4mm)	SE-50125TR			LTW-20	
1913K-3D38	●	●		19	19	-	13	125	29	11.8								
2012JX-3D42	●	●	42	20	20	-	12	120	31	10.8								
2012JX-3D51	●	●	51	20	20	-	12	120	36	10.8								
2020JX-3D42	●	●	42	20	20	-	20	120	31	18.8								
2020JX-3D51	●	●	51	20	20	-	20	120	36	18.8								

- Note 1) 0.157" (4mm) width insert can be installed in KGD % 8-3JX, 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 % 10-3D38JX, KGD % 12-3D42JX, or KGD % 43-3D42JX toolholders, use 1-edge inserts.  
Max. workpiece diameter for 2-edge inserts is Ø1.417" (36mm)





Choose an insert with a width that falls within the MIN and MAX parameters shown in table above.  
Applicable Inserts See [Page 4-6](#)

● : Standard Item





Toolholder Dimensions (Inch Size)

Part Number	Stock		Cut-Off Dia.	Dimensions (in)											Angle	Insert Width CW		Spare Parts				
	R	L		H=HF	HBH	B	LF	LH	HBL	LN	WF	MHD	MHD2	MHD3		GAMP	MIN	MAX				
	CUTDIA	CUTDIA																				
KGDR 5.72-2JCTM	●		0.945	0.500	0.330	0.709	4.750	0.825	1.725	0.500	2.125	-	0.331	1°	0.079" (2mm)	0.118" (3mm)						
KGDL 5.72-2JCTM	●							0.843					0.303									
KGDR 82.5-2JCTM	●		1.260	0.625	0.175	1.000	4.750	0.965	1.585	0.625	1.730	2.560	0.480	1°	0.094" (2.4mm)	0.118" (3mm)	SB-40120TR	LTW-15S	GP-1	HS5X4LP		
KGDL 82.5-2JCTM	●							0.303					0.303									
KGDR 5.72-2.4JCTM	●		0.945	0.500	0.330	0.709	4.750	0.825	1.725	0.500	2.125	-	0.331	1°	0.094" (2.4mm)	0.118" (3mm)						
KGDL 5.72-2.4JCTM	●							0.843					0.303									
KGDR 82.5-2.4JCTM	●		1.260	0.625	0.175	1.000	4.750	0.965	1.585	0.625	1.730	2.560	0.480	1°	0.094" (2.4mm)	0.118" (3mm)						
KGDL 82.5-2.4JCTM	●							0.303					0.303									
KGDR 5.72-3JCTM	●		0.945	0.500	0.330	0.709	4.750	0.825	1.725	0.500	2.125	-	0.331	1°	0.118" (3mm)	0.118" (3mm)						
KGDL 5.72-3JCTM	●							0.843					0.303									
KGDR 82.5-3JCTM	●		1.260	0.625	0.175	1.000	4.750	0.965	1.585	0.625	1.730	2.560	0.480	1°	0.118" (3mm)	0.157" (4mm)						
KGDL 82.5-3JCTM	●							0.303					0.303									

For coolant piping parts, see [Page 22-23](#)

Choose an insert with a width that falls within the MIN and MAX parameters shown in table above.

Applicable Inserts See [Page 4-6](#)

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

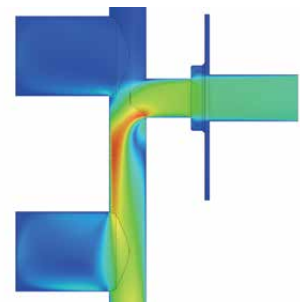
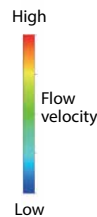
Compatible with various machine including the above. Toolholders can be customized as well.

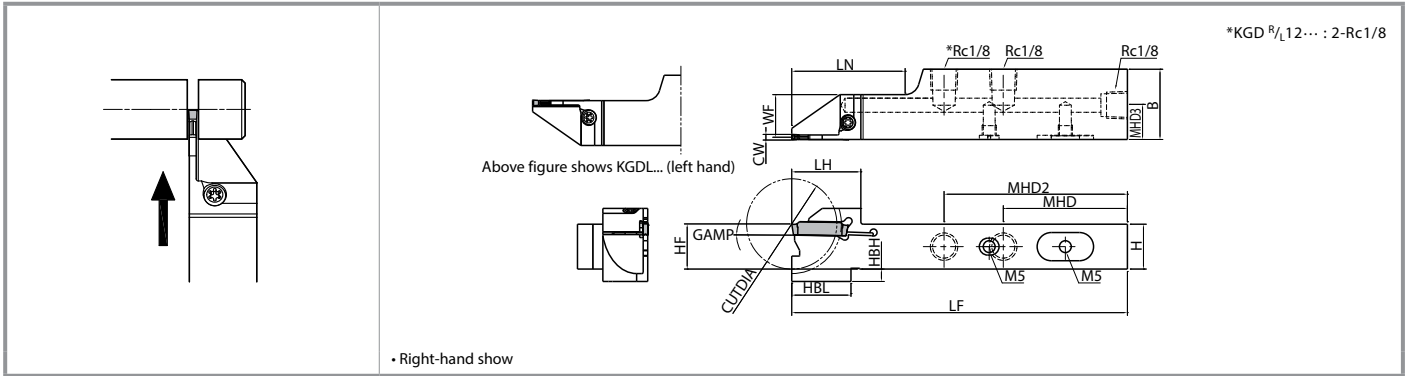


Optimized Coolant Supply

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

Analysis Image (Internal Evaluation)





Toolholder Dimensions (Metric Size)

Part Number	Stock		Cut-Off Dia.	Dimensions (mm)											Angle	Insert 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
KGDR 1218JX-2JCTM	●		24	12	8.5	18	120	19.5	21	44	11.2	54	-	8.4	1°	0.079" (2mm)	0.118" (3mm)	SB-40120TR	LTW-15S	GP-1	HS5X4LP	
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								7.7
KGDL 1625JX-2JCTM	●							7.7														
KGDR 1218JX-2.4JCTM	●		24	12	8.5	18	19.5	21	44	11	54	-	8.4	1°	0.094" (2.4mm)	0.118" (3mm)						
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				7.7					
KGDL 1625JX-2.4JCTM	●						7.7															
KGDR 1218JX-3JCTM	●		24	12	8.5	18	19.5	21	44	10.8	54	-	8.6	1°	0.118" (3mm)	0.118" (3mm)						
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				7.7					
KGDL 1625JX-3JCTM	●						7.7	0.157" (4mm)														

For coolant piping parts, see [Page 22-23](#)

Choose an insert with a width that falls within the MIN and MAX parameters shown in table above.

Applicable Inserts See [Page 4-6](#)

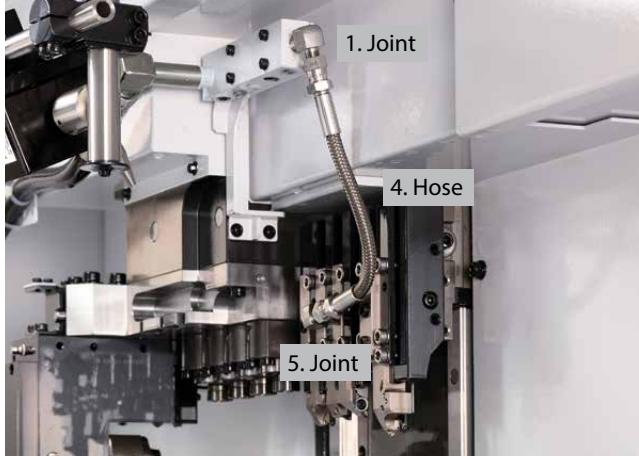
# Coolant Piping Parts

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

Pump Pressure: up to 2,900 psi

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

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



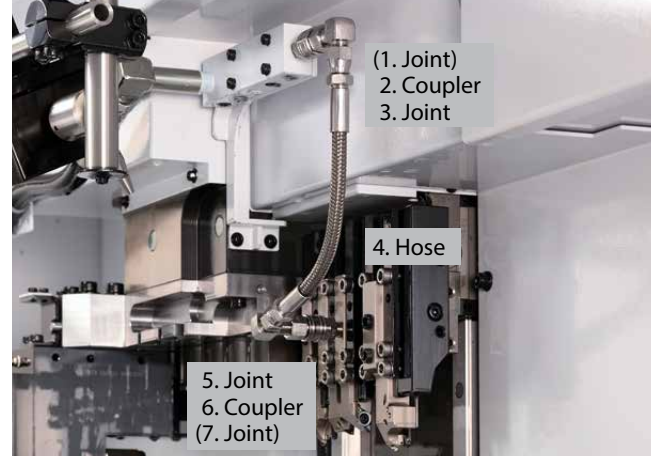
Combination Part Number (Example)

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

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

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

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



Combination Part Number (Example)

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

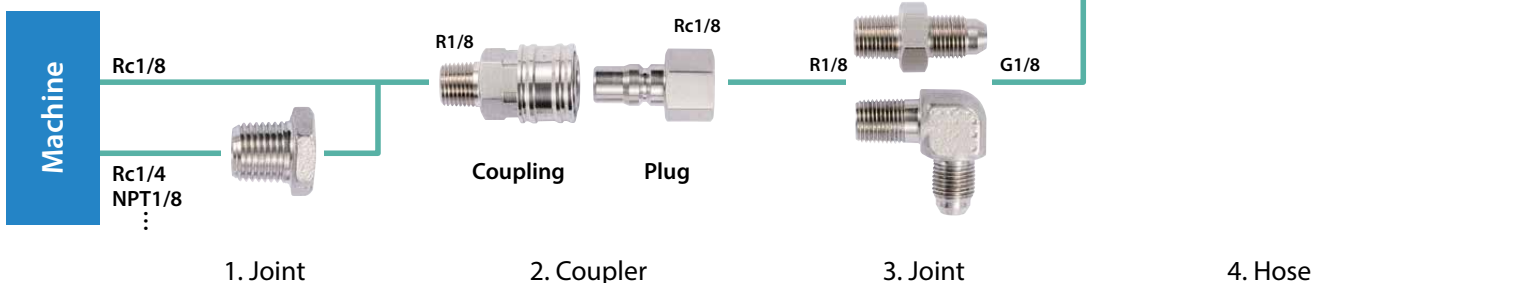
Convert the thread standards on the machine's side (Rc1/4, Rc1/8, NPT1/8, etc.) to thread standards of the coupler (Rc1/8, etc.) or hose (G1/8) for use.

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

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



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



# 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

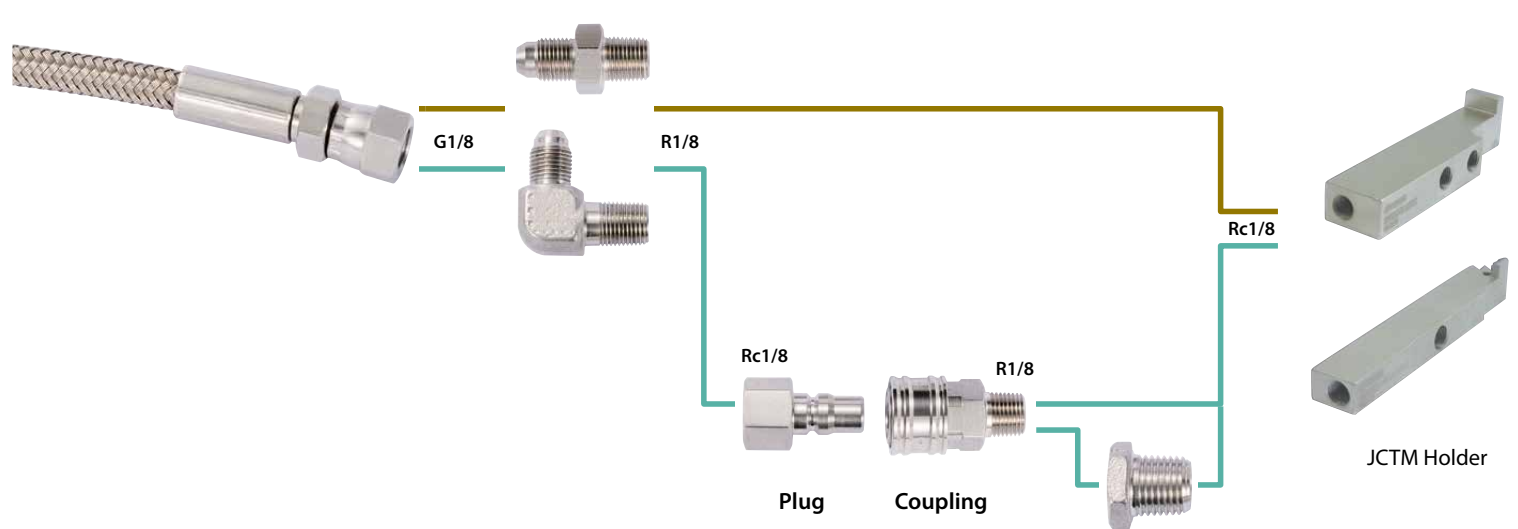
Coupler (2, 6) Pressure Resistance: up to 1,090 psi (Unit: mm)

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

(Unit: mm)

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

● : Standard Item

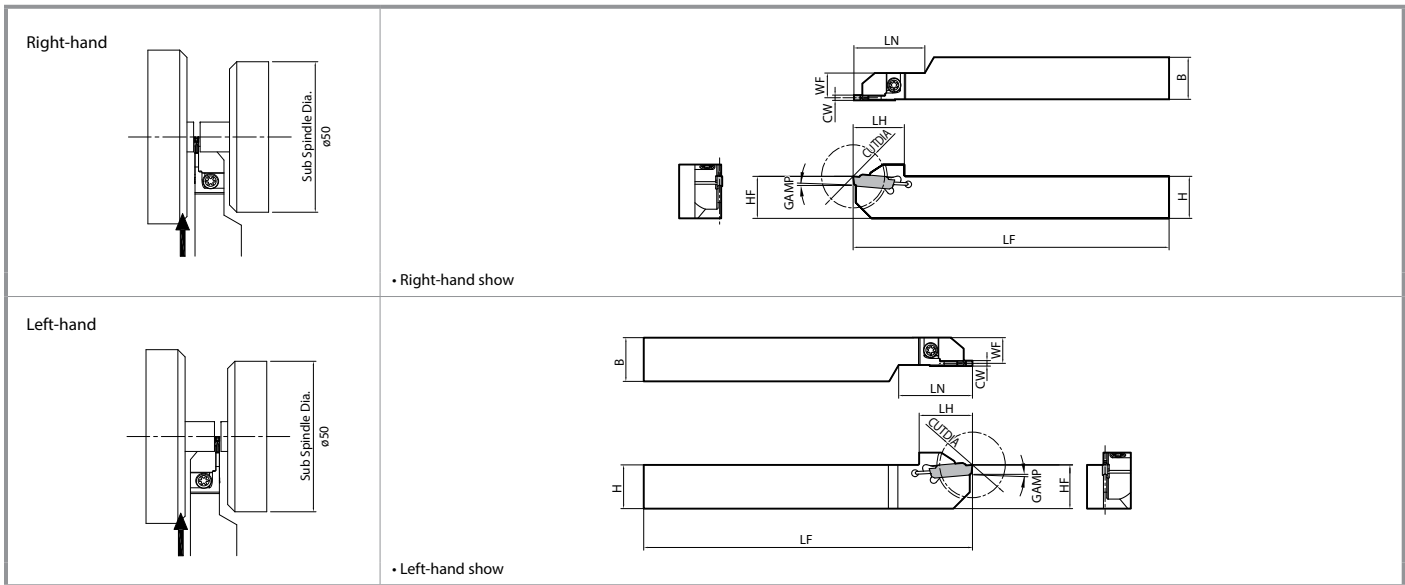


4. Hose

5. Joint

6. Coupler

7. Joint (Extension Joint)



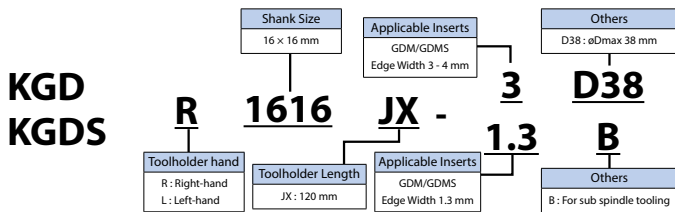
Toolholder Dimensions (Metric Size)

Part Number	Stock		Cut-Off Dia.	Dimensions (mm)							Angle	Insert Width CW		Spare Parts	
	R	L		CUTDIA	H	HF	B	LF	LH	LN		WF	GAMP	MIN	MAX
KGDS% 1616JX-1.3B	●	●	24	16	16	16	120	19.5	27	9.5	5°	0.051" (1.3mm)	0.051" (1.3mm)	SB-40120TR	LTW-155
1616JX-1.5B	●	●										0.051" (1.5mm)	0.051" (1.5mm)		
1616JX-2B	●	●									9.2	1°	0.079" (2mm)		

Choose an insert with a width that falls within the MIN and MAX parameters shown in table above.

Applicable Inserts See [Page 4-6](#)

Toolholders Identification System (Small Parts Machining)



KGDS Selection Reference

KGDS Standard Type

Both Right-hand and Left-hand types are applicable to gang tool post. Basically Left-hand type is used for cut-off operation using a sub spindle.

KGDR (Right-hand)	KGDL (Left-hand)
1st Recommendation Use insert with lead angle to remove boss • No sub-spindle • Cut-off close to main spindle	1st Recommendation Insert without lead angle • Sub-spindle use • Cut-off close to sub-spindle

KGDS Sub Spindle Type

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

KGDSR (Right-hand)	KGDSL (Left-hand)
• Long workpiece and more rigidity • Cut-off near main spindle	• Short workpiece and less rigidity • Cut-off near sub-spindle

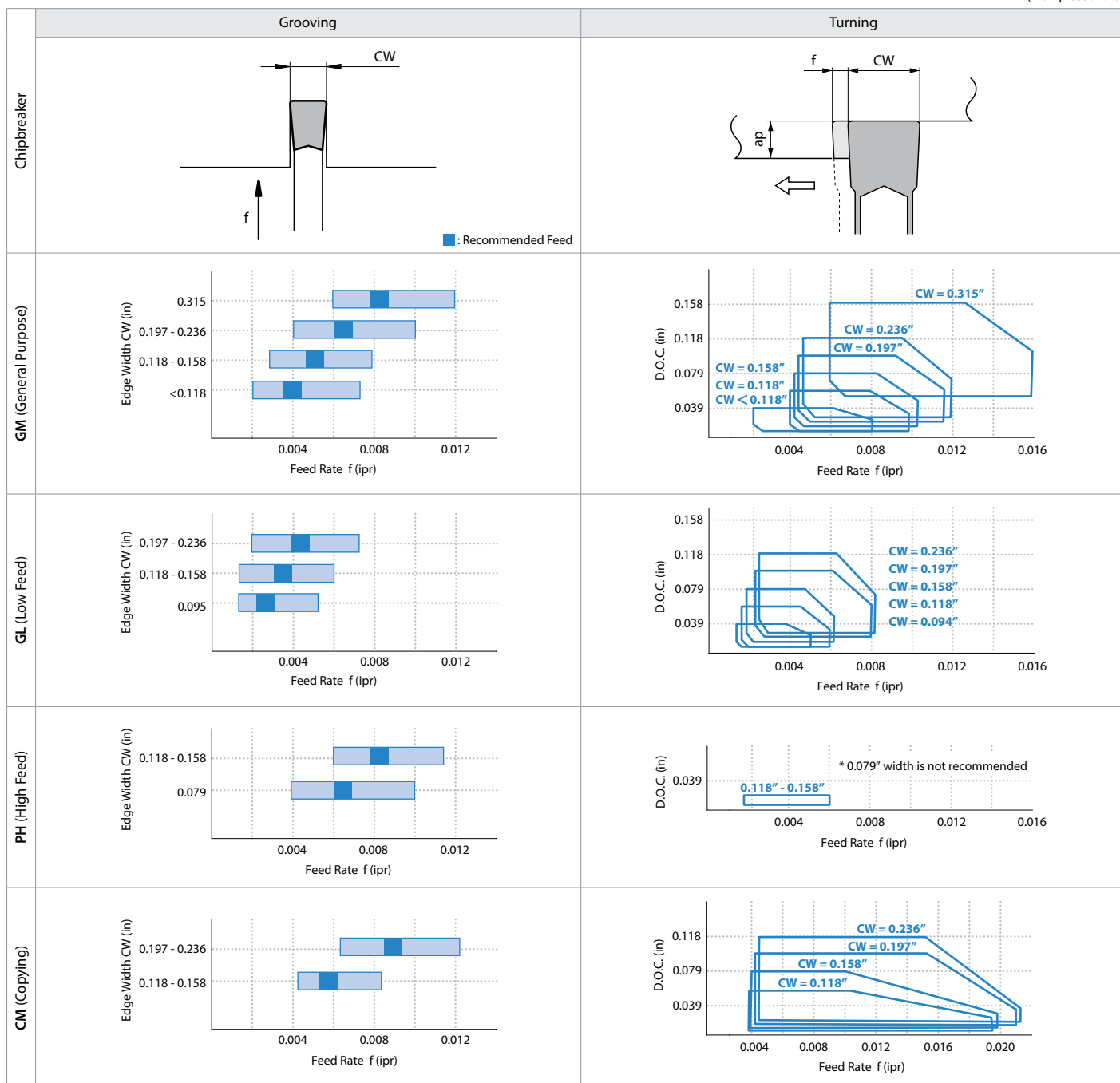


# Recommended Cutting Conditions (External Grooving) ★ 1st Recommendation ☆ 2nd Recommendation

Workpiece	Chipbreaker	Recommended Insert Grade (Vc : sfm)									Notes
		Cermet		MEGACOAT NANO	MEGACOAT		Carbide	MEGACOAT CBN	CBN	PCD	
		TN620	TN90	PR1535	PR1225	PR1215	GW15	KBN05M	KBN570	KPD001	
Carbon Steel	GM	☆ 260 - 720	☆ 330 - 720	☆ 260 - 660	★ 260 - 660	☆ 330 - 660	-	-	-	-	Coolant
Alloy Steel	GL	☆ 230 - 660	☆ 260 - 660	☆ 230 - 590	★ 230 - 590	☆ 260 - 590	-	-	-	-	
Stainless Steel	PH	-	-	★ 200 - 490	☆ 200 - 490	☆ 200 - 490	-	-	-	-	
Cast Iron	GS	-	-	-	-	★ 330 - 660	-	-	-	-	
Aluminum Alloy	GS	-	-	-	-	-	☆ 660 - 1,640	-	-	★ 490 - 6,560	
Brass	AM	-	-	-	-	-	☆ 330 - 660	-	-	★ 660 - 2,620	
Hard Materials	NB	-	-	-	-	-	-	★ 260 - 490	-	-	
Powdered Steel	NB	-	-	-	-	-	-	-	★ 330 - 820	-	

## Recommended Cutting Conditions (Feed Rate / Depth of Cut)

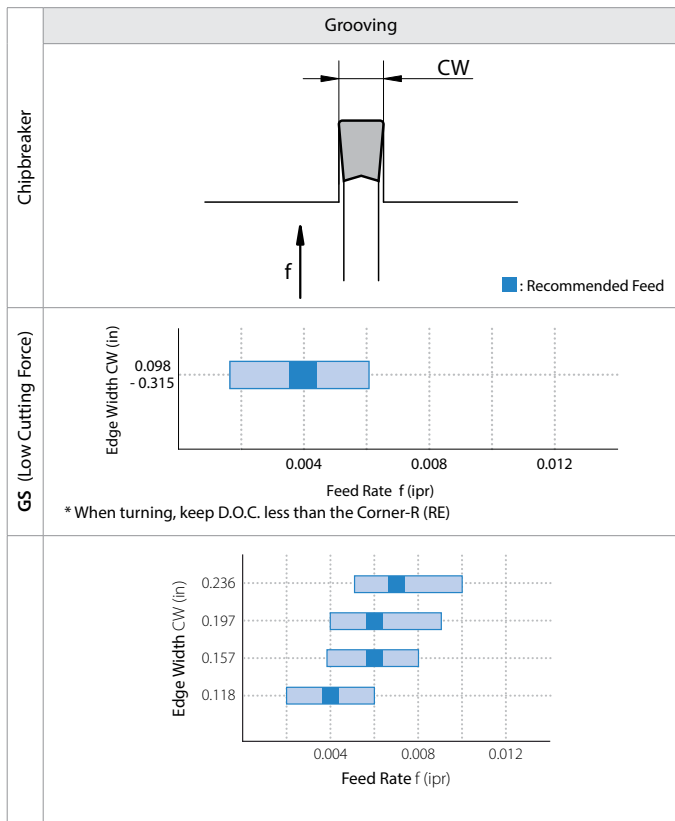
(Workpiece : 1049)



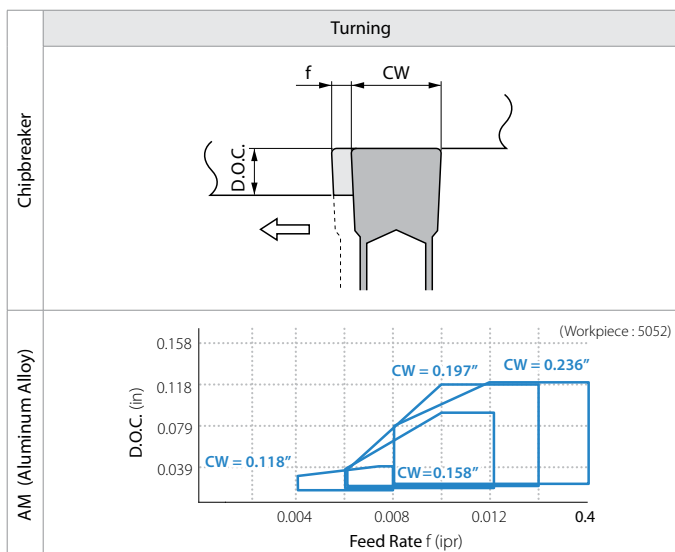
1) The above values reflect a T dimension that is 0.669" (17mm) or less.  
 2) If the toolholder is not for the 0.315" (8mm) width insert and its T dimension is over 0.669" (17mm), set the values for turning to less than 90% of recommended cutting conditions above.

# Recommended Cutting Conditions (External Grooving)

## Recommended Cutting Conditions (Feed Rate / D.O.C.)

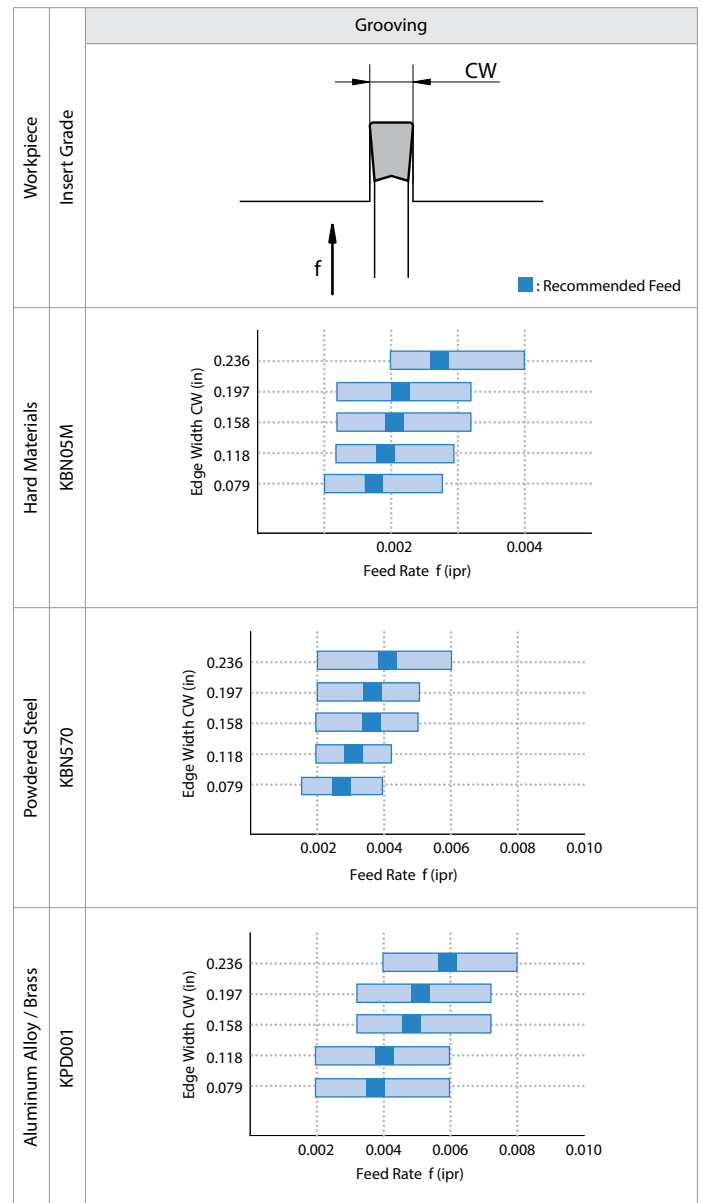


Note 1) The above values are based on the condition that CDX of toolholder is 0.669" (17mm) or less.



Note 1) The above values are based on the condition that CDX of toolholder is 0.669" (17mm) or less.

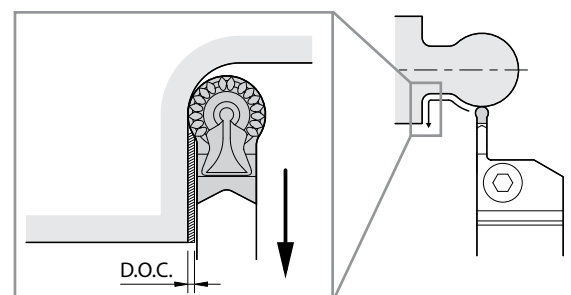
## Recommended Cutting Conditions (Feed Rate)



## CM Chipbreaker (Back Turning)

Estimated maximum cutting amount (D.O.C.) for back turning

Part Number	Max. D.O.C. (in)				
	Toolholder Part Number				
	KGD...-2T...	KGD...-3T...	KGD...-4T...	KGD...-5T...	KGD...-6T...
GDM 3020N-150R-CM	0.009	0.008	-	-	-
4020N-200R-CM	-	0.009	0.008	-	-
5020N-250R-CM	-	-	0.012	0.008	-
6020N-300R-CM	-	-	-	0.012	0.010



# Guide for External Grooving

## 1) Turning After Grooving

1. Grooving Depth Over 0.020" (0.5mm) : At Roughing (see Fig.1)

Before turning, pull the tool back about 0.004" (0.1mm) after grooving, instead of turning subsequent to grooving.

(Failure to pull the tool back before traverse cutting will result in an unbalanced load applied on only one side of the cutting edge.)

2. Grooving Depth Under 0.020" (0.5mm) : At Finishing (see Fig.2)

Turning subsequent to grooving is possible because shallow groove depths relate a small load on the cutting edge. (Dwell-motion is not necessary)

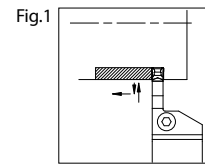
## 2)

1. When widening the groove width, apply the "Step Turning" as shown in Fig.3

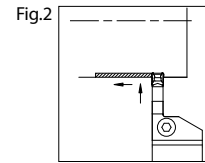
2. The widened groove and side walls should be finished last.

(For better chip control, D.O.C. over 0.020" (0.5mm) is recommended.)

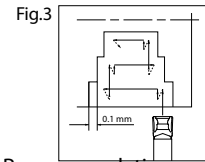
Note : If the workpiece is not supported at the center, reduce the feed rate when grooving towards center



Before turning, pull the tool back about 0.004" (0.1mm) after grooving (Grooving depth over 0.020" (0.5mm) : At Roughing)



Turning subsequent to grooving (Grooving depth under 0.020" (0.5mm) : At Finishing)



## Recommended Cutting Conditions (Cut-Off) ★ 1st Recommendation ☆ 2nd Recommendation

### PF Chipbreaker

Workpiece	Cutting Conditions (Vc : sfm)				Feed Rate (f : ipr)						Notes
	Recommended Insert Grade				PF Corner-R (RE) = 0.001			PF Corner-R (RE) = 0.006			
	MEGACOAT NANO	MEGACOAT		Carbide	Insert Width (W)			Insert Width (W)			
	PR1535	PR1225	PR1215	GW15	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	☆ 160 - 330	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	Insert Width (W)		Insert Width (W)		
	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	

### PM / PH Chipbreaker

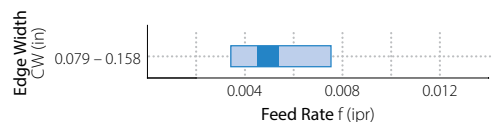
Workpiece	Cutting Conditions (Vc : sfm)			Feed Rate (f : ipr)			Notes
	Recommended Insert Grade			PM	PH		
	MEGACOAT NANO	MEGACOAT		Insert Width (W)	Insert Width (W)		
	PR1535	PR1225	PR1215	0.079" - 0.158" 2.0mm - 4.0mm	0.079" 2.0mm	0.095" - 0.158" 3.0mm - 4.0mm	
Carbon Steel	☆ 260 - 660	★ 260 - 660	☆ 330 - 660	0.0031 - 0.0071	0.0039 - 0.0098	0.0059 - 0.0110	Coolant
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	

### Example of feed

In the graph below indicates the most recommended value of feed (f)

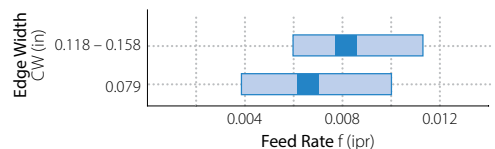
• PM Chipbreaker

(Workpiece : 1049)



• PH Chipbreaker

(Workpiece : 1049)



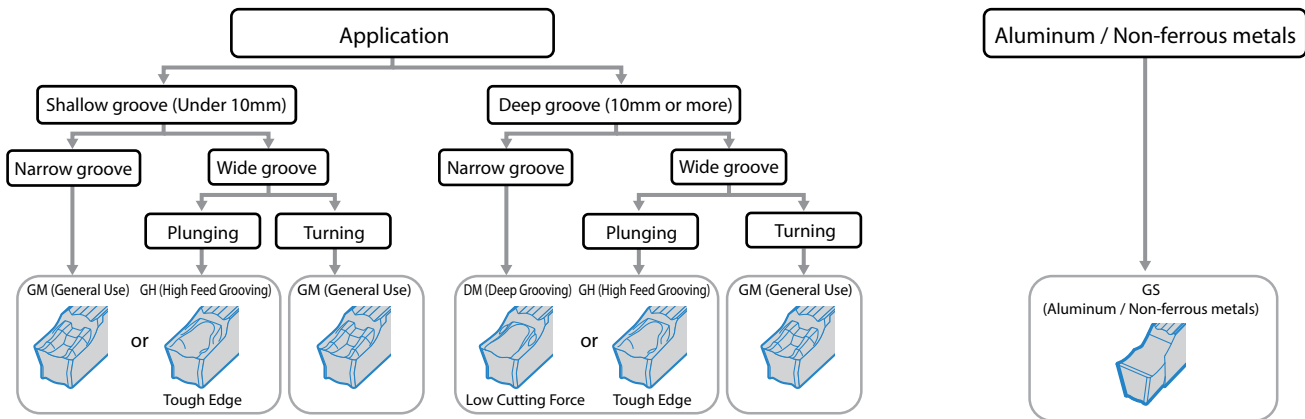
# KGDF Face Grooving

Good Chip Control

MEGACOAT Coating Technology for Long Tool Life and High Efficiency Machining

## 1 Wide Range of Chipbreakers Available for Face Grooving

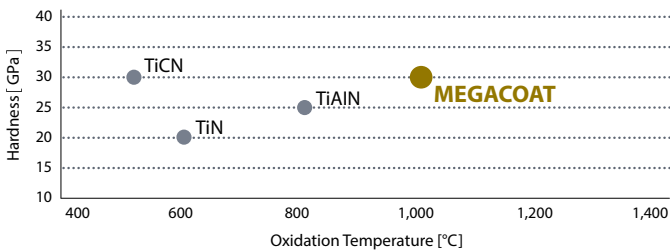
### Chipbreaker Selection



\* If chip control is not stable when using the general GM chipbreaker for grooving, change the chipbreaker to the DM chipbreaker for deep grooving or GH chipbreaker for high feed grooving.

## 2 MEGACOAT Coating Technology for Long Tool Life

### Coating Properties



### PR1225 (MEGACOAT)

1st. Recommendation for Face Grooving

### PR1215 (MEGACOAT)

Superior Wear Resistance,

1st. Recommendation for Cast Iron Machining

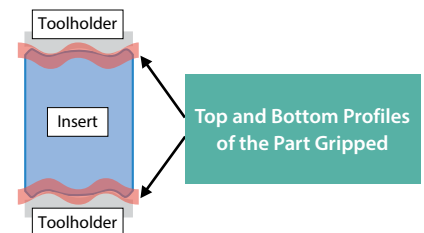


## 3 High Clamping Strength

Prevents abnormal machining surface and / or insert breakage resulting from slip of insert.

Improves repetitive installation accuracy of insert

### New Insert Clamping System "W Grip"



Applicable Inserts

Usage Classification	P	Carbon Steel / Alloy Steel	●	○	●	○	
	M	Stainless Steel			● <td>○ <td></td> <td></td> </td>	○ <td></td> <td></td>	
K	Cast Iron					● <td></td>	
N	Non-ferrous Metals						●
S	Titanium Alloy						○
H	Hard Materials (≤40HRC)						
	Hard Materials (≥40HRC)						

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

Insert	Part Number	Dimensions (in)							Cermet		MEGACOAT		Carbide
		Edge Width (CW)			RE	INSL	S	TN620	TN90	PR1225	PR1215	GW15	
		inch	mm	Tolerance									
Grooving and Turning	GDFM 2020N-020GM	0.079	2.0		0.008	0.827	0.154		●	●	●		
	3020N-030GM	0.118	3.0	±0.0012	0.012	0.787	0.177		●	●	●		
	4020N-040GM	0.157	4.0		0.016				●	●	●		
	5020N-040GM	0.197	5.0		0.016				●	●	●		
	5020N-080GM	0.197	5.0	±0.0016	0.031				●	●	●		
	6020N-040GM	0.236	6.0		0.016				●	●	●		
	6020N-080GM	0.236	6.0		0.031				●	●	●		
Grooving and Turning (High Feed)	GDFM 4020N-040GH	0.157	4.0	±0.0012	0.016	0.787	0.177			●	●		
	5020N-040GH	0.197	5.0	±0.0016	0.016					●	●		
	5020N-080GH	0.197	5.0		0.031					●	●		
	6020N-040GH	0.236	6.0		0.016					●	●		
	6020N-080GH	0.236	6.0		0.031						●	●	
Deep Grooving and Turning	GDFM 3020N-030DM	0.118	3.0	±0.0012	0.012	0.787	0.177	0.169	●	●	●		
	4020N-040DM	0.157	4.0		0.016				●	●	●		
	5020N-040DM	0.197	5.0	±0.0016	0.016				●	●	●		
	6020N-040DM	0.236	6.0		0.016				●	●	●		
Deep Grooving and Turning (1-Edge)	GDFMS 3020N-030DM	0.118	3.0	±0.0012	0.012	0.787	0.177	0.169	●	●	●		
	4020N-040DM	0.157	4.0		0.016				●	●	●		
	5020N-040DM	0.197	5.0	±0.0016	0.016				●	●	●		
	6020N-040DM	0.236	6.0		0.016				●	●	●		
Full Radius (R) Grooving	GDFM 3020N-150R-CM	0.118	3.0	±0.0012	0.059	0.787	0.169	●		●	●		
	4020N-200R-CM	0.157	4.0		0.079	*0.827		●		●	●		
	5020N-250R-CM	0.197	5.0	±0.0016	0.098	*0.827	0.177	●		●	●		
	6020N-300R-CM	0.236	6.0		0.118	*0.866		●		●	●		
Aluminum / Non-Ferrous Metals	GDFG 3020N-020GS	0.118	3.0	±0.0008	0.008	0.787	0.177	0.169				●	
	4020N-040GS	0.157	4.0										●
	5020N-040GS	0.197	5.0										●
	6020N-040GS	0.236	6.0										●

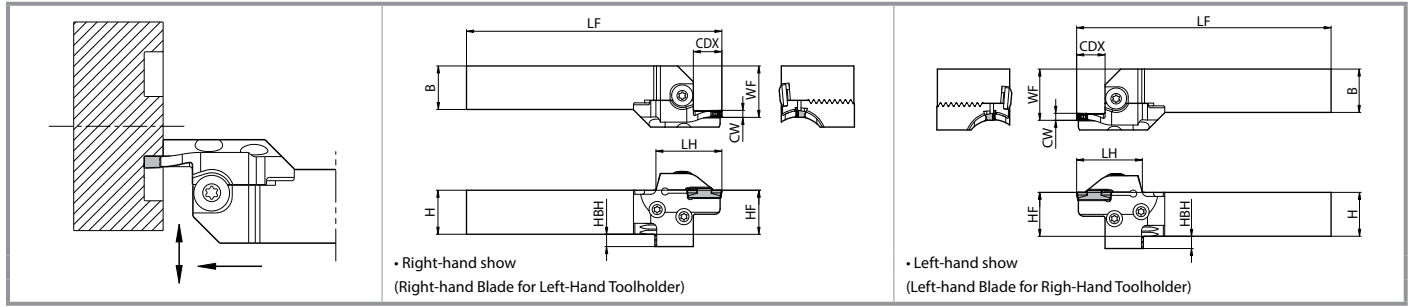
\* GDFM40/50/60-CM differs from other part numbers in length (INSL) to avoid interference of the toolholder with workpiece.

Recommended Cutting Conditions [Page 54](#) ● : Standard Item

Insert Identification System

Inserts sold in 10 piece boxes

<b>GDF</b>	<b>M</b>	<b>S</b>	<b>30</b>	<b>20</b>	<b>N</b> - <b>030</b>	<b>DM</b>
Series	Tolerance M : M-Class	No. of Edges No Indication : 2-Edge S : 1-Edge	Insert Width 20 : 2 mm 30 : 3 mm :	Insert Length 20 : 20 mm	Hand of Tool N : Neutral	Corner-R(re) 020 : 0.20mm 030 : 0.30mm 040 : 0.40 mm 150R : 1.50mm (Full-R)
						Chipbreaker GM : Grooving and Turning DM : Grooving GH : High Feed CM : Full-R GS : Aluminum / Non-Ferrous

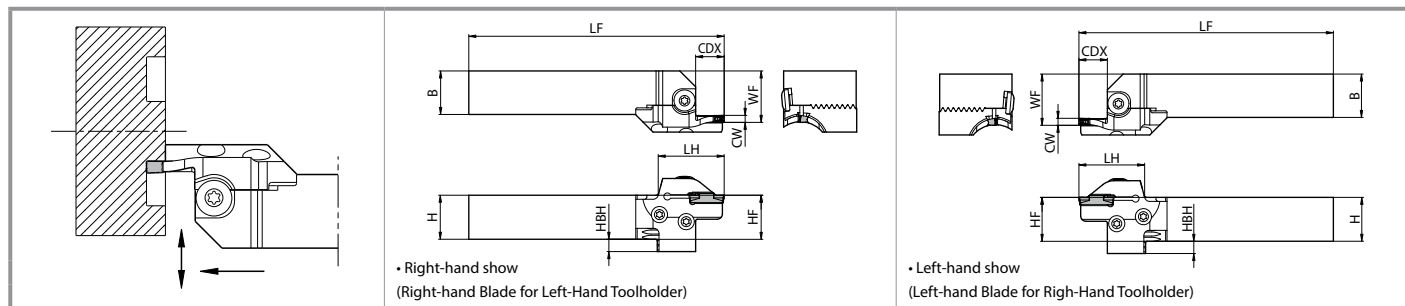


Toolholder + Blade Dimensions (0.079" Insert Width)

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

Shank Angle	Insert Width CW	Shank Size (in)	Max. Grooving Depth	Face Grooving Dia. (in)		Toolholder Part Number P17	Stock		Blade Part Number P52	Stock		Dimensions (in)														
				DAXN (min)	DAXX (max)		R	L		R	L	H	HF	HBH	B	LF	LH	WF	CDX*							
0°	0.079" (2mm)	0.75	0.236" (6mm)	0.984	1.181	KGDL12-C	●		KGDFR -25-2A-C	●	0.750	0.750	0.510	0.750	4.528	1.299	0.927	0.236" (6mm)								
				1.181	1.378				KGDFR -30-2A-C	●																
				1.378	1.772				KGDFR -35-2A-C	●																
				1.772	2.362				KGDFR -45-2A-C	●																
				2.362	3.150				KGDFR -60-2A-C	●																
				3.150	3.937				KGDFR -80-2A-C	●																
			3.937	5.118	KGDFR -100-2A-C				●																	
			0.512" (13mm)	0.984	1.181				KGDFR -25-2B-C	●									0.750	0.750	0.510	0.750	4.646	1.417	0.927	0.512" (13mm)
			1.181	1.378	KGDFR -30-2B-C				●																	
			1.378	1.772	KGDFR -35-2B-C				●																	
			1.772	2.362	KGDFR -45-2B-C				●																	
			2.362	3.150	KGDFR -60-2B-C				●																	
		3.150	3.937	KGDFR -80-2B-C	●																					
		3.937	5.118	KGDFR -100-2B-C	●																					
		1.00	0.236" (6mm)	0.984	1.181	KGDL16-C	●		KGDFR -25-2A-C	●	1.000	1.000	0.260	1.000	5.512	1.299	1.177	0.236" (6mm)								
				1.181	1.378				KGDFR -30-2A-C	●																
				1.378	1.772				KGDFR -35-2A-C	●																
				1.772	2.362				KGDFR -45-2A-C	●																
				2.362	3.150				KGDFR -60-2A-C	●																
				3.150	3.937				KGDFR -80-2A-C	●																
			3.937	5.118	KGDFR -100-2A-C				●																	
			0.512" (13mm)	0.984	1.181				KGDFR -25-2B-C	●									1.000	1.000	0.260	1.000	5.630	1.417	1.177	0.512" (13mm)
			1.181	1.378	KGDFR -30-2B-C				●																	
			1.378	1.772	KGDFR -35-2B-C				●																	
1.772	2.362		KGDFR -45-2B-C	●																						
2.362	3.150		KGDFR -60-2B-C	●																						
3.150	3.937	KGDFR -80-2B-C	●																							
3.937	5.118	KGDFR -100-2B-C	●																							

Note 1) If the unit part number is not listed (No Unit Part Number), please purchase toolholder and blade separately. ● : Standard Item  
 2) 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).  
 3) Insert clamp bolt (BH6x10TR) and Blade fixing bolt (SB-60120TR) come with toolholder. For Spare Parts, see Page 40  
 Applicable Inserts See Page 29



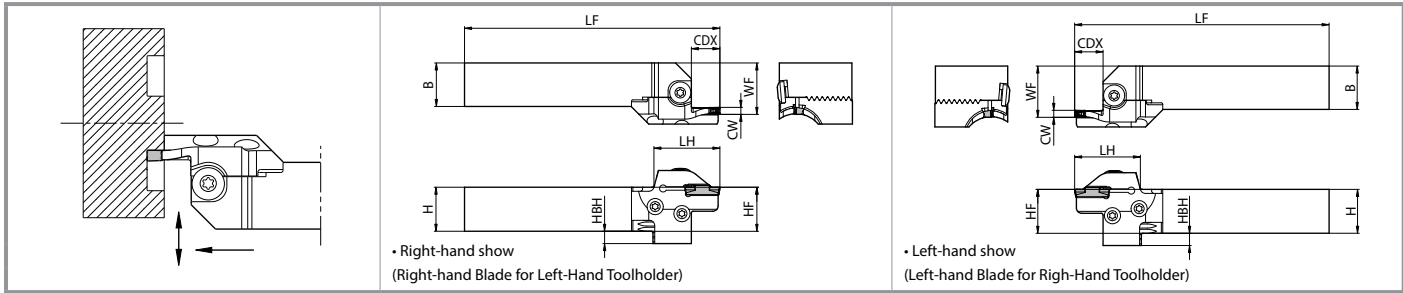
Toolholder + Blade Dimensions (0.118" Insert Width)

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

Shank Angle	Insert Width CW	Shank Size (in)	Max. Grooving Depth	Face Grooving Dia. (in)		Toolholder Part Number P17	Stock		Blade Part Number P52	Stock		Dimensions (in)														
				DAXN (min)	DAXX (max)		R	L		R	L	H	HF	HBH	B	LF	LH	WF	CDX*							
0°	0.118" (3mm)	0.75	0.512" (13mm)	0.984	1.181	KGDL12-C	●	●	KGDFR -25-3A-C	●	0.750	0.510	0.457	0.750	4.650	1.420	0.927	0.512								
				1.181	1.575				KGDFR -30-3A-C	●																
				1.575	1.969				KGDFR -40-3A-C	●																
			1.969	2.559	KGDFR -50-3B-C				●																	
			2.559	3.346	KGDFR -65-3B-C				●																	
			3.346	4.331	KGDFR -85-3B-C				●																	
		0.866" (22mm)	1.969	2.559	KGDFR -110-3B-C				●																	
			2.559	3.346	KGDFR -50-3C-C				●	0.750	0.510	0.457	0.750	5.000	1.770	0.927	0.866									
			3.346	4.331	KGDFR -65-3C-C				●																	
			4.331	5.709	KGDFR -85-3C-C				●																	
			5.709		KGDFR -110-3C-C				●																	
			0.984" (25mm)	3.346	4.331				KGDFR -50-3C-C									●	0.750	0.510	0.457	0.750	5.120	1.890	0.927	0.984
	4.331	5.709	KGDFR -65-3C-C	●																						
	5.709		KGDFR -85-3C-C	●																						
	5.709		KGDFR -110-3C-C	●																						
	0.118" (3mm)	1.00	0.512" (13mm)	0.984	1.181	KGDL16-C	●	●	KGDFR -25-3A-C	●	1.000	0.260	0.457	1.000	5.630	1.420	1.177	0.512								
				1.181	1.575				KGDFR -30-3A-C	●																
				1.575	1.969				KGDFR -40-3A-C	●																
			1.969	2.559	KGDFR -50-3B-C				●																	
			2.559	3.346	KGDFR -65-3B-C				●																	
			3.346	4.331	KGDFR -85-3B-C				●																	
		0.866" (22mm)	4.331	5.709	KGDFR -110-3B-C				●																	
			1.969	2.559	KGDFR -50-3C-C				●	1.000	0.260	0.457	1.000	5.980	1.770	1.177	0.866									
			2.559	3.346	KGDFR -65-3C-C				●																	
3.346			4.331	KGDFR -85-3C-C	●																					
4.331			5.709	KGDFR -110-3C-C	●																					
0.984" (25mm)			3.346	4.331	KGDFR -50-3C-C				●									1.000	0.260	0.457	1.000	6.100	1.890	1.177	0.984	
4.331	5.709	KGDFR -65-3C-C	●																							
5.709		KGDFR -85-3C-C	●																							
5.709		KGDFR -110-3C-C	●																							
0°	0.118" (3mm)	0.75	0.512" (13mm)	0.984	1.181	KGDR12-C	●	●	KGDFL -25-3A-C	●	0.750	0.510	0.457	0.750	4.650	1.420	0.927									0.512
				1.181	1.575				KGDFL -30-3A-C	●																
				1.575	1.969				KGDFL -40-3A-C	●																
			1.969	2.559	KGDFL -50-3B-C				●																	
			2.559	3.346	KGDFL -65-3B-C				●																	
			3.346	4.331	KGDFL -85-3B-C				●																	
		0.866" (22mm)	4.331	5.709	KGDFL -110-3B-C				●																	
			1.969	2.559	KGDFL -50-3C-C				●	0.750	0.510	0.457	0.750	5.000	1.770	0.927	0.866									
			2.559	3.346	KGDFL -65-3C-C				●																	
			3.346	4.331	KGDFL -85-3C-C				●																	
			4.331	5.709	KGDFL -110-3C-C				●																	
			0.984" (25mm)	3.346	4.331				KGDFL -50-3C-C									●	0.750	0.510	0.457	0.750	5.120	1.890	0.927	0.984
	4.331	5.709	KGDFL -65-3C-C	●																						
	5.709		KGDFL -85-3C-C	●																						
	5.709		KGDFL -110-3C-C	●																						
	0.118" (3mm)	1.00	0.512" (13mm)	0.984	1.181	KGDR16-C	●	●	KGDFL -25-3A-C	●	1.000	0.260	0.457	1.000	5.630	1.420	1.177	0.512								
				1.181	1.575				KGDFL -30-3A-C	●																
				1.575	1.969				KGDFL -40-3A-C	●																
			1.969	2.559	KGDFL -50-3B-C				●																	
			2.559	3.346	KGDFL -65-3B-C				●																	
			3.346	4.331	KGDFL -85-3B-C				●																	
		0.866" (22mm)	4.331	5.709	KGDFL -110-3B-C				●																	
			1.969	2.559	KGDFL -50-3C-C				●	1.000	0.260	0.457	1.000	5.980	1.770	1.177	0.866									
			2.559	3.346	KGDFL -65-3C-C				●																	
3.346			4.331	KGDFL -85-3C-C	●																					
4.331			5.709	KGDFL -110-3C-C	●																					
0.984" (25mm)			3.346	4.331	KGDFL -50-3C-C				●									1.000	0.260	0.457	1.000	6.100	1.890	1.177	0.984	
4.331	5.709	KGDFL -65-3C-C	●																							
5.709		KGDFL -85-3C-C	●																							
5.709		KGDFL -110-3C-C	●																							

Note 1) If the unit part number is not listed (No Unit Part Number), please purchase toolholder and blade separately. ● : Standard Item  
 2) 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).  
 3) Insert clamp bolt (BH6x10TR) and Blade fixing bolt (SB-60120TR) come with toolholder. For Spare Parts, see Page 40  
 Applicable Inserts See Page 29





Toolholder + Blade Dimensions (0.157" Insert Width)

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

Shank Angle	Insert Width CW	Shank Size (in)	Max. Grooving Depth	Face Grooving Dia. (in)		Toolholder Part Number ➔ P17	Stock		Blade Part Number ➔ P52	Stock		Dimensions (in)															
				DAXN (min)	DAXX (max)		R	L		R	L	H	HF	HBH	B	LF	LH	WF	CDX*								
0°	0.157" (4mm)	0.75	0.512" (13mm)	0.984	1.378	KGDL12-C	●		KGDFR -25-4A-C	●	0.750	0.510	0.457	0.750	4.650	1.420	0.927	0.512									
				1.378	1.969				-35-4B-C	●																	
			1.969	2.756	-50-4B-C				●																		
			2.756	3.937	-70-4B-C				●																		
			3.937	5.906	-100-4B-C				●																		
			5.906	8.661	-150-4B-C				●																		
		8.661	∞	-220-4B-C	●																						
		0.984" (25mm)	1.378	1.969	KGDFR -35-4C-C				●	0.750									0.510	0.457	0.750	5.120	1.890	0.927	0.984		
			1.969	2.756					-50-4C-C																	●	
			2.756	3.937					-70-4C-C																	●	
			3.937	5.906					-100-4C-C																	●	
			5.906	8.661					-150-4C-C																	●	
	8.661		∞	-220-4C-C		●																					
	1.00	0.512" (13mm)	0.984	1.378	KGDL16-C	●			KGDFR -25-4A-C	●	1.000	0.260	0.457	1.000	5.630	1.420	1.177	0.512									
			1.378	1.969					-35-4B-C	●																	
			1.969	2.756					-50-4B-C	●																	
			2.756	3.937					-70-4B-C	●																	
			3.937	5.906					-100-4B-C	●																	
			5.906	8.661					-150-4B-C	●																	
		8.661	∞	-220-4B-C					●																		
		0.984" (25mm)	1.378	1.969					KGDFR -35-4C-C	●									1.000	0.260	0.457	1.000	6.100	1.890	1.177	0.984	
			1.969	2.756						-50-4C-C																	●
			2.756	3.937						-70-4C-C																	●
			3.937	5.906						-100-4C-C																	●
5.906			8.661	-150-4C-C						●																	
8.661	∞		-220-4C-C	●																							
0°	0.157" (4mm)	0.75	0.512" (13mm)	0.984	1.378	KGDR12-C	●		KGDFL -25-4A-C	●	0.750	0.510	0.457	0.750	4.650	1.420	0.927	0.512									
				1.378	1.969				-35-4B-C	●																	
			1.969	2.756	-50-4B-C				●																		
			2.756	3.937	-70-4B-C				●																		
			3.937	5.906	-100-4B-C				●																		
			5.906	8.661	-150-4B-C				●																		
		8.661	∞	-220-4B-C	●																						
		0.984" (25mm)	1.378	1.969	KGDFL -35-4C-C				●	0.750									0.510	0.457	0.750	5.120	1.890	0.927	0.984		
			1.969	2.756					-50-4C-C																	●	
			2.756	3.937					-70-4C-C																	●	
			3.937	5.906					-100-4C-C																	●	
			5.906	8.661					-150-4C-C																	●	
	8.661		∞	-220-4C-C		●																					
	1.00	0.512" (13mm)	0.984	1.378	KGDR16-C	●			KGDFL -25-4A-C	●	1.000	0.260	0.457	1.000	5.630	1.420	1.177	0.512									
			1.378	1.969					-35-4B-C	●																	
			1.969	2.756					-50-4B-C	●																	
			2.756	3.937					-70-4B-C	●																	
			3.937	5.906					-100-4B-C	●																	
			5.906	8.661					-150-4B-C	●																	
		8.661	∞	-220-4B-C					●																		
		0.984" (25mm)	1.378	1.969					KGDFL -35-4C-C	●									1.000	0.260	0.457	1.000	6.100	1.890	1.177	0.984	
			1.969	2.756						-50-4C-C																	●
			2.756	3.937						-70-4C-C																	●
			3.937	5.906						-100-4C-C																	●
5.906			8.661	-150-4C-C						●																	
8.661	∞		-220-4C-C	●																							

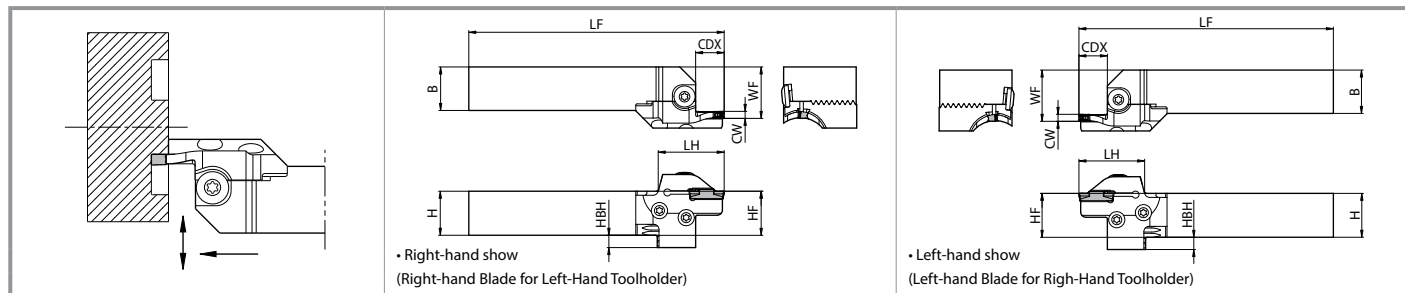
Note 1) If the unit part number is not listed (No Unit Part Number), please purchase toolholder and blade separately.

● : Standard Item

2) 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).

3) Insert clamp bolt (BH6x10TR) and Blade fixing bolt (SB-60120TR) come with toolholder. For Spare Parts, see Page 40

Applicable Inserts See Page 29

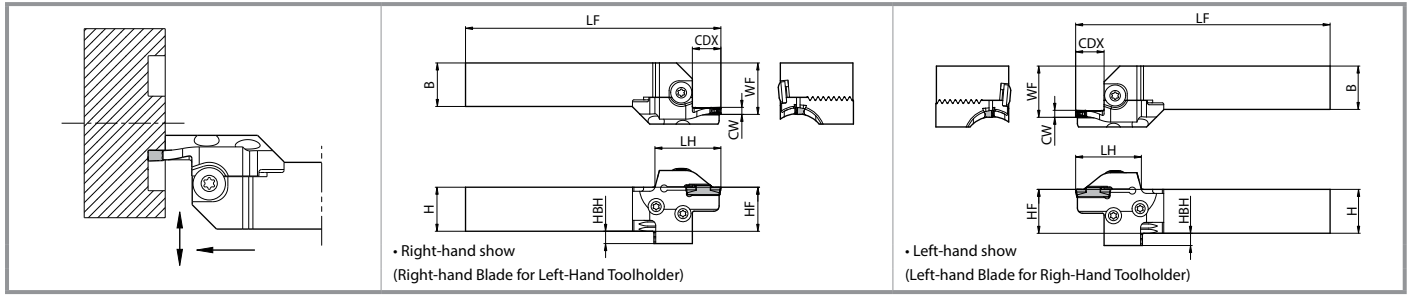


Toolholder + Blade Dimensions (0.197" Insert Width)

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

Shank Angle	Insert Width CW	Shank Size (in)	Max. Grooving Depth	Face Grooving Dia. (in)		Toolholder Part Number P17	Stock		Blade Part Number P52	Stock		Dimensions (in)																																										
				DAXN (min)	DAXX (max)		R	L		R	L	H	HF	HBH	B	LF	LH	WF	CDX*																																			
0°	0.197" (5mm)	0.75	0.591" (15mm)	0.984	1.378	KGDL12-C	●	●	KGDFR -25-5B-C	●	0.750	0.510	0.457	0.750	4.720	1.500	0.927	0.591	-35-5B-C	●	-50-5B-C	●	-75-5B-C	●	-115-5B-C	●	-180-5B-C	●	-235-5B-C	●																								
				0.787" (20mm)	0.984				1.378	KGDFR -25-5C-C									●	0.750	0.510	0.457	0.750	4.920	1.690	0.927	0.787	-35-5C-C	●	-50-5C-C	●	-75-5C-C	●	-115-5C-C	●	-180-5C-C	●	-235-5C-C	●															
				0.984" (25mm)	1.378				1.969	KGDFR -25-5B-C									●	1.000	0.260	0.457	1.000	5.700	1.500	1.177	0.591	-35-5B-C	●	-50-5B-C	●	-75-5B-C	●	-115-5B-C	●	-180-5B-C	●	-235-5B-C	●															
					1.969				2.953	KGDFR -25-5C-C									●									1.000	0.260	0.457	1.000	5.900	1.690	1.177	0.787	-35-5C-C	●	-50-5C-C	●	-75-5C-C	●	-115-5C-C	●	-180-5C-C	●	-235-5C-C	●							
					2.953				4.528	KGDFL -25-5B-C									●									1.000	0.260	0.457	1.000	6.100	1.890	1.177	0.984	-35-5B-C	●	-50-5B-C	●	-75-5B-C	●	-115-5B-C	●	-180-5B-C	●	-235-5B-C	●							
					4.528				7.087	KGDFL -25-5C-C									●																	1.000	0.260	0.457	1.000	6.100	1.890	1.177	0.984	-35-5C-C	●	-50-5C-C	●	-75-5C-C	●	-115-5C-C	●	-180-5C-C	●	-235-5C-C
			7.087		9.252				KGDFL -25-5B-C	●									1.000																	0.260	0.457	1.000	6.100	1.890	1.177	0.984	-35-5B-C	●	-50-5B-C	●	-75-5B-C	●	-115-5B-C	●	-180-5B-C	●	-235-5B-C	●
			9.252		∞				KGDFL -25-5C-C	●																																	1.000	0.260	0.457	1.000	6.100	1.890	1.177	0.984	-35-5C-C	●	-50-5C-C	●
			0.984	1.378	KGDR12-C				●	0.750										0.510	0.457	0.750	4.720	1.500	0.927	0.591	-35-5B-C																●	-50-5B-C	●	-75-5B-C	●	-115-5B-C	●	-180-5B-C	●	-235-5B-C	●	
			1.378	1.969	KGDFL -25-5C-C				●																		0.750																0.510	0.457	0.750	4.920	1.690	0.927	0.787	-35-5C-C	●	-50-5C-C	●	-75-5C-C
			1.969	2.953	KGDFL -25-5B-C				●																		1.000	0.260	0.457	1.000	5.700	1.500	1.177	0.591	-35-5B-C								●	-50-5B-C	●	-75-5B-C	●	-115-5B-C	●	-180-5B-C	●	-235-5B-C	●	
			2.953	4.528	KGDFL -25-5C-C				●																										1.000								0.260	0.457	1.000	5.900	1.690	1.177	0.787	-35-5C-C	●	-50-5C-C	●	-75-5C-C
		4.528	7.087	KGDFL -25-5B-C	●	1.000	0.260	0.457	1.000		6.100	1.890	1.177	0.984	-35-5B-C	●	-50-5B-C	●	-75-5B-C																●	-115-5B-C	●	-180-5B-C	●	-235-5B-C	●													
		7.087	9.252	KGDFL -25-5C-C	●										1.000	0.260	0.457	1.000	6.100																1.890	1.177	0.984	-35-5C-C	●	-50-5C-C	●	-75-5C-C	●	-115-5C-C	●	-180-5C-C	●	-235-5C-C	●					
		9.252	∞	KGDFL -25-5B-C	●					1.000					0.260	0.457	1.000	6.100	1.890	1.177	0.984	-35-5B-C	●	-50-5B-C	●	-75-5B-C									●	-115-5B-C	●	-180-5B-C	●	-235-5B-C	●													
		0.984	1.378	KGDR16-C	●																	1.000	0.260	0.457	1.000	6.100									1.890	1.177	0.984	-35-5C-C	●	-50-5C-C	●	-75-5C-C	●	-115-5C-C	●	-180-5C-C	●	-235-5C-C	●					
		1.378	1.969	KGDFL -25-5C-C	●																	1.000	0.260	0.457	1.000	6.100	1.890	1.177	0.984	-35-5C-C	●	-50-5C-C	●	-75-5C-C	●	-115-5C-C	●	-180-5C-C	●	-235-5C-C	●													
		1.969	2.953	KGDFL -25-5B-C	●																									1.000	0.260	0.457	1.000	6.100	1.890	1.177	0.984	-35-5B-C	●	-50-5B-C	●	-75-5B-C	●	-115-5B-C	●	-180-5B-C	●	-235-5B-C	●					
		2.953	4.528	KGDFL -25-5C-C	●	1.000	0.260	0.457	1.000		6.100	1.890	1.177	0.984																-35-5C-C	●	-50-5C-C	●	-75-5C-C	●	-115-5C-C	●	-180-5C-C	●	-235-5C-C	●													
		4.528	7.087	KGDFL -25-5B-C	●																									1.000	0.260	0.457	1.000	6.100	1.890	1.177	0.984	-35-5B-C	●	-50-5B-C	●	-75-5B-C	●	-115-5B-C	●	-180-5B-C	●	-235-5B-C	●					
		7.087	9.252	KGDFL -25-5C-C	●					1.000					0.260	0.457	1.000	6.100	1.890	1.177	0.984									-35-5C-C	●	-50-5C-C	●	-75-5C-C	●	-115-5C-C	●	-180-5C-C	●	-235-5C-C	●													
		9.252	∞	KGDFL -25-5B-C	●																									1.000	0.260	0.457	1.000	6.100	1.890	1.177	0.984	-35-5B-C	●	-50-5B-C	●	-75-5B-C	●	-115-5B-C	●	-180-5B-C	●	-235-5B-C	●					

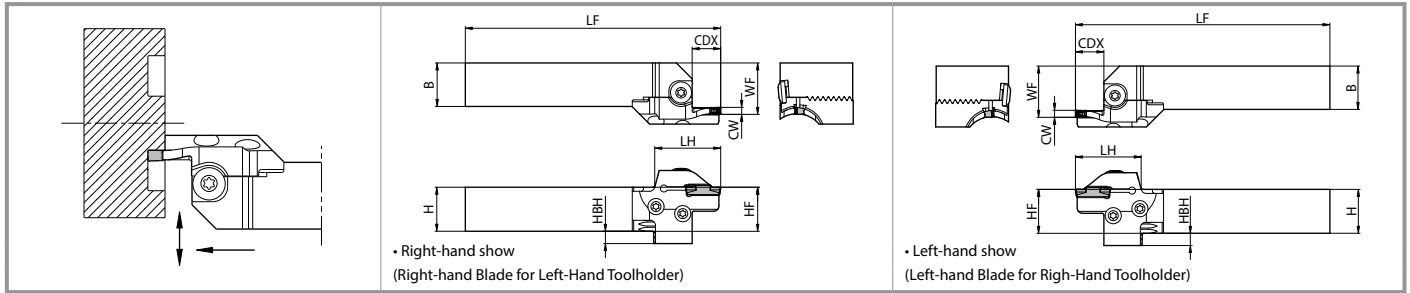
Note 1) If the unit part number is not listed (No Unit Part Number), please purchase toolholder and blade separately. ● : Standard Item  
 2) Dimension CDX\* : Shows the maximum grooving depth. If the dimension CDX is 0.787" (20mm) or more, using a 2-edge insert, the maximum grooving depth is 0.709" (18mm).  
 3) Insert clamp bolt (BH6x10TR) and Blade fixing bolt (SB-60120TR) come with toolholder. For Spare Parts, see Page 40



Toolholder + Blade Dimensions (0.236" Insert Width) (Choose **Right-hand** Blade for **Left-hand** Toolholder and **Left-hand** Blade for **Right-hand** Toolholder)

Shank Angle	Insert Width CW	Shank Size (in)	Max. Grooving Depth	Face Grooving Dia. (in)		Toolholder Part Number P17	Stock		Blade Part Number P52	Stock		Dimensions (in)						
				DAXN (min)	DAXX (max)		R	L		R	L	H	HF	HBH	B	LF	LH	WF
0°	0.236" (6mm)	0.75	0.591" (15mm)	0.984	1.378	KGDL12-C	●		KGDFR -25-6B-C	●	0.750	0.510	0.457	0.750	4.720	1.500	0.927	0.591
				-35-6B-C	●													
				-50-6B-C	●													
				-75-6B-C	●													
				-115-6B-C	●													
				-180-6B-C	●													
			-235-6B-C	●														
			0.787" (20mm)	0.984	1.378				KGDFR -25-6C-C	●	0.750	0.510	0.457	0.750	4.920	1.690	0.927	0.787
			1.378	1.969	-35-6C-C				●	0.750	0.510	0.457	0.750	5.120	1.890	0.927	0.984	
			1.969	2.953	-50-6C-C				●									
			2.953	4.528	-75-6C-C				●									
			4.528	7.087	-115-6C-C				●									
		7.087	9.252	-180-6C-C	●													
		9.252	∞	-235-6C-C	●													
		1.00	0.591" (15mm)	0.984	1.378	KGDL16-C	●		KGDFR -25-6B-C	●	1.000	0.260	0.457	1.000	5.700	1.500	1.177	0.591
				1.378	1.969				-35-6B-C	●								
				1.969	2.953				-50-6B-C	●								
				2.953	4.528				-75-6B-C	●								
				4.528	7.087				-115-6B-C	●								
				7.087	9.252				-180-6B-C	●								
			9.252	∞	-235-6B-C				●									
			0.787" (20mm)	0.984	1.378				KGDFR -25-6C-C	●	1.000	0.260	0.457	1.000	5.900	1.690	1.177	0.787
			1.378	1.969	-35-6C-C				●	1.000	0.260	0.457	1.000	6.100	1.890	1.177	0.984	
			1.969	2.953	-50-6C-C				●									
2.953	4.528		-75-6C-C	●														
4.528	7.087		-115-6C-C	●														
7.087	9.252	-180-6C-C	●															
9.252	∞	-235-6C-C	●															

Note 1) If the unit part number is not listed (No Unit Part Number), please purchase toolholder and blade separately. ● : Standard Item  
 2) 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).  
 3) Insert clamp bolt (BH6x10TR) and Blade fixing bolt (SB-60120TR) come with toolholder. For Spare Parts, see Page 40



Toolholder + Blade Dimensions (2mm Insert Width)

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

Shank Angle	Insert Width CW	Shank Size (mm)	Max. Grooving Depth	Face Grooving Dia. (mm)		Toolholder Part Number P17	Stock		Blade Part Number P52	Stock		Dimensions (mm)												
				DAXN (min)	DAXX (max)		R	L		R	L	H	HF	HBH	B	LF	LH	WF	CDX*					
0°	0.079" (2mm)	20	0.236" (6mm)	25	30	KGD2020-C	●	KGDFR	-25-2A-C	●	20	20	12	20	115	33	24.5	6						
				30	35				-30-2A-C	●														
				35	45				-35-2A-C	●														
				45	60				-45-2A-C	●														
				60	80				-60-2A-C	●														
				80	100				-80-2A-C	●														
		100	130	-100-2A-C	●																			
		25	30	-25-2B-C	●				20	20									12	20	118	36	24.5	13
		30	35	-30-2B-C	●				20	20									12	20	120	38	24.5	15
		35	45	-35-2B-C	●																			
		45	60	-45-2B-C	●																			
		60	80	-60-2B-C	●																			
	80	100	-80-2B-C	●																				
	100	130	-100-2B-C	●																				
	25	30	-25-2B-C	●	20	20	12	20			118	36	24.5	13										
	30	35	-30-2B-C	●	25	25	7	25			140	33	29.5	6										
	35	45	-35-2A-C	●																				
	45	60	-45-2A-C	●																				
	60	80	-60-2A-C	●																				
	80	100	-80-2A-C	●																				
	100	130	-100-2A-C	●																				
	25	30	-25-2B-C	●					25	25					7	25	143	36	29.5	13				
	30	35	-30-2B-C	●					25	25					7	25	145	38	29.5	15				
	35	45	-35-2B-C	●																				
45	60	-45-2B-C	●																					
60	80	-60-2B-C	●																					
80	100	-80-2B-C	●																					
100	130	-100-2B-C	●																					
25	30	-25-2B-C	●	25	25	7	25	143			36	29.5	13											
30	35	-30-2B-C	●	32	32	-	32	160			33	36.5	6											
35	45	-35-2A-C	●																					
45	60	-45-2A-C	●																					
60	80	-60-2A-C	●																					
80	100	-80-2A-C	●																					
100	130	-100-2A-C	●																					
25	30	-25-2B-C	●						32	32				-	32	163	36	36.5	13					
30	35	-30-2B-C	●						32	32				-	32	165	38	36.5	15					
35	45	-35-2B-C	●																					
45	60	-45-2B-C	●																					
60	80	-60-2B-C	●																					
80	100	-80-2B-C	●																					
100	130	-100-2B-C	●																					
25	30	-25-2B-C	●	32	32	-	32	163			36	36.5	13											
30	35	-30-2B-C	●	32	32	-	32	165			38	36.5	15											
35	45	-35-2B-C	●																					
45	60	-45-2B-C	●																					
60	80	-60-2B-C	●																					
80	100	-80-2B-C	●																					
100	130	-100-2B-C	●																					

Note 1) If the unit part number is not listed (No Unit Part Number), please purchase toolholder and blade separately. ● : Standard Item  
 2) 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).  
 3) Insert clamp bolt (BH6x10TR) and Blade fixing bolt (SB-60120TR) come with toolholder. For Spare Parts, see Page 40

Applicable Inserts See Page 29

Toolholder + Blade Dimensions (3mm Insert Width)

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

Shank Angle	Insert Width CW	Shank Size (mm)	Max. Grooving Depth	Face Grooving Dia. (mm)		Toolholder Part Number P17	Stock		Blade Part Number P52	Stock		Dimensions (mm)										
				DAXN (min)	DAXX (max)		R	L		R	L	H	HF	HBH	B	LF	LH	WF	CDX*			
0°	0.118" (3mm)	□20	0.512" (13mm)	25	30	KGD% 2020-C	●	●	KGDF% -25-3A-C	●	●	20	12	11.6	20	118	36	24.5	13			
				30	40					●	●											
				40	50					●	●											
			0.591" (15mm)	50	65				KGDF% -50-3B-C	●	●	20	12	11.6	20	120	38	24.5	15			
				65	85					●	●											
				85	110					●	●											
		0.886" (22mm)	110	145	KGDF% -85-3B-C				●	●	20	12	11.6	20	127	45	24.5	22				
			50	65					●	●												
			65	85					●	●												
		□25	0.512" (13mm)	25	30				KGD% 2525-C	●	●	KGDF% -25-3A-C	●	●	25	7	11.6	25	143	36	29.5	13
				30	40								●	●								
				40	50								●	●								
	0.591" (15mm)		50	65	KGDF% -50-3B-C	●	●	25				7	11.6	25	145	38	29.5	15				
			65	85		●	●															
			85	110		●	●															
	0.886" (22mm)	110	145	KGDF% -85-3B-C	●	●	25	7				11.6	25	152	45	29.5	22					
		50	65		●	●																
		65	85		●	●																
	□32	0.512" (13mm)	85	110	KGD% 3232-C	●	●	KGDF% -85-3C-C				●	●	25	7	11.6	25	155	48	29.5	25	
			110	145								●	●									
			50	65								●	●									
		0.591" (15mm)	25	30				KGDF% -25-3A-C	●	●	32	-	11.6	32	163	36	36.5	13				
			30	40					●	●												
			40	50					●	●												
0.886" (22mm)	50	65	KGDF% -50-3B-C	●				●	32	-	11.6	32	165	38	36.5	15						
	65	85		●				●														
	85	110		●				●														
□32	0.512" (13mm)	110	145	KGD% 3232-C				●	●	KGDF% -85-3B-C	●	●	32	-	11.6	32	172	45	36.5	22		
		50	65								●	●										
		65	85								●	●										
	0.591" (15mm)	85	110		KGDF% -50-3C-C	●	●			32	-	11.6	32	175	48	36.5	25					
		110	145			●	●															
		50	65			●	●															
0.886" (22mm)	65	85	KGDF% -65-3C-C		●	●	32			-	11.6	32	175	48	36.5	25						
	85	110			●	●																
	110	145			●	●																

Note 1) If the unit part number is not listed (No Unit Part Number), please purchase toolholder and blade separately. ● : Standard Item  
 2) 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).  
 3) Insert clamp bolt (BH6x10TR) and Blade fixing bolt (SB-60120TR) come with toolholder. For Spare Parts, see Page 40  
 Applicable Inserts See Page 29

Toolholder + Blade Dimensions (4mm Insert Width)

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

Shank Angle	Insert Width CW	Shank Size (mm)	Max. Grooving Depth	Face Grooving Dia. (mm)		Toolholder Part Number P17	Stock		Blade Part Number P52	Stock		Dimensions (mm)								
				DAXN (min)	DAXX (max)		R	L		R	L	H	HF	HBH	B	LF	LH	WF	CDX*	
0°	0.157" (4mm)	□ 20	0.512" (13mm)	25	35	KGD P%L 2020-C	●	●	KGDF P%L -25-4A-C	●	●	20	12	11.6	20	118	36	24.5	13	
				35	50				-35-4B-C	●	●	20	12	11.6	20	120	38	24.5	15	
				50	70				-50-4B-C	●	●									
			70	100	-70-4B-C				●	●										
			0.591" (15mm)	100	150				-100-4B-C	●	●									
				150	220				-150-4B-C	●	●									
				220	∞				-220-4B-C	●	●									
				0.984" (25mm)	35				50	KGDF P%L -35-4C-C	●	●	20	12	11.6	20	130	48	24.5	25
					50				70	-50-4C-C	●	●								
			70		100				-70-4C-C	●	●									
			100		150				-100-4C-C	●	●									
			150		220				-150-4C-C	●	●									
		220	∞		-220-4C-C	●	●													
		□ 25	0.512" (13mm)	25	35	KGD P%L 2525-C	●	●	KGDF P%L -25-4A-C	●	●	25	7	11.6	25	143	36	29.5	13	
				35	50				-35-4B-C	●	●	25	7	11.6	25	145	38	29.5	15	
				50	70				-50-4B-C	●	●									
			70	100	-70-4B-C				●	●										
			0.591" (15mm)	100	150				-100-4B-C	●	●									
				150	220				-150-4B-C	●	●									
				220	∞				-220-4B-C	●	●									
				0.984" (25mm)	35				50	KGDF P%L -35-4C-C	●	●	25	7	11.6	25	155	48	29.5	25
					50				70	-50-4C-C	●	●								
			70		100				-70-4C-C	●	●									
			100		150				-100-4C-C	●	●									
150	220		-150-4C-C		●				●											
220	∞	-220-4C-C	●		●															
□ 32	0.512" (13mm)	25	35	KGD P%L 3232-C	●	●	KGDF P%L -25-4A-C	●	●	32	-	11.6	32	163	36	36.5	13			
		35	50				-35-4B-C	●	●	32	-	11.6	32	165	38	36.5	15			
		50	70				-50-4B-C	●	●											
	70	100	-70-4B-C				●	●												
	0.591" (15mm)	100	150				-100-4B-C	●	●											
		150	220				-150-4B-C	●	●											
		220	∞				-220-4B-C	●	●											
		0.984" (25mm)	35				50	KGDF P%L -35-4C-C	●	●	32	-	11.6	32	175	48	36.5	25		
			50				70	-50-4C-C	●	●										
	70		100				-70-4C-C	●	●											
	100		150				-100-4C-C	●	●											
	150		220				-150-4C-C	●	●											
220	∞		-220-4C-C	●	●															

- Note 1) If the unit part number is not listed (No Unit Part Number), please purchase toolholder and blade separately.  
 2) 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).  
 3) Insert clamp bolt (BH6x10TR) and Blade fixing bolt (SB-60120TR) come with toolholder. For Spare Parts, see Page 40

● : Standard Item

Applicable Inserts See Page 29

Toolholder + Blade Dimensions (5mm Insert Width)

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

Shank Angle	Insert Width CW	Shank Size (mm)	Max. Grooving Depth	Face Grooving Dia. (mm)		Toolholder Part Number P17	Stock		Blade Part Number P52	Stock		Dimensions (mm) Diagram on Page P35														
				DAXN (min)	DAXX (max)		R	L		R	L	H	HF	HBH	B	LF	LH	WF	CDX*							
0°	0.197" (5mm)	□20	0.591" (15mm)	25	35	KGD% 2020-C	●	●	KGD% -25-5B-C	●	●	20	12	11.6	20	120	38	24.5	15							
				35	50					●	●															
				50	75					●	●															
				75	115					●	●															
				115	180					●	●															
				180	235					●	●															
			235	∞	●				●																	
			0.787" (20mm)	25	35				KGD% -25-5C-C	●	●	20	12	11.6	20	125	43	24.5	20							
			35	50	●					●																
			50	75	●					●																
			75	115	●					●																
			115	180	●					●																
		180	235	●	●																					
		235	∞	●	●																					
		0.984" (25mm)	75	115	KGD% -75-5C-C	●	●	20	12	11.6	20	130	48	24.5	25											
			115	180		●	●																			
			180	235		●	●																			
			235	∞		●	●																			
			75	115		KGD% -75-5D-C	●									●	20	12	11.6	20	137	55	24.5	32		
			115	180			●									●										
		180	235	●	●																					
		235	∞	●	●																					
		0°	0.197" (5mm)	□25	0.591" (15mm)	25	35	KGD% 2525-C	●	●	KGD% -25-5B-C	●	●	25	7	11.6	25	145	38	29.5	15					
						35	50					●	●													
50	75					●	●																			
75	115					●	●																			
115	180					●	●																			
180	235					●	●																			
235	∞				●	●																				
0.787" (20mm)	25				35	KGD% -25-5C-C	●				●	25	7	11.6	25	150	43	29.5	20							
35	50				●		●																			
50	75				●		●																			
75	115				●		●																			
115	180				●		●																			
180	235			●	●																					
235	∞			●	●																					
0.984" (25mm)	75			115	KGD% -75-5C-C	●	●	25	7	11.6	25	155	48	29.5	25											
	115			180		●	●																			
	180			235		●	●																			
	235			∞		●	●																			
	75			115		KGD% -75-5D-C	●									●	25	7	11.6	25	162	55	29.5	32		
	115			180			●									●										
180	235			●	●																					
235	∞			●	●																					
0°	0.197" (5mm)			□32	0.591" (15mm)	25	35	KGD% 3232-C	●	●	KGD% -25-5B-C	●	●	32	-	11.6	32	165	38	36.5	15					
						35	50					●	●													
		50	75			●	●																			
		75	115			●	●																			
		115	180			●	●																			
		180	235			●	●																			
		235	∞		●	●																				
		0.787" (20mm)	25		35	KGD% -25-5C-C	●				●	32	-	11.6	32	170	43	36.5	20							
		35	50		●		●																			
		50	75		●		●																			
		75	115		●		●																			
		115	180		●		●																			
		180	235	●	●																					
		235	∞	●	●																					
		0.984" (25mm)	75	115	KGD% -75-5C-C	●	●	32	-	11.6	32	175	48	36.5	25											
			115	180		●	●																			
			180	235		●	●																			
			235	∞		●	●																			
			75	115		KGD% -75-5D-C	●									●	32	-	11.6	32	182	55	36.5	32		
			115	180			●									●										
		180	235	●	●																					
		235	∞	●	●																					

Note 1) If the unit part number is not listed (No Unit Part Number), please purchase toolholder and blade separately. ● : Standard Item  
 2) 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).  
 3) Insert clamp bolt (BH6x10TR) and Blade fixing bolt (SB-60120TR) come with toolholder. For Spare Parts, see Page 40  
 Applicable Inserts See Page 29



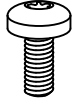
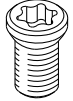
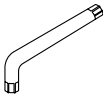
Toolholder + Blade Dimensions (6mm Insert Width)

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

Shank Angle	Insert Width CW	Shank Size (mm)	Max. Grooving Depth	Face Grooving Dia. (mm)		Toolholder Part Number P17	Stock		Blade Part Number P52	Stock		Dimensions (mm) Diagram on Page P35															
				DAXN (min)	DAXX (max)		R	L		R	L	H	HF	HBH	B	LF	LH	WF	CDX*								
0°	0.236" (6mm)	20	0.591" (15mm)	25	35	KGD% 2020-C	●	●	KGDF%	-25-6B-C	●	●	20	12	11.6	20	120	38	24.5	15							
				35	50					-35-6B-C	●	●															
				50	75					-50-6B-C	●	●															
				75	115					-75-6B-C	●	●															
				115	180					-115-6B-C	●	●															
				180	235					-180-6B-C	●	●															
			235	∞	-235-6B-C				●	●																	
			0.787" (20mm)	25	35				KGD%	-25-6C-C	●	●	20	12	11.6	20	125	43	24.5	20							
			35	50	-35-6C-C					●	●																
			50	75	-50-6C-C					●	●																
			75	115	-75-6C-C					●	●																
			115	180	-115-6C-C					●	●																
		180	235	-180-6C-C	●	●																					
		235	∞	-235-6C-C	●	●																					
		0.984" (25mm)	75	115	KGD%	-75-6D-C	●	●	20	12	11.6	20	130	48	24.5	25											
		115	180	-115-6D-C		●	●																				
		180	235	-180-6D-C		●	●																				
		235	∞	-235-6D-C		●	●																				
		1.260" (32mm)	115	180		KGD%	-115-6D-C	●									●	20	12	11.6	20	137	55	24.5	32		
		180	235	-180-6D-C			●	●																			
		235	∞	-235-6D-C	●		●																				
		25	35	KGD% 2525-C	●		●	KGDF%	-25-6B-C	●	●	25	7	11.6	25	145	38									29.5	15
		35	50						-35-6B-C	●	●																
		50	75						-50-6B-C	●	●																
75	115	-75-6B-C	●			●																					
115	180	-115-6B-C	●			●																					
180	235	-180-6B-C	●			●																					
235	∞	-235-6B-C	●			●																					
0.787" (20mm)	25	35	KGD%			-25-6C-C		●	●	25	7	11.6	25	150	43	29.5	20										
35	50	-35-6C-C				●		●																			
50	75	-50-6C-C				●		●																			
75	115	-75-6C-C				●		●																			
115	180	-115-6C-C				●		●																			
180	235	-180-6C-C		●	●																						
235	∞	-235-6C-C	●	●																							
0.984" (25mm)	75	115	KGD%	-75-6D-C	●	●	25	7	11.6	25	155	48	29.5	25													
115	180	-115-6D-C		●	●																						
180	235	-180-6D-C		●	●																						
235	∞	-235-6D-C		●	●																						
1.260" (32mm)	115	180		KGD%	-115-6D-C	●									●	25	7	11.6	25	162	55	29.5	32				
180	235	-180-6D-C			●	●																					
235	∞	-235-6D-C	●		●																						
25	35	KGD% 3232-C	●		●	KGDF%	-25-6B-C	●	●	32	-	11.6	32	165	38									36.5	15		
35	50						-35-6B-C	●	●																		
50	75						-50-6B-C	●	●																		
75	115			-75-6B-C			●	●																			
115	180			-115-6B-C			●	●																			
180	235			-180-6B-C			●	●																			
235	∞			-235-6B-C		●	●																				
0.787" (20mm)	25			35		KGD%	-25-6C-C	●	●	32	-	11.6	32	170	43	36.5	20										
35	50			-35-6C-C			●	●																			
50	75			-50-6C-C			●	●																			
75	115			-75-6C-C			●	●																			
115	180			-115-6C-C			●	●																			
180	235	-180-6C-C	●	●																							
235	∞	-235-6C-C	●	●																							
0.984" (25mm)	75	115	KGD%	-75-6D-C	●	●	32	-	11.6	32	175	48	36.5	25													
115	180	-115-6D-C		●	●																						
180	235	-180-6D-C		●	●																						
235	∞	-235-6D-C		●	●																						
1.260" (32mm)	115	180		KGD%	-115-6D-C	●									●	32	-	11.6	32	182	55	36.5	32				
180	235	-180-6D-C			●	●																					
235	∞	-235-6D-C	●		●																						

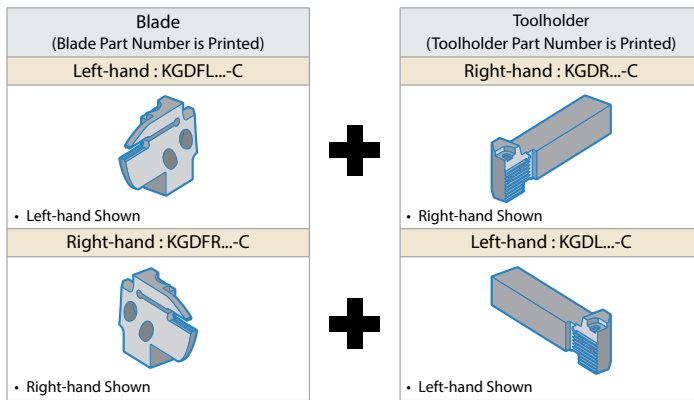
Note 1) If the unit part number is not listed (No Unit Part Number), please purchase toolholder and blade separately. ● : Standard Item  
 2) Dimension CDX\* : Shows the maximum grooving depth. If the dimension CDX is 0.787" (20mm) or more, using a 2-edge insert, the maximum grooving depth is 0.709" (18mm).  
 3) Insert clamp bolt (BH6x10TR) and Blade fixing bolt (SB-60120TR) come with toolholder. For Spare Parts, see Page 40  
 Applicable Inserts See Page 29

## Spare Parts (Common with SwitchBlade Holders)

Unit Part Number	Spare Parts		
	Clamp Screw (for Insert Clamp)	Clamp Screw (for Blade)	Wrench
KGDF $\frac{R}{L}$ ...S	 BH6X10TR	 SB-60120TR	 LTW-25

\* The spare parts above are included with the toolholder and unit.

## KGDF Toolholder Assembly Identification (Face Grooving - SwitchBlade)

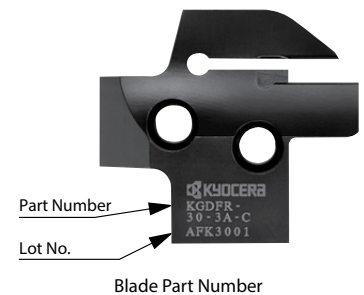
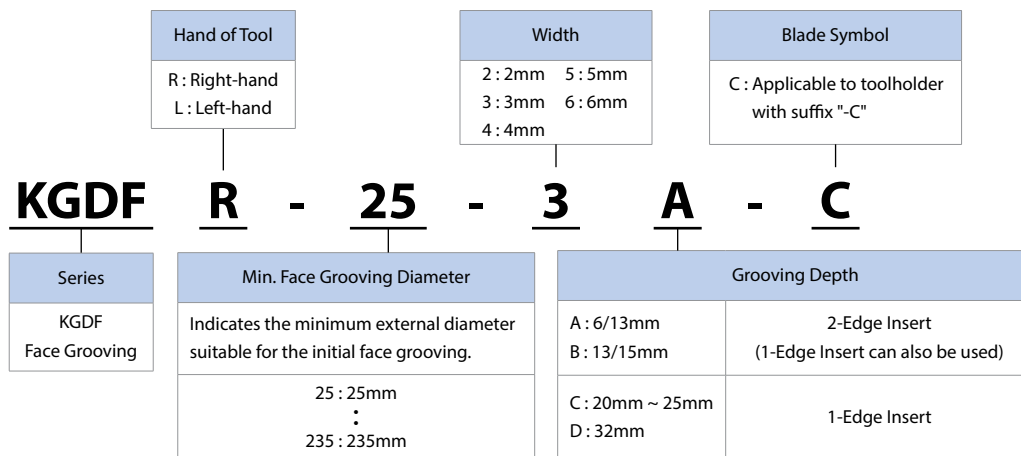


• **Right-hand** Blade for **Left-hand** Toolholder, **Left-hand** Blade for **Right-hand** Toolholder.

• Please purchase toolholder and blade separately

• The insert clamping screw (BH6X10TR), blade fixing screw (SB-60120TR) and wrench (LTW-25) which are included with the toolholder can be used.

## Face Grooving Blade Assembly Identification System



# Face Grooving Diameter (DAXN / DAXX)

Face grooving diameter (DAXN~DAXX) is the available range for the initial plunge on the unprocessed workpiece (See Fig.1).  
 You can then widen the groove towards the center (excluding the models listed in the below table) and towards the outside according to machine limits.

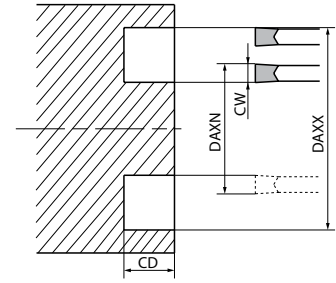


Fig.1

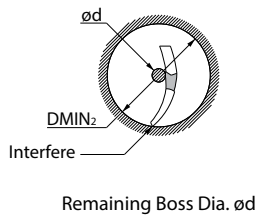
See video for more information!



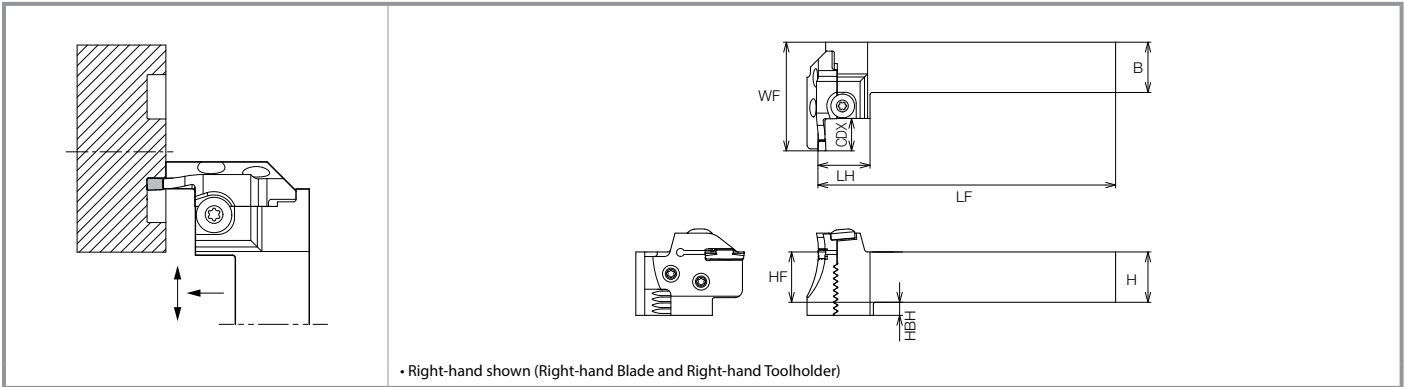
## Limit of Turning Toward Center

Turning towards the Center causes the toolholder to interfere with the groove wall depending on the initial cut's diameter.

Description	DMIN <sub>2</sub>	25	26	27	28 and over
	ød(mm)				
KGDF <sup>R</sup> / <sub>L</sub> -25-3A-C + KGD <sup>L</sup> / <sub>R</sub> 2020-C		4	2	0	0 (No remaining Boss)
KGDF <sup>R</sup> / <sub>L</sub> -25-3A-C + KGD <sup>L</sup> / <sub>R</sub> 2525-C					
KGDF <sup>R</sup> / <sub>L</sub> -25-4A-C + KGD <sup>L</sup> / <sub>R</sub> 2020-C		6	3	0	
KGDF <sup>R</sup> / <sub>L</sub> -25-4A-C + KGD <sup>L</sup> / <sub>R</sub> 2525-C					
KGDF <sup>R</sup> / <sub>L</sub> -25-5B-C + KGD <sup>L</sup> / <sub>R</sub> 2020-C		7	4	1	
KGDF <sup>R</sup> / <sub>L</sub> -25-5B-C + KGD <sup>L</sup> / <sub>R</sub> 2525-C					
KGDF <sup>R</sup> / <sub>L</sub> -25-6B-C + KGD <sup>L</sup> / <sub>R</sub> 2020-C		9	4	1	
KGDF <sup>R</sup> / <sub>L</sub> -25-6B-C + KGD <sup>L</sup> / <sub>R</sub> 2525-C					



e.g.) If the groove of external diameter 0.984" (25mm) is created using KGDFR2020X25-3AS and turning is made toward the inside, a 0.158" (4mm) portion will be left in middle due to interference of toolholder.



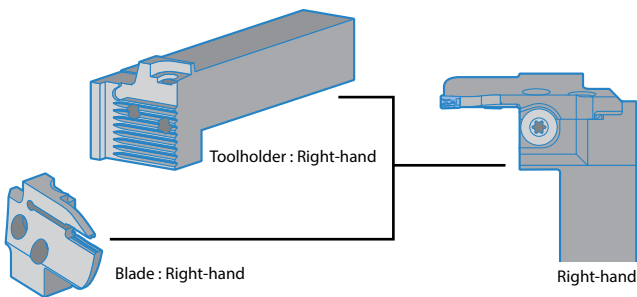
• Right-hand shown (Right-hand Blade and Right-hand Toolholder)

Toolholder Dimensions (0.079" Insert Width)

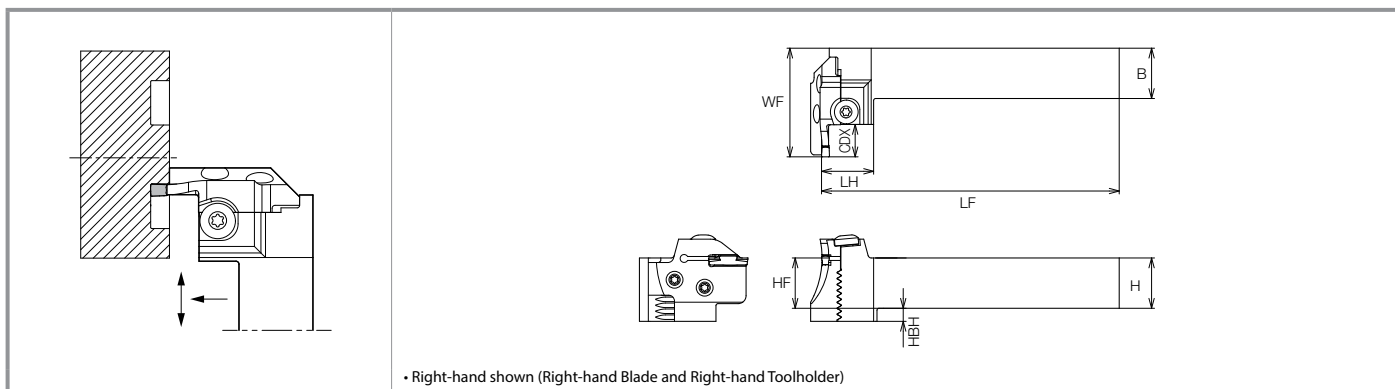
Shank Angle	Insert Width CW	Shank Size (in)	Max. Grooving Depth	Face Grooving Dia. (in)		Toolholder Part Number ➔ P17	Stock		Blade Part Number ➔ P52	Stock		Dimensions (in)													
				DAXN (min)	DAXX (max)		R	L		R	L	H	HF	HBH	B	LF	LH	WF	CDX						
90°	0.079" (2mm)	0.75	0.236" (6mm)	0.984	1.181	KGDSR12-C	●		KGDFR -25-2A-C	●	0.750	0.750	0.510	0.750	4.921	0.988	1.957	0.236							
				1.181	1.378				KGDFR -30-2A-C	●															
				1.378	1.772				KGDFR -35-2A-C	●															
				1.772	2.362				KGDFR -45-2A-C	●															
				2.362	3.150				KGDFR -60-2A-C	●															
				3.150	3.937				KGDFR -80-2A-C	●															
		3.937	5.118	KGDFR -100-2A-C	●																				
		0.512" (13mm)	0.984	1.181	KGDFR -25-2B-C				●	0.750									0.750	0.510	0.750	4.921	0.988	2.075	0.512
		1.181	1.378	KGDFR -30-2B-C	●				0.750	0.750									0.510	0.750	4.921	0.988	2.154	0.591	
		1.378	1.772	KGDFR -35-2B-C	●																				
		1.772	2.362	KGDFR -45-2B-C	●																				
		2.362	3.150	KGDFR -60-2B-C	●																				
	3.150	3.937	KGDFR -80-2B-C	●																					
	3.937	5.118	KGDFR -100-2B-C	●																					
	1.00	0.236" (6mm)	KGDSR16-C	●		0.984	1.181	KGDFR -25-2A-C	●	1.000	1.000	0.260	1.000	5.910	0.988	1.957	0.236								
						1.181	1.378	KGDFR -30-2A-C	●																
						1.378	1.772	KGDFR -35-2A-C	●																
						1.772	2.362	KGDFR -45-2A-C	●																
						2.362	3.150	KGDFR -60-2A-C	●																
						3.150	3.937	KGDFR -80-2A-C	●																
		3.937				5.118	KGDFR -100-2A-C	●																	
		0.512" (13mm)				0.984	1.181	KGDFR -25-2B-C	●									1.000	1.000	0.260	1.000	5.910	0.988	2.075	0.512
		1.181				1.378	KGDFR -30-2B-C	●	1.000									1.000	0.260	1.000	5.910	0.988	2.154	0.591	
		1.378				1.772	KGDFR -35-2B-C	●																	
1.772		2.362				KGDFR -45-2B-C	●																		
2.362		3.150				KGDFR -60-2B-C	●																		
3.150	3.937	KGDFR -80-2B-C	●																						
3.937	5.118	KGDFR -100-2B-C	●																						

● : Standard Item

Applicable Inserts See ➔ Page 29



- KGDF 90° SwitchBlade type is not available as unit (toolholder + blade). Blade and toolholder are available to assemble when purchasing individually.
- **Right-hand** Blade for **Right-hand** Toolholder, **Left-hand** Blade for **Left-hand** Toolholder.
- Insert clamp screw (BH6X10TR), Blade fixing screw (SB-60120TR) and Wrench (LTW-25) come with toolholder. For Spare Parts, see ➔ Page 40



• Right-hand shown (Right-hand Blade and Right-hand Toolholder)

Toolholder Dimensions (0.118" Insert Width)

Shank Angle	Insert Width CW	Shank Size (in)	Max. Grooving Depth	Face Grooving Dia. (in)		Toolholder Part Number ➔ P17	Stock		Blade Part Number ➔ P52	Stock		Dimensions (in)															
				DAXN (min)	DAXX (max)		R	L		R	L	H	HF	HBH	B	LF	LH	WF	CDX								
90°	0.118" (3mm)	0.75	0.512" (13mm)	0.984	1.181	KGDS 9/16-12-C	●	●	KGDF 9/16-25-3A-C	●	●	0.750	0.750	0.510	0.750	4.921	0.988	2.075	0.512								
				1.181	1.575				KGDF 9/16-30-3A-C	●	●																
				1.575	1.969				KGDF 9/16-40-3A-C	○	○																
			0.591" (15mm)	1.969	2.559				KGDF 9/16-50-3B-C	●	○	0.750	0.750	0.510	0.750	4.921	0.988	2.154	0.591								
				2.559	3.346				KGDF 9/16-65-3B-C	●	●																
				3.346	4.331				KGDF 9/16-85-3B-C	●	○																
		0.866" (22mm)	4.331	5.709	KGDF 9/16-110-3B-C				○	●	0.750	0.750	0.510	0.750	4.921	0.988	2.350	0.866									
			1.969	2.559	KGDF 9/16-50-3C-C				○	●																	
			2.559	3.346	KGDF 9/16-65-3C-C				○	●																	
		0.984" (25mm)	3.346	4.331	KGDF 9/16-85-3C-C				○	●	0.750	0.750	0.510	0.750	4.921	0.988	2.429	0.984									
			4.331	5.709	KGDF 9/16-110-3C-C				●	●																	
			0.75	0.512" (13mm)	0.984				1.181	KGDS 9/16-16-C									●	●	KGDF 9/16-25-3A-C	●	●	1.000	1.000	0.260	1.000
	1.181				1.575	KGDF 9/16-30-3A-C	●	●																			
	1.575				1.969	KGDF 9/16-40-3A-C	○	○																			
	0.591" (15mm)			1.969	2.559	KGDF 9/16-50-3B-C	●	○	1.000												1.000	0.260	1.000	5.906	0.988	2.154	0.591
		2.559		3.346	KGDF 9/16-65-3B-C	●	●																				
		3.346		4.331	KGDF 9/16-85-3B-C	●	○																				
	0.866" (22mm)	4.331	5.709	KGDF 9/16-110-3B-C	○	●	1.000	1.000	0.260		1.000	5.906	0.988	2.350	0.866												
		1.969	2.559	KGDF 9/16-50-3C-C	○	●																					
		2.559	3.346	KGDF 9/16-65-3C-C	○	●																					
	0.984" (25mm)	3.346	4.331	KGDF 9/16-85-3C-C	○	●	1.000	1.000	0.260		1.000	5.906	0.988	2.429	0.984												
		4.331	5.709	KGDF 9/16-110-3C-C	●	●																					

• KGDF 90° SwitchBlade type is not available as unit (toolholder + blade).

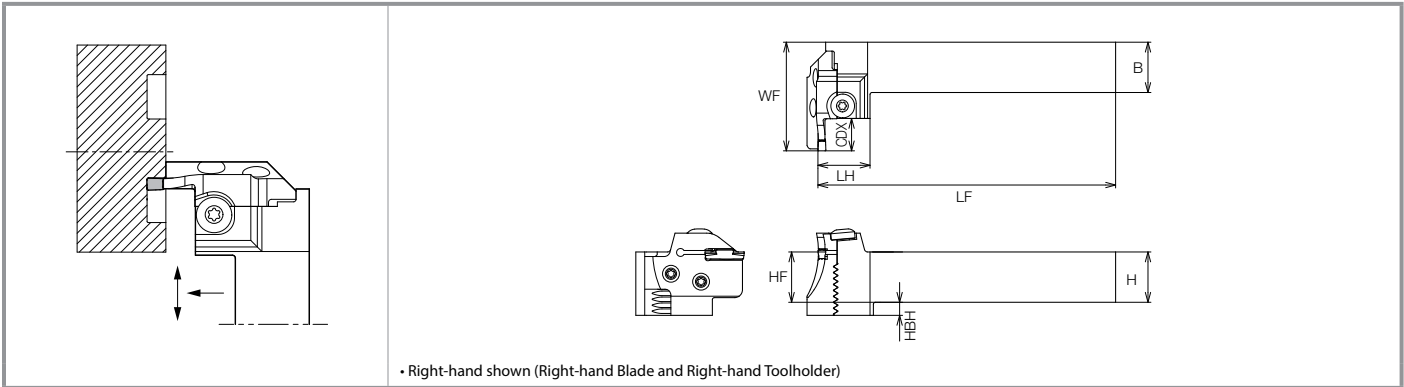
● : Standard Item

Blade and toolholder are available to assemble when purchasing individually.

Applicable Inserts See ➔ Page 29

• **Right-hand** Blade for **Right-hand** Toolholder, **Left-hand** Blade for **Left-hand** Toolholder.

• Insert clamp screw (BH6X10TR), Blade fixing screw (SB-60120TR) and Wrench (LTW-25) come with toolholder. For Spare Parts, see ➔ Page 40



Toolholder Dimensions (0.157" Insert Width)

Shank Angle	Insert Width CW	Shank Size (in)	Max. Grooving Depth	Face Grooving Dia. (in)		Toolholder Part Number ➔ P17	Stock		Blade Part Number ➔ P52	Stock		Dimensions (in)																										
				DAXN (min)	DAXX (max)		R	L		R	L	H	HF	HBH	B	LF	LH	WF	CDX																			
90°	0.157" (4mm)	☐ 0.75	0.512" (13mm)	0.984	1.378	KGDS 9/16 12-C	●	●	KGDF 9/16 -25-4A-C	●	●	0.750	0.750	0.510	0.750	4.921	0.988	2.075	0.512																			
				1.378	1.969				KGDF 9/16 -35-4B-C	●	●																											
				1.969	2.756				-50-4B-C	●	●																											
			0.591" (15mm)	2.756	3.937				-70-4B-C	●	●																											
				3.937	5.906				-100-4B-C	●	●																											
				5.906	8.661				-150-4B-C	●	●																											
			0.984" (25mm)	8.661	∞				-220-4B-C	●	●																											
				1.378	1.969				KGDF 9/16 -35-4C-C	●	●									0.750	0.750	0.510	0.750	4.921	0.988	2.550	0.984											
				1.969	2.756				-50-4C-C	●	●																											
			2.756	3.937	-70-4C-C				●	●																												
			0.512" (13mm)	0.984	1.378				KGDS 9/16 16-C	●	●																	KGDF 9/16 -25-4A-C	●	●	1.000	1.000	0.260	1.000	5.906	0.988	2.075	0.512
				1.378	1.969																							KGDF 9/16 -35-4B-C	●	●								
		1.969		2.756	-50-4B-C	●	●																															
		0.591" (15mm)	2.756	3.937	-70-4B-C	●	●																															
			3.937	5.906	-100-4B-C	●	●																															
			5.906	8.661	-150-4B-C	●	●																															
		0.984" (25mm)	8.661	∞	-220-4B-C	●	●																															
			1.378	1.969	KGDF 9/16 -35-4C-C	●	●	1.000				1.000	0.260	1.000	5.906	0.988	2.550	0.984																				
			1.969	2.756	-50-4C-C	●	●																															
		2.756	3.937	-70-4C-C	●	●																																
		0.512" (13mm)	0.984	1.378	-100-4C-C	●	●																															
			1.378	1.969	-150-4C-C	●	●																															
			1.969	2.756	-220-4C-C	●	●																															

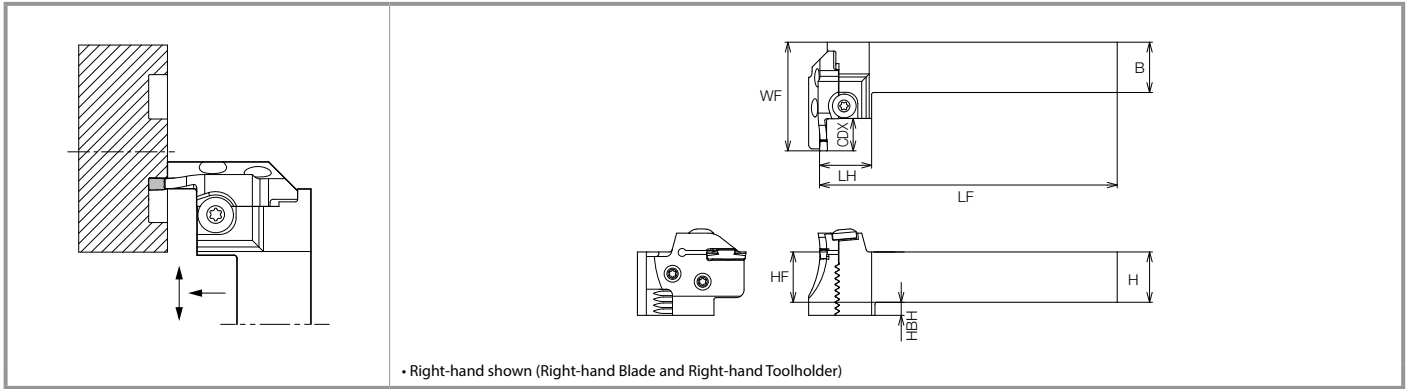
• KGDF 90° SwitchBlade type is not available as unit (toolholder + blade).  
Blade and toolholder are available to assemble when purchasing individually.

• **Right-hand** Blade for **Right-hand** Toolholder, **Left-hand** Blade for **Left-hand** Toolholder.

• Insert clamp screw (BH6X10TR), Blade fixing screw (SB-60120TR) and Wrench (LTW-25) come with toolholder. For Spare Parts, see ➔ Page 40

● : Standard Item

Applicable Inserts See ➔ Page 29



Toolholder Dimensions (0.197" Insert Width)

Shank Angle	Insert Width CW	Shank Size (in)	Max. Grooving Depth	Face Grooving Dia. (in)		Toolholder Part Number ➔ P17	Stock		Blade Part Number ➔ P52	Stock		Dimensions (in)								
				DAXN (min)	DAXX (max)		R	L		R	L	H	HF	HBH	B	LF	LH	WF	CDX	
90°	0.197" (5mm)	0.75	0.591" (15mm)	0.984	1.378	KGDS 9/12-C	●	●	KGDF 9/12-25-5B-C	●	●	0.750	0.750	0.510	0.750	4.921	0.927	2.154	0.591	
				1.378	1.969				-35-5B-C	●	●									
				1.969	2.953				-50-5B-C	●	●									
				2.953	4.528				-75-5B-C	●	●									
				4.528	7.087				-115-5B-C	●	●									
				7.087	9.252				-180-5B-C	●	●									
		9.252	∞	-235-5B-C	●				●											
		0.787" (20mm)	0.984	1.378	KGDF 9/12-25-5C-C				●	●	0.750	0.750	0.510	0.750	4.921	0.927	2.35	0.787		
		1.378	1.969	-35-5C-C	●				●	0.750	0.750	0.510	0.750	4.921	0.927	2.547	0.984			
		1.969	2.953	-50-5C-C	●				●											
		2.953	4.528	-75-5C-C	●				●											
		4.528	7.087	-115-5C-C	●				●											
	7.087	9.252	-180-5C-C	●	●															
	9.252	∞	-235-5C-C	●	●															
	1.260" (32mm)	2.953	4.528	KGDF 9/12-75-5D-C	●	●	0.750	0.750	0.510	0.750	4.921	0.927	2.823	1.26						
	4.528	7.087	-115-5D-C	●	●															
	7.087	9.252	-180-5D-C	●	●															
	9.252	∞	-235-5D-C	●	●															
	0.197" (5mm)	0.75	0.591" (15mm)	0.591" (15mm)	0.984	1.378	KGDS 9/16-C	●	●	KGDF 9/16-25-5B-C	●	●	1.000	1.000	0.260	1.000	5.906	1.177	2.154	0.591
					1.378	1.969				-35-5B-C	●	●								
					1.969	2.953				-50-5B-C	●	●								
					2.953	4.528				-75-5B-C	●	●								
					4.528	7.087				-115-5B-C	●	●								
					7.087	9.252				-180-5B-C	●	●								
9.252		∞	-235-5B-C	●	●															
0.787" (20mm)		0.984	1.378	KGDF 9/16-25-5C-C	●	●				1.000	1.000	0.260	1.000	5.906	1.177	2.35	0.787			
1.378		1.969	-35-5C-C	●	●	1.000				1.000	0.260	1.000	5.906	1.177	2.547	0.984				
1.969		2.953	-50-5C-C	●	●															
2.953		4.528	-75-5C-C	●	●															
4.528		7.087	-115-5C-C	●	●															
7.087	9.252	-180-5C-C	●	●																
9.252	∞	-235-5C-C	●	●																
1.260" (32mm)	2.953	4.528	KGDF 9/16-75-5D-C	●	●	1.000	1.000	0.260	1.000	5.906	1.177	2.823	1.26							
4.528	7.087	-115-5D-C	●	●																
7.087	9.252	-180-5D-C	●	●																
9.252	∞	-235-5D-C	●	●																

• KGDF 90° SwitchBlade type is not available as unit (toolholder + blade).

• Blade and toolholder are available to assemble when purchasing individually.

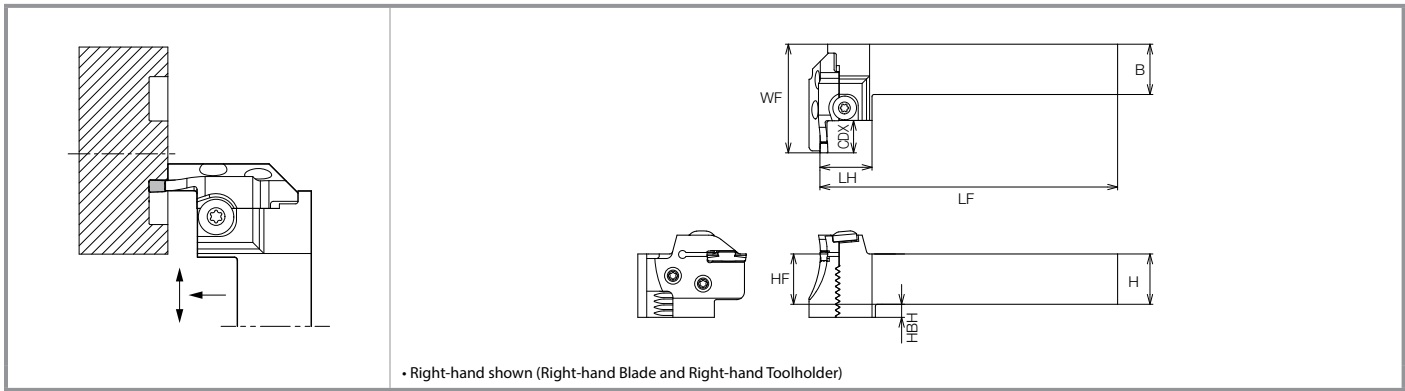
• **Right-hand** Blade for **Right-hand** Toolholder, **Left-hand** Blade for **Left-hand** Toolholder.

• Insert clamp screw (BH6X10TR), Blade fixing screw (SB-60120TR) and Wrench (LTW-25) come with toolholder. For Spare Parts, see ➔ Page 40

● : Standard Item

Applicable Inserts See ➔ Page 29





Toolholder Dimensions (0.236" Insert Width)

Shank Angle	Insert Width CW	Shank Size (in)	Max. Grooving Depth	Face Grooving Dia. (in)		Toolholder Part Number ➔ P17	Stock		Blade Part Number ➔ P52	Stock		Dimensions (in)													
				DAXN (min)	DAXX (max)		R	L		R	L	H	HF	HBH	B	LF	LH	WF	CDX						
90°	0.236" (6mm)	0.75	0.591" (15mm)	0.984	1.378	KGDS% 12-C	●	●	KGDF% -25-6B-C	●	●	0.750	0.750	0.510	0.750	4.921	0.988	2.154	0.591						
				1.378	1.969				-35-6B-C	●	●														
				1.969	2.953				-50-6B-C	●	●														
				2.953	4.528				-75-6B-C	●	●														
				4.528	7.087				-115-6B-C	●	●														
				7.087	9.252				-180-6B-C	●	●														
			9.252	∞	-235-6B-C				●	●															
			0.787" (20mm)	0.984	1.378				KGDF% -25-6C-C	●	●	0.750	0.750	0.510	0.750	4.921	0.988	2.350	0.787						
			0.984" (25mm)	1.378	1.969				-35-6C-C	●	●	0.750	0.750	0.510	0.750	4.921	0.988	2.547	0.984						
				1.969	2.953				-50-6C-C	●	●														
				2.953	4.528				-75-6C-C	●	●														
				4.528	7.087				-115-6C-C	●	●														
		7.087		9.252	-180-6C-C	●	●																		
		9.252		∞	-235-6C-C	●	●																		
		1.260" (32mm)	2.953	4.528	KGDF% -75-6D-C	●	●	0.750	0.750	0.510	0.750	4.921	0.988	2.823	1.260										
			4.528	7.087	-115-6D-C	●	●																		
			7.087	9.252	-180-6D-C	●	●																		
			9.252	∞	-235-6D-C	●	●																		
			1.00	0.591" (15mm)	0.984	1.378	KGDF% -25-6B-C									●	●	1.000	1.000	0.260	1.000	5.906	0.988	2.154	0.591
					1.378	1.969	-35-6B-C									●	●								
		1.969			2.953	-50-6B-C	●	●																	
		2.953			4.528	-75-6B-C	●	●																	
		4.528			7.087	-115-6B-C	●	●																	
		7.087			9.252	-180-6B-C	●	●																	
9.252	∞	-235-6B-C		●	●																				
0.787" (20mm)	0.984	1.378		KGDF% -25-6C-C	●	●	1.000	1.000	0.260	1.000	5.906	0.988	2.350	0.787											
0.984" (25mm)	1.378	1.969		-35-6C-C	●	●	1.000	1.000	0.260	1.000	5.906	0.988	2.547	0.984											
	1.969	2.953		-50-6C-C	●	●																			
	2.953	4.528		-75-6C-C	●	●																			
	4.528	7.087		-115-6C-C	●	●																			
	7.087	9.252	-180-6C-C	●	●																				
	9.252	∞	-235-6C-C	●	●																				
1.260" (32mm)	2.953	4.528	KGDF% -75-6D-C	●	●	1.000	1.000	0.260	1.000	5.906	0.988	2.823	1.260												
	4.528	7.087	-115-6D-C	●	●																				
	7.087	9.252	-180-6D-C	●	●																				
	9.252	∞	-235-6D-C	●	●																				

• KGDF 90° SwitchBlade type is not available as unit (toolholder + blade).

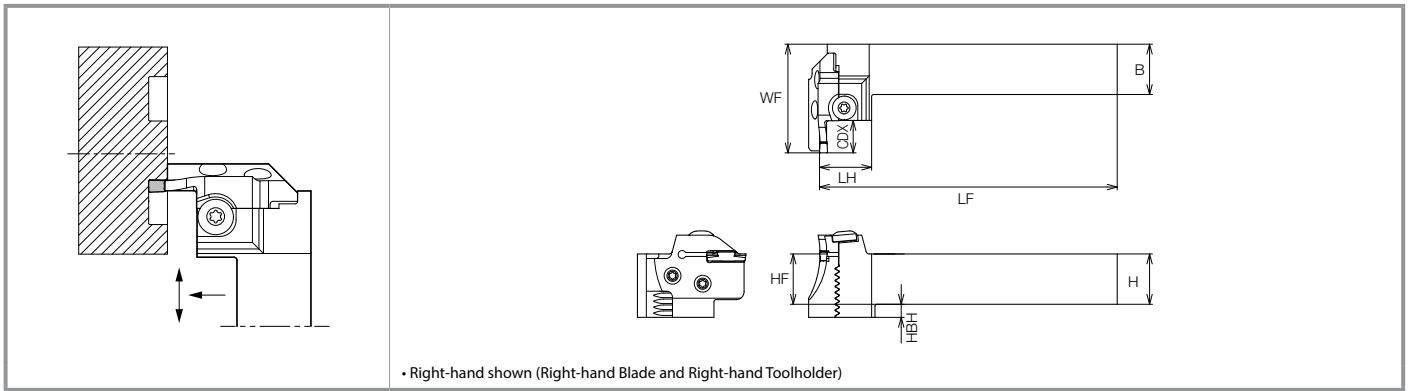
● : Standard Item

Blade and toolholder are available to assemble when purchasing individually.

Applicable Inserts See ➔ Page 29

• **Right-hand** Blade for **Right-hand** Toolholder, **Left-hand** Blade for **Left-hand** Toolholder.

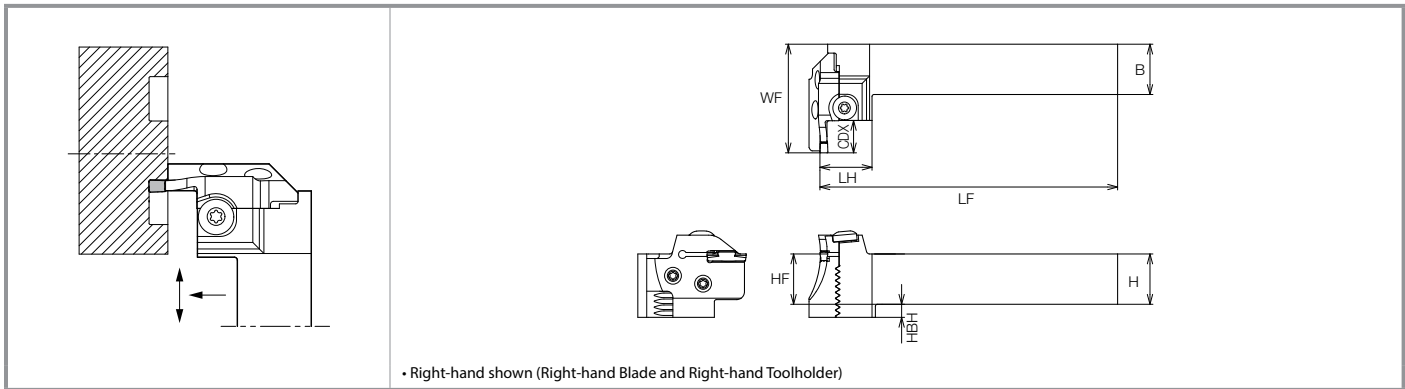
• Insert clamp screw (BH6X10TR), Blade fixing screw (SB-60120TR) and Wrench (LTW-25) come with toolholder. For Spare Parts, see ➔ Page 40



Toolholder Dimensions (2mm Insert Width)

Shank Angle	Insert Width CW	Shank Size (mm)	Max. Grooving Depth	Face Grooving Dia. (mm)		Toolholder Part Number ➔ P17	Stock		Blade Part Number ➔ P52	Stock		Dimensions (mm)													
				DAXN (min)	DAXX (max)		R	L		R	L	H	HF	HBH	B	LF	LH	WF	CDX						
90°	0.079" (2mm)	□20	0.236" (6mm)	25	30	KGDSR2020-C	●		KGDFR -25-2A-C	●	20	20	12	20	125	27.7	49.7	6							
				30	35				KGDFR -30-2A-C	●															
				35	45				KGDFR -35-2A-C	●															
				45	60				KGDFR -45-2A-C	●															
				60	80				KGDFR -60-2A-C	●															
				80	100				KGDFR -80-2A-C	●															
		100	130	KGDFR -100-2A-C	●																				
		0.512" (13mm)	25	30	KGDFR -25-2B-C				●	20									20	12	20	125	27.7	52.7	13
		30	35	KGDFR -30-2B-C	●				20	20									12	20	125	27.7	54.7	15	
		35	45	KGDFR -35-2B-C	●																				
		45	60	KGDFR -45-2B-C	●																				
		60	80	KGDFR -60-2B-C	●																				
	80	100	KGDFR -80-2B-C	●																					
	100	130	KGDFR -100-2B-C	●																					
	□25	0.236" (6mm)	25	30	KGDSR2525-C	●		KGDFR -25-2A-C	●	25	25	7	25	150	27.7	49.7	6								
			30	35				KGDFR -30-2A-C	●																
			35	45				KGDFR -35-2A-C	●																
			45	60				KGDFR -45-2A-C	●																
			60	80				KGDFR -60-2A-C	●																
			80	100				KGDFR -80-2A-C	●																
		100	130	KGDFR -100-2A-C				●																	
		0.512" (13mm)	25	30				KGDFR -25-2B-C	●									25	25	7	25	150	27.7	52.7	13
		30	35	KGDFR -30-2B-C				●	25									25	7	25	150	27.7	54.7	15	
		35	45	KGDFR -35-2B-C				●																	
45		60	KGDFR -45-2B-C	●																					
60		80	KGDFR -60-2B-C	●																					
80	100	KGDFR -80-2B-C	●																						
100	130	KGDFR -100-2B-C	●																						

- KGDF 90° SwitchBlade type is not available as unit (toolholder + blade).
  - Blade and toolholder are available to assemble when purchasing individually.
  - **Right-hand** Blade for **Right-hand** Toolholder, **Left-hand** Blade for **Left-hand** Toolholder.
  - Insert clamp screw (BH6X10TR), Blade fixing screw (SB-60120TR) and Wrench (LTW-25) come with toolholder. For Spare Parts, see ➔ Page 40
- : Standard Item  
Applicable Inserts See ➔ Page 29



Toolholder Dimensions (3mm Insert Width)

Shank Angle	Insert Width CW	Shank Size (mm)	Max. Grooving Depth	Face Grooving Dia. (mm)		Toolholder Part Number ➔ P17	Stock		Blade Part Number ➔ P52	Stock		Dimensions (mm)										
				DAXN (min)	DAXX (max)		R	L		R	L	H	HF	HBH	B	LF	LH	WF	CDX			
90°	0.118" (3mm)	□20	0.512" (13mm)	25	30	KGDS <sup>®</sup> 2020-C	●	●	KGDF <sup>®</sup> -25-3A-C	●	●	20	20	12	20	125	27.7	52.7	13			
				-30-3A-C	●				●													
				-40-3A-C	●				●													
			0.591" (15mm)	50	65				KGDF <sup>®</sup> -50-3B-C	●	●	20	20	12	20	125	27.7	54.7	15			
				-65-3B-C	●					●												
				-85-3B-C	●					●												
		0.866" (22mm)	50	65	KGDF <sup>®</sup> -50-3C-C				●	●	20	20	12	20	125	27.7	59.7	22				
			-65-3C-C	●					●													
			-85-3C-C	●					●													
		□25	0.512" (13mm)	25	30				KGDS <sup>®</sup> 2525-C	●	●	KGDF <sup>®</sup> -25-3A-C	●	●	25	25	7	25	150	27.7	52.7	13
				-30-3A-C	●							●										
				-40-3A-C	●							●										
	0.591" (15mm)		50	65	KGDF <sup>®</sup> -50-3B-C	●	●	25				25	7	25	150	27.7	54.7	15				
			-65-3B-C	●		●																
			-85-3B-C	●		●																
	0.866" (22mm)	50	65	KGDF <sup>®</sup> -50-3C-C	●	●	25	25				7	25	150	27.7	59.7	22					
		-65-3C-C	●		●																	
		-85-3C-C	●		●																	
	0.984" (25mm)	85	110	KGDF <sup>®</sup> -85-3C-C	●	●	25	25				7	25	150	27.7	61.7	25					
		-110-3C-C	●		●																	
		-110-3C-C	●		●																	

• KGDF 90° SwitchBlade type is not available as unit (toolholder + blade).

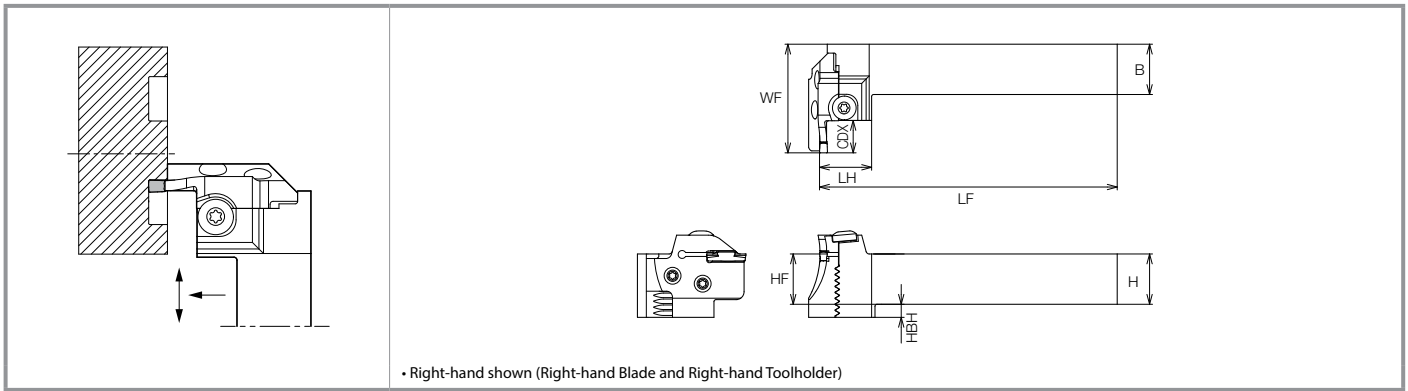
● : Standard Item

Blade and toolholder are available to assemble when purchasing individually.

Applicable Inserts See ➔ Page 29

• **Right-hand** Blade for **Right-hand** Toolholder, **Left-hand** Blade for **Left-hand** Toolholder.

• Insert clamp screw (BH6X10TR), Blade fixing screw (SB-60120TR) and Wrench (LTW-25) come with toolholder. For Spare Parts, see ➔ Page 40



Toolholder Dimensions (4mm Insert Width)

Shank Angle	Insert Width CW	Shank Size (mm)	Max. Grooving Depth	Face Grooving Dia. (mm)		Toolholder Part Number ➔ P17	Stock		Blade Part Number ➔ P52	Stock		Dimensions (mm)							
				DAXN (min)	DAXX (max)		R	L		R	L	H	HF	HBH	B	LF	LH	WF	CDX
90°	0.157" (4mm)	□ 20	0.512" (13mm)	25	35	KGDS% 2020-C	●	●	KGDF% -25-4A-C	●	●	20	20	12	20	125	27.7	52.7	13
				-35-4B-C	●				●	20	20	12	20	125	27.7	54.7	15		
			-50-4B-C	●	●														
			-70-4B-C	●	●														
			-100-4B-C	●	●														
			-150-4B-C	●	●														
		-220-4B-C	●	●															
		0.591" (15mm)	35	50	KGDF% -35-4C-C				●	●	20	20	12	20	125	27.7	64.7	25	
			50	70					-50-4C-C	●									●
			70	100					-70-4C-C	●									●
			100	150					-100-4C-C	●									●
			150	220					-150-4C-C	●									●
	220		∞	-220-4C-C		●	●												
	0.984" (25mm)	35	50	KGDF% -35-4C-C	●	●	25	25	7	25	150	27.7	64.7	25					
		50	70		-50-4C-C	●									●				
		70	100		-70-4C-C	●									●				
		100	150		-100-4C-C	●									●				
		150	220		-150-4C-C	●									●				
		220	∞		-220-4C-C	●									●				
	□ 25	0.512" (13mm)	25	35	KGDS% 2525-C	●	●	KGDF% -25-4A-C	●	●	25	25	7	25	150	27.7	52.7	13	
			-35-4B-C	●				●	25	25	7	25	150	27.7	54.7	15			
			-50-4B-C	●				●											
			-70-4B-C	●				●											
			-100-4B-C	●				●											
-150-4B-C			●	●															
-220-4B-C		●	●																
0.591" (15mm)		35	50	KGDF% -35-4C-C				●	●	25	25	7	25	150	27.7	64.7	25		
		50	70					-50-4C-C	●									●	
		70	100					-70-4C-C	●									●	
		100	150					-100-4C-C	●									●	
		150	220					-150-4C-C	●									●	
	220	∞	-220-4C-C		●	●													
0.984" (25mm)	35	50	KGDF% -35-4C-C	●	●	25	25	7	25	150	27.7	64.7	25						
	50	70		-50-4C-C	●									●					
	70	100		-70-4C-C	●									●					
	100	150		-100-4C-C	●									●					
	150	220		-150-4C-C	●									●					
	220	∞		-220-4C-C	●									●					

• KGDF 90° SwitchBlade type is not available as unit (toolholder + blade).

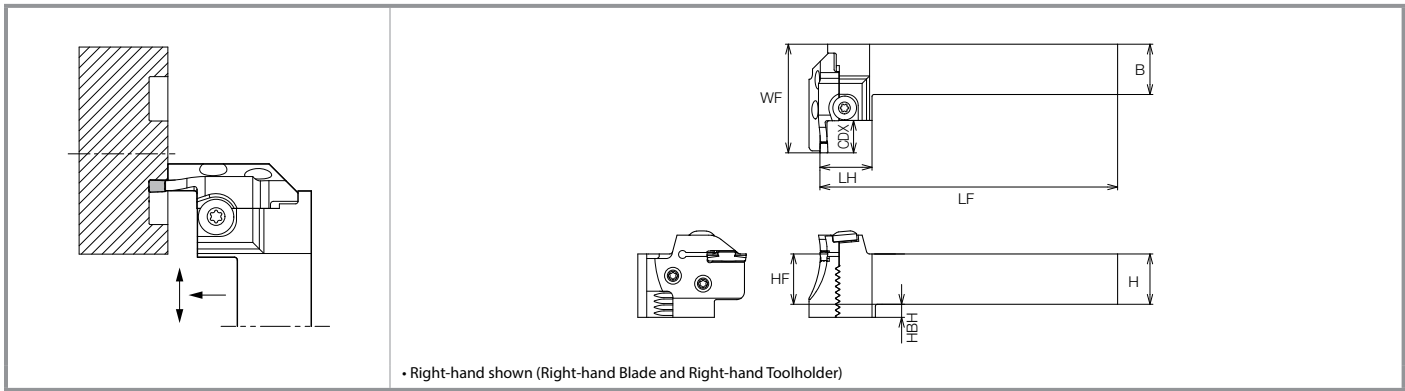
Blade and toolholder are available to assemble when purchasing individually.

• **Right-hand** Blade for **Right-hand** Toolholder, **Left-hand** Blade for **Left-hand** Toolholder.

• Insert clamp screw (BH6X10TR), Blade fixing screw (SB-60120TR) and Wrench (LTW-25) come with toolholder. For Spare Parts, see ➔ [Page 40](#)

● : Standard Item

Applicable Inserts See ➔ [Page 29](#)



Toolholder Dimensions (5mm Insert Width)

Shank Angle	Insert Width CW	Shank Size (mm)	Max. Grooving Depth	Face Grooving Dia. (mm)		Toolholder Part Number ➔ P17	Stock		Blade Part Number ➔ P52	Stock		Dimensions (mm)																			
				DAXN (min)	DAXX (max)		R	L		R	L	H	HF	HBH	B	LF	LH	WF	CDX												
90°	0.197" (5mm)	□20	0.591" (15mm)	25	35	KGDS % 2020-C	●	●	KGDF % -25-5B-C	●	●	20	20	12	20	125	27.7	54.7	15												
				35	50				-35-5B-C	●	●																				
				50	75				-50-5B-C	●	●																				
				75	115				-75-5B-C	●	●																				
				115	180				-115-5B-C	●	●																				
				180	235				-180-5B-C	●	●																				
		235	∞	-235-5B-C	●		●																								
		0.787" (20mm)	25	35	KGDF % -25-5C-C		●	●	20	20	12	20	125	27.7	59.7	20															
		0.984" (25mm)	35	50	KGDS % 2020-C		●	●	-35-5C-C	●	●	20	20	12	20	125	27.7	64.7	25												
			50	75					-50-5C-C	●	●																				
			75	115					-75-5C-C	●	●																				
			115	180					-115-5C-C	●	●																				
	180		235	-180-5C-C		●			●																						
	235		∞	-235-5C-C		●			●																						
	1.260" (32mm)	75	115	KGDS % 2020-C	●	●	KGDF % -75-5D-C	●	●	20	20	12	20	125	27.7	71.7	32														
		115	180				-115-5D-C	●	●																						
		180	235				-180-5D-C	●	●																						
		235	∞				-235-5D-C	●	●																						
		0.197" (5mm)	□25				0.591" (15mm)	25	35									KGDS % 2525-C	●	●	KGDF % -25-5B-C	●	●	25	25	7	25	150	27.7	54.7	15
								35	50												-35-5B-C	●	●								
	50			75	-50-5B-C	●		●																							
	75			115	-75-5B-C	●		●																							
	115			180	-115-5B-C	●		●																							
	180			235	-180-5B-C	●		●																							
235	∞		-235-5B-C	●	●																										
0.787" (20mm)	25		35	KGDF % -25-5C-C	●	●	25	25	7	25	150	27.7	59.7	20																	
0.984" (25mm)	35		50	KGDS % 2525-C	●	●	-35-5C-C	●	●	25	25	7	25	150	27.7	64.7	25														
	50		75				-50-5C-C	●	●																						
	75		115				-75-5C-C	●	●																						
	115		180				-115-5C-C	●	●																						
	180	235	-180-5C-C				●	●																							
	235	∞	-235-5C-C				●	●																							
1.260" (32mm)	75	115	KGDS % 2525-C	●	●	KGDF % -75-5D-C	●	●	25	25	7	25	150	27.7	71.7	32															
	115	180				-115-5D-C	●	●																							
	180	235				-180-5D-C	●	●																							
	235	∞				-235-5D-C	●	●																							

• KGDF 90° SwitchBlade type is not available as unit (toolholder + blade).

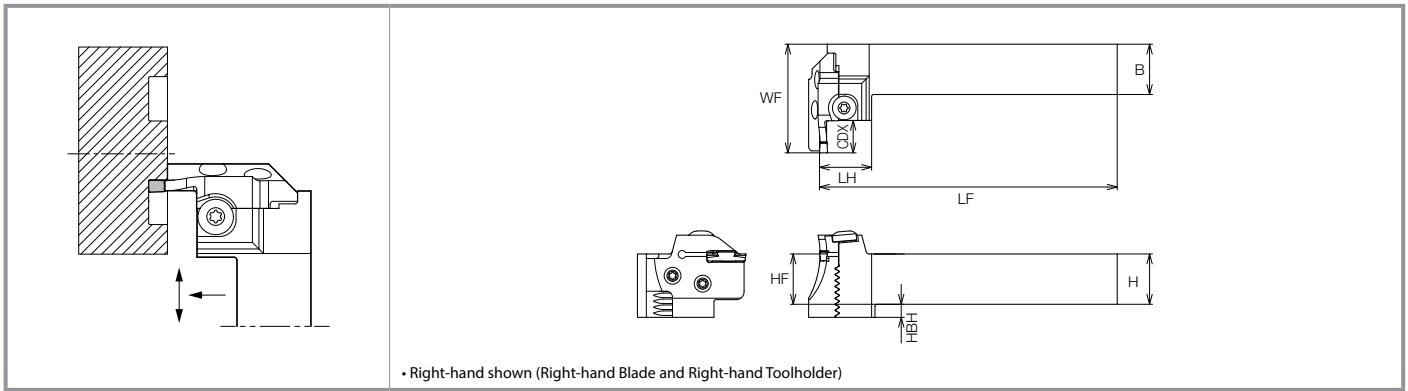
● : Standard Item

Blade and toolholder are available to assemble when purchasing individually.

Applicable Inserts See ➔ Page 29

• **Right-hand** Blade for **Right-hand** Toolholder, **Left-hand** Blade for **Left-hand** Toolholder.

• Insert clamp screw (BH6X10TR), Blade fixing screw (SB-60120TR) and Wrench (LTW-25) come with toolholder. For Spare Parts, see ➔ Page 40



Toolholder Dimensions (6mm Insert Width)

Shank Angle	Insert Width CW	Shank Size (mm)	Max. Grooving Depth	Face Grooving Dia. (mm)		Toolholder Part Number ● P17	Stock		Blade Part Number ● P52	Stock		Dimensions (mm)							
				DAXN (min)	DAXX (max)		R	L		R	L	H	HF	HBH	B	LF	LH	WF	CDX
90°	0.236" (6mm)	□20	0.591" (15mm)	25	35	KGDS%L 2020-C	●	●	KGDF%L -25-6B-C	●	●	20	20	12	20	125	27.7	54.7	15
				35	50				-35-6B-C	●	●								
				50	75				-50-6B-C	●	●								
				75	115				-75-6B-C	●	●								
				115	180				-115-6B-C	●	●								
				180	235				-180-6B-C	●	●								
		235	∞	-235-6B-C	●		●												
		0.787" (20mm)	25	35	KGDF%L -25-6C-C		●	●	20	20	12	20	125	27.7	59.7	20			
		35	50	-35-6C-C	●		●	20	20	12	20	125	27.7	64.7	25				
		50	75	-50-6C-C	●		●												
		75	115	-75-6C-C	●		●												
		115	180	-115-6C-C	●		●												
	180	235	-180-6C-C	●	●														
	235	∞	-235-6C-C	●	●														
	1.260" (32mm)	75	115	KGDF%L -75-6D-C	●	●	20	20	12	20	125	27.7	71.7	32					
	115	180	-115-6D-C	●	●														
	180	235	-180-6D-C	●	●														
	235	∞	-235-6D-C	●	●														
	0.236" (6mm)	□25	0.591" (15mm)	25	35	KGDS%L 2525-C	●	●	KGDF%L -25-6B-C	●	●	25	25	7	25	150	27.7	54.7	15
				35	50				-35-6B-C	●	●								
				50	75				-50-6B-C	●	●								
				75	115				-75-6B-C	●	●								
				115	180				-115-6B-C	●	●								
				180	235				-180-6B-C	●	●								
235		∞	-235-6B-C	●	●														
0.787" (20mm)		25	35	KGDF%L -25-6C-C	●		●	25	25	7	25	150	27.7	59.7	20				
35		50	-35-6C-C	●	●		25	25	7	25	150	27.7	64.7	25					
50		75	-50-6C-C	●	●														
75		115	-75-6C-C	●	●														
115		180	-115-6C-C	●	●														
180	235	-180-6C-C	●	●															
235	∞	-235-6C-C	●	●															
1.260" (32mm)	75	115	KGDF%L -75-6D-C	●	●	25	25	7	25	150	27.7	71.7	32						
115	180	-115-6D-C	●	●															
180	235	-180-6D-C	●	●															
235	∞	-235-6D-C	●	●															

• KGDF 90° SwitchBlade type is not available as unit (toolholder + blade).

● : Standard Item

Blade and toolholder are available to assemble when purchasing individually.

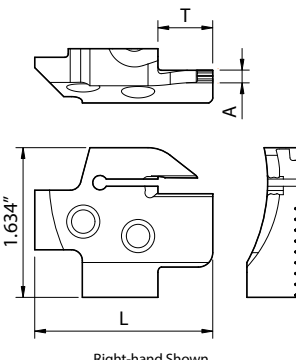
Applicable Inserts See ● Page 29

• **Right-hand** Blade for **Right-hand** Toolholder, **Left-hand** Blade for **Left-hand** Toolholder.

• Insert clamp screw (BH6X10TR), Blade fixing screw (SB-60120TR) and Wrench (LTW-25) come with toolholder. For Spare Parts, see ● Page 40

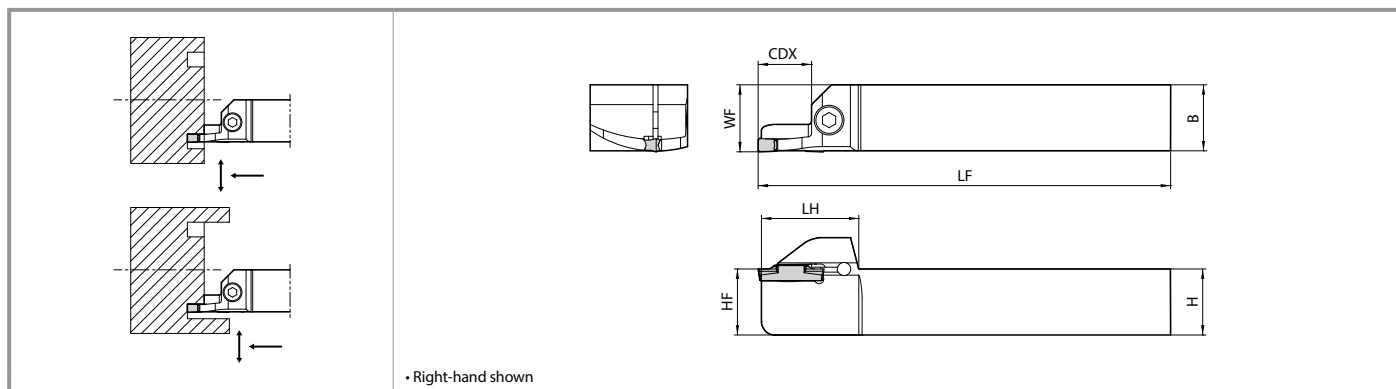
# Face Grooving Blades

## Blade Dimensions

Shape	Blade Part Number	Stock		Dimensions (in)			Face Grooving Dia. (in)		Insert Width (in)	Applicable Inserts P29	Toolholder Part Number P17	
		R	L	L	T	A	DAXN (min)	DAXX (max)	CW			
	KGDFR	-25-2A-C	●	1.746	0.236	0.059	0.984	1.181	0.079 (2mm)	GDFM 2020N-020GM		
		-30-2A-C	●				1.181	1.378				
		-35-2A-C	●				1.378	1.772				
		-45-2A-C	●				1.772	2.362				
		-60-2A-C	●				2.362	3.150				
		-80-2A-C	●	3.150	3.937							
		-100-2A-C	●	3.937	5.118							
		-25-2B-C	●	1.864	0.512		0.984	1.181				
		-30-2B-C	●	1.181	1.378							
		-35-2B-C	●	1.378	1.772							
	-45-2B-C	●	1.772	2.362								
	-60-2B-C	●	2.362	3.150								
	-80-2B-C	●	3.150	3.937								
	-100-2B-C	●	3.937	5.118								
	KGDF <sup>¾</sup>	-25-3A-C	●	●	1.864	0.512	0.079	0.984	1.181	0.118 (3mm)		GDFM 3020N-030GM GDFM 3020N-030DM GDFMS 3020N-030DM GDFM3020N-150R-CM GDFG3020N-020GS
		-30-3A-C	●	●				1.181	1.575			
		-40-3A-C	●	●				1.575	1.969			
		-50-3B-C	●	●				1.969	2.559			
		-65-3B-C	●	●				2.559	3.346			
		-85-3B-C	●	●	3.346	4.331						
		-110-3B-C	●	●	4.331	5.709						
		-50-3C-C	●	●	1.969	2.559						
		-65-3C-C	●	●	2.559	3.346						
		-85-3C-C	●	●	3.346	4.331						
	-110-3C-C	●	●	4.331	5.709							
	KGDF <sup>¾</sup>	-25-4A-C	●	●	1.864	0.512	0.118	0.984	1.378	0.157 (4mm)		GDFM 4020N-040GM GDFM 4020N-040GH GDFM 4020N-040DM GDFMS 4020N-040DM GDFM4020N-200R-CM GDFG4020N-040GS
		-35-4B-C	●	●				1.378	1.969			
		-50-4B-C	●	●				1.969	2.756			
		-70-4B-C	●	●				2.756	3.937			
		-100-4B-C	●	●				3.937	5.906			
		-150-4B-C	●	●	5.906	8.661						
		-220-4B-C	●	●	8.661	∞						
		-35-4C-C	●	●	1.378	1.969						
		-50-4C-C	●	●	1.969	2.756						
		-70-4C-C	●	●	2.756	3.937						
	-100-4C-C	●	●	3.937	5.906							
	-150-4C-C	●	●	5.906	8.661							
	-220-4C-C	●	●	8.661	∞							
	KGDF <sup>¾</sup>	-25-5B-C	●	●	1.943	0.591	0.157	0.984	1.378	0.197 (5mm)		GDFM 5020N-040GM GDFM 5020N-080GM GDFM 5020N-040GH GDFM 5020N-080GH GDFM 5020N-040DM GDFMS 5020N-040DM GDFM5020N-250R-CM GDFG5020N-040GS
		-35-5B-C	●	●				1.378	1.969			
		-50-5B-C	●	●				1.969	2.953			
		-75-5B-C	●	●				2.953	4.528			
		-115-5B-C	●	●				4.528	7.087			
		-180-5B-C	●	●	7.087	9.252						
		-235-5B-C	●	●	9.252	∞						
		-25-5C-C	●	●	2.140	0.787		0.984	1.378			
		-35-5C-C	●	●	1.378	1.969						
		-50-5C-C	●	●	1.969	2.953						
	-75-5C-C	●	●	2.953	4.528							
	-115-5C-C	●	●	4.528	7.087							
-180-5C-C	●	●	7.087	9.252								
-235-5C-C	●	●	9.252	∞								
-75-5D-C	●	●	2.953	4.528								
-115-5D-C	●	●	4.528	7.087								
-180-5D-C	●	●	7.087	9.252								
-235-5D-C	●	●	9.252	∞								
KGDF <sup>¾</sup>	-25-6B-C	●	●	1.943	0.591	0.197	0.984	1.378	0.236 (6mm)	GDFM 6020N-040GM GDFM 6020N-080GM GDFM 6020N-040GH GDFM 6020N-080GH GDFM 6020N-040DM GDFMS 6020N-040DM GDFM6020N-300R-CM GDFG6020N-040GS		
	-35-6B-C	●	●				1.378	1.969				
	-50-6B-C	●	●				1.969	2.953				
	-75-6B-C	●	●				2.953	4.528				
	-115-6B-C	●	●				4.528	7.087				
	-180-6B-C	●	●	7.087	9.252							
	-235-6B-C	●	●	9.252	∞							
	-25-6C-C	●	●	2.140	0.787		0.984	1.378				
	-35-6C-C	●	●	1.378	1.969							
	-50-6C-C	●	●	1.969	2.953							
-75-6C-C	●	●	2.953	4.528								
-115-6C-C	●	●	4.528	7.087								
-180-6C-C	●	●	7.087	9.252								
-235-6C-C	●	●	9.252	∞								
-75-6D-C	●	●	2.953	4.528								
-115-6D-C	●	●	4.528	7.087								
-180-6D-C	●	●	7.087	9.252								
-235-6D-C	●	●	9.252	∞								

● : Standard Item







Toolholder Dimensions (3mm / 4mm / 5mm Insert Width)

Insert Width CW	Shank Size (mm)	Max. Grooving Depth	Face Grooving Dia. (mm)		Part Number	Stock		Dimensions (mm)														
			DAXN (min)	DAXX (max)		R	L	H	HF	B	LF	LH	F1	CDX								
0.118 (3mm)	□20	0.591" (15mm)	50	65	KGDF <sup>R/L</sup>	2020K50-3B-Z	●	●	20	20	20	125	30.5	20.3	15							
			65	85		2020K65-3B-Z	●	●														
			85	110		2020K85-3B-Z	●	●														
	110		145	2020K110-3B-Z	●	●																
	□25		50	65	KGDF <sup>R/L</sup>	2525M50-3B-Z	●	●								25	25	25	150	30.5	25.3	15
			65	85		2525M65-3B-Z	●	●														
85		110	2525M85-3B-Z	●		●																
110	145	2525M110-3B-Z	●	●																		
0.157 (4mm)	□20	0.591" (15mm)	50	70	KGDF <sup>R/L</sup>	2020K50-4B-Z	●	●	20	20	20	125	30.5	20.3	15							
			70	100		2020K70-4B-Z	●	●														
			100	150		2020K100-4B-Z	●	●														
	□25		50	70	KGDF <sup>R/L</sup>	2525M50-4B-Z	●	●								25	25	25	150	30.5	25.3	15
			70	100		2525M70-4B-Z	●	●														
			100	150		2525M100-4B-Z	●	●														
0.197 (5mm)	□20	0.591" (15mm)	50	75	KGDF <sup>R/L</sup>	2020K50-5B-Z	●	●	20	20	20	125	30.5	20.3	15							
			75	115		2020K75-5B-Z	●	●														
			115	180		2020K115-5B-Z	●	●														
	□25		50	75	KGDF <sup>R/L</sup>	2525M50-5B-Z	●	●								25	25	25	150	30.5	25.3	15
			75	115		2525M75-5B-Z	●	●														
			115	180		2525M115-5B-Z	●	●														

● : Standard Item

Applicable Inserts See [Page 29](#)

### Spare Parts

Part Number	Spare Parts	
	Clamp Screw	Wrench
		
KGDF <sup>R/L</sup> ...-Z	HH5X16	LW-4

### Toolholder Identification System

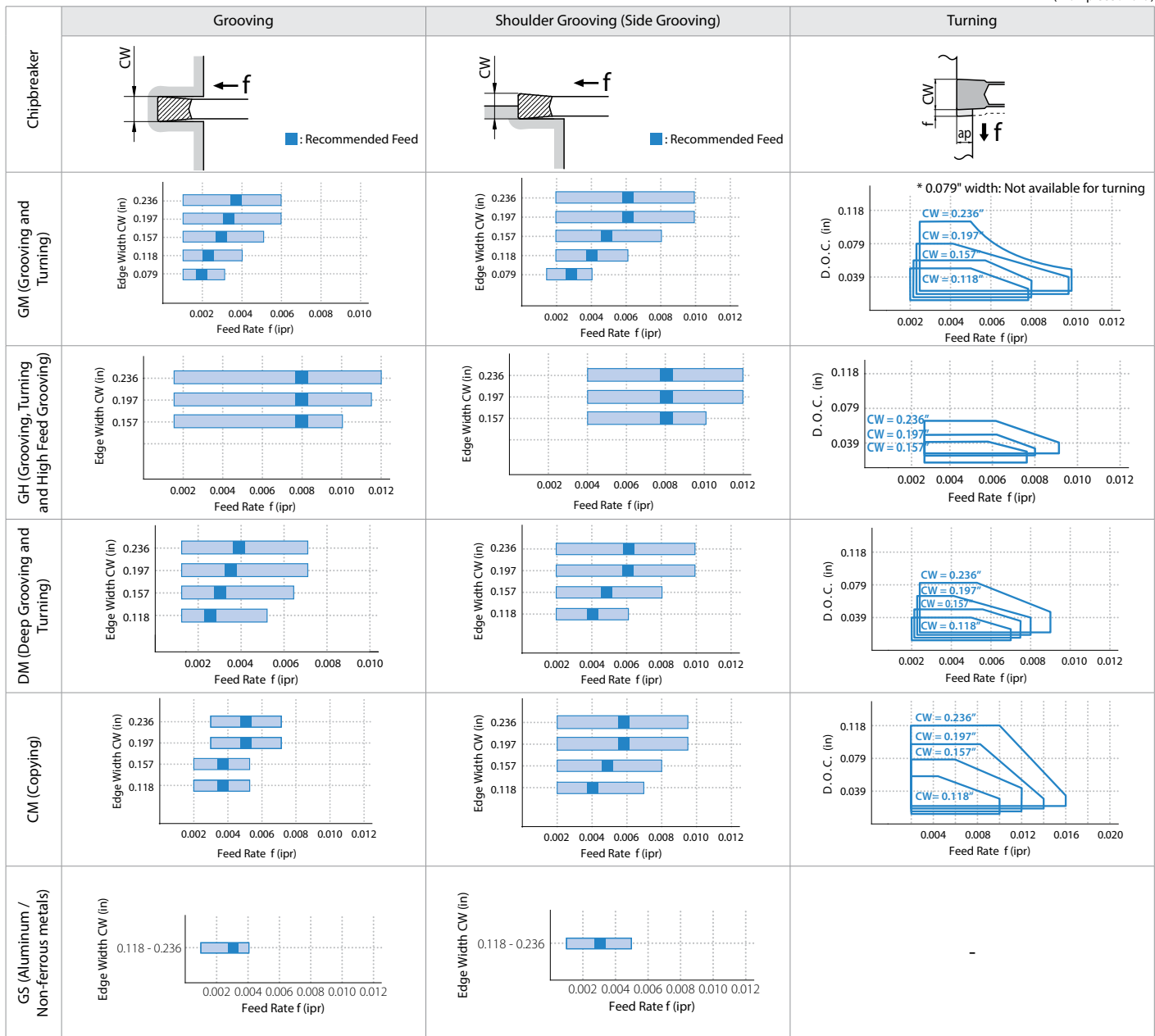
<b>KGDF</b>	<b>R</b>	<b>2525</b>	<b>M</b>	<b>50</b>	<b>3</b>	<b>B</b>	<b>Z</b>
Series	Hand of Tool	Shank Size	Toolholder Length	Min. Face Grooving Dia.	Insert Width	Grooving Depth	Toolholder Type
KGDF Face Grooving	R : Right-hand L : Left-hand	2020 : □20mm 2525 : □25mm	K : 125mm M : 150mm	50 : 50mm ∴ 115 : 115mm	3 : 3mm 4 : 4mm 5 : 5mm	B : 15mm	Z : Integral Type

# Recommended Cutting Conditions (Face Grooving) ★ 1st Recommendation ☆ 2nd Recommendation

Workpiece	Recommended Insert Grade (Vc : sfm)					Notes
	Cermet		MEGACOAT		Uncoated Carbide	
	TN620	TN90	PR1225	PR1215	GW15	
Carbon Steel	☆ 200 - 660	☆ 260 - 660	★ 200 - 520	☆ 260 - 520	-	Coolant
Alloy Steel	☆ 200 - 520	☆ 230 - 520	★ 200 - 490	☆ 200 - 490	-	
Stainless Steel	-	-	★ 160 - 390	☆ 160 - 390	-	
Cast Iron	-	-	-	★ 260 - 520	-	
Aluminum Alloy	-	-	-	-	★ 520 - 1310	
Brass	-	-	-	-	★ 260 - 520	

## Recommended Cutting Conditions (Feed Rate / D.O.C.)

(Workpiece : 1049)



When shouldering,  
 • If D.O.C. is set smaller, set feed higher.  
 • If D.O.C. is set larger, set feed lower.

1) The above values reflect a T dimension that is 0.591" (15mm) or less.

When T dimension is over 0.669" (17mm), set the values for turning to less than 90% of recommended cutting conditions above.

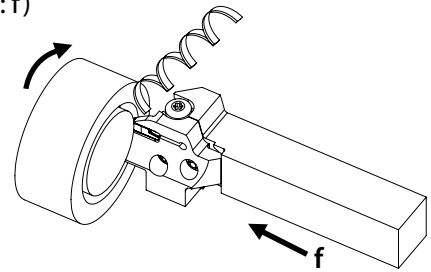
# Face Grooving Guide

## 1 Toolholder Selection

Check the range of applicable face grooving diameter as well as the groove width and depth.

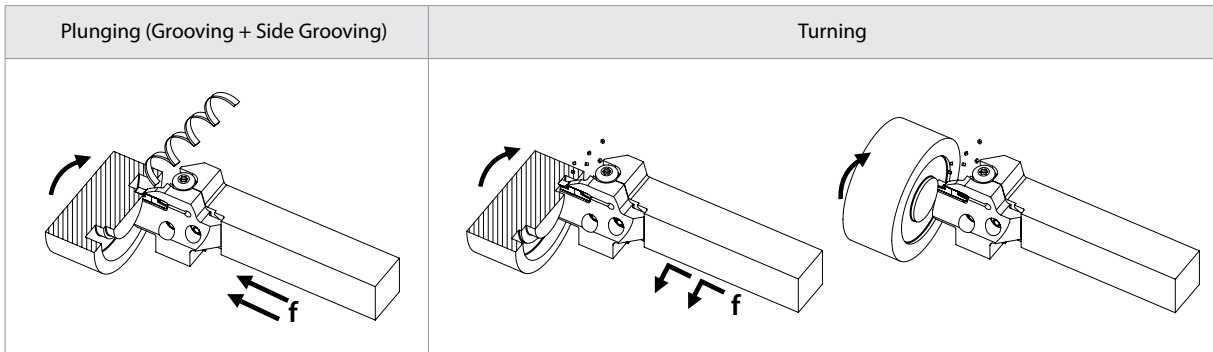
## 2 Cutting conditions (Feed rate : f)

When machining steel, set the feed rate (f) so that chips are created in a helical form when plunging.



## 3 Expanding Groove Width (Plunging and Turning)

Start machining from the outside and then proceed to the inside. Chip control will be better in this way.



## 4 Guide for Turning

A. When the cutting amount (D.O.C.) is over 0.020" (0.5mm)

- (1) Use plunging
- (2) Return the cutting by 0.004" (1mm)  
(Failure to pull the tool back before traverse cutting will result in an unbalanced load applied on only one side of the cutting edge.)
- (3) Perform turning (see Fig.1)

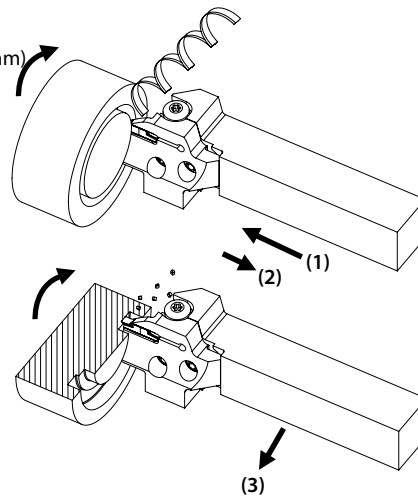


Fig.1

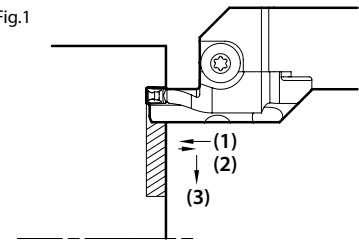
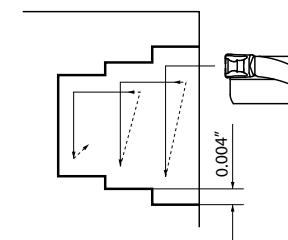


Fig.2



- When widening the face groove width (see Fig.2) Use "Step Turning". Then perform finishing.

B. When the cutting amount (D.O.C.) is under 0.5mm

- (1) Use Plunging
- (2) Perform turning  
Machining without interruption is possible. (see Fig.3)

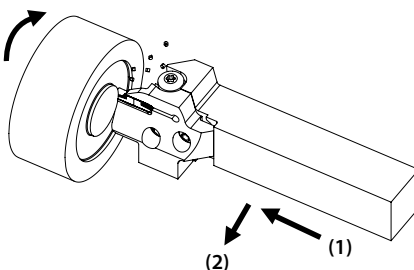
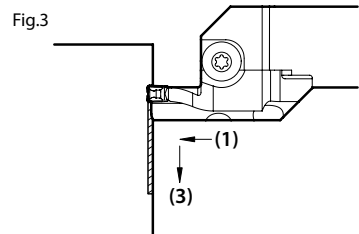


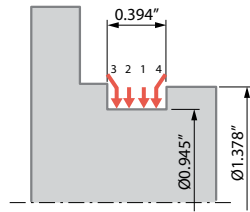
Fig.3



## Case Studies

### Gear 5120H (Grooving)

Vc = 370 ~ 540 sfm  
 f = 0.002 ipr  
 Wet  
 GDM4020N-040GM (PR1225)  
 KGDL2525X-3T105



Tool Life

**GM Chipbreaker** (PR1225) **1500 pcs/edge** **6x** Tool Life

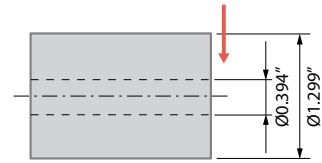
Competitor C (PVD Coated Carbide) **250 pcs/edge**

KGDL + GM chipbreaker (PR1225) improved tool life by 6 times that of Competitor C. No burned chips and good chip control.



### Sleeve 1045 (Cut-off)

Vc = 340 sfm  
 f = 0.005 ipr  
 Wet  
 GDM3020N-025PM (PR1225)  
 KGDL2525X-3T205



Tool Life

**PM Chipbreaker** (PR1225) **250 pcs/edge, capable of further machining**

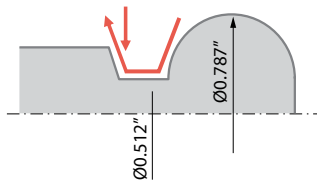
Competitor D (PVD Coated Carbide) **250 pcs/edge, with chipping**

KGDL + PM chipbreaker (PR1225) showed good edge condition after machining same number of workpieces as Competitor D. Available for further machining. (Competitor D showed chipping)

(User evaluation)

### Ball Stud 4137 (Copying)

Vc = 330 ~ 520 sfm  
 D.O.C. = 0.012"  
 f = 0.006 ~ 0.010 ipr  
 Wet  
 GDM3020N-150R-CM (PR1225)  
 KGDR2020X-3T105



Tool Life

**CM Chipbreaker** (PR1225) **800 pcs/edge** **2x** Tool Life

Conventional A **400 pcs/edge**

KGDL resolved issues such as chip-biting and tangled chips due to its superior chip evacuation performance.

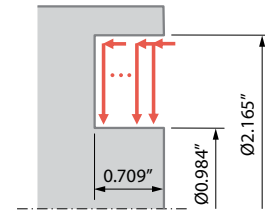
⇒ Resolved breakage of edge caused by chips.

Doubled tool life by reducing damage on the edge.

(User evaluation)

### Piston 4135H (Face Grooving)

Vc = 490 sfm  
 D.O.C. = 0.039", 0.071" (Turning)  
 f = 0.002 ipr (Grooving)  
 0.004, 0.006 ipr (Turning)  
 Wet  
 GDM4020N-040GM (PR1225)  
 KGDFL2525X50 - 4CS



Tool Life

**GM Chipbreaker** (PR1225) **40 pcs/edge, capable of further machining**

Conventional B **40 pcs/edge**

KGDL + GM chipbreaker improved chip evacuation compared to Conventional B.

(Resolved frequent breakage of toolholder.)

Smaller wear on the edge provided by MEGACOAT makes the tool life longer.

(Lower machining cost with longer tool life)

(User evaluation)



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