

Cut-Off

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CERACUT Cut-Off

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Cut-Off Toolholders CERACUT Plunge & Turn KGM Tool

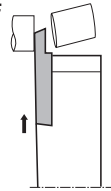
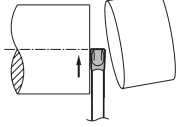
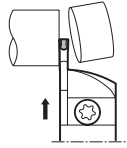
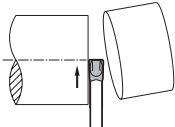
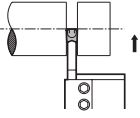
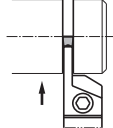
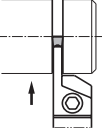
KGM	Integral Shank	336
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Technical Information





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Product Lineup

Product Lineup

CERACUT Cut-Off	Toolholder type (Long Shank for Automatic Lathe) Cut-Off Dia. ϕ 1.02~ ϕ 1.77in	KTKF (P.331)  Width: .02~.08in	KTKH-S (P.332)  Width: .063~.122in	Toolholder type (Long Shank for Automatic Lathe) Bolt Clamp Cut-Off Dia. ϕ .39~ ϕ 1.26in	KTKH-B (P.332)  Width: .063~.122in
	Toolholder type Cut-Off Dia. ϕ 1.18~ ϕ 3.11in	KTKH-S (P.332)  Width: .087~.197in			
	Blade type Cut-Off Dia. ϕ 1.26~ ϕ 4.72in	KTKB-S(S) (P.334)  Width: .063~.378in			
CERACUT Plunge & Turn (2 Corners)	KGM Tool Cut-Off Dia. ϕ .39~ ϕ 1.26in	KGM (P.336)  Width: .060~.157in	KGM-T (P.337)  Width: .078~.236in		

Cut-Off Tools

Series Name	Shape	Advantage	Application
CERACUT Cut-Off		<ol style="list-style-type: none"> Self-Clamping System Tap the insert lightly with a plastic hammer to set it in the pocket. 1-Corner Insert 3-D Chipbreaker · No Indication (ex. TKN3) · P-Chipbreaker (ex. TKN3-P) Blade type and Integral Shank type Max. cutting dia. 4.72in 	<ol style="list-style-type: none"> For cut-off and deep grooving No indication chipbreaker is for general cut-off applications (Feed rate: .004~.008ipr) P-chipbreaker is for cut-off at low feed rates. (Feed rate: .001~.003ipr)  
CERACUT KGM Tool		<ol style="list-style-type: none"> Insert is clamped from top side. 2-Corner & 1-Corner inserts available 3-D chipbreaker & no chipbreaker insert -TK type--smaller corner-R, 0, .002in -MT type--larger corner-R, .008~.012in Max. cutting dia. 1.26in 	<ol style="list-style-type: none"> For cut-off and grooving of small work pieces For automatic lathe, small machines

Tool Selection

		CERACUT Cut-Off	CERACUT Plunge & Turn
Insert	1. Insert 1-Corner Insert...For Larger Dia. Workpiece: Max. 120mm (4.72in) 2-Corner Insert...For Smaller Dia. Workpiece: Max. 32mm (1.26in) Cost per corner is reduced	TKF	—
	2. Use neutral angle insert if there is no limit to the finished shape	TKN	GMMB GMM
	3. Use angled insert to reduce the size of the remaining boss.	TK ^{R/L} (→Fig.1)	GMMB- ^{R/L} GMM- ^{R/L} (→Fig.2)
	4. Use sharp-cornered lead-angled Insert to make the remaining boss much smaller when machining small parts and thin parts.	—	GMMB- ^{R/L} GMM- ^{R/L} (→Fig.2)
	5. Use the minimum width insert suitable for the machining operation.	○	○
Tool holder	1. Use a suitable toolholder (blade) for the workpiece dia.	○	○
	2. Use a more rigid toolholder (blade).	○	○
	3. Use a back clamp toolholder if there is no space for clamping tools from top side (automatic lathe).	—	KGMB

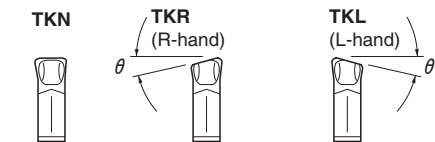
Set Up

1. Tap the insert lightly with a plastic hammer to push it in to the extent that it can not be removed by hand.	○ (→Fig.3)	—
2. Remove the insert by using the supplied wrench.	○ (→Fig.4)	

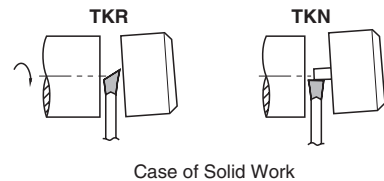
Cut Off

1. Set the cutting edge height 0.1-0.2mm(.004"-.008") above the center height.	○	○
2. Always apply sufficient coolant to the cutting edge.	○	○
3. Constant spindle revolution is recommended to obtain stable tool life.	○	○
4. Cut off as close to the chuck as possible.	○	○
5. Decrease the feed rate to 1/2 to 1/3 near the center to prevent chipping.	○	○
<ul style="list-style-type: none"> Overuse of insert and toolholder (blade) may cause insert breakage and toolholder (blade) damage. Do not rework the insert and toolholder (blade) or they may break. Clean the insert pocket well with compressed air when replacing insert. 	○	○

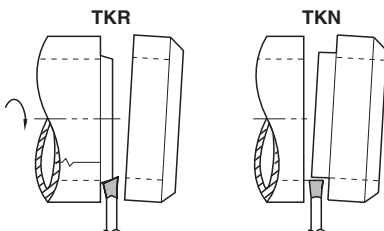
○ : Applicable —: Not Applicable



· Angled (θ) insert can reduce the burr size when cutting off.
· When using a larger Lead Angle (θ), Cutting Resistance becomes smaller, the Feed Rate should be reduced.

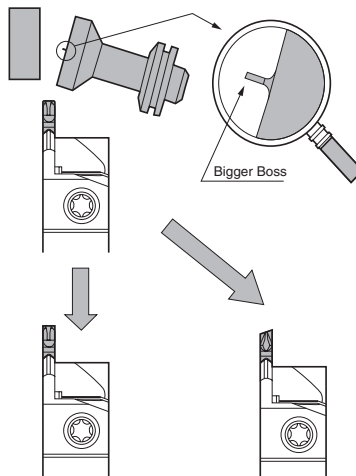


Case of Solid Work



Case of Hollow Work (Pipe)

Fig. 1



Sharp Corner-R

Angled

Fig. 2

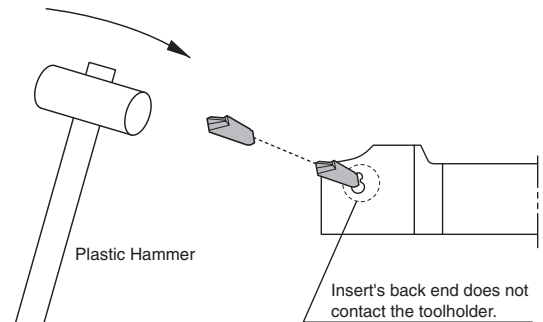


Fig. 3

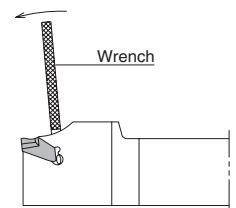


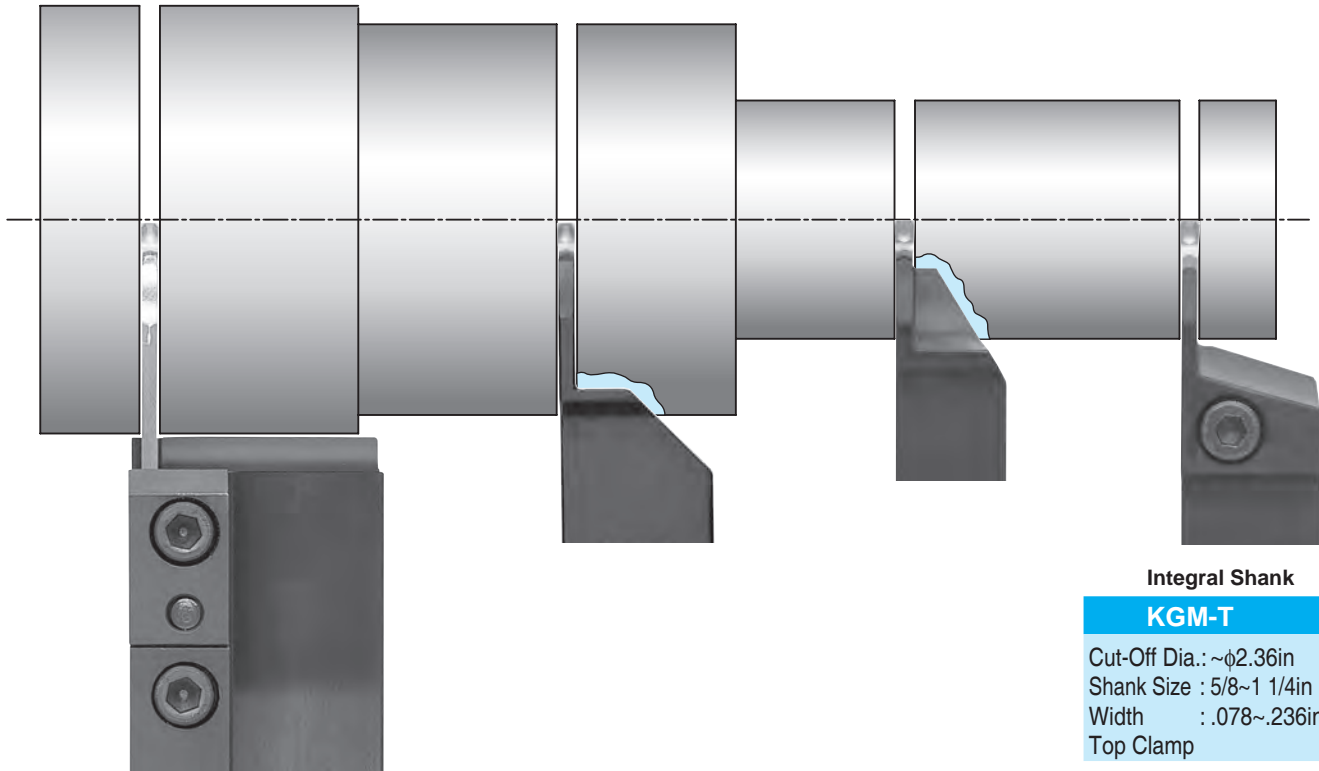
Fig. 4

Summary of Cut-Off

General Cut-Off ~ $\phi 4.72$ in

Cut-Off

Summary of Cut-Off



Blade + Toolblock

KTKB

Cut-Off Dia.: ~ $\phi 4.72$ in
 Shank Size : 16~32mm
 Width : .063~.378in
 Self Clamp

ⓘ P.334

Integral Shank

KTKH

Cut-Off Dia.: ~ $\phi 3.11$ in
 Shank Size : 3/4~1in
 Width : .120~.200in
 Self Clamp

ⓘ P.332

Integral Shank

KTKH-S

Cut-Off Dia.: ~ $\phi 3.11$ in
 Shank Size : 3/4~1 in
 Width : .122~2.0 in
 Self Clamp

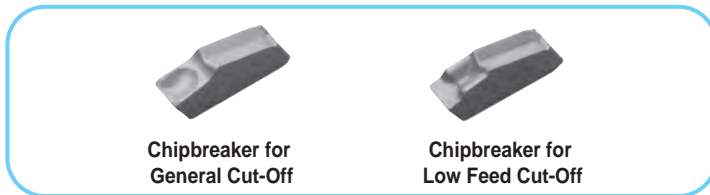
ⓘ P.332

Integral Shank

KGM-T

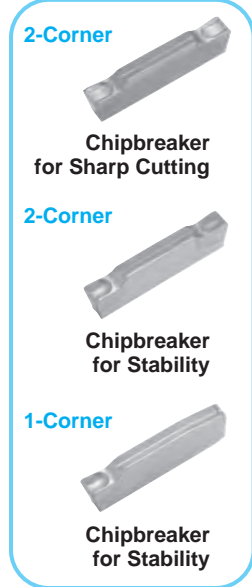
Cut-Off Dia.: ~ $\phi 2.36$ in
 Shank Size : 5/8~1 1/4in
 Width : .078~.236in
 Top Clamp

ⓘ P.337



Chipbreaker for General Cut-Off

Chipbreaker for Low Feed Cut-Off



2-Corner

Chipbreaker for Sharp Cutting

2-Corner

Chipbreaker for Stability

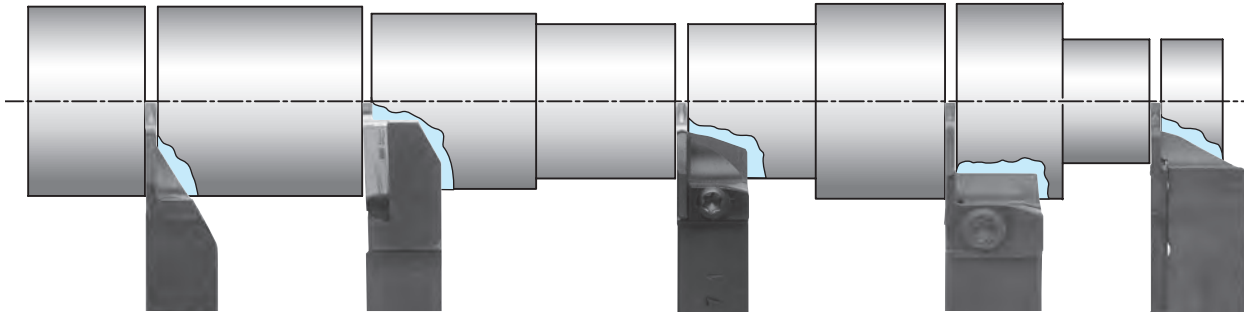
1-Corner

Chipbreaker for Stability

Blade + Toolblock	Integral Shank	
CERACUT Cut-Off	CERACUT Cut-Off	CERACUT Plunge & Turn

Small Dia. Cut-Off $\sim \phi 1.77\text{in}$

Small Shank



KTKHS
Cut-Off Dia.: $\sim \phi 1.77\text{in}$
Shank Size: 26~45mm
.375~.500in
Width : .087~.122in

Ⓟ P. 332

KTKF
Cut-Off Dia.: $\sim \phi .472\sim .630\text{in}$
Shank Size: 10~16mm
.375~.500in
Width : .020~.122in

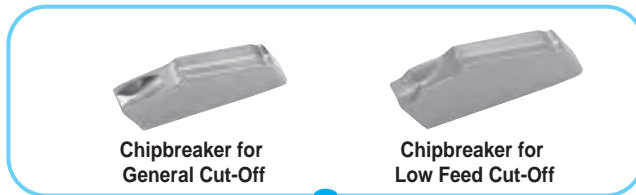
Ⓟ P. 331

KTKHB
Cut-Off Dia.: $\sim \phi 1.26\text{in}$
Shank Size: 8~16mm
Width : .063~.122in
Top Clamp

Ⓟ P. 332

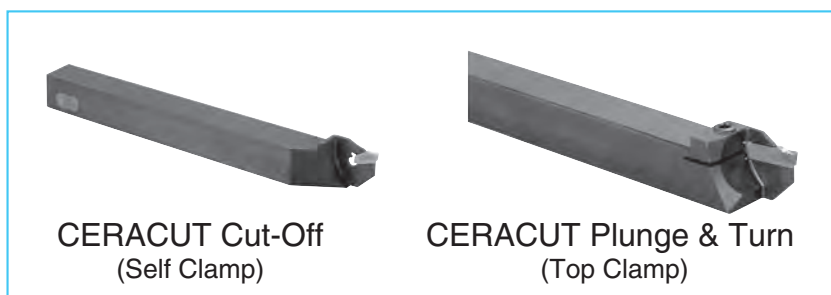
KGM
Cut-Off Dia.: $\sim \phi 1.26\text{in}$
Shank Size: 8~16mm
.375~.500in
Width : .060~.157in

Ⓟ P. 336



Chipbreaker Edge Shape	CERACUT Cut-Off		
	General Cut-Off		Low Feed Cut-Off
	Chamfer + hone	Sharp Edge	Chamfer + hone


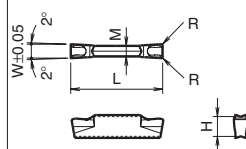

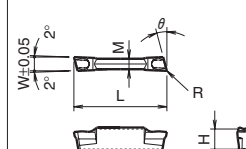

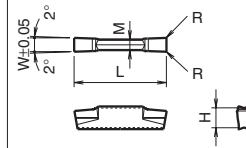

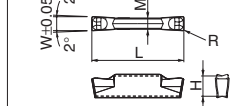

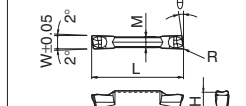
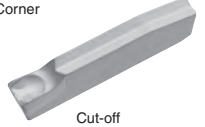
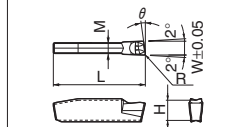
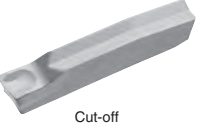
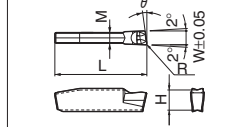
Chipbreaker Edge Shape	CERACUT Plunge & Turn			
	Sharp Cutting (MT Chipbreaker)		Stable Cutting (TK Chipbreaker)	
	Chamfer + hone	Chamfer + hone	Chamfer + hone	Sharp Edge
	Corner-R .002in	Sharp Corner	Corner-R .008~.012in	Corner-R .008~.012in



Summary of Cut-Off

Cut-Off Inserts

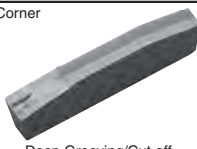
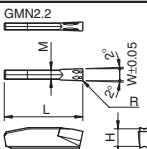
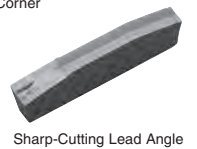
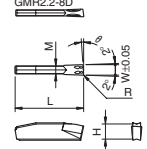
GMM / GMMB / GMN / GM^{R/L} (CERACUT Plunge & Turn)

Shape	Description	Dimension (mm)							Angle (°)	Insert Grade					Ref. Page for Toolholder			
		W	B	R	L	H	M	θ		Cermet	CVD Coated	PVD Coated Carbide		Carbide				
										TN90	CR9025	PR660	PR915	PR930		KW10		
Handed Insert shows Right-hand																		
 <p>Deep Grooving/Cut-off Sharp-Cutting</p>		GMM	1520-MT	1.5	-	0.0 0.05	20.3	4.3	1.2	-				●	●	336 337		
			2020-MT	2.0	-	0.0 0.05	20.3	4.3	1.5	-		○			●		○	
			2520-MT	2.5	-	0.0 0.05	20.3	4.3	1.9	-		○			●		○	
			3020-MT	3.0	-	0.0 0.05	20.3	4.3	2.3	-		○			○		○	
 <p>Cut-Off Sharp-Cutting Lead Angle</p>		GMM	1520%L-MT-15D	1.5	-	0.0 0.05	20.3	4.3	1.2	15°				R	●		●	
			2020%L-MT-8D	2.0	-	0.0 0.05	20.3	4.3	1.5	8°					○			
			2020%L-MT-15D	2.0	-	0.0 0.05	20.3	4.3	1.5	15°		○		R	●		○	
			2520%L-MT-15D	2.5	-	0.0 0.05	20.3	4.3	1.9	15°		○		R	●		○	
			3020%L-MT-4D	3.0	-	0.0 0.05	20.3	4.3	2.3	4°					○		○	
			3020%L-MT-15D	3.0	-	0.0 0.05	20.3	4.3	2.3	15°		●		R	○		●	
 <p>Deep Grooving/Cut-off Sharp-Cutting Without Chipbreaker</p>		GMM	1520-NB	1.5	-	0.0 0.05	20.3	4.3	1.2	-					○		○	
			2020-NB	2.0	-	0.0 0.05	20.3	4.3	1.5	-		○					○	○
			2520-NB	2.5	-	0.0 0.05	20.3	4.3	1.9	-		○					○	○
			3020-NB	3.0	-	0.0 0.05	20.3	4.3	2.3	-		○					○	○
 <p>Deep Grooving/Cut-off Excellent Stability</p>		GMM	2020-TK	2.0		0.20			1.5	-				○	○		○	
			2520-TK	2.5	-	0.20	20	4.3	1.9	-		○			○		○	○
			3020-TK	3.0		0.25			2.3			○				○	○	○
 <p>Cut-Off Excellent Stability Lead Angle</p>		GMM	2020%L-TK-8D	2.0		0.20			1.5	8°				R	○	○		
			2520%L-TK-8D	2.5	-	0.20	20	4.3	1.9	8°		○			R	○	○	
			3020%L-TK-8D	3.0		0.25			2.3			○			R	○	○	
 <p>Cut-off Excellent Stability</p>		GMN	2-TK	2.0		0.20			1.8	-				○	○	○		
			3-TK	3.0	-	0.25	20	4.3	2.3	-		○			○	○	○	
			4-TK	4.0		0.30			3.3			○				○	○	○
 <p>Cut-off Excellent Stability Lead Angle</p>		GM ^{R/L}	2-TK-8D	2.0		0.20			1.8	8°				R	R	R		
			3-TK-8D	3.0	-	0.25	20	4.3	2.3	8°		R			R	R	R	
			4-TK-8D	4.0		0.30			3.3			R			R	R	R	


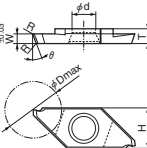

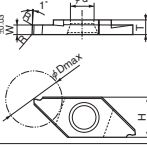

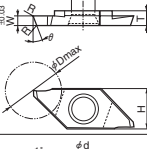

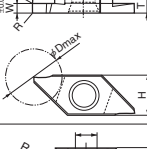
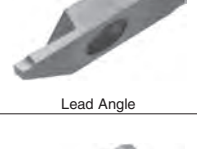
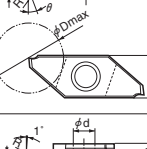

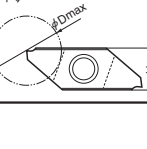
Cut-Off

Cut-Off Inserts

GMN / GM^{R/L}


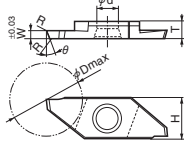

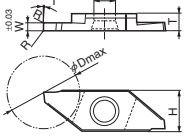
Shape	Description	Dimension (mm)						Angle (°)	Insert Grade					Ref. Page for Toolholder	
		W	B	R	L	H	M		Cermet	PVD Coated Carbide	Carbide				
		TN90	CR9025	PR660	PR915	PR930	KW10								
Handed Insert shows Right-hand															
1-Corner  Deep Grooving/Cut-off		GMN 2.2	2.2	0.17			1.8		○	●					336
		3	3.0	0.20			2.3		○	●					
		4	4.0	0.25	20	4.3	3.3	-	○	○					
		5	5.0	0.8			4.2		○	○					
		6	6.0	0.8			5.2		○	○					
1-Corner  Sharp-Cutting Lead Angle		GM^{R/L} 2.2-8D	2.2	0.17			1.8	8°	○	●				337	
		2.2-15D	2.2	0.00			1.8	15°	○	○					
		3-4D	3.0	0.20	20	4.3	2.3	4°	R	●					
		3-15D	3.0	0.20			2.3	15°	○	○					
		4-4D	4.0	0.25			3.3	4°	R	○			R		○

TKF


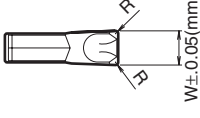

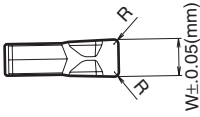
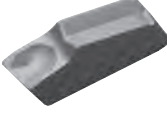
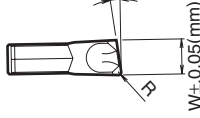

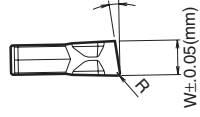
Shape	Description	Dimension (mm)						Angle (°)	Insert Grade					Ref. Page for Toolholder	
		W	ϕD_{max}	R	T	H	ϕd		Cermet	PVD Coated Carbide	Carbide				
		TN90	CF9025	PR660	PR915	PR930	KW10								
Handed Insert shows Right-hand															
 Lead Angle		TKF12^{R/L} 050-S-16DR	0.5	5										331	
		070-S-16DR	0.7	8											
		100-S-16DR	1.0		0.03	3	8.7	5	16°				R		○
		150-S-16DR	1.5	12									R		○
		200-S-16DR	2.0										R		○
 Without Chipbreaker		TKF12^{R/L} 050-S	0.5	5								R	●	331	
		070-S	0.7	8								R	●		
		100-S	1.0		0.03	3	8.7	5	-				R		○
		150-S	1.5	12									R		○
		200-S	2.0										R		○
 Lead Angle		TKF12^{R/L} 050-NB-20DR	0.5	5								R	○	331	
		070-NB-20DR	0.7	8								R	○		
		100-NB-20DR	1.0		0.00	3	8.7	5	20°				R		○
 Without Chipbreaker		TKF12^{R/L} 050-NB	0.5	5								R	●	331	
		070-NB	0.7	8								R	●		
		100-NB	1.0		0.00	3	8.7	5	-				R		○
 Lead Angle		TKF16^{R/L} 150-S-16DR	1.5									R	○	331	
		200-S-16DR	2.0		16	0.05	4	9.5	5	16°			R		○
 Without Chipbreaker		TKF16^{R/L} 150-S	1.5									R	○	331	
		200-S	2.0		16	0.05	4	9.5	5	-			R		○

Cut-Off Inserts

TKF



Shape	Description	Dimension (mm)						Angle (°)	Insert Grade					Ref. Page for Toolholder	
		W	ϕD_{max}	R	T	H	ϕd		Cermet	CVD Coated	PVD Coated Carbide		Carbide		
		TN90	CF9025	PR660	PR915	PR930	KW10								
Handed Insert shows Right-hand															
 Lead Angle Without Chipbreaker		TKF16% 150-NB-20DR	1.5	16	0.00	4	9.5	5	20°					R	○
	200-NB-20DR	2.0													
 Without Chipbreaker		TKF16% 150-NB	1.5	16	0.00	4	9.5	5	-					R	○
	200-NB	2.0													

TKN / TK^{R/L} (CERACUT Cut-Off)




Shape	Description	Dimension (inch)							Angle (°)	Insert Grade					Ref. Page for Toolholder
		W	B	R	L	H	M	θ		Cermet	CVD Coated	PVD Coated Carbide		Carbide	
		TN90	CF9025	PR660	PR915	PR930	KW10								
Handed Insert shows Right-hand															
 Low Feed	 W±.05(mm) W±.002(in)	TKN 1.6	.063		.006									○	○
		2	.087		.008									○	○
		2.4	.094		.008									○	○
		3	.122		.010									○	○
		4	.161		.012									○	○
		4.8	.189		.012									○	○
		5	.201		.012									○	○
		6	.252		.014									○	○
		8	.315		.016									○	○
		9	.378		.018									○	○
 Low Feed	 W±.05(mm) W±.002(in)	TKN 1.6-P	.063		.006									○	○
		2-P	.087		.008									○	○
		3-P	.122		.010									○	○
 Lead Angle	 W±.05(mm) W±.002(in)	TK^{R/L} 1.6	.063		.006				8°	R	●	●		R	○
		2	.087		.008				8°	R	○	○		R	○
		2.4	.094		.008				8°	R	○	○		R	○
		3	.122		.010				8°	R	○	○		R	○
		3-15D	.122		.010				15°	R	○	○		R	○
		4	.161		.012				8°	R	○	○		R	○
		5	.201		.012				8°	R	○	○		R	○
 Low Feed/Lead Angle	 W±.05(mm) W±.002(in)	TK^{R/L} 1.6-P	.063		.006				8°	R	○	○		R	○
		2-P	.087		.008				8°	R	○	○		R	○
		3-P	.122		.010				8°	R	○	○		R	○

CERACUT Cut-Off Insert

◆ Chipbreaker


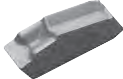





Application	Chipbreaker	Advantage
General Cut-Off	Standard (No Indication) 	General cut-off type to be used at feed rates over .004ipr (0.1mm/rev). Very good at evacuating chips.
Low Feed Cut-Off	P 	Chipbreaker specially developed for low feed rate machining on automatic lathes, etc. Chips are tightly curled small at feed rates .001-.003ipr (0.03~0.08mm/rev). Excellent chip evacuation.

◆ Insert's Cutting Edge (CERACUT Cut-Off)

Edge Shape	Chamfer + hone	Sharp Edge	Chamfer + hone
			
Std. Chipbreaker	TN90 CR9025/PR660	PR930/KW10	-
P-Chipbreaker	-	-	TN90/CR9025 PR660/PR930/KW10

· Sharp edge's cutting resistance is up to 40% less than that of the chamfered edge.

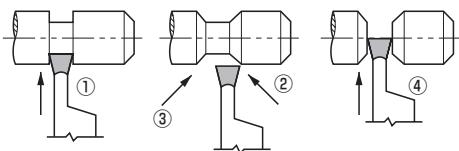
CERACUT Cut-Off Chipbreakers

Series	Application	Type	Shape	Advantage
Cut-Off	General Cut-Off	TK (Std.)		1-Corner General cut-off to be used at feed rates over .004ipr(0.1mm/rev). Superior chip evacuation
	Low Feed Cut-Off	TK-P		1-Corner Chipbreaker specially designed for low feed machining on automatic lathes, etc. Chips are controlled at feed rate .001-.003ipr(0.03~0.08mm/rev).
Plunge & Turn	Cut-Off Deep Grooving	GMM-MT		2-Corner Specific chipbreaker for cut-off operations requiring sharp cutting performance. Minimizes the boss.
	Cut-Off Deep Grooving	GMM-NB		2-Corner Cutting edge is flat with no chipbreaker. Good performance on brass, etc.
	Cut-Off Deep Grooving	GMM-TK		2-Corner Stable design with chipbreaker for cut-off. Large corner-R. 2-Corners for economical performance.
	Cut-Off Deep Grooving	GMN-TK		1-Corner Same chipbreaker geometry as GMM-TK. 1-Corner. Wide application range.
	Cut-Off Deep Grooving	GMN (Std.)		1-Corner Mainly for deep grooving, but available for groove widening and turning due to projection near side cutting edge. 1-Corner and wide application range. Available for cut-off applications.

◆ Application Example of CERACUT Cut-Off

1. Cut-Off after Chamfering

1. Groove 2, 3 Chamfer 4. Cut-Off

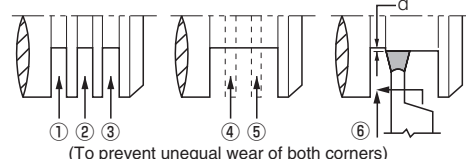


2. Wide Grooving

1-5 Groove Widening

6. Traverse Finishing

(D.O.C. "d" shall be less than the Corner-Radius)



Edge Preparation

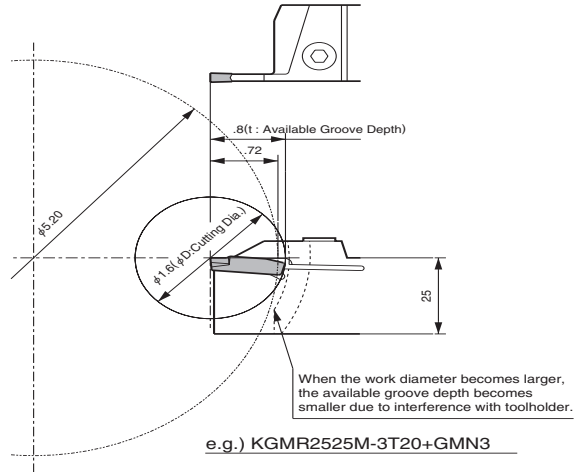
◆ CERACUT Plunge & Turn (-MT/-NB Type)

Edge Shape	Chamfer + hone Corner-R .002"	Chamfer + hone Sharp Corner
MT-Chipbreaker	CR9025/PR915	PR930/KW10
Edge Shape	hone Corner-R .002"	Sharp Edge Sharp Corner
Without Chipbreaker (-NB)	CR9025	PR930/KW10

◆ CERACUT Plunge & Turn (-TK Type)

Edge Shape	Chamfer + hone Corner-R .008"~.012"	Sharp Edge Corner-R .008"~.012"
TK-Chipbreaker	CR9025/PR915	PR930/KW10

• Sharp edge can reduce cutting resistance by 40% compared to the chamfered edge.



◆ Available Cutting Diameter of KGM / KGM-T type

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

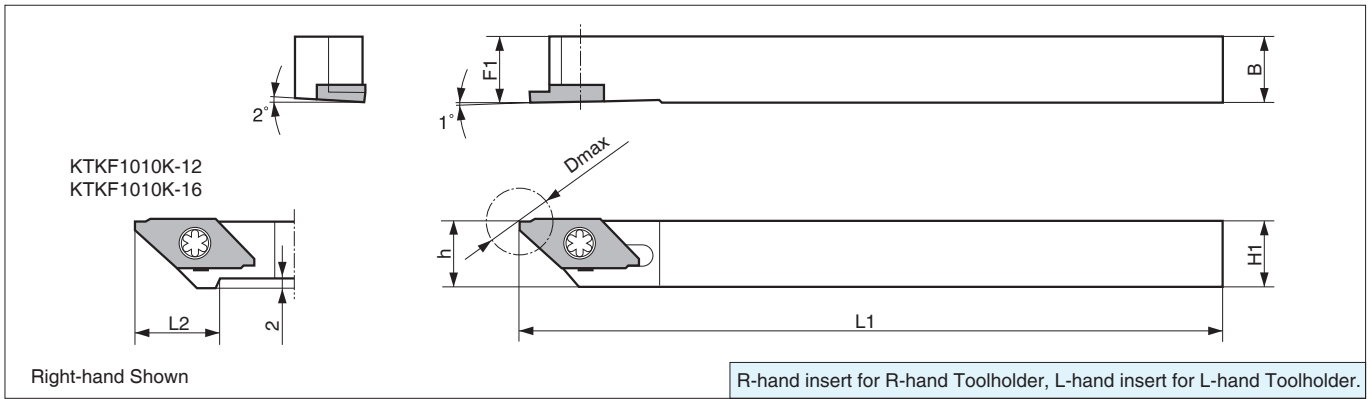
◆ KGM Available Cutting Diameter Table

Toolholder	φ D (Cutting Dia.)(in)																	
KGM^{R/L} 0810K-1.5-125	-	-	-	-	-	-	-	-	-	-	-	-	-	.40	.56	.64	1.28	°
1010K-1.5-125	-	-	-	-	-	-	.80	1.00	1.28	1.60	2.40	°	°	°	°	°	°	°
1212M-1.5-150	-	-	-	-	1.00	1.04	1.12	1.28	1.44	1.60	2.40	4.00	°	°	°	°	°	°
0810K-2-125	-	-	-	-	-	-	-	-	-	-	-	-	.40	.56	.64	1.28	°	°
6-2-5	-	-	-	-	-	-	.80	1.00	1.28	1.60	2.40	°	°	°	°	°	°	°
1010K-2-125	-	-	-	-	-	-	.80	1.00	1.28	1.60	2.40	°	°	°	°	°	°	°
8-2-6	-	-	-	-	1.00	1.04	1.12	2.00	°	°	°	°	°	°	°	°	°	°
1212M-2-150	-	-	-	-	1.00	1.04	1.12	2.00	°	°	°	°	°	°	°	°	°	°
1616M-2-150	1.28	1.60	2.00	2.40	3.20	4.00	°	°	°	°	°	°	°	°	°	°	°	°
1010K-2.5-125	-	-	-	-	-	-	.80	1.00	1.28	1.60	2.40	°	°	°	°	°	°	°
1212M-2.5-150	-	-	-	-	1.00	1.04	1.12	1.28	1.44	1.60	2.40	4.00	°	°	°	°	°	°
1616M-2.5-150	1.28	1.60	2.00	2.40	3.20	4.00	°	°	°	°	°	°	°	°	°	°	°	°
1616M-3-150	1.28	1.60	2.00	2.40	3.20	4.00	°	°	°	°	°	°	°	°	°	°	°	°
Available Grooving Depth: t (inch)	.64	.60	.56	.52	.50	.48	.44	.40	.36	.32	.28	.24	.20	.16	.12	.08	.04	°

◆ KGM-T Available Cutting Diameter Table (GMN-GM^{R/L} When using 1-corner insert)

Toolholder	φ D (Cutting Dia.)(in)																	
KGM^{R/L} 2012K-2T17	-	-	-	-	-	-	-	-	2.64	3.20	5.20	10.40	°	°	°	°	°	°
12-2T	-	-	-	-	-	-	-	-	2.64	3.20	5.20	10.40	°	°	°	°	°	°
2020K-2T17	-	-	-	-	-	-	-	-	2.64	3.20	5.20	10.40	°	°	°	°	°	°
16-2T	-	-	-	-	-	-	-	-	2.64	3.20	5.20	10.40	°	°	°	°	°	°
2525M-2T17	-	-	-	-	-	-	-	-	2.64	3.20	5.20	10.40	°	°	°	°	°	°
1616H-3T20	-	-	-	-	-	1.60	2.16	2.80	4.00	7.20	°	°	°	°	°	°	°	°
2012K-3T20	-	-	-	-	-	1.60	3.60	5.20	9.60	°	°	°	°	°	°	°	°	°
12-3T	-	-	-	-	-	1.60	3.60	5.20	9.60	°	°	°	°	°	°	°	°	°
2020K-3T20	-	-	-	-	-	1.60	3.60	5.20	9.60	°	°	°	°	°	°	°	°	°
16-3T	-	-	-	-	-	1.60	3.60	5.20	9.60	°	°	°	°	°	°	°	°	°
2525M-3T20	-	-	-	-	-	1.60	3.60	5.20	9.60	°	°	°	°	°	°	°	°	°
12-4T	-	-	-	-	-	1.60	3.60	5.20	9.60	°	°	°	°	°	°	°	°	°
2020K-4T20	-	-	-	-	-	1.60	3.60	5.20	9.60	°	°	°	°	°	°	°	°	°
2525M-4T20	-	-	-	-	-	1.60	3.60	5.20	9.60	°	°	°	°	°	°	°	°	°
16-4T	-	-	2.00	5.60	9.60	°	°	°	°	°	°	°	°	°	°	°	°	°
2525M-4T25	-	-	2.00	5.60	9.60	°	°	°	°	°	°	°	°	°	°	°	°	°
16-5T	-	-	2.00	5.60	9.60	°	°	°	°	°	°	°	°	°	°	°	°	°
2525M-5T25	-	-	2.00	5.60	9.60	°	°	°	°	°	°	°	°	°	°	°	°	°
3232P-5T25	-	-	2.00	11.20	24.00	°	°	°	°	°	°	°	°	°	°	°	°	°
2525M-6T30	4.00	12.00	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°
Available Grooving Depth: t (inch)	1.20	1.08	1.00	.92	.88	.80	.76	.72	.68	.64	.60	.56	under .52	°	°	°	°	°

KTKF (Small Diameter Cut - Off)



● Toolholder Dimension

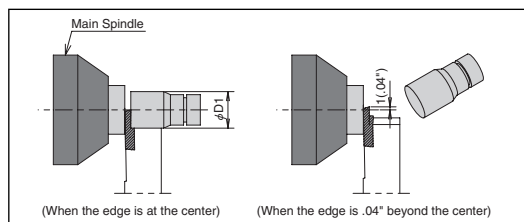
Description	Stock		Cutting Dia. ϕD_{max}	Dimension mm (inch)					Spare Parts			Applicable Insert P.327-328
	R	L		H1=h	B	L1	L2	F1	Clamp Screw	Wrench		
KTKF ^{R/L} 1010K-12 1212M-12 1616M-12 6-12C 8-12D	●	●	12 (.472")	10	10	125	15	10	SB-4590TRW	LTW-10S	-	TKF12 R/L
	●	●		12	12	150	-	12				
	●	●		16	16	150	-	16				
	●	●		.375	.375	5.0	.591	.375				
	●	●		.500	.500	6.0	-	.500				
1010K-16 1212M-16 1616M-16 6-16C 6-16D	●	●	16 (.630")	10	10	125	20	10	SE-4590TRW	LTW-10S	-	TKF16 R/L
	●	●		12	12	150	-	12				
	●	●		16	16	150	-	16				
	●	●		.375	.375	5.0	.591	.375				
	●	●		.500	.500	6.0	10	.500				

Cutting Dia. ϕD_{max}

1. When using Main Spindle only

Work's max, $\phi D1 = \phi D_{max}$

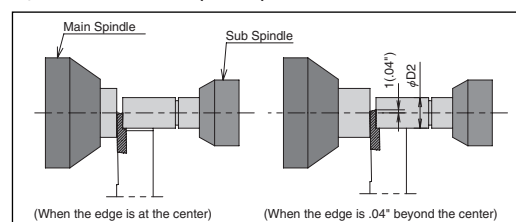
Even if the cutting edge runs beyond the center line, the insert does not contact the workpiece, since the workpiece falls off. (The clearance between the insert and the work is .008")



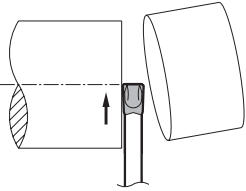
2. When using both Main and Sub Spindle

Work's max, $\phi D2 = \phi D_{max} - (\text{Programmed Distance beyond the center}) \times 2$

In this case, when the cutting edge runs beyond the center line, the insert will contact the workpiece, since the workpiece does not fall off. Therefore the programmed distance beyond the center must be considered. e.g. When the cutting edge is programmed to run .04" beyond the center. $\phi D2 = \phi D_{max} - .04" \times 2$



KTKH-B/S



For Automatic Lathe (Long Shank type)

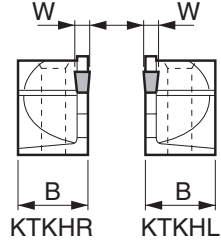
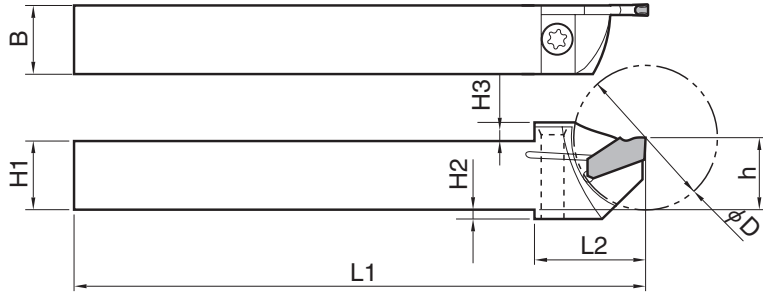


Fig. 1

For Automatic Lathe (Long Shank type)

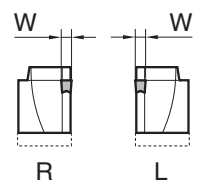
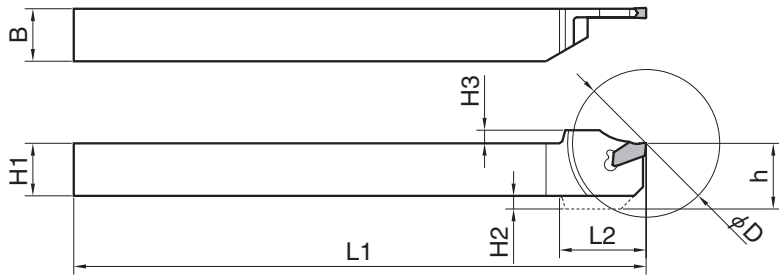


Fig. 2

For General Cut-Off

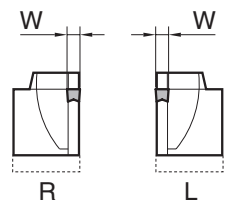
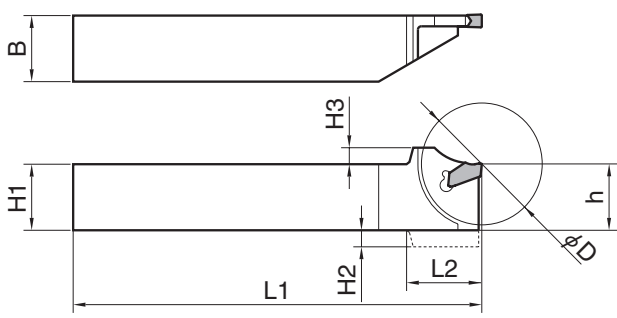


Fig. 3

For General Cut-Off

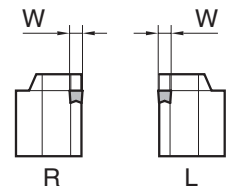
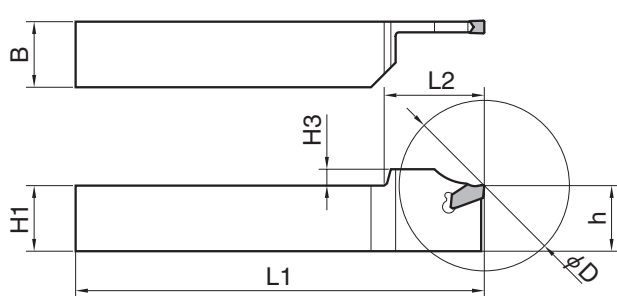



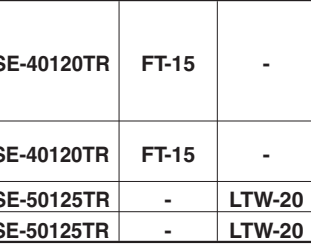


Fig. 4

• Right-hand Shown

● Toolholder Dimension

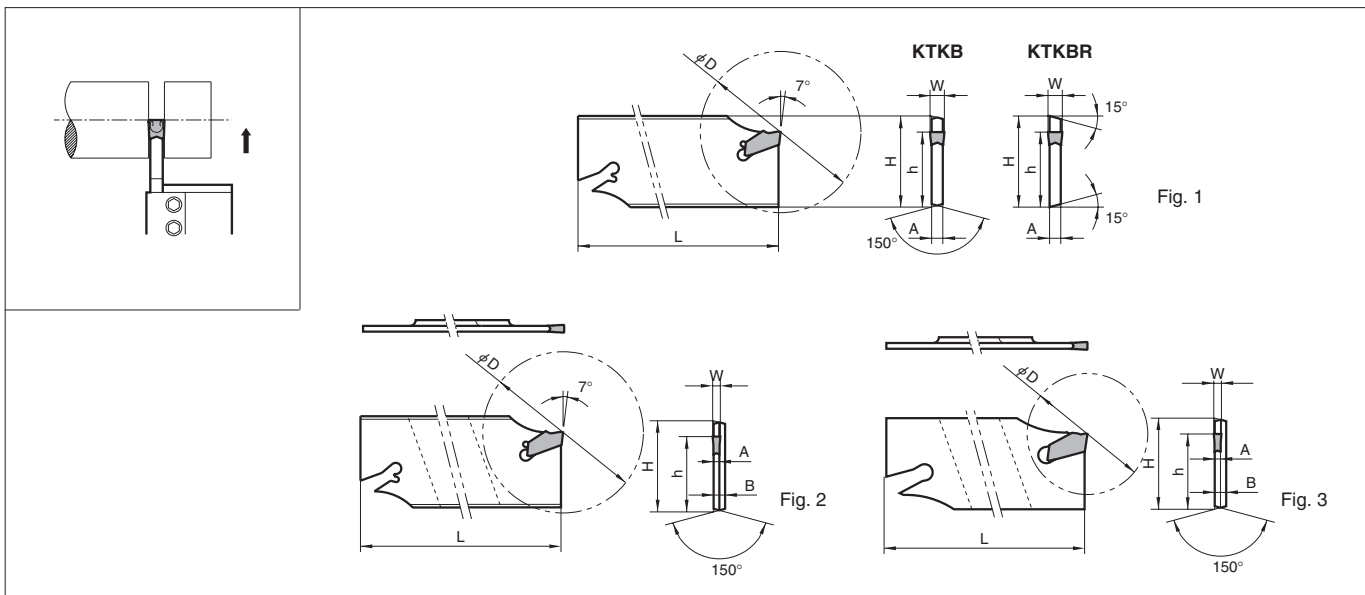
Description	Stock		Cutting Dia. φDmax	Dimension (mm)						Width (mm) W	Drawing	Spare Parts			Applicable Insert ● P.328					
	R	L		H1=h	H2	H3	B	L1	L2			Clamp Screw	Wrench							
	○	○	○	○	○	○	○	○	○											
KTKH[®]/L 0808K-1.6-125B	○	○	10	8	4	2	8	125	13.0	1.6	Fig. 1		SE-40120TR	FT-15	-	TKN1.6(-P) TK [®] /L 1.6(-P)				
1010K-1.6-125B	○	○	20	10	2.5	2	10	125	16.8											
1212M-1.6-150B	○	○	25	12	0	2	12	150	18.8											
1414M-1.6-150B	○	○	26	14	0	2	14	150	19.8											
1010K-2-125B	○	○	20	10	5	3	10	125	16.8								2.2 2.4			
1212M-2-150B	○	○	25	12	2	3	12	150	18.8											
1616M-2-150B	○	○	32	16	0	3	16	150	23.8											
1616M-3-150B	○	○	32	16	4	4	16	150	23.8									3.1		
																	SE-50125TR	-	LTW-20	TKN3(-P),TK [®] /L 3(-P)

● Toolholder Dimension

Description	Stock		Unit	Cutting Dia. φDmax	Dimension						Width W	Drawing	Spare Parts			Applicable Insert ● P.328	
	R	L			H1=h	H2	H3	B	L1	L2			Wrench				
	○	○	○	○	○	○	○	○	○	○	○		○	○			
For Automatic Lathe (Long Shank type)																	
KTKH[®]/L 8-1.6-6S	●	●	inch	1.20	.500	0	.079	.500	6.0	.67	.063	Fig. 2	LTK-5				TKN1.6(-P) TK [®] /L 1.6(-P)
6-2-5S	●	●	inch	1.20	.375	.20	.117	.375	5.0	.69	.087 .094	Fig. 2	LTK-5				TKN2(-P) TK [®] /L 2(-P) TKN2.4 TK [®] /L 2.4
8-2-6S	●	●	inch	1.30	.500	.16	.087	.500	6.0	.70							
KTKH[®]/L 0808K-1.6-125S	○	○	mm	26	8	4	2	8	125	14.0	1.6	Fig. 2	LTK-5				TKN1.6(-P) TK [®] /L 1.6(-P)
1010K-1.6-125S	○	○		28	10	2.5	2	10	125	15.0							
1212M-1.6-150S	○	○		30	12	0	2	12	150	17.0							
1414M-1.6-150S	○	○		35	14	0	2	14	150	20.0							
1010K-2-125S	●	○	mm	30	10	5	3	10	125	17.5	2.2 2.4	Fig. 2	LTK-5				TKN2(-P) TK [®] /L 2(-P) TKN2.4 TK [®] /L 2.4
1212M-2-150S	●	○		30	12	4	3	12	150	18.0							
1616M-2-150S	●	●		36	16	0	3	16	150	20.7							
1616M-3-150S	●	●		45	16	4	4	16	150	25.6							
For General Cut-Off																	
KTKH[®]/L 12-2S	●	○	inch	1.50	.75	0	.15	.75	5.0	.87	.087 .094	Fig. 3	LTK-5				TKN2(-P),TK [®] /L 2(-P) TKN2.4,TK [®] /L 2.4
12-3S	●	●	inch	2.00	.75		.10	.75	5.0	1.19	.122	Fig. 4	LTK-5				TKN3(-P),TK [®] /L 3(-P)
16-3S	●	○		2.10	1.00		.20	1.00	6.0	1.21							
12-4S	●	○	inch	2.40	.75		.10	.75	5.0	1.35	.161	Fig. 4	LTK-5				TKN4,TK [®] /L 4
16-4S	●	○		2.60	1.00		.20	1.00	6.0	1.36							
16-5S	●	○	inch	3.10	1.00		.20	1.00	6.0	1.56	.189 .201	Fig. 4	LTK-5				TKN4.8,5, TK [®] /L 5
1010F-2S	○	○	mm	30	10	5	4	10	80	18.6	2.2 2.4	Fig. 3	LTK-5				TKN2(-P) TK [®] /L 2(-P) TKN2.4 TK [®] /L 2.4
1212H-2S	○	○		33	12	4	5	12	100	19.8							
1612H-2S	○	○		33	16	0	3	12	100	19.8							
1616H-2S	○	○		33	16	0	3	16	100	19.8							
2012K-2S	○	○		38	20	0	4	12	125	22.8							
2020K-2S	○	○		38	20	0	4	20	125	22.8							
1612H-3S	○	○	mm	36	16	4	4	12	100	21.7	3.1	Fig. 3	LTK-5				TKN3(-P) TK [®] /L 3(-P)
1616H-3S	○	○		36	16	4	4	16	100	21.7							
2012K-3S	○	○		41	20	0	5	12	125	25.3							
2020K-3S	○	○		52	20	-	5	20	125	31.0							
2525M -3S	○	○		55	25	-	5	25	150	31.5							
2012K-4S	○	○		44	20	0	5	12	125	26.3							
2020K-4S	○	○	62	20	-	5	20	125	35.0								
2525M -4S	○	○	68	25	-	5	25	150	38.0								
2525M -5S	○	○	79	25	-	5	25	150	43.5	4.8,5.1	Fig. 4	LTK-5				TKN4.8,TKN5,TK [®] /L 5	
KTKH[®]/L 2020K-3T17S	○	○	mm	35	20	0	5	20	125	21.8	3.1	Fig. 3	LTK-5				TKN3(-P) TK [®] /L 3(-P)
2525M-3T22S	○	○		45	25	0	5	25	150	26.8							
2020K-4T22S	○	○		45	20	0	5	20	125	26.8							
2525M-4T22S	○	○		45	25	0	5	25	150	26.8							

● : Std. Stock ○ : World Express

KTKB-S/KTKB-SS



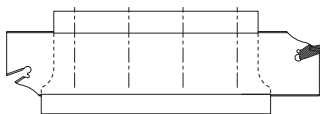
● Blade Dimension

Description	Stock	Cutting Dia. ϕD_{max}	Dimension					Width (mm) W	Drawing	Spare Parts Wrench	Applicable Insert P.328	Applicable Toolblock P.335
			H	h	B	L	A					
KTKB 19-1SS	○	35	19	15.7	2.4	86	1.2	1.6	Fig.3	LTK-5	TKN1.6(-P),TK $\frac{1}{2}$ 1.6(-P)	KTKTB 16-19 20-19
KTKB 26-1SS	●	35	26	21.4	2.4	110	1.2	1.6	Fig.3	LTK-5	TKN1.6(-P),TK $\frac{1}{2}$ 1.6(-P)	KTKTB 16-26 20-26
26-2SS	○	50	26	21.4	-	110	1.8	2.2,2.4	Fig.1		TKN2(-P),TK $\frac{1}{2}$ 2(-P),TKN2.4,TK $\frac{1}{2}$ 2.4	
26-3SS	○	75	26	21.4	-	110	2.6	3.1	Fig.1		TKN3(-P),TK $\frac{1}{2}$ 3(-P)	
KTKB 32-1SS	○	35	32	25	2.4	150	1.2	1.6	Fig.3	LTK-5	TKN1.6(-P),TK $\frac{1}{2}$ 1.6(-P)	KTKTB 20-32 25-32 32-32 KTKTBF 25-32 32-32
32-3SS	○	100	32	25	-	150	2.6	3.1	Fig.1		TKN3(-P),TK $\frac{1}{2}$ 3(-P)	
32-4SS	○	100	32	25	-	150	3.4	4.1	Fig.1		TKN4,TK $\frac{1}{2}$ 4	
KTKB 19-2S	●	40	19	15.7	-	86	1.8	2.2,2.4	Fig.1	LTK-5	TKN2(-P),TK $\frac{1}{2}$ 2(-P),TKN2.4,TK $\frac{1}{2}$ 2.4	KTKTB 16-19 20-19
KTKB 26-2S	●	50	26	21.4	-	110	1.8	2.2,2.4	Fig.1		TKN2(-P),TK $\frac{1}{2}$ 2(-P),TKN2.4,TK $\frac{1}{2}$ 2.4	
26-3S	●	75	26	21.4	-	110	2.6	3.1			TKN3(-P),TK $\frac{1}{2}$ 3(-P)	
26-4S	●	80	26	21.4	-	110	3.4	4.1		TKN4,TK $\frac{1}{2}$ 4		
26-5S	○	80	26	21.4	-	110	4.2	4.8,5.1	Fig.1	TKN4.8,TKN5,TK $\frac{1}{2}$ 5	KTKTB 20-32 25-32 32-32 KTKTBF 25-32 32-32	
KTKB 32-2S	●	50	32	25	2.4	150	1.8	2.2,2.4	Fig.2	TKN2(-P),TK $\frac{1}{2}$ 2(-P),TKN2.4,TK $\frac{1}{2}$ 2.4		
32-3S	●	100	32	25	-	150	2.6	3.1	Fig.1	TKN3(-P),TK $\frac{1}{2}$ 3(-P)		
32-4S	●	100	32	25	-	150	3.4	4.1		TKN4,TK $\frac{1}{2}$ 4		
32-5S	●	120	32	25	-	150	4.2	4.8,5.1		TKN4.8,TKN5,TK $\frac{1}{2}$ 5		
KTKB$\frac{1}{2}$ 32-6S	○	120	32	25	-	150	5.4	6.4	Fig.1	TKN6		
KTKB$\frac{1}{2}$ 32-8S	○	120	32	25	-	150	6.8	8.0	Fig.1	TKN8		
32-9S	○	120	32	25	-	150	8.0	9.6		LTK-5	TKN9	

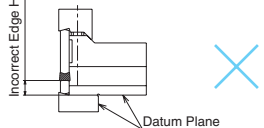
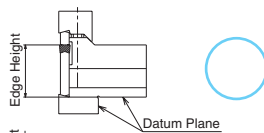
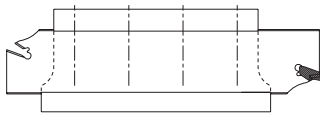
· Suffix "-SS" means silver coating. (Prevents wear from chips and maintains high resistance to rust)

◆ How to Install Toolblock and Blade

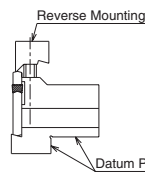
Correct Way



Incorrect way



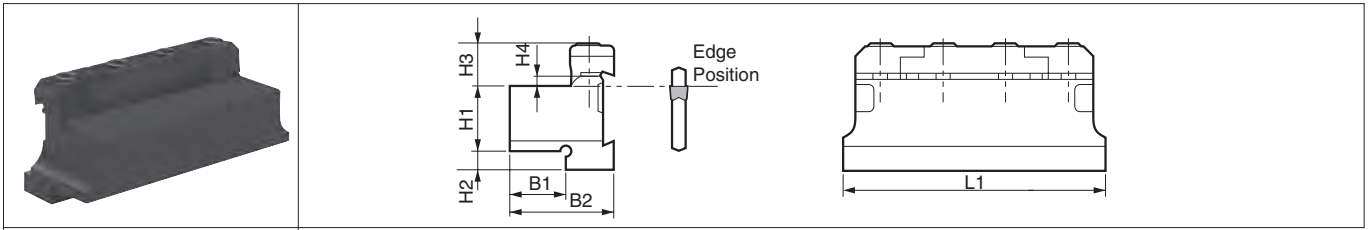
Incorrect Setting of Clamp Element



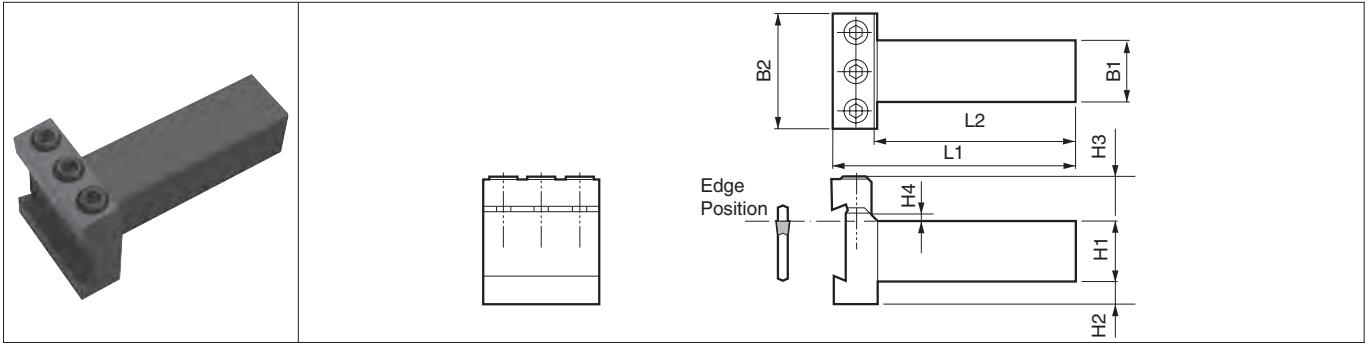
If the clamp element is mounted backward, a large gap will occur between the clamp and the toolblock, and the blade may come off during cutting. Be careful when installing the clamp for safety.

Toolblocks (for Holding Cut-Off Blade)

KTKTB



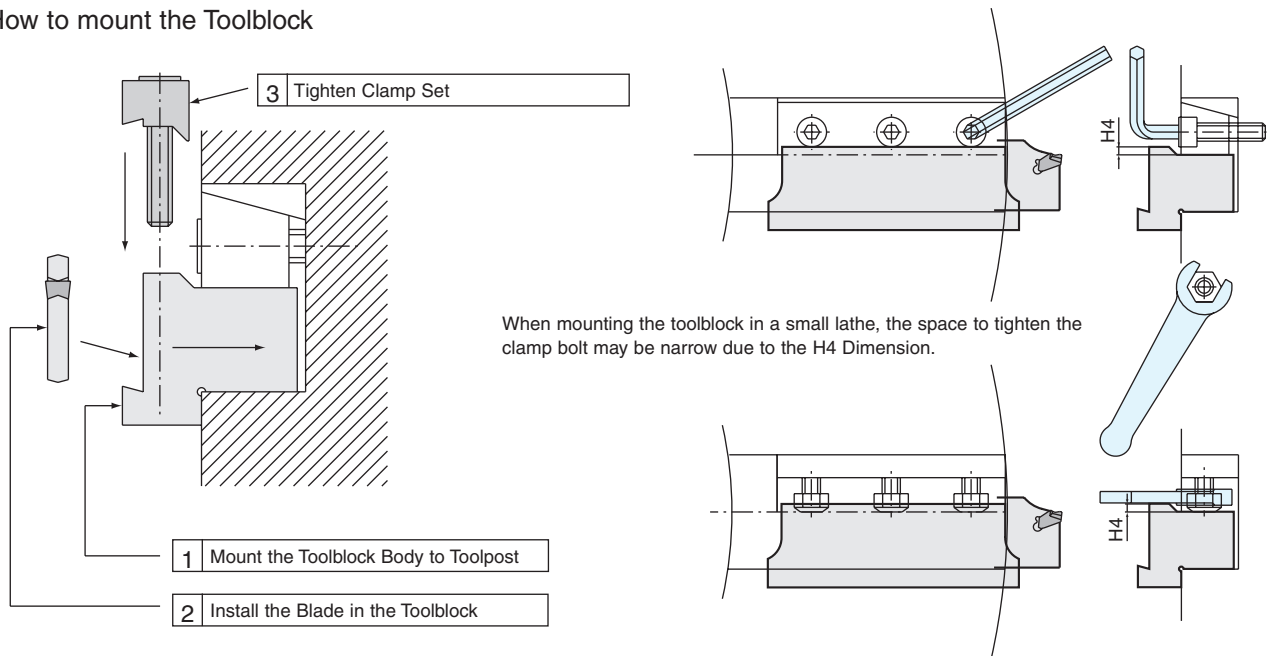
KTKTBF (Perpendicular type)



● Toolblock Dimension

Description	Stock	Unit	Dimension								Spare Parts			Applicable Blade		
			H1	H2	H3	H4	B1	B2	L1	L2	Clamp Set		Screw	Wrench	Cutting-Off	Face Grooving
											Separate type	Integral type				
KTKTB 19-19	●	inch	0.75	0.19	0.46	0.079	0.720	1.31	2.99	-	-	BSC-1	HH5X25	LW-4	ⓘ P. 334	ⓘ P. 310
16-19	○	mm	16	4	12	2	15.5	29.5	76	-	-	BSC-1	HH5X25	LW-4	KTKB19-OS KTKB19-SS	-
20-19	○	mm	20	4	12	2	19	34	76	-	-	BSC-1	HH5X25	LW-4	KTKB19-OS KTKB19-SS	-
KTKTB 19-26	●	inch	0.75	0.39	0.55	0.098	0.720	1.39	3.39	-	BCS-2	-	HH6X30	LW-5	ⓘ P. 334	ⓘ P. 310
16-26	○	mm	16	13	14	2.5	15.5	31.5	86	-	BCS-2	-	HH6X30	LW-5	KTKB26-OS KTKB26-SS	-
20-26	○	mm	20	9	14	2.5	19	36	86	-	BCS-2	-	HH6X30	LW-5	KTKB26-OS KTKB26-SS	-
KTKTB 25.4-32	●	inch	1.00	0.30	0.67	0.138	0.905	1.65	4.33	-	BCS-4	-	HH6X30	LW-5	ⓘ P. 334	ⓘ P. 310
20-32	○	mm	20	13	17	3.5	19	38	100	-	BCS-3	-	HH6X30	LW-5	KTKB32-OS KTKB32-SS	KFTB%○○○○-4S
25-32	○	mm	25	8	17	3.5	23	42	110	-	BCS-3	-	HH6X30	LW-5	KTKB32-OS KTKB32-SS	KFTB%○○○○-4S
32-32	○	mm	32	5	17	3.5	29	48	110	-	BCS-4	-	HH6X30	LW-5	KTKB%32-OS	KFTB%○○○○-5S
KTKTBF 25-32	○	mm	25	9.5	17	3.5	25	48	102	84.5	-	BCS-5	HH6X30	LW-5	KTKB32-OS KTKB32-SS	KFTB%○○○○-4S
32-32	○	mm	32	2.5	17	3.5	32	48	117	99.5	-	BCS-5	HH6X30	LW-5	KTKB%32-OS	KFTB%○○○○-5S

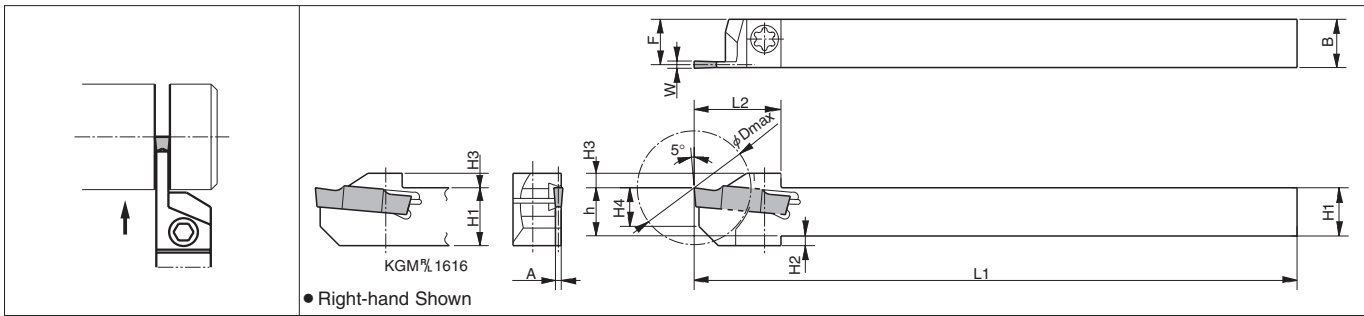
◆ How to mount the Toolblock



● : Std. Stock ○ : World Express

Cut-Off Toolholders

KGM For Automatic Lathe (Long Shank type)



Toolholder Dimension

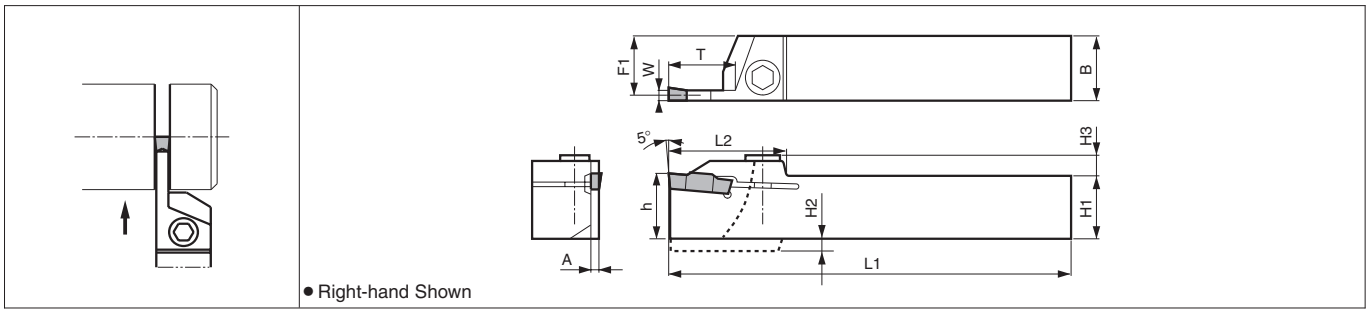
Description	Stock		Unit	Cutting Dia. ϕ Dmax	Dimension									Width W		Spare Parts	
	R	L			H1=h	H2	H3	H4	B	L1	L2	F	A	MIN.	MAX.	Screw	Wrench
KGM $\%$ 6-2-5	●	●	inch	.787	0.375	-	-	-	0.375	5.00	0.750	0.342	0.067	0.079	1.18	SE-40120TR	LTW-15S
8-2-6	●	●	inch	.984	0.500	-	-	-	0.500	6.00	0.830	0.467	0.067	0.079	1.18	SE-40120TR	LTW-15S
0810K-1.5-125	○	○	mm	10	8	4	3	8	10	125	18	9.4	1.2	1.5	2.0	SE-40120TR	LTW-15S
1010K-1.5-125	○	○	mm	20	10	2	3	8	10	125	18	9.4	1.2	1.5	2.0	SE-40120TR	LTW-15S
1212M-1.5-150	○	○	mm	25	12	2	4	10	12	150	20.5	11.4	1.2	1.5	2.0	SE-40120TR	LTW-15S
0810K-2-125	○	○	mm	10	8	4	3	8	10	125	18	9.2	1.6	2.0	3.0	SE-40120TR	LTW-15S
1010K-2-125	●	●	mm	20	10	2	3	8	10	125	18	9.15	1.7	2.0	3.0	SE-40120TR	LTW-15S
1212M-2-150	●	●	mm	25	12	2	4	10	12	150	19	11.15	1.7	2.0	3.0	SE-40120TR	LTW-15S
1616M-2-150	●	●	mm	32	16	-	4	9	16	150	24.5	15.15	1.7	2.0	3.0	SE-50125TR	LTW-20
1010K-2.5-125	○	○	mm	20	10	2	3	8	10	125	18	9	2.0	2.4	3.0	SE-40120TR	LTW-15S
1212M-2.5-150	○	○	mm	25	12	2	4	10	12	150	20.5	11	2.0	2.4	3.0	SE-40120TR	LTW-15S
1616M-2.5-150	●	●	mm	32	16	-	4	9	16	150	25.5	15	2.0	2.4	3.0	SE-50125TR	LTW-20
1616M-3-150	○	○	mm	32	16	-	4	9	16	150	25.5	14.8	2.4	3.0	4.0	SE-50125TR	LTW-20

Applicable Insert

Application	Grooving/Turning	Grooving/Turning	Grooving	Full-R / Copying	Cut-Off	Cut-Off	Cut-Off	Cut-Off	Cut-Off
Ref. Page	266	266	266	266	326	326	326	326	327
Shape									
Toolholder									
KGM $\%$...1.5	-	-	-	-	GMM1520..MT GMM2020..MT GMM1520\$.MT GMM2020\$.MT	GMM1520..NB GMM2020..NB	GMM2020..TK TKGMM2020%..TK	GMN2..TK GM%2..TK	-
KGM $\%$...2	GMM2420.. GMG3020.. GMM3020..	GMM3020..MS	GMG2520..MG GMG3020..MG	GMG3020..R GMM3020..R	GMM2020..MT GMM2520..MT GMM3020..MT GMM2020\$.MT GMM2520\$.MT GMM3020\$.MT	GMM2020..NB GMM2520..NB GMM3020..NB	GMM2020..TK GMM2520..TK GMM3020..TK GMM2020%..TK GMM2520%..TK GMM3020%..TK	GMN2..TK GMN3..TK GM%2..TK GM%3..TK	GMN2 GMN2.2 GMN3 GM%2.2 GM%3
KGM $\%$...2.5	GMM2420.. GMG3020.. GMM3020..	GMM3020..MS	GMG2520..MG GMG3020..MG	GMG3020..R GMM3020..R	GMM2520..MT GMM3020..MT GMM2520\$.MT GMM3020\$.MT	GMM2520..NB GMM3020..NB	GMM2520..TK GMM3020..TK GMM2520%..TK GMM3020%..TK	GMN3..TK GM%3..TK	GMN3 GM%3
KGM $\%$...3	GMG3020.. GMM3020.. GMG4020.. GMM4020..	GMM3020..MS GMM4020..MS	GMG3020..MG GMG3520..MG GMG4020..MG	GMG3020..R GMM3020..R GMG4020..R GMM4020..R	GMM3020..MT GMM3020\$.MT	GMM3020..NB	GMM3020..TK GMM3020%..TK	GMN3..TK GMN4..TK GM%3..TK GM%4..TK	GMN3 GMN4 GM%3 GM%4

Recommended Cutting Conditions P.338

KGM-T



● Toolholder Dimension

Description	Stock		Unit	Dimension									Width W		Spare Parts			
	R	L		H1=h	H2	H3	B	L1	L2	F1	A	T	MIN.	MAX.	Screw		Wrench	
KGM ^{R/L} 12-2T 16-2T 12-3T 16-3T 12-4T 16-4T 16-5T	●	●	inch	0.75	-	0.24	0.75	5.0	1.30	0.717	0.067	0.669	0.78	0.098	-	HH5X16	-	LW-4
	●	●		1.00	-	0.24	1.00	6.0	1.30	0.967	0.067	0.669	-	HH5X25	-			
	●	●		0.75	-	0.24	0.75	5.0	1.42	0.702	0.094	0.787	1.18	0.157	-	HH5X16	-	
	●	●		1.00	-	0.24	1.00	6.0	1.42	0.953	0.094	0.787	-	HH5X25	-			
	●	●		0.75	-	0.24	0.75	5.0	1.42	0.683	0.133	0.787	1.57	0.197	-	HH5X16	-	
	●	●		1.00	-	0.24	1.00	6.0	1.22	0.933	0.133	0.984	-	HH5X25	-			
	●	●		1.00	-	0.24	1.00	6.0	1.22	0.913	0.173	0.984	1.97	0.236	-	HH5X25	-	
KGM ^{R/L} 2012K-2T17 2020K-2T17 2525M-2T17 1616H-3T20 2012K-3T20 2020K-3T20 2525M-3T20 2020K-4T20 2525M-4T20 2525M-4T25 2525M-5T25 3232P-5T25 2525M-6T30	○	○	mm	20	-	6	12	125	33	11.15	1.7	17	2.0	2.5	SB-5TR	-	LTW-20	-
	○	○		20	-	6	20	125	33	19.15	1.7	17	-	HH5X16	-	LW-4		
	○	○		25	-	6	25	150	33	24.15	1.7	17	-	HH5X25	-			
	●	●		16	4	6	16	100	36	14.8	2.4	20	3.0	4.0	SB-5TR	-	LTW-20	-
	○	○		20	-	6	12	125	36	10.8	2.4	20	-	HH5X16	-	LW-4		
	○	○		20	-	6	20	125	36	18.8	2.4	20	-	HH5X25	-			
	○	○		25	-	6	25	150	36	23.8	2.4	20	-	HH5X16	-			
	○	○		20	-	6	20	125	36	18.3	3.4	20	4.0	5.0	-	HH5X25	-	
	○	○		25	-	6	25	150	36	23.3	3.4	20	-	HH5X25	-			
	○	○		25	-	6	25	150	41	23.3	3.4	25	-	HH5X25	-			
	○	○		25	-	6	25	150	42	22.8	4.4	25	5.0	6.0	-	HH5X25	-	
	○	○		32	-	6	32	170	42	29.8	4.4	25	-	HH5X25	-			
	○	○		25	-	6	25	150	45	22.4	5.2	30	6.0	6.0	-	HH5X25	-	

· T Dimension shows the distance from toolholder to cutting edge. See the table(P281) for the relationship between the available grooving depth and cutting dia.
 · When using GMG/GMM type(2-corner inserts), set the grooving depth under 15mm. (.591")

● Applicable Insert

Application	Grooving/Turning	Grooving/Turning	Grooving	Full-R / Copying	Full-R / Copying	Cut-Off	Cut-Off	Cut-Off	Cut-Off	Cut-Off
Ref. Page	266	266	266	266	266	326	326	326	326	327
Shape										
Toolholder										
KGM ^{R/L} ...2T	GMM2420..	-	GMG2520..MG	-	-	GMM2020..MT GMM2520..MT GMM2020%..MT GMM2520%..MT	GMM2020..NB GMM2520..NB	GMM2020..TK GMM2520 TK GMM2020%..TK GMM2520%..TK	GMN2..TK GM%2..TK	GMN2 GMN2.2 GM%2.2
KGM ^{R/L} ...3T	GMG3020.. GMM3020.. GMG4020.. GMM4020..	GMM3020..MS GMM4020..MS	GMG3020..MG GMG3520..MG GMG4020..MG	GMG3020..R GMM3020..R GMG4020..R GMM4020..R	-	GMM3020..MT GMM3020%..MT	GMM3020..NB	GMM3020..TK GMM3020%..TK	GMN3..TK GMN4..TK GM%3..TK GM%4..TK	GMN3 GMN4 GM%3 GM%4
KGM ^{R/L} ...4T	GMG4020.. GMM4020.. GMG5020.. GMM5020..	GMM4020..MS GMM5020..MS	GMG4020..MG GMG5020..MG	GMG4020..R GMM4020..R GMG5020..R GMM5020..R	-	-	-	-	GMN4 GM%4..TK	GMN4 GMN5 GM%4
KGM ^{R/L} ...5T	GMG5020.. GMM5020.. GMG6020.. GMM6020..	GMM5020..MS GMM6020..MS	GMG5020..MG GMG6020..MG	GMG5020..R GMM5020..R GMG6020..R GMM6020..R	GMGA6020..R	-	-	-	-	GMN5 GMN6
KGM ^{R/L} ...6T	GMG6020.. GMM6020..	GMM6020..MS	GMG6020..MG	GMG6020..R GMM6020..R	GMGA6020..R	-	-	-	-	GMN6

Recommended Cutting Conditions P.338

Recommended Cutting Conditions

Recommended Cutting Conditions(TKN, TK^{R/L} Type Insert)

CERACUT Cut-Off

Work Material	Recommended Grade (Cutting Speed SFM)					Width (inch)					Remark
	Cermet	CVD Coated	PVD Coated Carbide		Carbide	.063	.087/.094	.122	.161	.189~.378	
	TN90	CR9025	PR660	PR930	KW10	f(ipr)					
Carbon Steel	☆ 400~660	☆(Width: less than .122) ★(Width: more than .161) 270~600	☆ 200~430	☆(Width: less than .122) ★(Width: more than .161) 200~430		.0008~.003	.002~.007	.002~.010	.003~.012	.006~.016	Coolant
Alloy Steel	☆ 330~530	☆(Width: less than .122) ★(Width: more than .161) 230~500	☆ 200~430	☆(Width: less than .122) ★(Width: more than .161) 200~430		.0008~.003	.002~.007	.002~.010	.003~.012	.006~.016	
Stainless Steel	☆ 270~500	☆ 200~460	★ 170~400	☆ 200~460		.0008~.002	.002~.005	.002~.007	.003~.010	.004~.012	
Cast Iron	-	-	-	-	★ 170~330	.0008~.003	.002~.005	.004~.010	.004~.012	.006~.014	
Aluminum	-	-	-	-	★ 660~1490	.0008~.004	.002~.004	.002~.008	.002~.010	.004~.010	
Brass	-	-	-	-	★ 330~660	.0008~.004	.002~.004	.002~.006	.002~.008	.004~.010	

Recommended Cutting Conditions

(In case of Using GMM-MT, GMM-TK, GMM-NB type Insert)

CERACUT Plunge & Turn

Work Material	Recommended Grade (Cutting Speed SFM)					Width (inch)					Remark
	Cermet	CVD Coated	PVD Coated Carbide		Carbide	.059	.079/.098	.118	.157		
	-	CR9025	PR915	PR930	KW10	f(ipr)					
Carbon Steel	-	☆ 270~600	★ 200~500	☆ 200~430		.0004~.002	.0008~.006	.002~.008	.003~.012		Coolant
Alloy Steel	-	☆ 230~500	★ 200~500	☆ 200~430		.0004~.002	.0008~.006	.002~.008	.003~.012		
Stainless Steel	-	☆ 200~460	★ 170~460	★ 170~400		.0004~.002	.0008~.004	.002~.006	.003~.010		
Cast Iron	-	-	-	-	★ 170~330	.0004~.002	.002~.005	.004~.010	.004~.012		
Aluminum	-	-	-	-	★ 660~1490	.0004~.002	.002~.004	.002~.008	.002~.010		
Brass	-	-	-	-	★ 330~660	.0004~.002	.002~.004	.002~.006	.002~.008		

● When machining Steel and Stainless Steel with 4mm(.157") PR930 Insert, decrease the Feed Rate by 20%. ★: 1st Recommendation ☆: 2nd Recommendation

Recommended Cutting Conditions(TKF12)

Work Material	Insert Grade(SFM)		Groove Width(in)					Remarks
	PVD	Carbide	.02	.027	.04	.06	.08	
	PR930	KW10	Feed(ipr)					
Carbon Steel	200~430	-	.0004~.0008	.0004~.0012	.0004~.0016	.0004~.0016	.0004~.0016	Coolant
Alloy Steel	200~430	-	.0004~.0008	.0004~.0012	.0004~.0016	.0004~.0016	.0004~.0016	
Stainless Steel	170~330	-	.0002~.0006	.0004~.0008	.0004~.0008	.0004~.0008	.0004~.0008	
Cast Iron	-	170~330	.0004~.0012	.0004~.0016	.0004~.002	.0004~.002	.0004~.002	
Aluminum	-	660~1500	.0004~.0012	.0004~.0016	.0004~.002	.0004~.002	.0004~.002	
Brass	-	330~660	.0004~.0012	.0004~.0016	.0004~.0024	.0004~.0024	.0004~.0024	

Recommended Cutting Conditions(TKF16)

Work Material	Insert Grade(SFM)		Groove Width(in)		Remarks
	PVD	Carbide	.06	.08	
	PR930	KW10	Feed(ipr)		
Carbon Steel	200~430	-	.0008~.0027	.0008~.0027	Coolant
Alloy Steel	200~430	-	.0008~.0027	.0008~.0027	
Stainless Steel	170~330	-	.0004~.0016	.0004~.0016	
Cast Iron	-	170~330	.0008~.003	.0008~.003	
Aluminum	-	660~1500	.0008~.003	.0008~.003	
Brass	-	330~660	.0008~.004	.0008~.004	