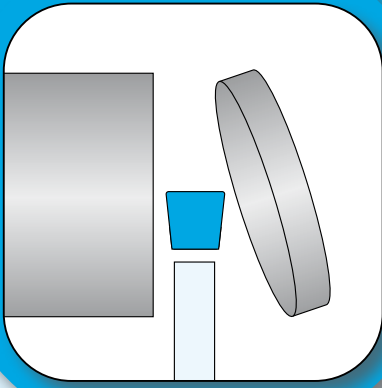


Cut-off

H1~H26



H

Product Lineup H2

Guide for Cut-Off H3

Summary of Cut-Off H4~H5

Cut-Off Toolholders (for small diameter cut-off) H6~H11



KTKF Lateral side screw clamp holder **H8**

KTKFS (For sub spindle tooling) Lateral side screw clamp holder **H10**

Cut-Off Toolholders (for 2-edge insert) H12~H15



KGD Integral Toolholder **H14**

KGD-S Separate Toolholder **H15**

Cut-Off Toolholders (for 2-edge insert) Grooving / Plunge & Turn H16~H20



KGM (For automatic lathe) Integral Toolholder **H18**

KGM Integral Toolholder **H19**

KGM-T Integral Toolholder **H19**

Cut-Off Toolholders (for 1-edge insert) Cut-Off H21~H24



KTKB-SS / KTKB-S Blade

KTKTB / KTKTBF Toolblock

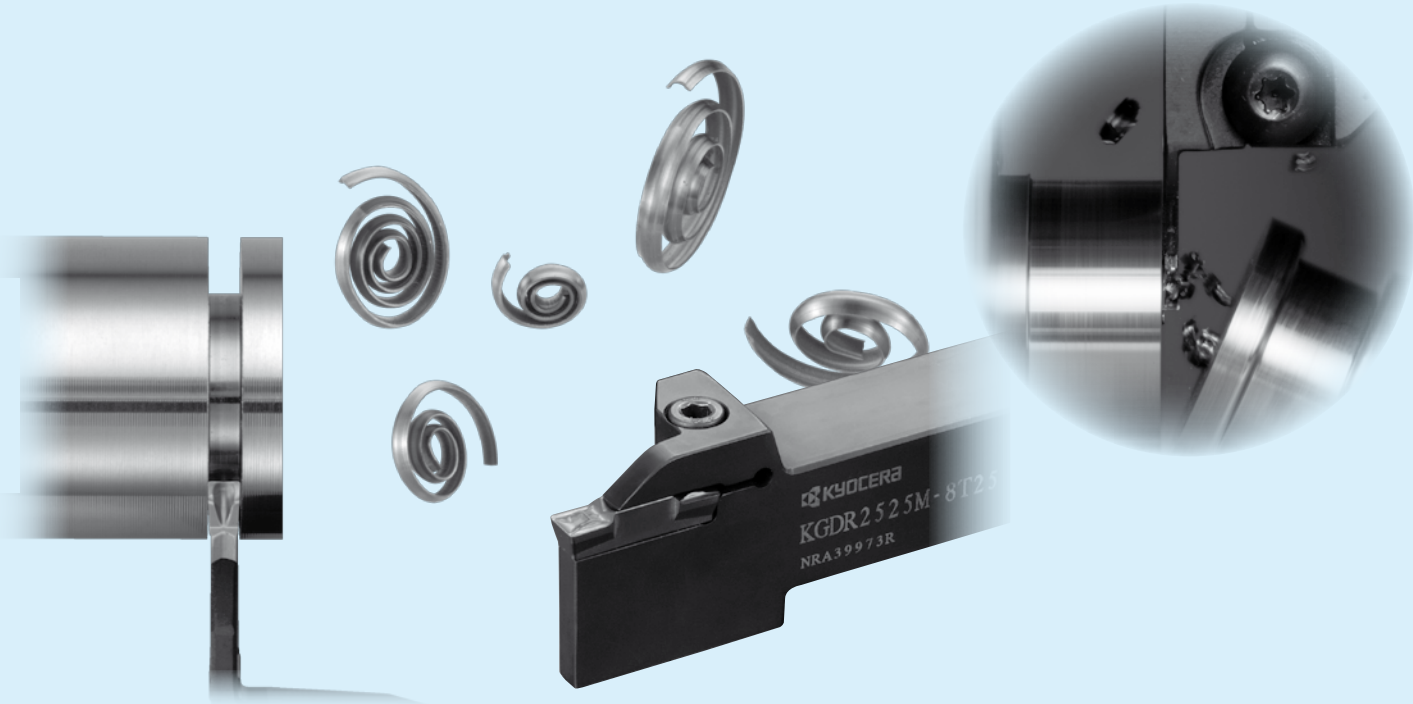
KTKH-S Integral Toolholder

Technical Information H25~H26



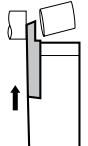
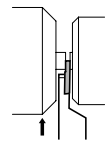
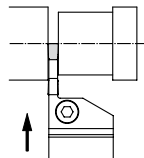
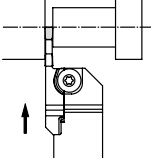
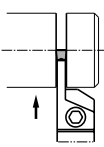
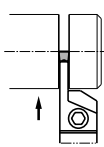
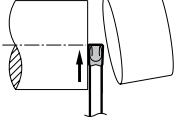
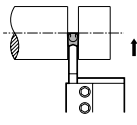
Recommended Cutting Conditions

Alternative Toolholder Reference Table for Cut-off Toolholder H26



Product Lineup





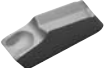
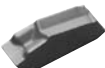
Product Lineup

For Small Diameter Cut-Off	Toolholder (Long Shank for automatic lathe) Cut-Off Dia. ø5~ø12 ~ø16	KTKF (H8)  Width: 0.5~2.0 mm		For sub spindle tooling Cut-Off Dia. ø6~ø12 ø14~ø16	KTKFS (H10)  Width: 1.0~2.0 mm
NEW KGD	Bolt Clamp Cut-Off Dia. ø12~ø50	KGD (H14)  Width: 2.0~4.0mm	KGD-S (H15)  Width: 2.0~4.0mm		
CERACUT / Plunge & Turn (2-edge)	Bolt Clamp Cut-Off Dia. ø18~ø60	KGM (H18~H19)  Width: 1.5~4.0mm, 3~8mm	KGM-T (H19)  Width: 2.0~6.0mm		
CERACUT Cut-Off (1-edge)	Toolholder Type Cut-Off Dia. ø30~ø79	KTKH-S (H24)  Width: 2.2~5.1mm		Blade type Cut-Off Dia. ø32~ø120	KTKB-S(S) (H22)  Width: 1.6~9.6mm

H

Cut-off

Cut-Off Tools

Series Name	Shape	Advantage	Application
For Small Diameter Cut-Off		<ol style="list-style-type: none"> 1) Insert clamp is side screw type from lateral side 2) 2-edge Insert 3) Cut-off Diameter is prepared for two sizes from ø5~ø12 and max.ø16. 	<ol style="list-style-type: none"> 1) For cut-off and grooving of small workpieces 2) For automatic lathe, small machine
NEW KGD		<ol style="list-style-type: none"> 1) Insert is clamped from top side. 2) 1-edge and 2-edge inserts available 3) Integral type and separate type are available. 4) Max. Cutting Dia.: ø50 	<ol style="list-style-type: none"> 1) PM Chipbreaker...For Cut-Off 2) PH Chipbreaker...For Cut-Off (High Feed) For Grooving
CERACUT / Plunge & Turn		<ol style="list-style-type: none"> 1) Insert is clamped from top side 2) 1-edge and 2-edge inserts available 3) Max. Cutting Dia.: ø60 	<ol style="list-style-type: none"> 1) For cut-off and grooving of small workpieces 2) For automatic lathe, small machine 3) TMR-Chipbreaker provides stable chip control up to high feed rate ranges.
CERACUT Cut-Off		<ol style="list-style-type: none"> 1) Self-Clamping System Tap the insert lightly with a plastic hammer to set it in the pocket. 2) 1-edge insert 3) Blade type and Integral Shank type 4) Max. Cutting Dia.: ø120 	<ol style="list-style-type: none"> 1) For cut-off and deep grooving 2) Standard chipbreaker is general cut-off type. Feed rate : over 0.1mm/rev  P-Chipbreaker is for cut-off at low feed rates Feed rate : 0.03~0.08mm/rev 

Guide for Cut-Off

Tool Selection

		For Small Dia. Cut-Off	KGD	CERACUT / Plunge & Turn	CERACUT Cut-Off
Insert	1. Insert 1-edge Insert ... For Larger Dia. Workpiece (Max. $\phi 120$) 2-edge Insert ... For Smaller Dia. Workpiece Cost per corner is reduced	-	-	-	○
	2. Use a neutral angle insert if there is no limit to the finished shape.	TKF...S TKF...NB TKFS...S	GDM GDMS	GMM	TKN
	3. Use angled insert to reduce the size of the remaining boss.	TKF...DR	GDM-R-6D GDMS-R-6D (\odot Fig.2)	GMM- β /L (\odot Fig.2)	TK β /L (\odot Fig.1)
	4. Use sharp-cornered lead-angled Insert to make the remaining boss much smaller when machining small parts and thin parts.	TKF...DR	-	GMM- β /L (\odot Fig.2)	-
	5. Use the minimum width insert suitable for the machining operation.			○	○
Toolholder	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).	○	-	-	-

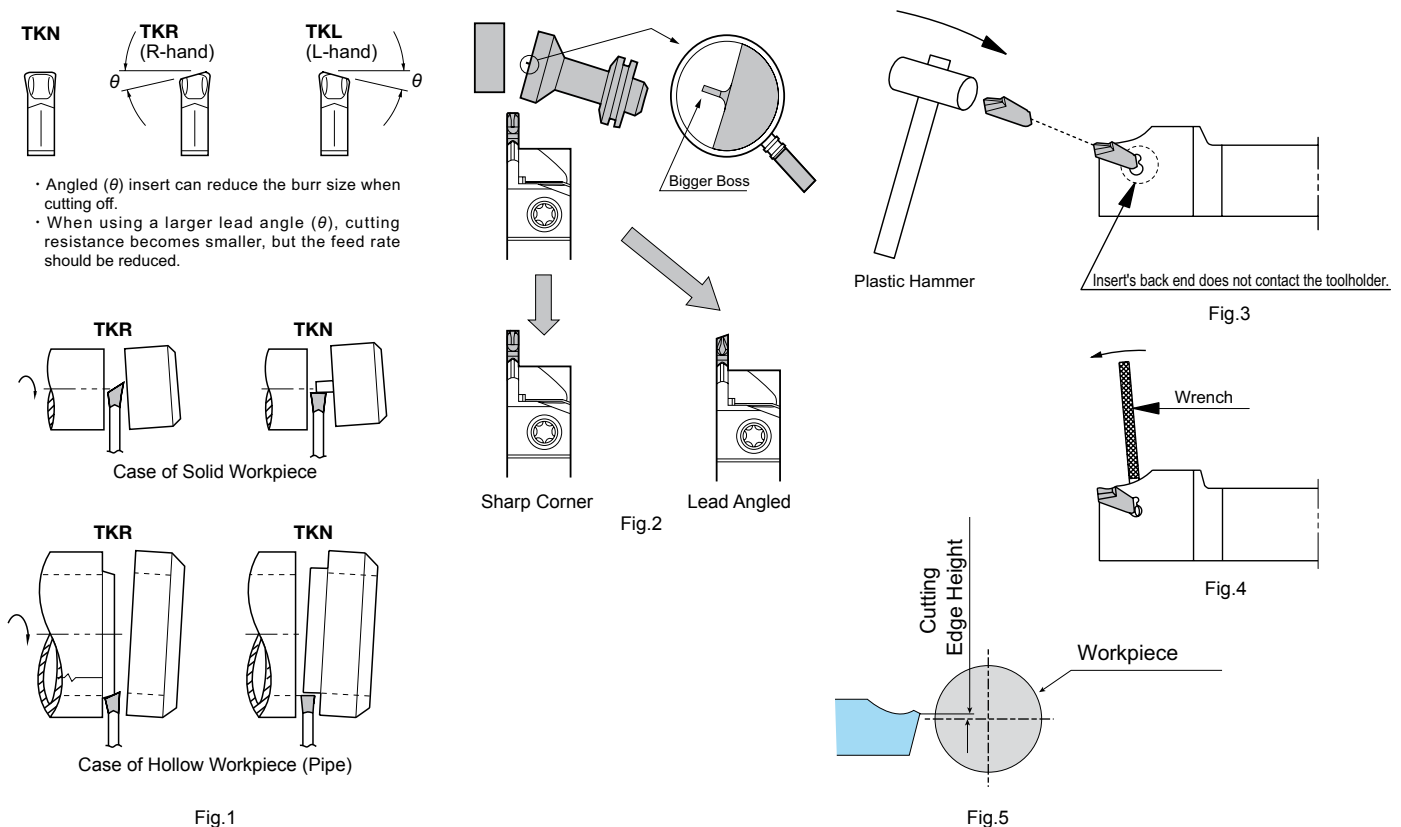
How to Set Up (TKN / TK β /L)

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

Caution

1. Set the cutting edge height 0.1-0.2mm above the center height.	○ (\odot Fig.5)	○ (\odot Fig.5)	○ (\odot Fig.5)	○ (\odot Fig.5)
2. Always apply sufficient coolant to the cutting edge.	○	○	○	○
3. Constant spindle revolution is recommended to obtain stable tool life.	○	○	○	○
4. Cut-off as close to the chuck as possible	○	○	○	○
5. Decrease the feed rate from 1/2 to 1/3 at the near 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) to prevent damage. Clean the insert pocket well with compressed air when replacing insert. 	○	○	○	○

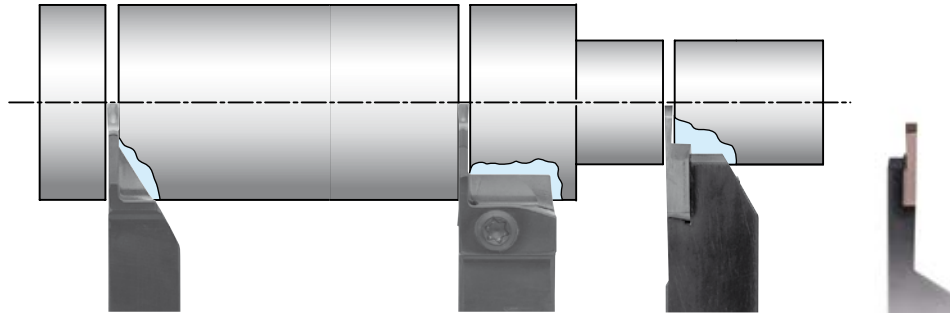
○: Applicable —: Not Applicable



Summary of Cut-Off

Small Dia. Cut-off ~ $\phi 45$

Small Shank



GTKH
Cutting Dia: ~ $\phi 45$
Shank: □10~25
Edge Width: 2.2~4.1
Self Clamp

KGM
Cutting Dia: ~ $\phi 32$
Shank: □10~16
Edge Width: 1.5~4.0
Top Clamp

GTKF
Cutting Dia: ~ $\phi 16$
Shank: □10~16×20
Edge Width: 0.5~2.0
Lateral Side Clamp

GTKFS
Cutting Dia: ~ $\phi 16$
Shank: □10~12
Edge Width: 1.0~2.0
Lateral Side Clamp

⊕H24

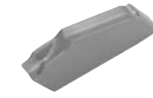
⊕H18

⊕H8

⊕H10



Chipbreaker for General Cut-Off



Chipbreaker for Low Feed Cut-Off



2-edge
Chipbreaker for Sharp Cutting



**KTKF
GTKFS**
2-edge
Low resistance cut-off
Chipbreaker



2-edge
Chipbreaker for Stability



1-edge
Chipbreaker for Stability

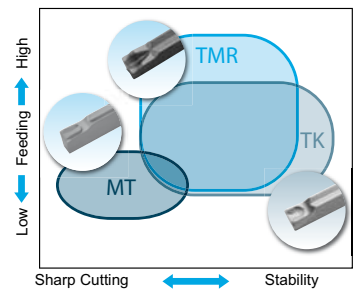


2-edge
Chipbreaker for Productivity

Chipbreaker edge shape	CERACUT Cut-Off ⊕H21		
	General Cut-Off		Low Feed Cut-Off
	Chamfer + hone	Sharp Edge	Hone

Chipbreaker edge shape	Grooving / Plunge&Turn ⊕H16				
	Sharp Cutting (MT-Chipbreaker)		Stable Cutting (TK-Chipbreaker)		Productivity Oriented (TMR-Chipbreaker)
	Chamfer + hone Corner-R 0.05	Chamfer + hone Sharp Corner	Chamfer + hone Corner-R 0.2-0.3	Sharp Edge Corner-R 0.2-0.3	Chamfer + hone Corner-R 0.2

GMM Chipbreaker MAP



CERACUT Cut-Off
⊕H24 (Self Clamp)

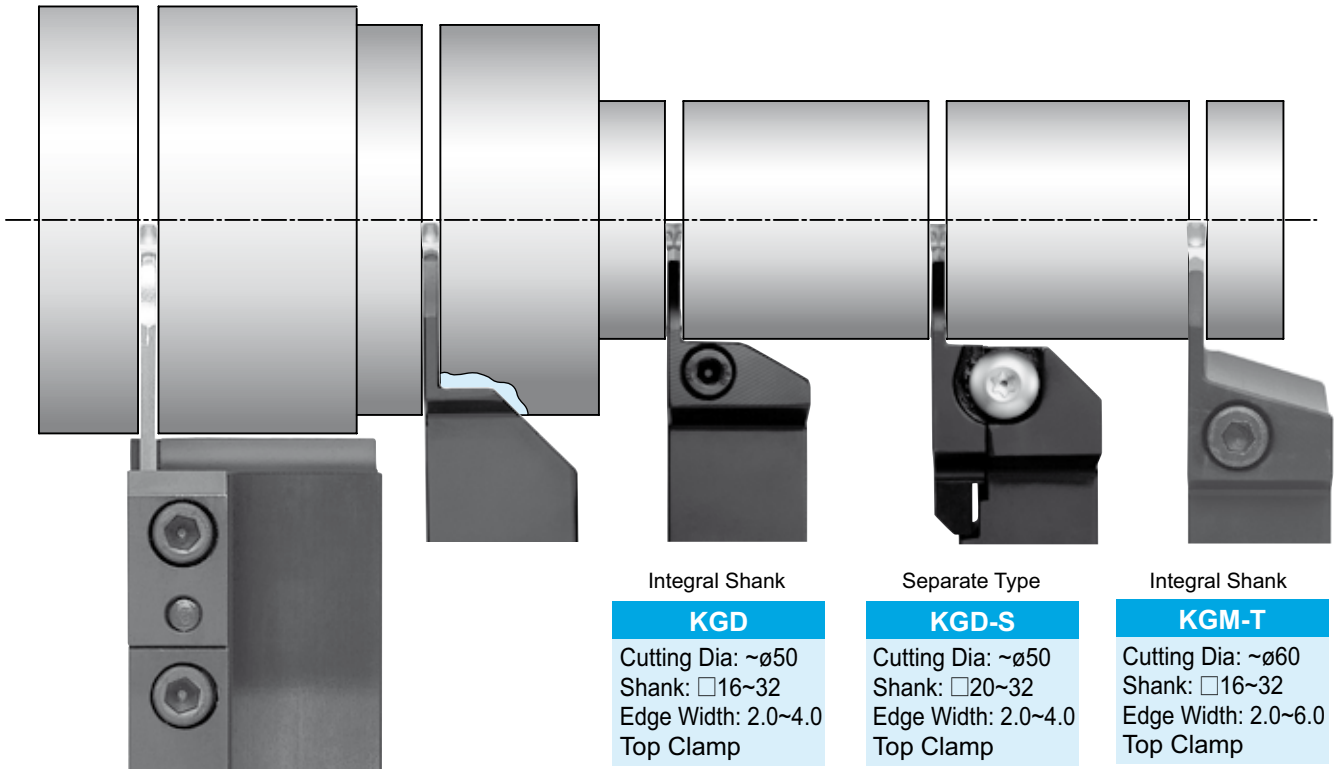


CERACUT / Plunge & Turn
⊕H18 (Top Clamp)



For Small Diameter Cut-Off
⊕H8 (Lateral Side Clamp)

General Cut-Off ~ø120



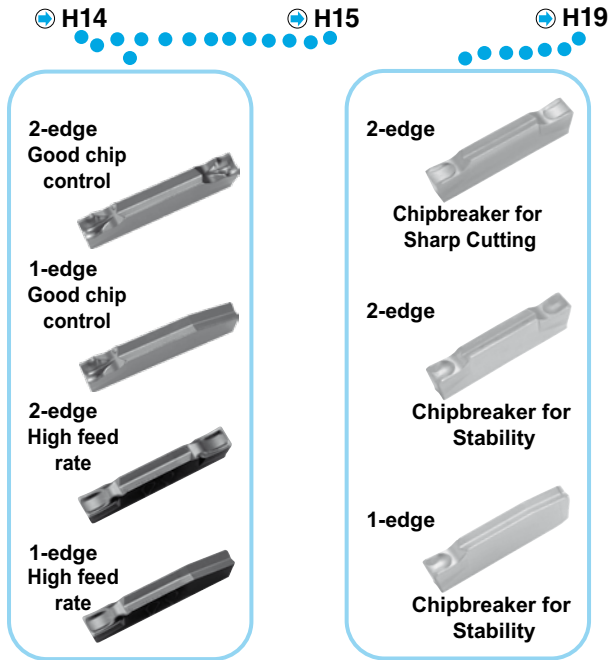
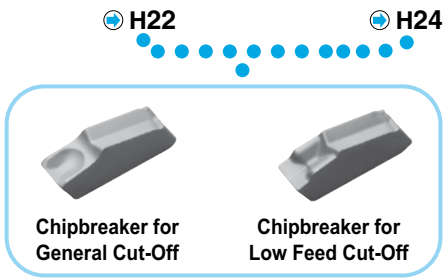
Integral Shank
KGD
 Cutting Dia: ~ø50
 Shank: □16~32
 Edge Width: 2.0~4.0
 Top Clamp

Separate Type
KGD-S
 Cutting Dia: ~ø50
 Shank: □20~32
 Edge Width: 2.0~4.0
 Top Clamp

Integral Shank
KGM-T
 Cutting Dia: ~ø60
 Shank: □16~32
 Edge Width: 2.0~6.0
 Top Clamp

Blade + Toolblock
KTKB
 Cutting Dia: ~ø120
 Shank: □16~32
 Edge Width: 1.6~9.6
 Self Clamp

Integral Shank
KTKH
 Cutting Dia: ~ø79
 Shank: □20~25
 Edge Width: 3.1~5.1
 Self Clamp



Blade + Toolblock	Separate Type	Integral Shank		
				
CERACUT Cut-Off H22	KGD-S H15	CERACUT Cut-Off H24	KGD H14	CERACUT / Plunge & Turn H18





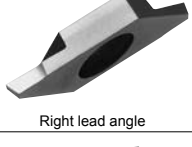

Cut-Off Toolholders (for small diameter)

TKF

NEW

Classification of usage	P	Carbon Steel / Alloy Steel	☉	☺	
● : Continuous-Low Interruption / 1st Choice	M	Stainless Steel	●	☺	
☉ : Continuous-Low Interruption / 2nd Choice	K	Cast Iron			●
● : Continuous / 1st Choice	N	Non-ferrous Metals			●
○ : Continuous / 2nd Choice					

● Applicable Inserts (TKF12)

Insert Handed Insert shows Right-hand	Description	Dimension (mm)							Angle (°)	MEGA COAT		PVD Coated Carbide		Carbide		Ref. Page for Toolholder
		W	øD _{max}	rε	T	H	ød	θ		PR1225		PR1025		KW10		
										R	L	R	L	R	L	
 Right lead angle	TKF12 ^{R/L} 050-S-16DR	0.5	5	0.03	3	8.7	5	16°	●		●	●	●	●		H8
	TKF12 ^{R/L} 070-S-16DR	0.7	8						●		●	●	●	●		
	TKF12 ^{R/L} 100-S-16DR	1.0	12						●	●	●	●	●	●		
	TKF12 ^{R/L} 150-S-16DR	1.5	12						●	●	●	●	●	●		
	TKF12 ^{R/L} 200-S-16DR	2.0	12						●	●	●	●	●	●		
 	TKF12 ^{R/L} 050-S	0.5	5	0.03	3	8.7	5	0°	●		●	●	●	●		
	TKF12 ^{R/L} 070-S	0.7	8						●		●	●	●	●		
	TKF12 ^{R/L} 100-S	1.0	12						●	●	●	●	●	●		
	TKF12 ^{R/L} 150-S	1.5	12						●	●	●	●	●	●		
	TKF12 ^{R/L} 200-S	2.0	12						●	●	●	●	●	●		
 Right lead angle Tough Edge	TKF12 ^{R/L} 100-T-16DR	1.0	12	0.08	3	8.7	5	16°	●	●						
	TKF12 ^{R/L} 150-T-16DR	1.5							●	●						
	TKF12 ^{R/L} 200-T-16DR	2.0							●	●						
 Tough Edge	TKF12 ^{R/L} 100-T	1.0	12	0.08	3	8.7	5	0°	●	●						
	TKF12 ^{R/L} 150-T	1.5							●	●						
	TKF12 ^{R/L} 200-T	2.0							●	●						
 Right lead angle	TKF12 ^{R/L} 050-NB-20DR	0.5	5	0	3	8.7	5	20°			●	●	●	●		
	TKF12 ^{R/L} 070-NB-20DR	0.7	8						●	●	●	●				
	TKF12 ^{R/L} 100-NB-20DR	1.0	12						●	●	●	●				
	TKF12 ^{R/L} 150-NB-20DR	1.5	12						●	●	●	●				
	TKF12 ^{R/L} 200-NB-20DR	2.0	12						●	●	●	●				
 Without Chipbreaker	TKF12 ^{R/L} 050-NB	0.5	5	0	3	8.7	5	0°			●	●	●	●		
	TKF12 ^{R/L} 070-NB	0.7	8						●	●	●	●				
	TKF12 ^{R/L} 100-NB	1.0	12						●	●	●	●				
	TKF12 ^{R/L} 150-NB	1.5	12						●	●	●	●				
	TKF12 ^{R/L} 200-NB	2.0	12						●	●	●	●				

• Lead angle shows the angle when installed in toolholder.

• As Fig.1 of H8 shows, the cutting diameter of the insert is indicated when the top of the cutting edge progresses 1mm from the center.

◆ Identification of Description (See Table.1)

TKF 12 R 050 — S — 16D R

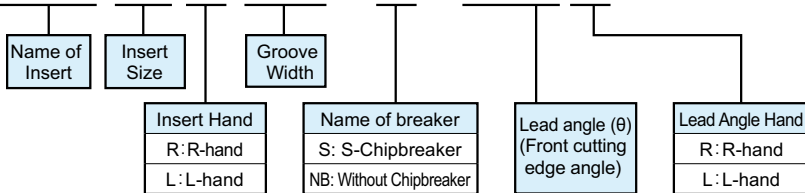
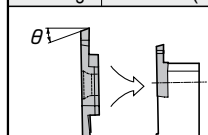
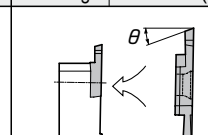
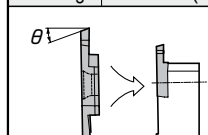
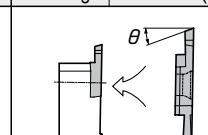
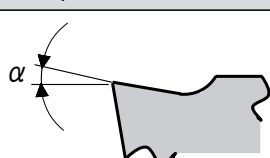


Table 1

Toolholder	R-hand (R)	Toolholder	L-hand (L)
Insert	R-hand (R)	Insert	L-hand (L)
Lead Angle	R-hand (R)	Lead Angle	R-hand (R)
			

● Descriptions of Chipbreaker Edge Shape

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






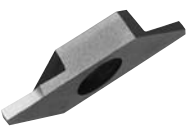
Inserts are sold in 10 piece boxes.

● : Std. Item ○ : Check Availability
R : Std. Item (R-hand Only) L : Std. Item (L-hand Only)

NEW

● Applicable Inserts (TKF16)

Classification of usage	P	Carbon Steel / Alloy Steel	●	☺	
● : Continuous-Low Interruption / 1st Choice	M	Stainless Steel	● <td>☺</td> <td></td>	☺	
☺ : Continuous-Low Interruption / 2nd Choice	K	Cast Iron			●
● : Continuous / 1st Choice	N	Non-ferrous Metals			●
☺ : Continuous / 2nd Choice					

Insert Handed Insert shows Right-hand	Description	Dimension (mm)						Angle (°)	MEGA COAT		PVD Coated Carbide		Carbide		Ref. Page for Toolholder
		W	øD _{max}	rε	T	H	ød		PR1225		PR1025		KW10		
									R	L	R	L	R	L	
 Right lead angle	TKF16 ^{R/L} 150-S-16DR	1.5	16	0.05	4	9.5	5	16°	●	●	●	●	●	●	H8
	200-S-16DR	2.0							●	●	●	●	●	●	
 Right lead angle	TKF16 ^{R/L} 150-S	1.5	16	0.05	4	9.5	5	0°	●	●	●	●	●	●	
	200-S	2.0							●	●	●	●	●	●	
 Right lead angle Tough Edge	TKF16 ^{R/L} 150-T-16DR	1.5	16	0.08	4	9.5	5	16°	●	●					
	200-T-16DR	2.0							●	●					
 Tough Edge	TKF16 ^{R/L} 150-T	1.5	16	0.08	4	9.5	5	0°	●	●					
	200-T	2.0							●	●					
 Right lead angle / Without Chipbreaker	TKF16 ^{R/L} 150-NB-20DR	1.5	16	0	4	9.5	5	20°			●	●	●	●	
	200-NB-20DR	2.0									●	●	●	●	
 Without Chipbreaker	TKF16 ^{R/L} 150-NB	1.5	16	0	4	9.5	5	0°			●	●	●	●	
	200-NB	2.0									●	●	●	●	

- Lead angle shows the angle when installed in toolholder.
- As Fig.1 of H8 shows, the cutting diameter of the insert is indicated when the top of the cutting edge progresses 1mm from the center.

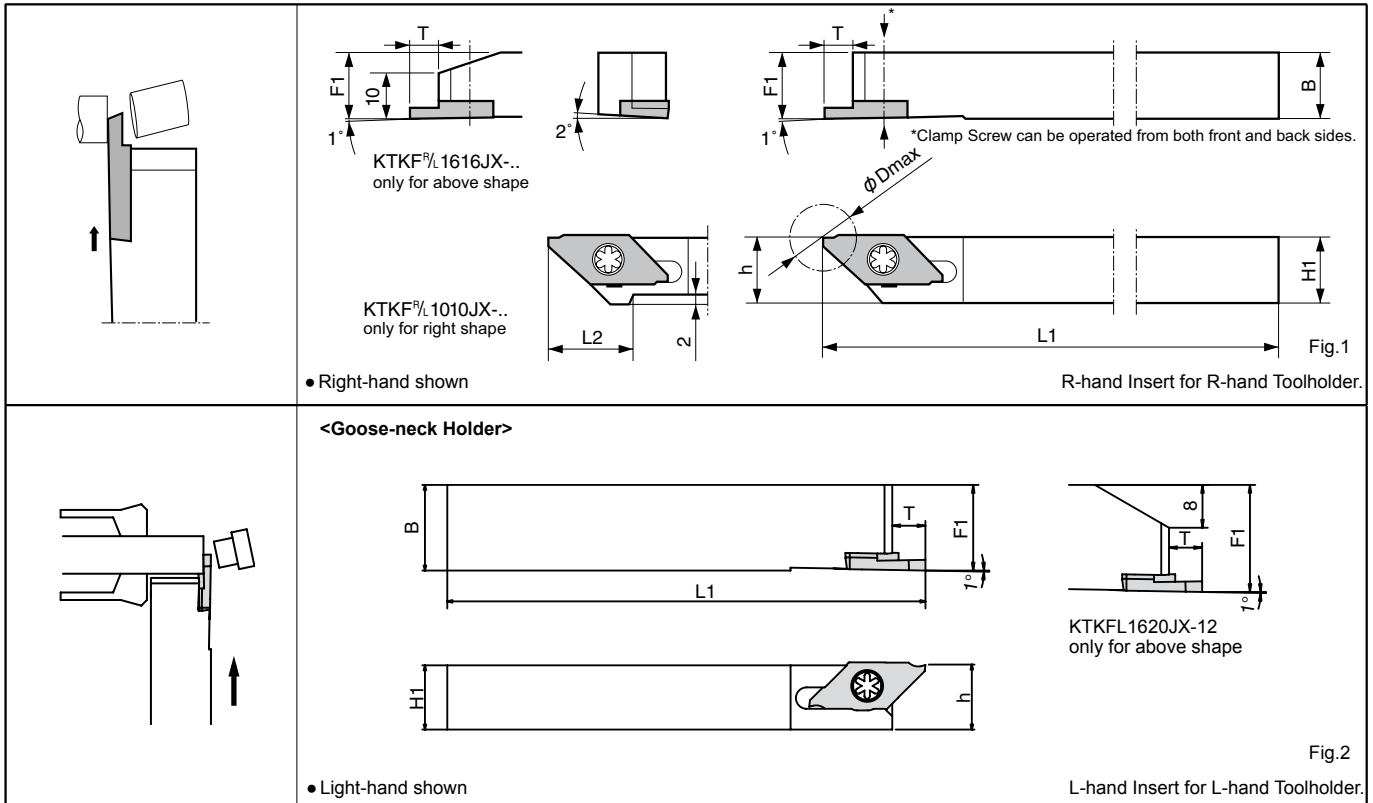
● : Std. Item

Inserts are sold in 10 piece boxes.



Cut-Off Toolholders (for small diameter)

KTKF (For small diameter cut-off)



Toolholder Dimensions

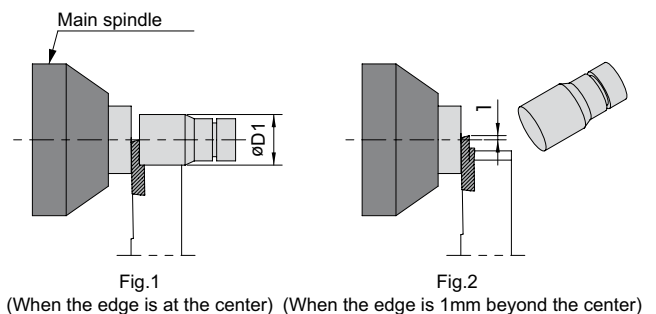
Description	Std.		Dimension (mm)						Insert	Spare Parts		Applicable Inserts ● H6,H7
	R	L	H1=h	B	L1	L2	F1	T		Clamp Screw	Wrench	
KTKF ^{R/L} 1010JX-12	●	●	10	10	120	15	10	6	Fig.1	SB-4590TRWN	LTW-10S	TKF12 ^{R/L} ...
	●	●	12	12		-	12					
	●	●	16	16		-	16					
KTKF ^{R/L} 1010JX-16	●	●	10	10	120	20	10	8		SB-4590TRWN	LTW-10S	TKF16 ^{R/L} ...
	●	●	12	12		-	12					
	●	●	16	16		-	16					
KTKF ^{R/L} 1212F-12	●	●	12	12	85	-	12	6	SB-4590TRWN	LTW-10S	TKF12 ^{R/L} ...	
	●	●						8			TKF16 ^{R/L} ...	
KTKFL ^L 1216JX-12		●	12	16	120	-	16	6	Fig.2	SB-4590TRWN	LTW-10S	TKF12L ...
	NEW	●	16	20								

• Dimension T shows the distance from the Toolholder to the cutting edge. ● H6,H7 for the actual cutting diameter. For recommended cutting conditions, see page ● H25
Note: Cutting diameter of -12 type toolholder(ϕD_{max}) depends on the insert grooving width.

How to Use

1) When using Main Spindle only

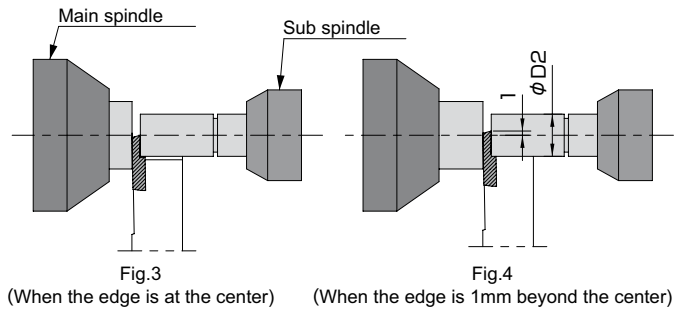
Workpiece maximum $\phi D1$ (Fig.1)= ϕD_{max}
Even if the cutting edge runs beyond the center line, the insert does not contact the workpiece, since the workpiece falls off.
(The clearance between the insert and the workpiece is 0.2mm)



● : Std. Item

2) When using both Main and Sub spindles

In this case, when the cutting edge runs beyond the center line, the insert will contact the workpiece, since the workpiece does not fall off. Therefore the programmed distance beyond the center must be considered.
 e.g. When the cutting edge is programmed to run 1mm beyond the center.
 Workpiece maximum, $\phi D2$ (Fig.4) = $[\phi D_{max} - 1\text{mm} \times 2]$ (mm)
 (The clearance between the insert and the workpiece is 0.2mm)



When using TKF-AS type

The KTKF holder can be used as a multi-functional tooling for non-ferrous metals and non metals when combined with a TKF-AS insert (See Fig.5).

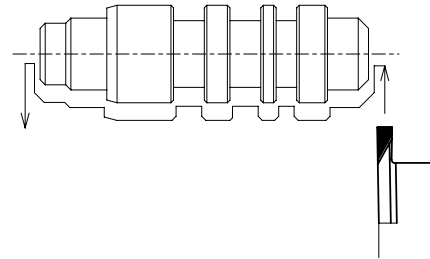


Fig.5 Example of the pass of KTKF toolholder + TKF-AS insert

Traversing / Grooving (1-Edge insert)

Edge Preparation				Classification of usage		N		S		Applicable Toolholder				
PCD all models		Sharp Edge		● : Continuous-Low Interruption / 1st Choice		● : Continuous-Low Interruption / 2nd Choice		● : Continuous / 1st Choice		● : Continuous / 2nd Choice				
Insert	Description	Dimension (mm)							Angle (°)	No. of Corners	PCD		Applicable Toolholder	
		W	ϕD_{max}	$r\epsilon$	T	H	A	ϕd			S	KPD001		
Handed Insert shows R-hand.		R	L									H8		
<p>Traversing / Grooving</p>	TKF12 ^{R/L} 200-AS	2.0	10	0.1	3	8.7	7.7	5	0°	1	●	●	H8	
	TKF12 ^{R/L} 250-AS	2.5	10								5.5	●		●
	TKF16 ^{R/L} 250-AS	2.5	16	4	9.5	8.5	6.5	●	●					
<p>Grooving (Traversing is possible)</p>	TKF12 ^{R/L} 150-NB	1.5	7	0.1	3	8.7	-	5	0°	1	●	●	H8	
	TKF12 ^{R/L} 200-NB	2.0	8								3.0	●		●
	TKF12 ^{R/L} 250-NB	2.5	8								3.0	●		●
	TKF12 ^{R/L} 250-NB4.5	2.5	10								4.5	●		●

*Lead angle shows the angle when installed in toolholder.
 *Please use PCD Insert for traverse machining.

Note1) The cutting edge of the TKF..-AS will be 1 mm lower than the center line when attached to the KTKF toolholder (See Fig.6). Adjust the height by making NC lathe parameter settings or inserting a plate.
 2) If the 1 mm adjustment is not possible, use the TKF. . -NB (See Fig.7).

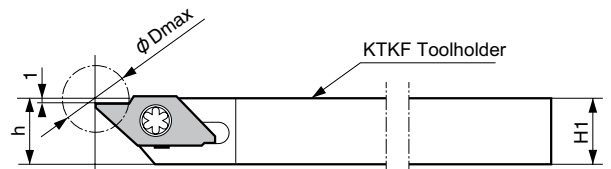


Fig.6 When a TKF-AS insert is attached (The cutting edge is 1 mm lower than the center line.)

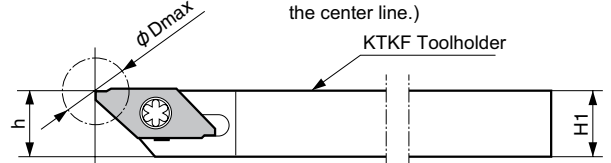


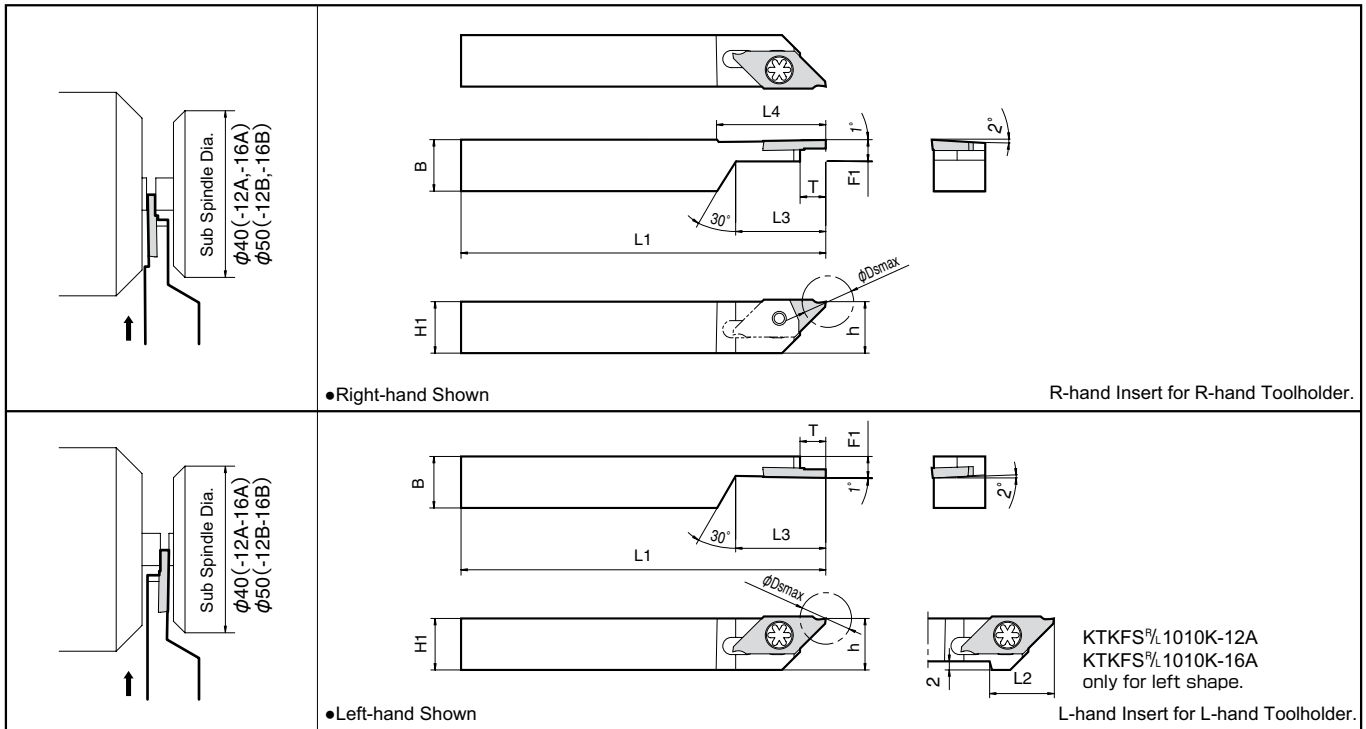
Fig.7 When a TKF-NB insert is attached

● : Std. Item

CBN & PCD Tools are sold in 1 piece boxes.

Cut-Off Toolholders (for sub spindle tooling)

KTKFS (For Small diameter cut-off)



Toolholder Dimensions

Description	Std.		Cutting Dia. ϕD_{smax}	Dimension (mm)								Spare Parts		Applicable Inserts H9
	R	L		H1=h	B	L1	L2	L3	L4	F1	T	Clamp Screw	Wrench	
KTKFS ^{R/L} 1010K-12A 1212F-12A 1212K-12B	●	●	6~12	10	10	120	15	22	26	5	6	SB-4050TRN	LTW-10S	TKFS12 ^{R/L}
	●	●		12	12	85	-							
	●	●		120	26									
KTKFS ^{R/L} 1010K-16A 1212F-16A 1212K-16B	●	●	14~16	10	10	120	20	22	30	5	8	SB-4050TRN	LTW-10S	TKFS16 ^{R/L}
	●	●		12	12	85	-							
	●	●		120	26									

• Dimension T shows the distance from the Toolholder to the cutting edge. H8 for the actual cutting diameter.

For recommended cutting conditions, see page H11

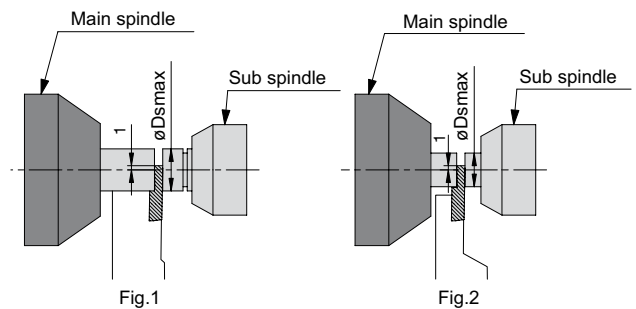
• Cutting diameter (ϕD_{smax}) depends on the insert grooving width.

* Only R-hand is available for L4 dimension.

TKFS (ϕD_{smax})

Insert Handed insert indicates Left-hand	Description	Dimension (mm)	
		W	ϕD_{smax}
	TKFS12 ^{R/L} 100-S	1.0	6
	150-S	1.5	9
	200-S	2.0	12
	TKFS16 ^{R/L} 150-S	1.5	14
	200-S	2.0	16


Note) As Fig.2 shows, the cutting diameter of the insert is indicated when the top of the cutting edge progresses 1mm from the center.



- As Fig.1 shows, use KTKFL (L-hand) for the distance between main spindle and sub spindle.
- As Fig.2 shows, KTKFS is recommended for small diameters and for the short distance between the main spindle and sub spindle.

● Applicable Inserts

Classification of usage	P	Carbon Steel and Alloy Steel	●		
● : Continuous-Low Interruption / 1st Choice	M	Stainless Steel	●		
⊙ : Continuous-Low Interruption / 2nd Choice	K	Cast Iron		●	
● : Continuous / 1st Choice	N	Non-ferrous Metals		●	
○ : Continuous / 2nd Choice					

Insert	Description	Dimension (mm)						Angle (°)	PVD Coated Carbide	Carbide	PCD	Applicable Toolholder	
		W	∅Ds max	rε	T	H	∅d						
		PR1025		KW10		KPD001							
 Handed insert indicates Left-hand	TKFS12 ^{R/L}	100-S	1.0	6	0.05	2.2	8.7	4.4	0°	●	●		KTKFS ^{R/L} ---12
		150-S	1.5	9						●	●		
	200-S	2.0	12	●	●								
	TKFS16 ^{R/L}	150-S	1.5	14	0.05	2.2	9.5	4.4	0°	●	●	KTKFS ^{R/L} ---16	
200-S	2.0	16	●	●									

• As Fig.2 of H8 shows, the cutting diameter of the insert is indicated when the top of the cutting edge progresses 1mm from the center.
 • Lead angle shows the angle when installed in toolholder.

◆ Recommended Cutting Conditions (For TKFS12)

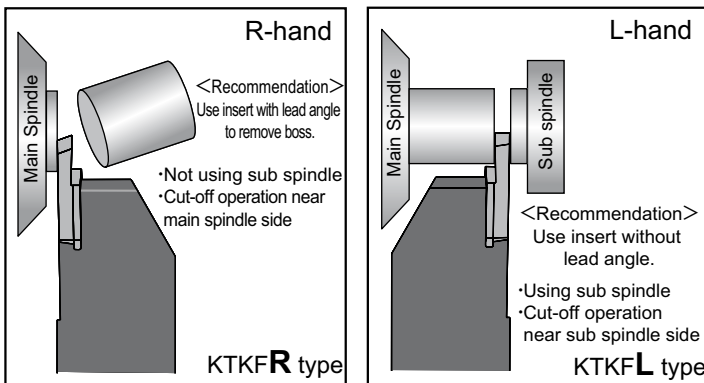
Workpiece Material	Recommended Insert Grade (Vc: m/min)		Width (mm)			Remarks
	PVD Coated Carbide	Carbide	1.0	1.5	2.0	
	PR1025	KW10	f (mm/rev)			
Carbon Steel	60~130	-	0.01~0.03	0.01~0.03	0.01~0.03	Coolant
Alloy Steel	60~130	-	0.01~0.03	0.01~0.03	0.01~0.03	
Stainless Steel	50~100	-	0.01~0.02	0.01~0.02	0.01~0.03	
Cast Iron	-	50~100	0.01~0.03	0.01~0.03	0.01~0.03	
Non-ferrous Metals	-	200~450	0.01~0.03	0.01~0.03	0.01~0.03	

◆ Recommended Cutting Conditions (For TKFS16)

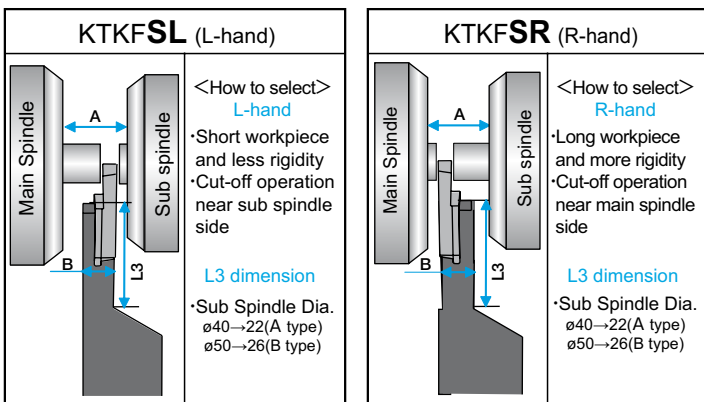
Workpiece Material	Recommended Insert Grade (Vc: m/min)		Width (mm)		Remarks
	PVD Coated Carbide	Carbide	1.5	2.0	
	PR1025	KW10	f (mm/rev)		
Carbon Steel	60~130	-	0.01~0.03	0.01~0.03	Coolant
Alloy Steel	60~130	-	0.01~0.03	0.01~0.03	
Stainless Steel	50~100	-	0.01~0.02	0.01~0.03	
Cast Iron	-	50~100	0.01~0.03	0.01~0.03	
Non-ferrous Metals	-	200~450	0.01~0.03	0.01~0.03	

■ How to use small diameter cut-off tool

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



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



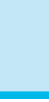
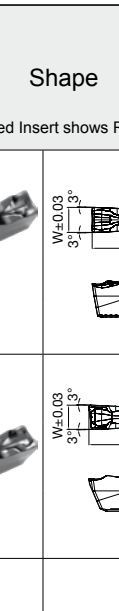
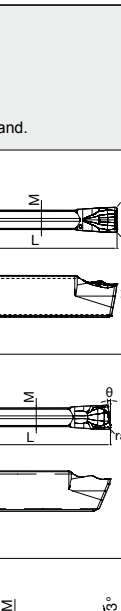
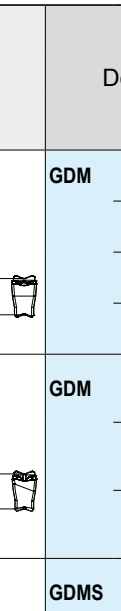
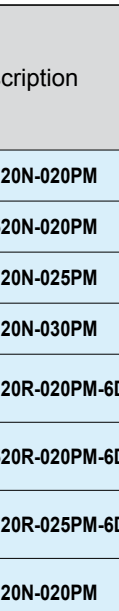
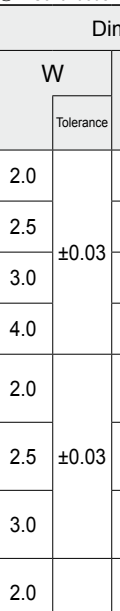
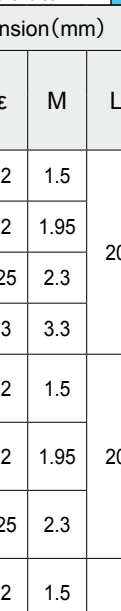
● : Std. Item ○ : Check Availability R : Std. Item (R-hand Only) L : Std. Item (L-hand Only)

Inserts are sold in 10 piece boxes.

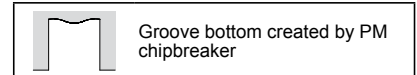
Cut-Off Inserts

GDM / GDMS **NEW**

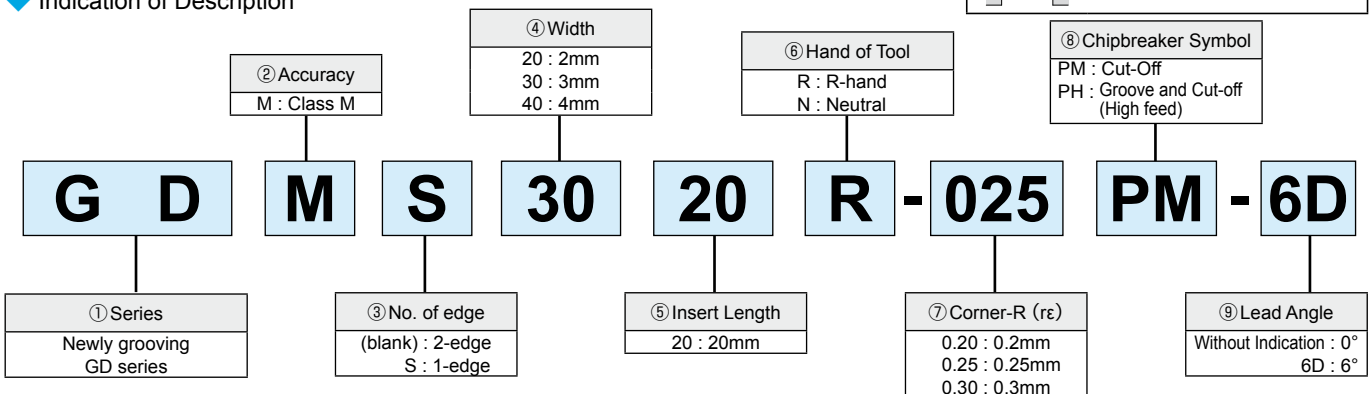
Classification of usage	P	Carbon steel / Alloy steel	●	☺
	M	Stainless Steel	●	☺
	K	Cast Iron	●	☺
●	: Continuous-Low Interruption / 1st Choice			
☺	: Continuous-Low Interruption / 2nd Choice			
●	: Continuous / 1st Choice			
○	: Continuous / 2nd Choice			

Shape	Description	Dimension (mm)					Angle (°)	MEGACOAT		Ref. Page for Toolholder	
		W	r _e	M	L	H		PR1225	PR1215		
Cut-off Handed Insert shows R-hand. 	NEW 2-edge Insert 	GDM 2020N-020PM	2.0	±0.03	0.2	1.5	20	-	●	●	H14 H15
		2520N-020PM	2.5		0.2	1.95			●	●	
		3020N-025PM	3.0		0.25	2.3			●	●	
		4020N-030PM	4.0		0.3	3.3			●	●	
	NEW 2-edge Insert 	GDM 2020R-020PM-6D	2.0	±0.03	0.2	1.5	20	6°	●	●	
		2520R-020PM-6D	2.5		0.2	1.95			●	●	
		3020R-025PM-6D	3.0		0.25	2.3			●	●	
	NEW 1-edge Insert 	GDMS 2020N-020PM	2.0	±0.03	0.2	1.5	20	-	●	●	
		3020N-025PM	3.0		0.25	2.3			●	●	
		4020N-030PM	4.0		0.3	3.3			●	●	
	NEW 1-edge Insert 	GDMS 2020R-020PM-6D	2.0	±0.03	0.2	1.5	20	6°	●	●	
		3020R-025PM-6D	3.0		0.25	2.3			●	●	
4020R-030PM-6D		4.0	0.3		3.3	●			●		
Grooving and Cut-off	NEW High feed rate 2-edge Insert 	GDM 2020N-020PH	2.0	±0.03	0.2	1.5	20	-	●	●	
		3020N-030PH	3.0		0.3	2.3			●	●	
		4020N-030PH	4.0		0.3	3.3			●	●	
	NEW High feed rate 1-edge Insert 	GDMS 2020N-020PH	2.0	±0.03	0.2	1.5	20	-	●	●	
		3020N-030PH	3.0		0.3	2.3			●	●	
		4020N-030PH	4.0		0.3	3.3			●	●	

Note 1. Using the PM chipbreaker (for cut-off) for grooving cannot create a flat bottom (See the right figure).

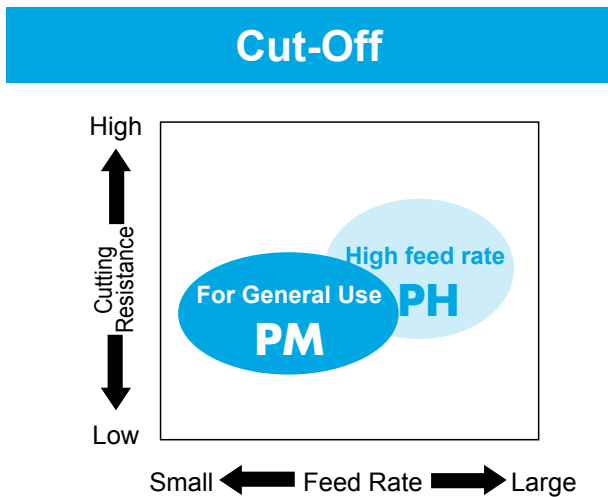


◆ Indication of Description

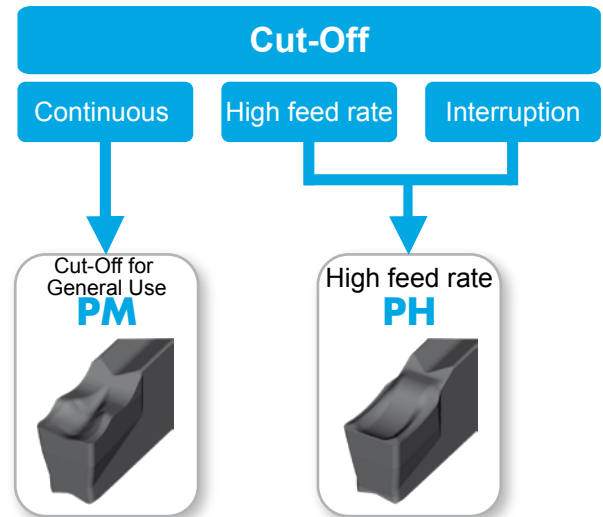


● : Std. Item

● Application Map



● Chipbreaker Selection



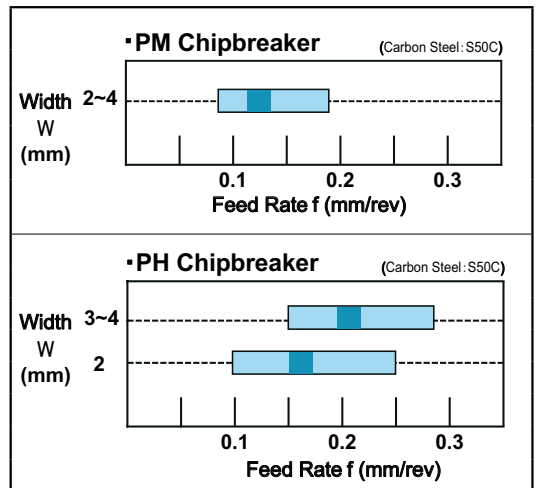
● Recommended Cutting Conditions

Workpiece Material	Recommended Insert Grade (Vc: m/min)		Feed Rate (mm/rev)			Remarks
			PM-Chipbreaker	PH-Chipbreaker		
	MEGACOAT		Width W (mm)	Width W (mm)		
	PR1225	PR1215	2~4	2	3~4	
Carbon Steel (SxxC)	★ 80~200	☆ 100~200	0.08~0.18	0.10~0.25	0.15~0.28	Coolant
Alloy Steel (SCM)	★ 70~180	☆ 80~180				
Stainless Steel (SUS304)	★ 60~150	☆ 60~150	0.06~0.12	0.05~0.12	0.08~0.15	
Cast Iron (FC, FCD)	-	★ 100~200	0.08~0.18	0.10~0.25	0.15~0.28	

★:1st Recommendation ☆:2nd Recommendation

◆ Example of feed

■ in the graph indicates the center value of feed (f)



◆ Caution (Cut-Off)

1. Be sure to perform wet processing. Apply enough amount of coolant to the cutting edge.
2. Keep the constant rate during processing so that optimum product life will be achieved.
3. Cut off as close to the chuck as possible.
4. Lower the feed rate to 1/2 to 1/3 at the near center to prevent impact caused by cutting.

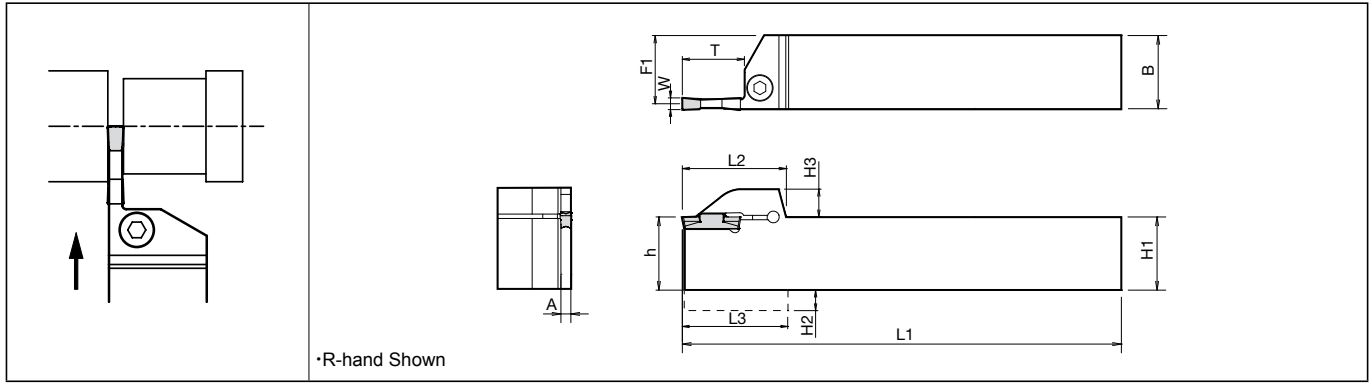
■ Case Studies (Cut-Off)

C45 (S45CF)		(Result) ·The cutting edge of KGD Cut-off PM Chipbreaker (PR1225) shows good condition even after processing the same number of workpiece as Competitor L. ·Longer product life can be expected. (Competitor L suffered from chipping of cutting blade). (Evaluation by the user)
·Sleeve ·Vc=103 m/min ·f=0.12 mm/rev ·WET ·GDM3020N-025PM (PR1225) ·KGD L2525X-3T20S		
PM Chipbreaker (PR1225) 250 pcs/edge Can be extended		
Competitor L (PVD Coated Carbide)	250 pcs/edge Chipping occurred	





Grooving / Cut-Off

KGD (Integral Type) NEW



Toolholder Dimensions

Width (mm)	Available Grooving Depth (mm)	Description	Std.		Dimension (mm)											Width W (mm)		Spare Parts				
			R	L	H1=h	H2	H3	B	L1	L2	L3	F1	A	T	MIN	MAX	Clamp Bolt	Wrench				
																						
2	6	KGD [®] /L 1616H-2T06	●	●	16	4.0	9.5	16	100	27.7	28.0	15.2	1.7	6	2.0	3.0	HH5X16	LW-4				
		2020K-2T06	●	●	20	-		20	125	28.0	-	19.2							6	HH5X25		
		2525M-2T06	●	●	25	-		25	150	-	24.2	10									HH5X16	
	KGD [®] /L 1616H-2T10	●	●	16	4.0	16		100	30.2	30.5	15.2			10					HH5X25			
	2020K-2T10	●	●	20	-	20		125	30.5	-	19.2	17								HH5X16		
	2525M-2T10	●	●	25	-	25		150	-	24.2	17										HH5X25	
	KGD [®] /L 1616H-2T17	●	●	16	4.0	16		100	31.2	31.5		15.2		17			HH5X16					
	2012K-2T17	●	●	20	-	12		125	-	11.2	20	HH5X25										
	2020K-2T17	●	●	20	-	20		125	32.5	-								19.2	20	HH5X16		
	2525M-2T17	●	●	25	-	25		150	-	24.2	20	HH5X25										
	3	6	KGD [®] /L 1616H-3T06	●	●	16		4.0	16	100				27.7			28.0	14.8	2.4	6	3.0	4.0
			2020K-3T06	●	●	20		-	20	125	28.0	-		18.8			10	HH5X25				
2525M-3T06			●	●	25	-	25	150	-	23.8	10	HH5X16										
KGD [®] /L 1616H-3T10		●	●	16	4.0	16	100	30.2	30.5	14.8			10	HH5X25								
2020K-3T10		●	●	20	-	20	125	30.5	-	18.8	20	HH5X16										
2525M-3T10		●	●	25	-	25	150	-	23.8	20					HH5X25							
KGD [®] /L 1616H-3T20		●	●	16	4.0	16	100	34.2	34.5		14.8	20	HH5X16									
2012K-3T20		●	●	20	-	12	125	34.5	-	10.8	25			HH5X25								
2020K-3T20		●	●	20	-	20	125	-	18.8	25					HH5X16							
2525M-3T20		●	●	25	-	25	150	35.5	-		23.8	25	HH5X25									
4		10	KGD [®] /L 2020K-4T10	●	●	20	-	20	125	30.5	-			18.3	3.4	10	4.0	5.0		HH5X16		
			2525M-4T10	●	●	25	-	25	150	-	23.3	20	HH5X25									
	KGD [®] /L 2020K-4T20	●	●	20	-	20	125	34.5	-	18.3	25			HH5X16								
	2525M-4T20	●	●	25	-	25	150	35.5	-	23.3		25	HH5X25									
	KGD [®] /L 2525M-4T25	●	●	25	-	25	150	40.5	-	23.3	25			HH5X16								
	KGD [®] /L 2525M-4T25	●	●	25	-	25	150	40.5	-	23.3		25	HH5X25									
5	10	KGD [®] /L 2020K-5T10	●	●	20	-	20	125	30.5	-	17.8			4.4	10	5.0	6.0	HH5X16	LW-4			
		2525M-5T10	●	●	25	-	25	150	-	22.8	17	HH5X25										
	KGD [®] /L 2020K-5T17	●	●	20	-	20	125	37.5	-	17.8			17		HH5X16							
	2525M-5T17	●	●	25	-	25	150	-	22.8	25	HH5X25											
	KGD [®] /L 2525M-5T25	●	●	25	-	25	150	40.5	-			22.8	25		HH5X16							
	KGD [®] /L 2525M-5T25	●	●	25	-	25	150	40.5	-	22.8	25	HH5X25										
6	15	KGD [®] /L 2525M-6T15	●	●	25	-	25	150	32.5	-			22.4	5.3	15	6.0	6.0	HH5X25	LW-4			
	30	KGD [®] /L 2525M-6T30	●	●	25	-	25	150	45.5	-	22.4	30										
8	25	KGD [®] /L 2525M-8T25	●	●	25	7.0	25	150	43.3	44.2	22.0	6.0	25	8.0	8.0	HH6X25	LW-5					
		3232P-8T25	●	●	32	-	32	170	-	29.0												

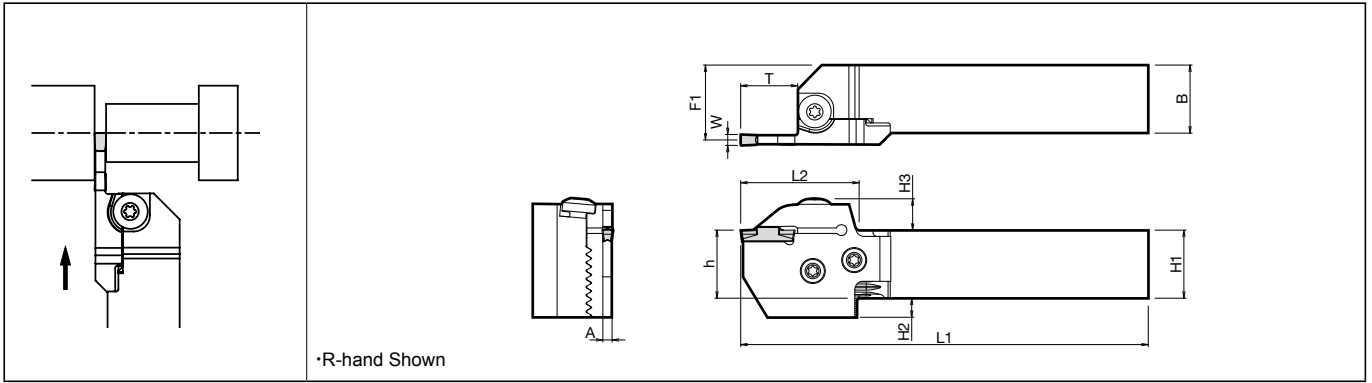
Note)1. Dimension T : Maximum depth to which processing can be made. (If the dimension T is 20 mm or more, the maximum depth of groove made by the 2-edge insert will be 18 mm.)

2. Recommended tightening torque of clamp bolt: 6.5N·m (Groove width 2 - 6 mm), 8.0N·m (Groove width 8 mm)

Recommended Cutting Conditions **H13**

● : Std. Item
○ : Check Availability

KGD-S (Straight : 0°, Separate Type) **NEW**



● Toolholder Dimensions (Toolholder+Blade)

Shank Angle	Width (mm)	Available Grooving Depth (mm)	Assembly Number (Standard Stock Number)	Std.		Description ● G28	Blade Description ● G28	Dimension (mm)										Width W (mm)										
				R	L			H1=h	H2	H3	B	L1	L2	L3	F1	A	T	MIN	MAX									
0°	2	17	KGD% 2020X-2T17S	●	●	KGD% 2020-C	KGD%-2T17-C	20	12	11.6	20	122	39.9	23.4	1.7	17	2.0	3.0										
			2525X-2T17S	●	●	KGD% 2525-C		25	7										25	147	28.4							
			KGD% 2020X-3T10S	●	●	KGD% 2020-C	KGD%-3T10-C	20	12										20	115	23.0	2.4	10	3.0	4.0			
			2525X-3T10S	●	●	KGD% 2525-C		25	7																	25	140	28.0
			3232X-3T10S	●	●	KGD% 3232-C		32	-																	32	160	33.0
			KGD% 2020X-3T20S	●	●	KGD% 2020-C	KGD%-3T20-C	20	12										20	125	23.0	2.4	20	3.0	4.0			
	2525X-3T20S	●	●	KGD% 2525-C	25	7		25	150	28.0																		
	3232X-3T20S	●	●	KGD% 3232-C	32	-		32	170	33.0																		
	KGD% 2020X-4T10S	●	●	KGD% 2020-C	KGD%-4T10-C	20	12	20	115	22.5	3.4	10	4.0	5.0														
	2525X-4T10S	●	●	KGD% 2525-C		25	7								25	140	27.5											
	3232X-4T10S	●	●	KGD% 3232-C		32	-								32	160	32.5											
	KGD% 2020X-4T20S	●	●	KGD% 2020-C	KGD%-4T20-C	20	12	20	125	22.5	3.4	20	4.0	5.0														
	2525X-4T20S	●	●	KGD% 2525-C		25	7								25	150	27.5											
	3232X-4T20S	●	●	KGD% 3232-C		32	-								32	170	32.5											
	KGD% 2020X-4T25S	●	●	KGD% 2020-C	KGD%-4T25-C	20	12	20	130	22.5	25	25	5.0	6.0														
	2525X-4T25S	●	●	KGD% 2525-C		25	7								25	155	27.5											
	3232X-4T25S	●	●	KGD% 3232-C		32	-								32	175	32.5											
	KGD% 2020X-5T10S	●	●	KGD% 2020-C	KGD%-5T10-C	20	12	20	115	22.0	4.4	10	5.0	6.0														
	2525X-5T10S	●	●	KGD% 2525-C		25	7								25	140	27.0											
	3232X-5T10S	●	●	KGD% 3232-C		32	-								32	160	32.0											
	KGD% 2020X-5T25S	●	●	KGD% 2020-C	KGD%-5T25-C	20	12	20	130	22.0	4.4	25	5.0	6.0														
	2525X-5T25S	●	●	KGD% 2525-C		25	7								25	155	27.0											
	3232X-5T25S	●	●	KGD% 3232-C		32	-								32	175	32.0											

Note) 1. In case of normal mounting position, the toolholder body may interfere with the tool presetter.

2. Toolholder description and blade description are printed on the toolholder body. (Unit description is not indicated.)

KGD-S : R-hand Blade for R-hand Toolholder, L-hand Blade for L-hand Toolholder.

Combination of the optional toolholder (KGD..-C) and blade (KGD..T..-C) (both separately sold) can make up the corresponding assembly part.

Make sure of the "hand of toolholder" and "hand of blade".

3. Dimension T: Maximum depth to which processing can be made. (If the dimension T is 20 mm or more, the maximum depth of groove made by the 2-edge insert will be 18 mm.)


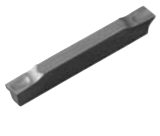





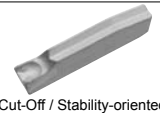
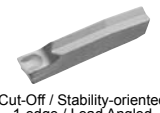


4. Recommended tightening torque of clamp bolt for insert: 6.5N·m (Groove width 2 - 6 mm)

Recommended Cutting Conditions ● H13

Cut-Off Inserts

GMM / GMN / GM^{R/L}

Classification of usage	P	Carbon Steel / Alloy Steel	○	☺	●	☺	●
● : Continuous-Low Interruption / 1st Choice	M	Stainless Steel		☺	●	☺	●
☺ : Continuous-Low Interruption / 2nd Choice	K	Cast Iron					●
● : Continuous / 1st Choice	N	Non-ferrous Metals					●
○ : Continuous / 2nd Choice							

Insert	Description	Dimension (mm)					Angle (°)	Cermat	CVD Coated Carbide	PVD Coated Carbide			Carbide	Ref. Page for Applicable Toolholder
		W	r _ε	L	H	M				TN90	CR9025	PR915		
 <p>Cut-Off / Sharp-Cutting 2-edge</p>	GMM 1520-MT	1.5	0.0/0.05	20	4.3	1.2	-				●		●	H18 H19
	2020-MT	2.0	0.0/0.05			1.5		●	●			●		
	2520-MT	2.5	0.0/0.05			1.9		●	●			●		
	3020-MT	3.0	0.0/0.05			2.3		●	●			●		
 <p>Cut-Off / Sharp-Cutting 2-edge / Lead Angled</p>	GMM 1520 ^{R/L} -MT-15D	1.5	0.0/0.05	20	4.3	1.2	15°			R	●		●	
	2020 ^{R/L} -MT-15D	2.0	0.0/0.05			1.5		●	R			●		
	2520 ^{R/L} -MT-15D	2.5	0.0/0.05			1.9		●	R			●		
	3020 ^{R/L} -MT-15D	3.0	0.0/0.05			2.3		●	R			●		
 <p>Cut-Off / Sharp-Cutting 2-edge / Without Chipbreaker</p>	GMM 1520-NB	1.5	0.0/0.05	20	4.3	1.2	-				●		●	
	2020-NB	2.0	0.0/0.05			1.5		●				●		
	2520-NB	2.5	0.0/0.05			1.9		●				●		
	3020-NB	3.0	0.0/0.05			2.3		●				●		
 <p>Cut-Off / Stability-oriented 2-edge</p>	GMM 2020-TK	2.0	0.20	20	4.3	1.5	-			●	●		●	
	2520-TK	2.5	0.20			1.9		●	●			●		
	3020-TK	3.0	0.25			2.3		●	●			●		
 <p>Cut-Off / Stability-oriented 2-edge / Lead Angled</p>	GMM 2020 ^{R/L} -TK-8D	2.0	0.20	20	4.3	1.5	8°		R	R	R		R	
	2520 ^{R/L} -TK-8D	2.5	0.20			1.9		R	R	R		R		
	3020 ^{R/L} -TK-8D	3.0	0.25			2.3		R	R	R		R		
 <p>Cut-Off / High Feed 2-edge</p>	GMM 2020-TMR	2.0	0.20	20	4.3	1.5	-					●		
	2520-TMR	2.5	0.20			1.9						●		
	3020-TMR	3.0	0.25			2.3						●		
 <p>Cut-Off / High Feed 2-edge / Lead Angled</p>	GMM 2020 ^{R/L} -TMR-6D	2.0	0.20	20	4.3	1.5	6°					R		
	2520 ^{R/L} -TMR-6D	2.5	0.20			1.9						R		
	3020 ^{R/L} -TMR-6D	3.0	0.25			2.3						R		
 <p>Cut-Off / Stability-oriented 1-edge</p>	GMN 2-TK	2.0	0.20	20	4.3	1.8	-			●	●		●	
	3-TK	3.0	0.25			2.3		●	●			●		
	4-TK	4.0	0.30			3.3		●	●			●		
 <p>Cut-Off / Stability-oriented 1-edge / Lead Angled</p>	GM ^{R/L} 2-TK-8D	2.0	0.20	20	4.3	1.8	8°		R	R	R		R	
	3-TK-8D	3.0	0.25			2.3		R	R	R		R		
	4-TK-8D	4.0	0.30			3.3		R	R	R		R		
 <p>Shows GMN2.2</p> <p>Cut-Off / Sharp-Cutting 1-edge</p>	GMN 2.2	2.2	0.17	20	4.3	1.8	-	●	●		●		●	
	3	3.0	0.20			2.3		●	●		●		●	
	4	4.0	0.25			3.3		●	●		●		●	
	5	5.0	0.80			4.2		●	●		●		●	
	6	6.0	0.80			5.2		●	●		●		●	
 <p>Shows GMR2.2-8D / 15D</p> <p>Cut-Off / Sharp-Cutting 1-edge / Lead Angled</p>	GM ^{R/L} 2.2-8D	2.2	0.17	20	4.3	1.8	8°	R	●		●		●	
	2.2-15D	2.2	0.00			1.8		15°	R	●		●		
	3-4D	3.0	0.20			2.3		4°		●		●		
	3-15D	3.0	0.20			2.3		15°		●		●		
	4-4D	4.0	0.25			3.3		4°		●		R		

● : Std. Item ○ : Check Availability R : Std. Item (R-hand Only) L : Std. Item (L-hand Only)

Edge Preparation

Series	MT-Chipbreaker		TK-Chipbreaker		TMR-Chipbreaker	Without Chipbreaker (NB)	
Edge Specification	Chamfer + hone	Chamfer + hone	Chamfer + hone	Sharp Edge	Chamfer + hone	Hone	Sharp Edge
	Corner-R0.05	Sharp Corner	Corner-R0.2-0.3	Corner-R0.2-0.3	Corner-R0.2	Corner-R0.05	Sharp Corner
	CR9025 / PR915	PR930 / KW10	CR9025 / PR915	PR930 / KW10	PR1115	CR9025	PR930 / KW10

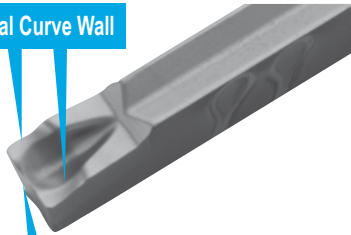
* Sharp Edge Spec. can reduce cutting resistance by 40% compared to chamfer edge.

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

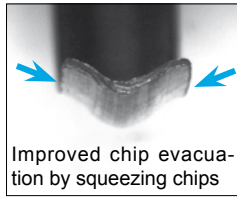
TMR-Chipbreaker

Chipbreaker Advantages

Special Curve Wall

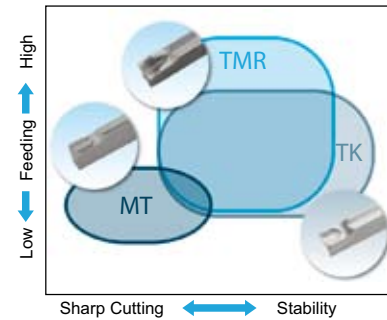


Depression in center of cutting edge.



Chip width < grooving width

GMM Chipbreaker MAP

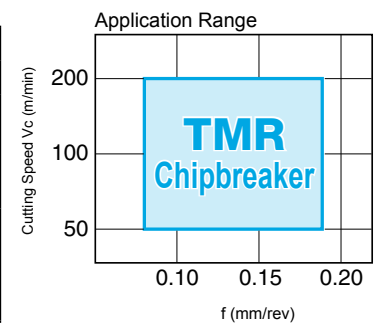


The TMR chipbreaker provides stable chip control up to high feed rate range.

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

(Cutting Condition: 15CrMo4 (SCM415), ø30, constant spindle revolution)

Description	n=1060min ⁻¹ (Vc=100m/min)		n=2123min ⁻¹ (Vc=200m/min)	
	f=0.12mm/rev	f=0.18mm/rev	f=0.12mm/rev	f=0.18mm/rev
GMM 3020-TMR (Without Hand)				
GMM 3020R-TMR-6D (R-hand)				

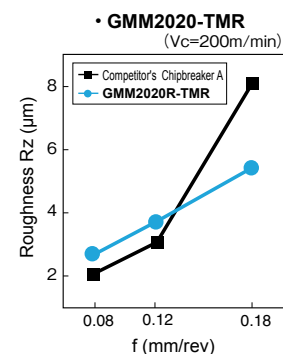
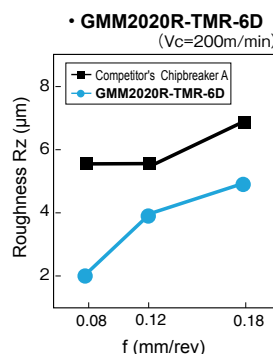


Recommended Cutting Conditions

Workpiece Material	Vc (m/min)	f (mm/rev)
Carbon Steel	60~200	0.08~0.18
Alloy Steel	60~150	
Stainless Steel	50~140	

Workpiece Surface Roughness

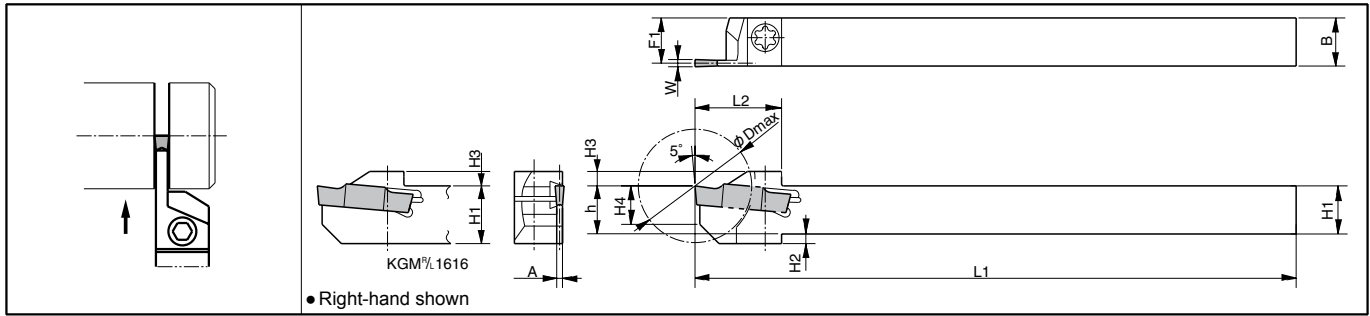
TMR-Chipbreaker provides good surface roughness on the workpiece end face at high feed rate ranges.



Cut-Off Toolholders

KGM (For automatic lathe)

Edge Width: 1.5~4.0mm

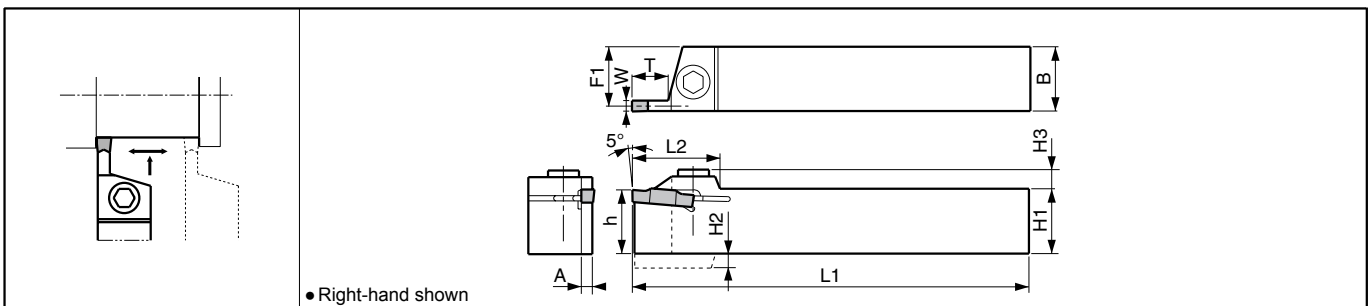


Toolholder Dimensions

Description	Std.		Cutting Dia. ϕD_{max}	Dimension (mm)										Width W (mm)		Spare Parts	
	R	L		H1=h	H2	H3	H4	B	L1	L2	F1	A	MIN.	MAX.	Screw	Wrench	
KGM^{R/L} 1010JX-1.5	●	●	20	10	2	3	8	10	120	18	9.4	1.2	1.5	2.0	SE-40120TR	LTW-15S	
1212JX-1.5	●	●	25	12		4	10	12		20.5	11.4						
KGM^{R/L} 1010JX-2	●	●	20	10	2	3	8	10	120	18	9.15	1.7	2.0	3.0	SE-40120TR	LTW-15S	
1212JX-2	●	●	25	12		4	10	12		19	11.15						
1616JX-2	●	●	32	16		-	9	16		24.5	15.15						
KGM^{R/L} 1010JX-2.5	●	●	20	10	2	3	8	10	120	18	9	2.0	2.4	3.0	SE-40120TR	LTW-15S	
1212JX-2.5	●	●	25	12		4	10	12		20.5	11						
1616JX-2.5	●	●	32	16		-	9	16		25.5	15						
KGM^{R/L} 1616JX-3	●	●	32	16	-	4	9	16	120	25.5	14.8	2.4	3.0	4.0	SE-50125TR	LTW-20	
KGM^{R/L} 1212F-1.5-85	●	●	25	12	2	4	10	12	85	19	11.4	1.2	1.5	2.0	SE-40120TR	LTW-15S	
KGM^{R/L} 1212F-2-85	●	●	25	12	2	4	10	12	85	19	11.15	1.7	2.0	3.0	SE-40120TR	LTW-15S	
KGM^{R/L} 1212F-2.5-85	●	●	25	12	2	4	10	12	85	19	11	2.0	2.4	3.0	SE-40120TR	LTW-15S	

KGM

Width: 3.0~8.0mm



Toolholder Dimensions

Description	Std.		Dimension (mm)										Width W (mm)		Spare Parts			
	R	L	H1=h	H2	H3	B	L1	L2	F1	A	T	MIN.	MAX.	Screw	Wrench			
KGM^{R/L} 1212H-3	●	●	12	4	6	12	100	27	10.8	2.4	9	3.0	3.0	SB-5TR	-	LTW-20	-	
1616H-3	●	●	16		7	16			14.8									
KGM^{R/L} 2020K-3	●	●	20	-	7	20	125	27	18.8	3.4	10	4.0	5.0	-	-	-	LW-4	
2525M-3	●	●	25			150	23.8											
2020K-4	●	●	20			125	18.3											
KGM^{R/L} 2525M-4	●	●	25	150	23.3	4.4	10	5.0	6.0	-	-	-	-	-	-	LW-4		
2020K-5	●	●	20	125	17.8													
2525M-5	●	●	25	150	22.8													
KGM^{R/L} 3232P-5	●	●	32	170	29.8	6.0	25	8.0	8.0	-	-	-	-	-	-	LW-5		
2525M-8	●	●	25	7.5	10.5												150	22.0
KGM^{R/L} 3232P-8	●	●	32	-	10.5	170	40	29.0	6.0	25	8.0	8.0	-	HH6X25	-	LW-5		

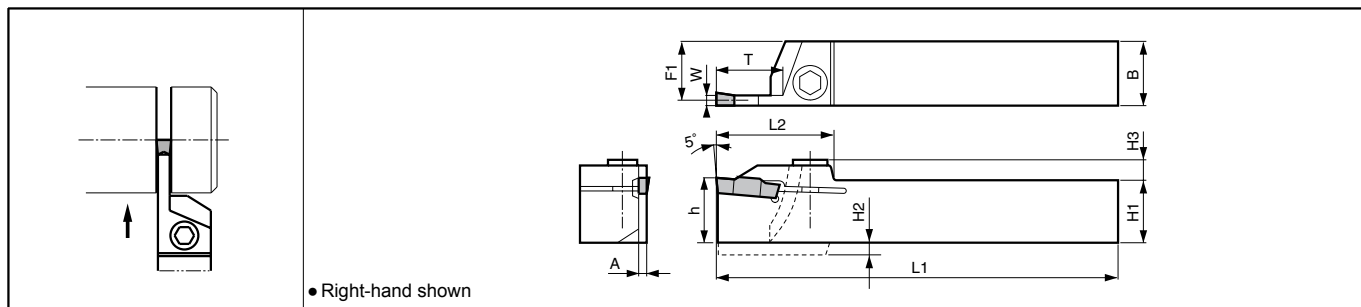
• Dimension T shows the distance from the Toolholder to the cutting edge.

• 4.0mm width Insert can be installed in KGM^{R/L} 1212H-3, but is not recommended due to the toolholder's rigidity.

● : Std. Item ○ : Check Availability R : Std. Item (R-hand Only) L : Std. Item (L-hand Only)

KGM-T

Width: 2.0~6.0mm



Toolholder Dimensions

Description	Std.	Dimension (mm)											Width W (mm)		Spare Parts			
		R	L	H1-h	H2	H3	B	L1	L2	F1	A	T	MIN.	MAX.	Screw		Wrench	
KGM^{R/L} 2012K-2T17	●●	20	-	7	12	125		11.15					2.0	3.0	SB-5TR	-	LTW-20	-
2020K-2T17	●●	20	-	7	20	125	33	19.15	1.7	17					-	HH5X16	-	LW-4
2525M-2T17	●●	25			25	150		24.15							-	HH5X25	-	LW-4
1616H-3T20	●●	16	4		16	100		14.8							-	HH5X16	-	LW-4
2012K-3T20	●●	20		7	12	125	36	10.8		2.4	20		3.0	4.0	SB-5TR	-	LTW-20	-
2020K-3T20	●●	20			20	125		18.8							-	HH5X16	-	LW-4
2525M-3T20	●●	25			25	150		23.8							-	HH5X25	-	LW-4
2020K-4T20	●●	20			20	125	36	18.3			20				-	HH5X16	-	LW-4
2525M-4T20	●●	25		7.5	25	150		23.3	3.4		20		4.0	5.0	-	HH5X25	-	LW-4
2525M-4T25	●●	25			25	150	41				25				-	HH5X25	-	LW-4
2525M-5T25	●●	25			25	150	42	22.8	4.4		25		5.0	6.0	-	HH5X25	-	LW-4
3232P-5T25	●●	32			32	170		29.8			25				-	HH5X25	-	LW-4
2525M-6T30	●●	25		9.5	25	150	45	22.4	5.2		30		6.0	6.0	-	HH5X25	-	LW-4

• Dimension T shows the distance from the Toolholder to the cutting edge. See the Table (H20) for the relationship between the Grooving Depth and the Cutting Dia.
 • When using GMG / GMM type (2-edge) Insert, set the grooving depth under 15mm.

Applicable Inserts

Applications	Grooving / Turning	Grooving / Turning	Grooving	Full-R / Copying	Full-R / Copying	Cut-Off	Cut-Off	Cut-Off	Cut-Off	Cut-Off
Ref. Page	G32	G32	G32	G32	G33	H16	H16	H16	H16	H16
Insert										
Toolholder								TMR		
KGM^{R/L}...1.5	-	-	-	-	-	GMM1520..MT GMM2020..MT GMM1520%...MT GMM2020%...MT	GMM1520..NB GMM2020..NB	GMM2020..T GMM2020%...T	GMN2..TK GM% 2..TK	-
KGM^{R/L}...2(T)	GMM2420..MW GMM3020..MW	GMG3020..MS GMM3020..MS	GMG2520..MG GMG3020..MG	GMG3020..R GMM3020..R	-	GMM2020..MT GMM2520..MT GMM3020..MT GMM2020%...MT GMM2520%...MT GMM3020%...MT	GMM2020..NB GMM2520..NB GMM3020..NB	GMM2020..T GMM2520..T GMM3020..T GMM2020%...T GMM2520%...T GMM3020%...T	GMN2..TK GMN3..TK GM%2..TK GM%3..TK	GMN2 GMN2.2 GMN3 GM%2.2 GM%3
KGM^{R/L}...2.5	GMM2420..MW GMM3020..MW	GMG3020..MS GMM3020..MS	GMG2520..MG GMG3020..MG	GMG3020..R GMM3020..R	-	GMM2520..MT GMM3020..MT GMM2520%...MT GMM3020%...MT	GMM2520..NB GMM3020..NB	GMM2520..T GMM3020..T GMM2520%...T GMM3020%...T	GMN3..TK GM%3..TK	GMN3 GM%3
KGM^{R/L}...3(T)	GMM3020..MW GMM4020..MW	GMG3020..MS GMM3020..MS GMG4020..MS GMM4020..MS	GMG3020..MG GMG3520..MG GMG4020..MG	GMG3020..R GMM3020..R GMG4020..R GMM4020..R	-	GMM3020..MT GMM3020%...MT	GMM3020..NB	GMM3020..T GMM3020%...T	GMN3..TK GMN4..TK GM%3..TK GM%4..TK	GMN3 GMN4 GM%3 GM%4
KGM^{R/L}...4(T)	GMM4020..MW GMM5020..MW	GMG4020..MS GMM4020..MS GMG5020..MS GMM5020..MS	GMG4020..MG GMG5020..MG	GMG4020..R GMM4020..R GMG5020..R GMM5020..R	-	-	-	-	GMN4..TK GM%4..TK	GMN4 GMN5 GM%4
KGM^{R/L}...5T	GMM5020..MW GMM6020..MW	GMG5020..MS GMM5020..MS GMG6020..MS GMM6020..MS	GMG5020..MG GMG6020..MG	GMG5020..R GMM5020..R GMG6020..R GMM6020..R	GMGA6020..R	-	-	-	-	GMN5 GMN6
KGM^{R/L}...6T	GMM6020..MW	GMG6020..MS GMM6020..MS	GMG6020..MG	GMG6020..R GMM6020..R	GMGA6020..R	-	-	-	-	GMN6
KGM^{R/L}...8	GMM8030..MW	-	GMG8030..MG	-	GMGA8030..R	-	-	-	-	-

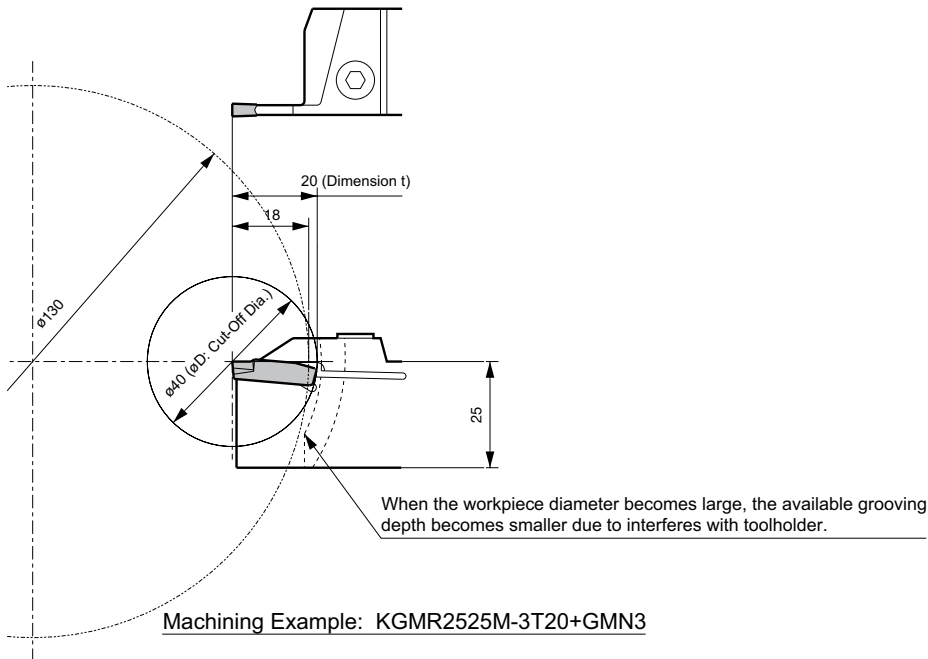
For recommended cutting conditions, see page **H25**

● : Std. Item ○ : Check Availability R : Std. Item (R-hand Only) L : Std. Item (L-hand Only)

Cut-Off Toolholders

Available cut-off diameter of KGM / KGM-T type

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



H



Cut-off

◆ KGM (For Automatic Lathe) Available Cutting Dia. Table

Toolholder		øD (Cut-Off Dia.)																	
KGM ^{FL}	0810K-1.5-125	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10	14	16	32
	1010 ○ -1.5...	-	-	-	-	-	-	-	20	25	32	40	60	∞	∞	∞	∞		
	1212 ○ -1.5...	-	-	-	-	25	26	28	32	36	40	60	100						
	0810K-2-125	-	-	-	-	-	-	-	-	-	-	-	-	-	10	14	16	32	
	1010 ○ -2...	-	-	-	-	-	-	-	20	25	32	40	60	∞	∞	∞	∞	∞	
	1212 ○ -2...	-	-	-	-	25	26	28	50	∞	∞	∞	∞						
	1616 ○ -2...	32	40	50	60	80	100	∞	∞	∞	∞	∞	∞						
	1010 ○ -2.5...	-	-	-	-	-	-	-	20	25	32	40	60						
	1212 ○ -2.5...	-	-	-	-	25	26	28	32	36	40	60	100						
	1616 ○ -2.5...	32	40	50	60	80	100	∞	∞	∞	∞	∞	∞						
		1616 ○ -3...	32	40	50	60	80	100	∞	∞	∞	∞	∞	∞					
	Grooving Depth t (mm)		16	15	14	13	12.5	12	11	10	9	8	7	6	5	4	3	2	1

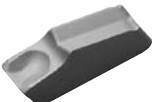
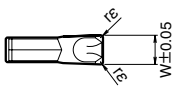
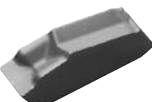
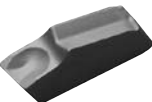
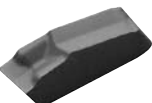
◆ KGM-T Available Cutting Dia. Table (GMN, GM^{FL} type When using 1-edge inserts)

Toolholder		øD (Cutting Dia.)													
KGM ^{FL}	2012K-2T17	-	-	-	-	-	-	-	-	66	80	130	260		
	2020K-2T17	-	-	-	-	-	-	-	-	66	80	130	260		
	2525M-2T17	-	-	-	-	-	-	-	-	66	80	130	260		
	1616H-3T20	-	-	-	-	-	40	54	70	100	180	∞	∞		
	2012K-3T20	-	-	-	-	-	40	90	130	240					
	2020K-3T20	-	-	-	-	-	40	90	130	240					
	2525M-3T20	-	-	-	-	-	40	90	130	240					
	2020K-4T20	-	-	-	-	-	40	90	130	240					
	2525M-4T20	-	-	-	-	-	40	90	130	240					
	2525M-4T25	-	-	50	140	240	∞	∞	∞	∞					
	2525M-5T25	-	-	50	140	240									
	3232P-5T25	-	-	50	280	600									
	2525M-6T30	100	300	∞	∞	∞									
	Grooving Depth t (mm)		30	27	25	23	22	20	19	18	17	16	15	14	under 13

Cut-Off Inserts

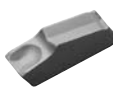

TKN / TK^{R/L}

Classification of usage	P	Carbon Steel and Alloy Steel	○	●	○	○
● : Continuous-Low Interruption / 1st Choice	M	Stainless Steel		☺	●	○
☺ : Continuous-Low Interruption / 2nd Choice	K	Cast Iron				●
● : Continuous / 1st Choice	N	Non-ferrous Metals				●
○ : Continuous / 2nd Choice						




Insert	Description	Dimension (mm)		Angle (°)	Cermet		CVD Coated Carbide		PVD Coated Carbide		Carbide	Ref. Page for Applicable Toolholder
		W	rε	θ	TN90	CR9025	PR660	PR930	KW10			
  Handed Insert shows Right-hand	TKN 1.6 2 2.4 3 4 4.8 5 6 8 9	1.6	0.15	-	●	●	●	●	●	H22 H24		
		2.2	0.20		●	●	●	●				
		2.4	0.20		●	●	●	●				
		3.1	0.25		●	●	●	●				
		4.1	0.30		●	●	●	●				
		4.8	0.30		●	●	●	●				
		5.1	0.30		●	●	●	●				
		6.4	0.35		●	●	●	●				
		8.0	0.40		●	●	●	●				
9.6	0.45	●	●	●	●	●	●					
 Low Feed	TKN 1.6-P 2-P 3-P	1.6	0.20	-	●	●	●	●	●			
		2.2	0.20		●	●	●	●				
		3.1	0.25		●	●	●	●				
 Lead Angle	TK^{R/L} 1.6 2 2.4 3 4 5	1.6	0.15	8°	R	●	●	R	●			
		2.2	0.20		●	●	R	●				
		2.4	0.20		●	●	R	●				
		3.1	0.25		●	●	●	●				
		4.1	0.30		●	●	●	●				
5.1	0.30	●	●	●	●	●	●					
 Low Feed / Lead-Angled	TK^{R/L} 1.6-P 2-P 3-P	1.6	0.20	8°	R	R	●	R	R			
		2.2	0.20		R	R	●	R	R			
		3.1	0.25		R	R	●	R	R			

For recommended cutting conditions, see page [H25](#)

Cut-Off Tools

Cutting Range	Chipbreaker	Advantage
General Cut-Off	Standard (No Indication) 	General cut-off type for feed rates over 0.1mm/rev. Superior chip evacuation
Low Feed Cut-Off	P 	Chipbreaker specially designed for low feed machining on automatic lathes, etc. Chips are controlled at feed rate 0.03~0.08mm/rev.

Insert's Edge Shape (CERACUT Cut-Off)

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

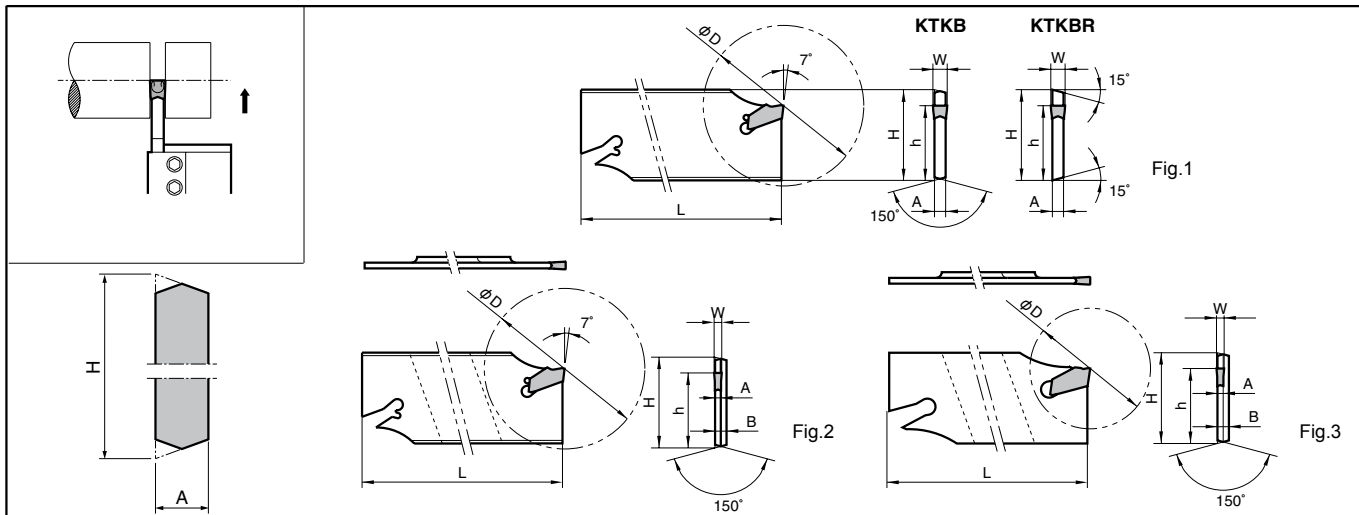
* Sharp Edge Spec. can reduce cutting resistance 40% less than that of chamfer edge.

● : Std. Item ○ : Check Availability R : Std. Item (R-hand Only) L : Std. Item (L-hand Only)

Inserts are sold in 10 piece boxes

Cut-Off Blades

KTKB-S / KTKB-SS



Blade Dimensions

Description	Std.	Cutting Dia. ϕD_{max}	Dimension (mm)						Width (mm)	Drawing	Applicable Inserts \oplus H21				Applicable Block \oplus H23
			H	h	B	L	A	W			Low Feed	With Lead Angle	Low Feed / Lead-Angled		
KTKB 19-1SS	●	32	19	15.7	2.4	86	1.2	1.6	Fig.3	TKN1.6	TKN1.6-P	TK ^{R/L} 1.6	TK ^{R/L} 1.6-P	KTKTB 16-19 20-19	
KTKB 26-1SS	●	35	26	21.4	2.4	110	1.2	1.6	Fig.3	TKN1.6	TKN1.6-P	TK ^{R/L} 1.6	TK ^{R/L} 1.6-P	KTKTB 16-26 20-26	
KTKB 32-1SS	●	35	32	25	2.4	150	1.2	1.6	Fig.3	TKN1.6	TKN1.6-P	TK ^{R/L} 1.6	TK ^{R/L} 1.6-P	KTKTB 20-32 25-32 32-32 KTKTBF 25-32 32-32	
KTKB 19-2S	●	40	19	15.7	-	86	1.8	2.2 2.4	Fig.1	TKN2 TKN2.4	TKN2-P	TK ^{R/L} 2 TK ^{R/L} 2.4	TK ^{R/L} 2-P	KTKTB 16-19 20-19	
KTKB 26-2S	●	50	26	21.4	-	110	1.8	2.2 2.4							
KTKB 26-3S	●	75					2.6	3.1		TKN3	TKN3-P	TK ^{R/L} 3	TK ^{R/L} 3-P	KTKTB 16-26 20-26	
KTKB 26-4S	●	80					3.4	4.1		TKN4	-	TK ^{R/L} 4	-		
KTKB 26-5S	●	80					4.2	4.8 5.1		TKN4.8 TKN5	-	TK ^{R/L} 5	-		
KTKB 32-2S	●	50					32	25	-	150	1.8	2.2 2.4	Fig.2		TKN2 TKN2.4
KTKB 32-3S	●	100	2.6	3.1	TKN3	TKN3-P					TK ^{R/L} 3	TK ^{R/L} 3-P			
KTKB 32-4S	●	100	3.4	4.1	TKN4	-					TK ^{R/L} 4	-			
KTKB 32-5S	●	120	4.2	4.8 5.1	TKN4.8 TKN5	-					TK ^{R/L} 5	-			
KTKB 32-6S	●	120	5.4	6.4	TKN6	-					-	-			
KTKB ^{R/L} 32-8S	●	120	6.8	8.0	TKN8	-					-	-			
KTKB ^{R/L} 32-9S	R	120	8.0	9.6	TKN9	-	-	-							

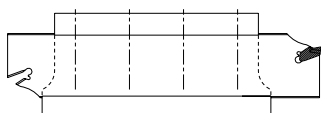
Note) 1. Suffix "-SS" means silver coating.

2. Releasing wrench is "LTK-5".

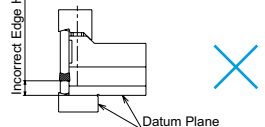
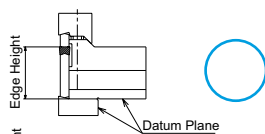
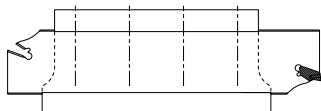
* Dimension H shows virtual apex distance.

How to install toolblock and blade.

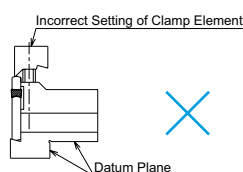
Correct way



Incorrect way

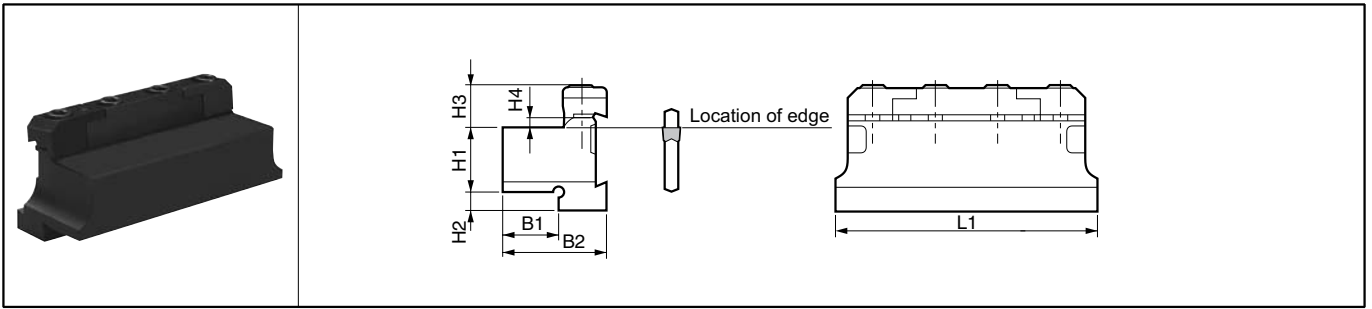


Incorrect Setting of Clamp Element

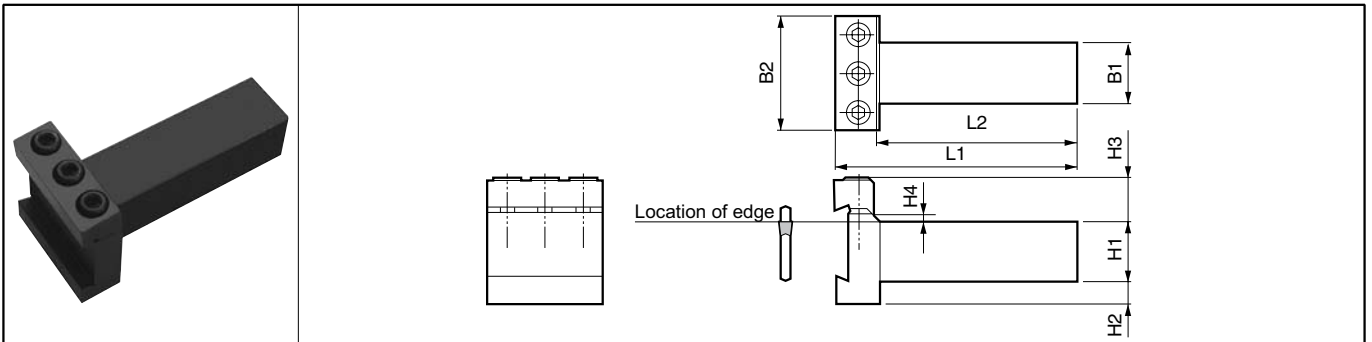


If the clamp element is mounted backward, a large gap will occur between the clamp and the toolblock, and the blade may come off during cutting. Be careful when installing the clamp for safety.

KTKTB (Separate type)



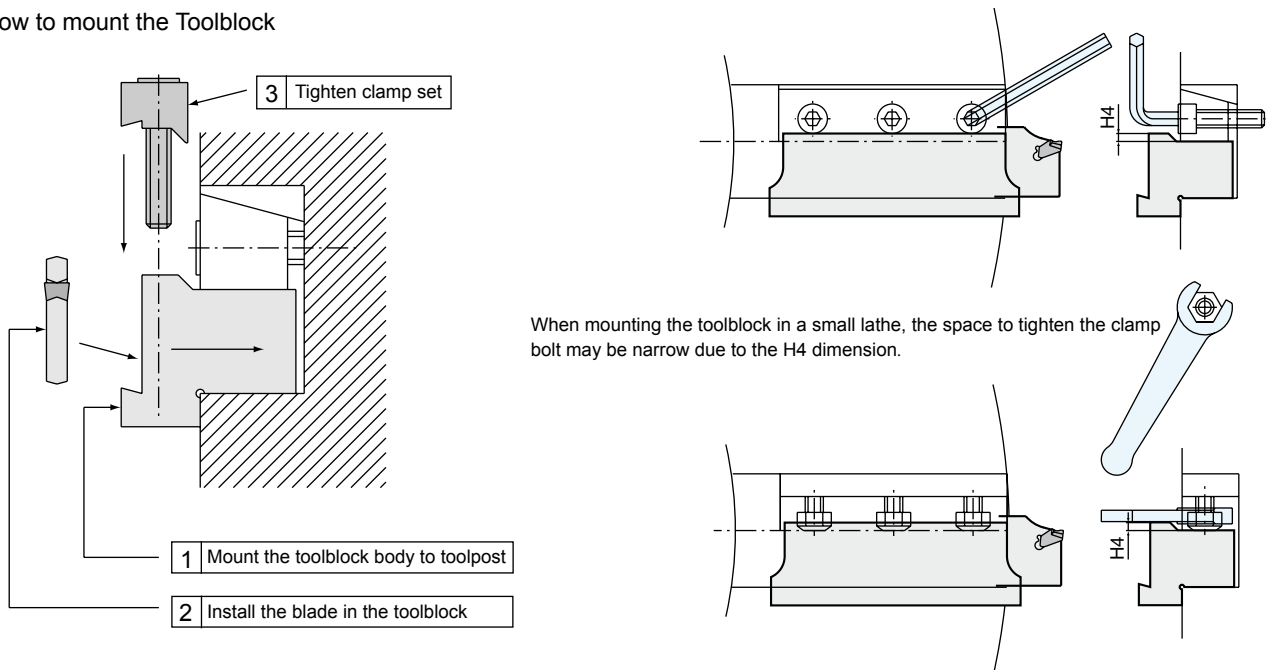
KTKTBF (Separate / Perpendicular type)



● Toolblock Dimensions

Description	Std.	Dimension (mm)										Spare Parts			Applicable Blade	
		H1	H2	H3	H4	B1	B2	L1	L2	Clamp Set		Screw	Wrench	Cut-off	Face Grooving	
										Separate Type	Integral Type					
KTKTB	16-19	●	16				15.5	29.5	76	-	-	BCS-1	HH5X25	LW-4	KTKB19-○S KTKB19-1SS	-
	20-19	●	20	4	12	2	19	34	76	-	-	BCS-1	HH5X25	LW-4	KTKB19-○S KTKB19-1SS	-
	16-26	●	16	13			15.5	31.5	86	-	BCS-2	-	HH6X30	LW-5	KTKB26-○S KTKB26-1SS	-
	20-26	●	20	9	14	2.5	19	36	86	-	BCS-2	-	HH6X30	LW-5	KTKB26-○S KTKB26-1SS	-
	20-32	●	20	13			19	38	100	-	BCS-3	-	HH6X30	LW-5	KTKB32-○S KTKB32-1SS	KFTB% 0000 -4S KFTB% 0000 -5S
	25-32	●	25	8	17	3.5	23	42	110	-	BCS-4	-	HH6X30	LW-5	KTKB32-○S KTKB32-1SS	KFTB% 0000 -4S KFTB% 0000 -5S
KTKTBF	32-32	●	32	5			29	48	110	-	BCS-4	-	HH6X30	LW-5	KTKB%32-○S	KFTB% 0000 -4S KFTB% 0000 -5S
	25-32	●	25	9.5	17	3.5	25	48	102	84.5	-	BCS-5	HH6X30	LW-5	KTKB32-○S KTKB32-1SS	KFTB% 0000 -4S KFTB% 0000 -5S
32-32	●	32	2.5			32	48	117	99.5	-	BCS-5	HH6X30	LW-5	KTKB%32-○S	KFTB% 0000 -4S KFTB% 0000 -5S	

◆ How to mount the Toolblock



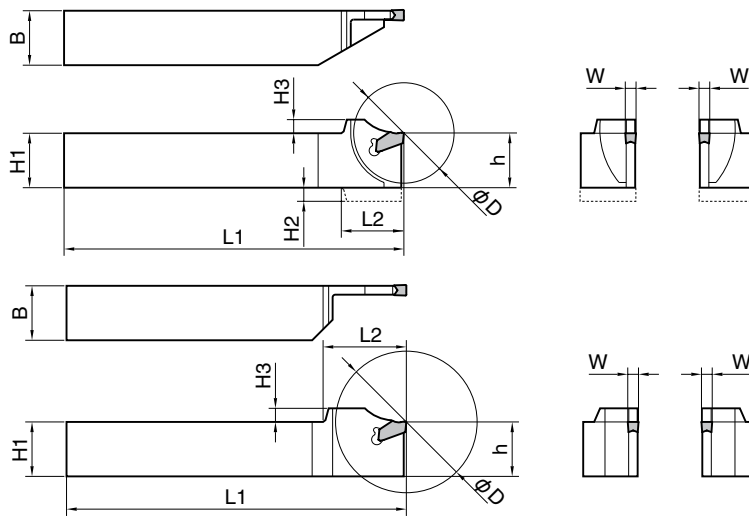
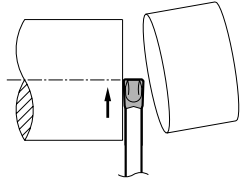
● : Std. Item ○ : Check Availability R : Std. Item (R-hand Only) L : Std. Item (L-hand Only)



Cut-Off Toolholders (Integral Shank)

KTKH-S

For General Cut-Off (Self Clamp)



● Right-hand shown

Fig.1

Fig.2

Toolholder Dimensions

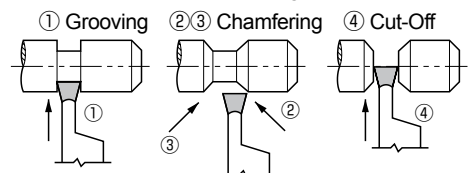
Description	Std.		Cut-Off Dia. ϕD_{max}	Dimension (mm)						Width (mm) W	Drawing	Spare Parts	Ref. Page for Recommended Cutting Conditions		
	R	L		H1=h	H2	H3	B	L1	L2			Releasing Wrench			
KTKH^{R/L} 1010F-2S	●	●	30	10	5	4	10	80	18.6	2.2 2.4	Fig.1	LTK-5	H25		
1212H-2S	●	●	33	12	4	5	12	100	19.8						
1612H-2S	●	●	33	16	-	3	12	100	19.8						
1616H-2S	●	●	33	16	-	3	16	100	19.8						
2012K-2S	●	●	38	20	-	4	12	125	22.8						
2020K-2S	●	●	38	20	-	4	20	125	22.8						
1612H-3S	●	●	36	16	4	4	12	100	21.7	3.1	Fig.1			H25	
1616H-3S	●	●	36	16	4	4	16	100	21.7		Fig.1				
2012K-3S	●	●	41	20	-	5	12	125	25.3		Fig.2				
2020K-3S	●	●	52	20	-	5	20	125	31.0		Fig.2				
2525M-3S	●	●	53	25	-	5	25	150	31.5		Fig.2				
2012K-4S	●	●	44	20	-	5	12	125	26.3	4.1	Fig.1				H25
2020K-4S	●	●	62	20	-	5	20	125	35.0		Fig.2				
2525M-4S	●	●	68	25	-	5	25	150	38.0		Fig.2				
2525M-5S	●	●	79	25	-	5	25	150	43.5		Fig.2				
KTKH^{R/L} 2020K-3T17S	●	●	35	20	-	5	20	125	21.8	3.1 4.1	Fig.1	LTK-5	H25		
2525M-3T22S	●	●	45	25	-	5	25	150	26.8						
2020K-4T22S	●	●	45	20	-	5	20	125	26.8						
2525M-4T22S	●	●	45	25	-	5	25	150	26.8						

Applicable Inserts

Ref. Page	H21			
Insert				
Toolholder	Low Feed	Lead Angle	Low Feed / Lead-Angled	
KTKH^{R/L} ...-2...	TKN2 TKN2.4	TKN2-P	TK ^{R/L} /2 TK ^{R/L} /2.4	TK ^{R/L} /2-P
KTKH^{R/L} ...-3...	TKN3	TKN3-P	TK ^{R/L} /3	TK ^{R/L} /3-P
KTKH^{R/L} ...-4...	TKN4	-	TK ^{R/L} /4	-
KTKH^{R/L} ...-5...	TKN4.8 TKN5	-	TK ^{R/L} /5	-

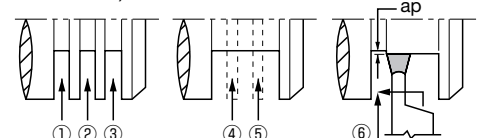
Application Example of CERACUT Cut-Off

1. Cut-Off after Chamfering



2. Wide Grooving

- ① ~ ⑤ Groove Widening
 - ⑥ Traverse Finishing
- (Value of "ap" shall be under the value of Corner-R)



(In order to prevent both corners' unequal wear)

● : Std. Item ○ : Check Availability R : Std. Item (R-hand Only) L : Std. Item (L-hand Only)

Recommended Cutting Conditions

TKF12/16 Recommended Cutting Conditions

Workpiece Material	Recommended Grade (Vc m/min)			TKF12					TKF16		Remarks
	MEGACOAT	PVD Coated Carbide	Carbide	Width W (mm)					Width W (mm)		
	PR1225	PR1025	KW10	0.5	0.7	1.0	1.5	2.0	1.5	2.0	
Carbon Steel (SxxC)	★ 70 ~ 150	☆ 60 ~ 130	-	0.01 ~ 0.02	0.01 ~ 0.03	0.01 ~ 0.04 (0.01 ~ 0.05)	0.01 ~ 0.04 (0.01 ~ 0.07)	0.01 ~ 0.04 (0.01 ~ 0.07)	0.02 ~ 0.07 (0.02 ~ 0.1)	0.02 ~ 0.07 (0.02 ~ 0.1)	Coolant
Alloy Steel (SCM)	★ 70 ~ 150	☆ 60 ~ 130	-	0.01 ~ 0.02	0.01 ~ 0.03	0.01 ~ 0.04 (0.01 ~ 0.05)	0.01 ~ 0.04 (0.01 ~ 0.07)	0.01 ~ 0.04 (0.01 ~ 0.07)	0.02 ~ 0.07 (0.02 ~ 0.1)	0.02 ~ 0.07 (0.02 ~ 0.1)	
Stainless Steel (SUS304)	★ 60 ~ 120	☆ 50 ~ 100	-	0.005 ~ 0.015	0.01 ~ 0.02	0.01 ~ 0.02 (0.01 ~ 0.03)	0.01 ~ 0.02 (0.01 ~ 0.03)	0.01 ~ 0.02 (0.01 ~ 0.03)	0.01 ~ 0.04 (0.02 ~ 0.04)	0.01 ~ 0.04 (0.02 ~ 0.04)	
Cast Iron (FC/FCD)	-	-	★ 50 ~ 100	0.01 ~ 0.03	0.01 ~ 0.04	0.01 ~ 0.05	0.01 ~ 0.05	0.01 ~ 0.05	0.02 ~ 0.08	0.02 ~ 0.08	
Aluminium	-	-	★ 200 ~ 450	0.01 ~ 0.03	0.01 ~ 0.04	0.01 ~ 0.05	0.01 ~ 0.05	0.01 ~ 0.05	0.02 ~ 0.08	0.02 ~ 0.08	

※ (): Tough edge type (TKF..T.)

★ : 1st Recommendation
☆ : 2nd Recommendation

Workpiece Material		PCD		Remarks
		KPD001		
Aluminium	Vc (m/min)	200 ~ 500		Coolant
	Brass	Feed Rate (mm/rev)	0.01 ~ 0.03	
Vc (m/min)		100 ~ 350		
Aluminium	Feed Rate (mm/rev)	0.01 ~ 0.05	0.02 ~ 0.15	
	Vc (m/min)	200 ~ 500		
Brass	Feed Rate (mm/rev)	0.01 ~ 0.03	0.02 ~ 0.12	

Recommended Cutting Conditions (In case of using GMM-MT, GMM-TK, GMM-NB insert)

Workpiece Material	Recommended Insert Grade (Vc: m/min)				Dimension (mm)					Remarks
	Cermet	CVD Coated Carbide	PVD Coated Carbide	Carbide	1.5	2.0 / 2.5	3.0	4.0		
	-	CR9025	PR915	PR930	KW10	f (mm/rev)				
Carbon Steel	-	☆ 80~180	★ 60~150	☆ 60~130		0.01~0.04	0.02~0.15	0.03~0.20	0.08~0.30	Coolant
Alloy Steel	-	☆ 70~150	★ 60~150	☆ 60~130		0.01~0.04	0.02~0.15	0.03~0.20	0.08~0.30	
Stainless Steel	-	☆ 60~140	★ 50~140	☆ 50~120		0.01~0.03	0.02~0.10	0.03~0.15	0.08~0.25	
Cast Iron	-	-	-	-	★ 50~100	0.01~0.05	0.05~0.12	0.10~0.25	0.10~0.30	
Non-ferrous Metals	-	-	-	-	★ 200~450	0.01~0.05	0.05~0.10	0.05~0.20	0.05~0.25	

• When machining Steel and Stainless Steel by 4mm width Insert of PR930, decrease the Feed Rate by 20%.

★ : 1st Recommendation ☆ : 2nd Recommendation

Recommended Cutting Conditions (TKN, TK^{1/2} type Insert)

Workpiece Material	Recommended Insert Grade (Vc: m/min)				Dimension (mm)					Remarks	
	Cermet	CVD Coated Carbide	PVD Coated Carbide	Carbide	1.6	2.2 / 2.4	3.1	4.1	4.8~9.6		
	TN90	CR9025	PR660	PR930	KW10	f (mm/rev)					
Carbon Steel	☆ 120~200	★ 80~180	☆ 60~130	☆ 60~130		0.02~0.08	0.04~0.18	0.05~0.25	0.08~0.30	0.15~0.40	Coolant
Alloy Steel	☆ 100~160	★ 70~150	☆ 60~130	☆ 60~130		0.02~0.08	0.04~0.18	0.05~0.25	0.08~0.30	0.15~0.40	
Stainless Steel	☆ 80~150	☆ 60~40	★ 50~120	☆ 60~140		0.02~0.06	0.04~0.12	0.05~0.18	0.08~0.25	0.10~0.30	
Cast Iron	-	-	-	-	★ 50~100	0.02~0.08	0.05~0.12	0.10~0.25	0.10~0.30	0.15~0.35	
Non-ferrous Metals	-	-	-	-	★ 100~450	0.02~0.10	0.05~0.10	0.05~0.20	0.05~0.25	0.10~0.25	

★ : 1st Recommendation ☆ : 2nd Recommendation



Recommended Cutting Conditions (In case of using GMM-TMR type Insert)

Workpiece Material	Vc (m/min)	f (mm/rev)	Remarks
Carbon Steel	60~200	0.08~0.18	Coolant
Alloy Steel	60~150		
Stainless Steel	50~140		





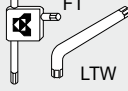
Alternative Toolholder Reference Table for Cut-off Toolholder

Alternative Toolholder Reference Table for Cut-off Toolholder (KTKF / KGM)

Conventional Toolholder				Alternative Toolholder				
Description	Overall length (mm)	Spare Parts			Description	Overall length (mm)	Remarks	Ref. Page
		Clamp Screw	Wrench					
								
KTKF ^{®/L} 1010K-12	125	SB-4590TRWN	LTW-10S	KTKF ^{®/L} 1010JX-12	120		H8	
KTKF ^{®/L} 1212M-12	150			KTKF ^{®/L} 1212JX-12	120			
KTKF ^{®/L} 1616M-12	150			KTKF ^{®/L} 1616JX-12	120			
KTKF ^{®/L} 1010K-16	125			KTKF ^{®/L} 1010JX-16	120			
KTKF ^{®/L} 1212M-16	150			KTKF ^{®/L} 1212JX-16	120			
KTKF ^{®/L} 1616M-16	150			KTKF ^{®/L} 1616JX-16	120			
KGM ^{®/L} 0810K-1.5-125	125	SE-40120TR	LTW-15S	-	-	No replacement	H18	
KGM ^{®/L} 1010K-1.5-125	125			KGM ^{®/L} 1010JX-1.5	120			
KGM ^{®/L} 1212M-1.5-150	150			KGM ^{®/L} 1212JX-1.5	120			
KGM ^{®/L} 0810K-2-125	125	SE-40120TR	LTW-15S	-	-	No replacement		
KGM ^{®/L} 1010K-2-125	125			KGM ^{®/L} 1010JX-2	120			
KGM ^{®/L} 1212M-2-150	150			KGM ^{®/L} 1212JX-2	120			
KGM ^{®/L} 1616M-2-150	150	SE-50125TR	LTW-20	KGM ^{®/L} 1616JX-2	120			
KGM ^{®/L} 1010K-2.5-125	125	SE-40120TR	LTW-15S	KGM ^{®/L} 1010JX-2.5	120			
KGM ^{®/L} 1212M-2.5-150	150			KGM ^{®/L} 1212JX-2.5	120			
KGM ^{®/L} 1616M-2.5-150	150	SE-50125TR	LTW-20	KGM ^{®/L} 1616JX-2.5	120			
KGM ^{®/L} 1616M-3-150	150	SE-50125TR	LTW-20	KGM ^{®/L} 1616JX-3	120			

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

Alternative Toolholder Reference Table for Cut-off Toolholder (KTKH-B / KTKH-S)

Conventional Toolholder				Alternative Toolholder				
Description	Cut-Off Diameter	Spare Parts			Description	Cut-Off Diameter	Remarks	Ref. Page
		Supplied wrench	Clamp Bolt	Wrench				
								
KTKH ^{®/L} 0808K-1.6-125B	φ 10	-	SE-40120TR	FT-15	-	-	No replacement	H18
KTKH ^{®/L} 1010K-1.6-125B	φ 20				KGM ^{®/L} 1010JX-1.5	φ 20		
KTKH ^{®/L} 1212M-1.6-150B	φ 25				KGM ^{®/L} 1212JX-1.5	φ 25		
KTKH ^{®/L} 1414M-1.6-150B	φ 26	-	SE-40120TR	FT-15	-	-	No replacement	
KTKH ^{®/L} 1010K-2-125B	φ 20				KGM ^{®/L} 1010JX-2	φ 20		
KTKH ^{®/L} 1212M-2-150B	φ 25				KGM ^{®/L} 1212JX-2	φ 25		
KTKH ^{®/L} 1616M-2-150B	φ 32	-	SE-50125TR	LTW-20	KGM ^{®/L} 1616JX-2	φ 32		
KTKH ^{®/L} 1616M-3-150B	φ 32				KGM ^{®/L} 1616JX-3	φ 32		
KTKHR 1010K-2-125S	φ 30				KGMR 1010JX-2	φ 20	Processing diameter is small.	
KTKH ^{®/L} 1212M-2-150S	φ 30	LTK-5	-	-	KGM ^{®/L} 1212JX-2	φ 25	Processing diameter is small.	
KTKH ^{®/L} 1616M-2-150S	φ 36				KGM ^{®/L} 1616JX-2	φ 32	Processing diameter is small.	
KTKH ^{®/L} 1616M-3-150S	φ 45				KGM ^{®/L} 1616JX-3	φ 32	Processing diameter is small.	

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