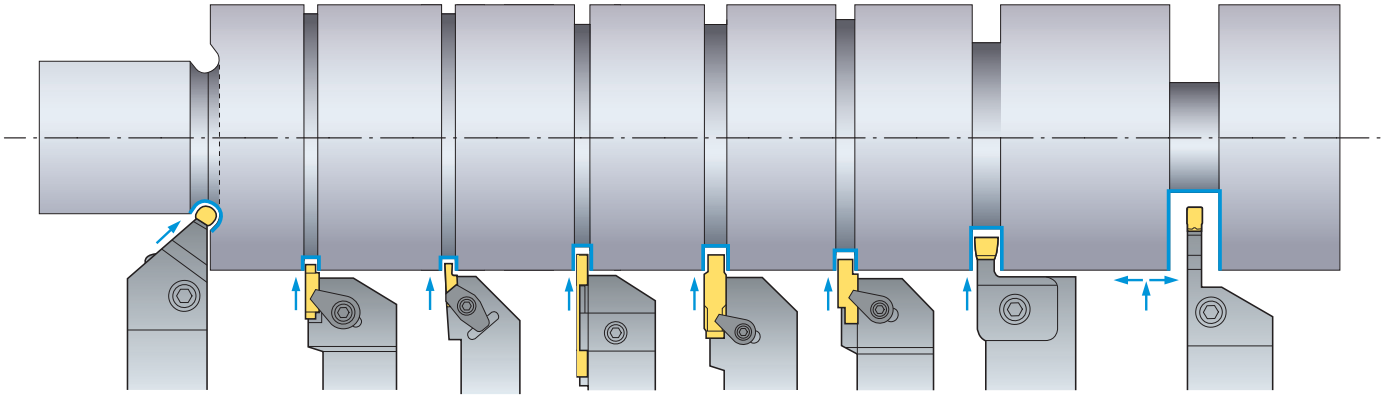
MULTI FUNCTIONAL TOOLS

Korloy Multi-functional tools can be used for machining
in grooving, parting-off, facing and forming applications.
Its design ensures superior machinability and productivity.

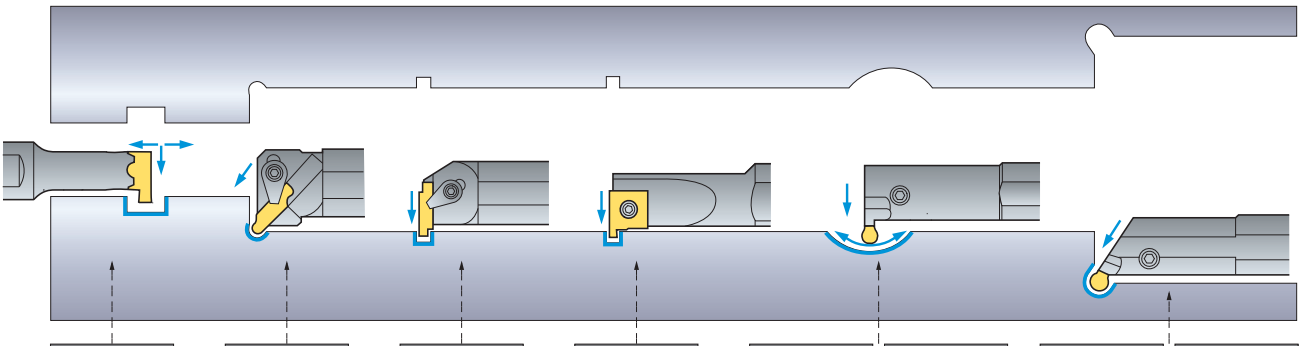
C

For external machining



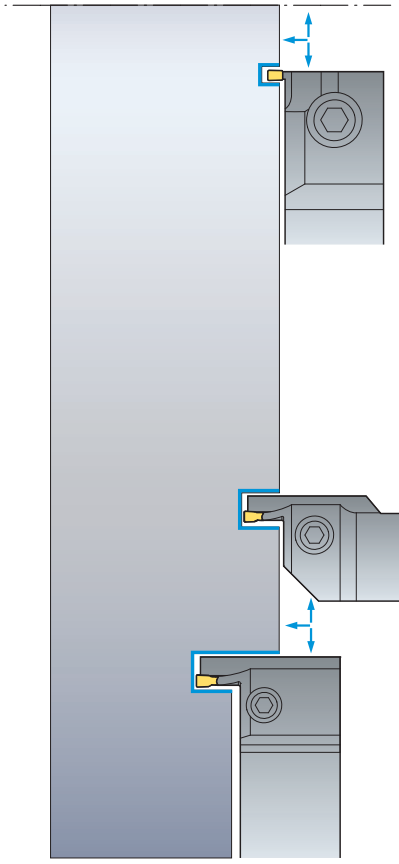
KGEUR/L	MGEUR/L	TBH	K Notch	PH	GH	GFT	DBH	KGEHR/L	MGEHR/L
Width: 2.5 T-MAX: 3.0	Width: 3.0~8.0 T-MAX: 3.0~5.0	Width: 1.25~4.5 T-MAX: 1.5~5.0	Width: 0.75~6.3 T-MAX: 0~6.5	Width: 3.0~5.0 ØD-MAX: 30~50	Width: 1.23~4.28 T-MAX: 1.5~4.0	Width: 1.1~8.0 T-MAX: 2.1~9.0	Width: 3.0~8.0 T-MAX: 14	Width: 2.0~8.0 T-MAX: 17~20	Width: 1.5~8.0 T-MAX: 10~28
KRMN KRGN	MRMN MRGN	TB TB-M	KNG KNGP KNR KNRP KNB	POB	GO GS	GW BF	DC DB	KGGN KGMN KGMR/L KRGN KRMN	MGGN MGMN MGMR MRGN MRMN

For internal machining

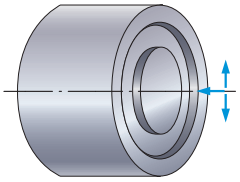


NFTIH	GFIK	GFIP	IGH	KGIVR/L	MGIVR/L	KGIUR/L	MGIUR/L
Width: 0.75~4.02 T-MAX: 1.3~4.6	Width: 2.0~8.0 T-MAX: 2.0~8.0	Width: 1.1~8.0 T-MAX: 2.1~9.0	Width: 1.25~2.8 T-MAX: 1.5~2.3	Width: 2.0~4.0 T-MAX: 7.0~8.0	Width: 1.5~8.0 T-MAX: 4.0~10	Width: 3.0 T-MAX: 3.0	Width: 3.0~8.0 T-MAX: 3.5~6.5
NFTG NFTF NFTT	GR	GW BF	IG	KGMI KGMN KRMN KGGN	MRMN MGGN MRGN	KRMN KRGN	MRMN

For face grooving

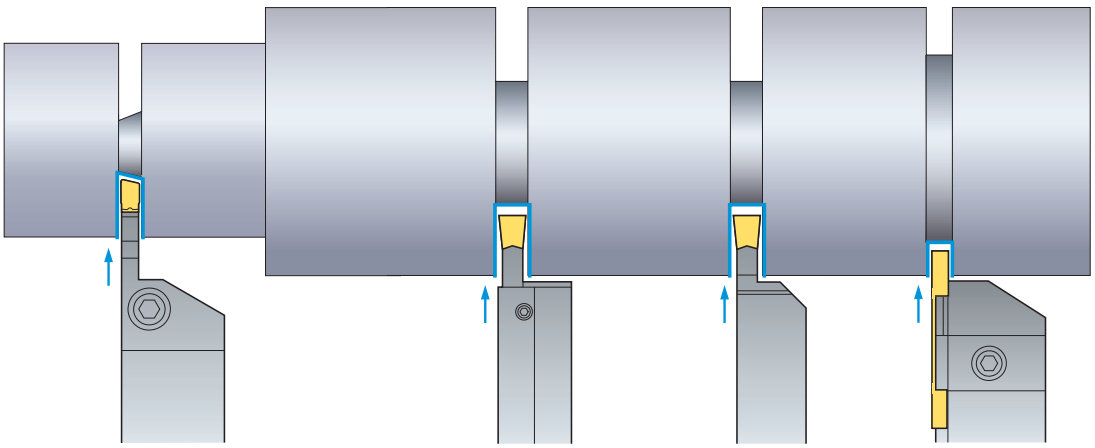


KGEVR/L	MGEVR/L
Width: 3,0~4,0 T-MAX: 4,0~8,0	Width: 1,5~8,0 T-MAX: 3,0~9,0
KGMN	MGMN
KGGN	MGGN
KRMN	MRMN
KRGN	MRGN



FGHH/FGVH	MGFHR/L, MGFVR/L	KGFHR/L, KGFVR/L
Width: 3,0~5,0 T-MAX: 12~25	Width: 3,0~4,0 T-MAX: 10~15	Width: 4,0 T-MAX: 20
FGD	MGMN	KGMN
FGM	MFMN	KRMN
FMM		KGGN
		KRGN

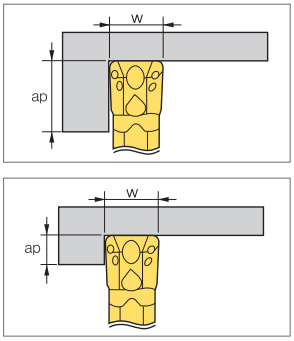
For parting off



KGEHR/L	MGEHR/L	KSPB	SPB-(S)	KGTB	PH
Width: 3,0 T-MAX: 20	Width: 2,0~5,0 T-MAX: 10~28	Width: 2,0~6,0 ØD-MAX: 35~125	Width: 2,0~6,0 ØD-MAX: 35~125	Width: 1,5~8,0 ØD-MAX: 26~120	Width: 3,0~5,0 ØD-MAX: 30~50
KGMR/L	MGMR/L	KSP	SP	KGMN KGGN-S-R	POB

Turning and Grooving

Selection of insert



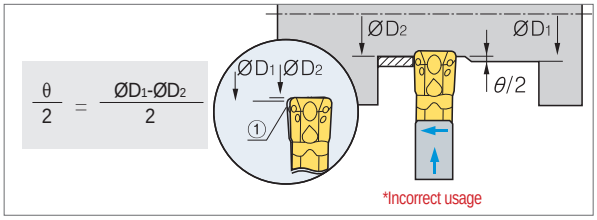
- Feed rate
  - Decide maximum feed rate after considering the insert's characteristics and machine capabilities (Fmax = W x 0.075)
  - Max feed rate should not be larger than the corner radius of the insert
  - In grooving applications, chip evacuation problems can be remedied by using step feed methods at small intervals
- Depth of cut
  - The minimum depth of cut should be bigger than corner radius of insert
  - When deciding on the max depth of cut please consider the machine's cutting load
  - Depending on the shape of the insert, deflection of work piece and clearance angle can be changed

Notice for turning

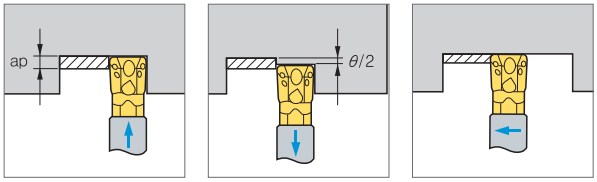
- KGT/MGT tools are designed to incur side cutting force from its clearance angle; this feature gives you advantage over a standard ISO insert
- The standard MGT insert also provides a "wiper" effect to improve surface roughness

Notice for finishing (offset need final quality)

- After desired diameter is grooved, continuous turning operation might cause some deflection of the workpiece. In these cases follow the given formula, offsetting these factors enables the desired diameter that you want

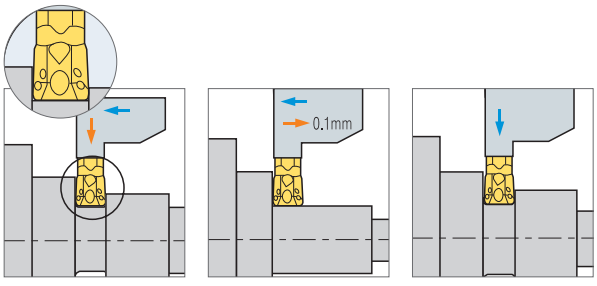


- To eliminate the difference in the machined diameter by utilizing the clearance angle (which is commonly generated during the final turning operation) follow the directions above when machining
  To obtain a good surface roughness without offsetting in an application follows the directions below
  1) Groove to the desired diameter
  2) Pull the tool backs a total distance of θ/2
  3) Continue the external turning operation to desired diameter

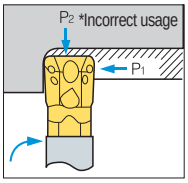


Notice for MGT turning applications

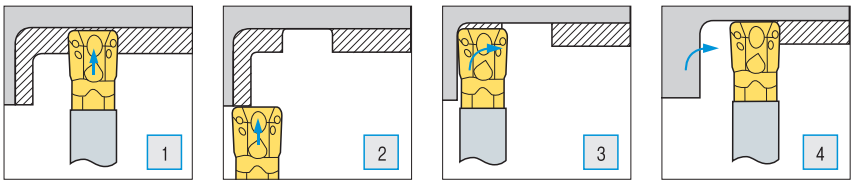
- KGT/MGT tools are available for grooving and turning as a multifunctional tool. When using a M.G.T tool keep in mind that the tool imitates a standard ISO turning application. The application uses a positive clearance angle where a tool's cutting force and depth of cut are all applied in an application. This might create normal wear on the insert, after turning, a grooving process might not meet the desired diameter on the work piece. To off set this, adjust the tool 0.1 mm and return to the original position of the grooving application



Machining workpiece with a radius bigger than the insert's corner radius

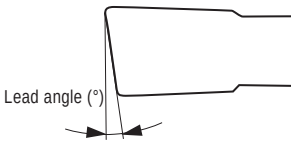
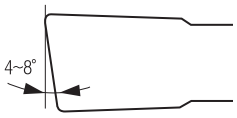
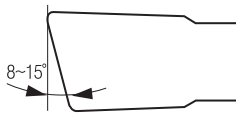


Stabilize your tool pressure. KGT/MGT tools create a cutting load when machining a workpiece with a radius larger than the corner radius of insert (shown in the picture). The unequal cutting force might initially break the insert or holder



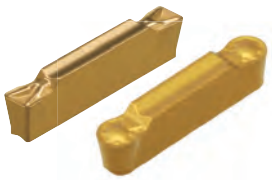
Parting off & Grooving

Insert

Lead angle applications	Lead angle 0° (Neutral)	Lead angle 4°~ 8°	Lead angle 8°~15°
			
• 4°- Pipe (Tubing and hollow bar) • 6°- Pipe and solid bar • 8°- Solid bar • 15°- Small diameter Solid bar	• Parting off on solid bar type • Occurring the center stub when parting off • Prevent to be deflected workpiece by cutting direction during parting off • Available for use deep parting depth	• Reduce the center stub when parting off on solid bar type • Reduce the burr when parting off on tubing or hollow bar type	• Parting off on small diameter and hollow bar type • Reduce the burr and center stub when parting off on small diameter solid bar type

※ Available Inserts: MGMR/L□□□ – □□ – LP/RP, KGMR/L□□□ – □□ – PS/PT
(Lead angle) (Lead angle)

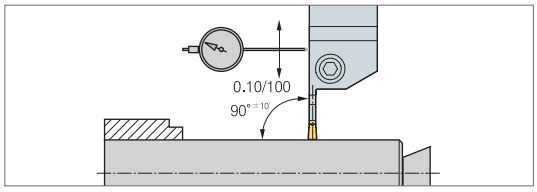
Selection of Insert



- To properly match the insert and cutting condition, the following factors should be considered
  - Width of insert • Chip breaker • Grade and nose R
- The relationship between the cutting width and cutting depth
  - Neutral type, inserts with a 0-degree lead angle are best when used an applications maximum depth of cut
  - In general alloy steel, the maximum depth of cut = W x 0.8
- Insert with lead angle
  - To reduce burrs, we recommend using insert with a lead angle.
  - Insert that have larger lead angles reduce burrs but will also decreases tool life
  - In the case where burrs are acceptable, we recommend using a neutral type insert

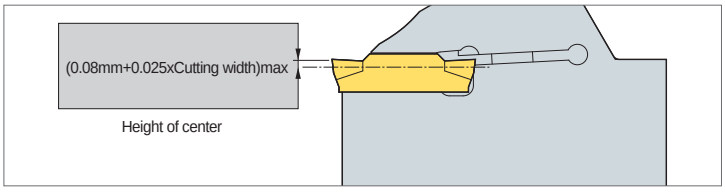
Setting of holders

- The cutting position should be exactly mounted on machined axis in order to create a perpendicular direction or 90 to minimize vibration



Setting of parting off

- The edge height of an insert should be set within ±0.1mm based on the center line
  - Parting off should be done as close to the chuck as possible to minimize vibration



Notice

- Keep a consistent cutting speed and feed
- Use proper amounts of coolant for better performance
- Properly clean the insert pocket before mounting insert

Usage

- If insert is worn, immediately replace with a new insert. This is to prevent the damage on the workpiece
- If the holder seat is worn or damaged replace with a new one immediately for stable clamping
- Do not grind or regrind the holder seat

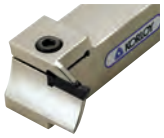
Selection of chip breaker

- Our chip breakers are designed to narrow chips during grooving operations. Narrow chips usually offer the following advantages
- Decreases friction between chips and the workpiece. This usually gives a better surface roughness finish
- With better chip flow, a machinist is able to increase feed rates due to a reduced cutting load

Face grooving tools

For shallow grooving

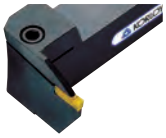
- Economical tools utilizing a double ended cutting edge system
- Newly designed chip breakers that help ensure chip control for various face grooving applications
- KORLOY face grooving tools provide various holder line-ups to give you more options and benefits

MFMN300	MGMN400	Horizontal MGFHR	Vertical MGFVR
			
Cutting Width 3 mm	Cutting Width 4 mm	Machining Dia. Ø24~200 mm	Machining Dia. Ø24~60 mm

KGMN300~600	Horizontal KGFHR	Vertical KGFVR
		
Cutting Width 3~6 mm	Machining Dia. Ø34~220 mm	Machining Dia. Ø44~200 mm

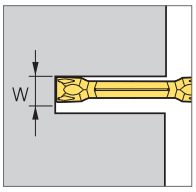
For deep grooving

- These tools are suitable for deep grooving with a single cutting edge (Tmax 25 mm)
- A variety of chip breakers enable a machinist to apply a wide range of functions in machining
- A variety of holders ensures multiple application ranges

FGD	FGM	FMM	Horizontal FGHH	Vertical FGVH
				
Deep face grooving (G class)	Wide face grooving turning (G class)	Wide face grooving turning (M class)	Machining Dia. Ø25~140 mm	Machining Dia. Ø25~140 mm

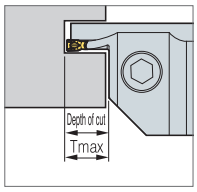
Selection system of holder

- Follow these 3 simple directions to choose the right insert and holder for your application



Insert and holder

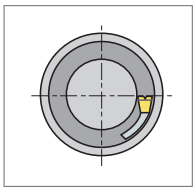
Choose an insert and holder that best applies to your application according to the cutting width and part of workpiece to be machined.



Holder Tmax

Choose the holder with the shortest overhang that will still meet the cutting depth required

Notice: To minimize chattering, use the shortest holder according to Tmax.

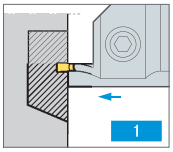


Machining Dia.

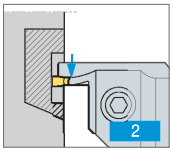
Choose the largest size of shank depending on the initial grooving diameter required in the application

Optimization of face grooving

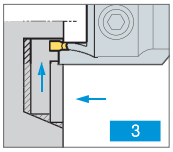
Roughing: When face grooving decreases the cutting speed 40% below a normal face turning operation



• Grooving at the initial diameter

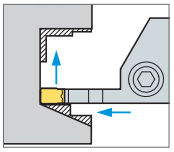


• Face turning away from center

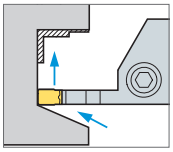


• Face turning to center

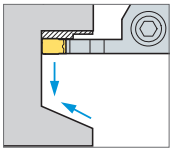
Finishing: When face grooving decreases the cutting speed 40% below a normal face turning operation



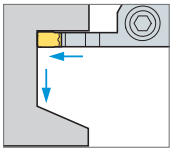
• Grooving at the initial diameter to the final cutting depth and face turning away from center



• Radius operation toward final dimension at the bottom



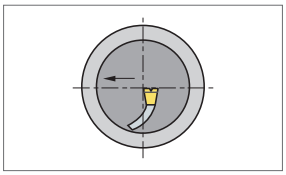
• Face turning to center



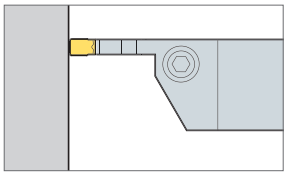
• Grooving for the right dimension you want

Notice for face grooving

- Before machining, check and adjust the following holder position



- Check the cutting edge height at the center of the workpiece
- Machine towards the center and check for burrs



- For better surface roughness, set up the insert in order to perpendicular at center line

Multi-functional machining with strong clamping system and new technology

KGT

- Double-sided inserts of KGT reduces machining cost
- Strong clamping system ensures stable and accurate machining
- New grade and new technology provide superior tool life
- Various tooling solutions of the KGT improve productivity
- The foreside and clearance face of the KGT insert having cutting edges are optimal for grooving, parting-off, turning and facing with reducing processing time
- Three-dimensional chip breaker ensures excellent chip control in various applications
- The KGT inserts with various chip breakers are available for wide application range
- Special cutting edges are available for quotation

Code system

• Insert

KG M N 300 (s) - 04 - T

System Code	Tolerance	Hand	Width of cutting edge	1 corner	Nose Radius	Chip Breaker
KG: KORLOY Grooving KR: KORLOY Grooving Round	M: Pressed G: Ground	N: Neutral R: Right L: Left I: Internal	2.0~8.0 mm		0.2 mm 0.3 mm 0.4 mm 0.8 mm	L / R / T / C / LP / RP / B / A

• Holder

KG E H R/L 2525 - 3 T20

System Code	Working Style	Holder Style	Hand	Shank standard	Cutting Width	Maximum Depth
KG SYSTEM (KORLOY Grooving)	E: External Process I: Internal Process F: Facing Process	H: Horizontal V: Vertical U: Undercut	R: Right L: Left	Height 25 mm Width 25 mm (For Internal machining: Minimum diameter for machining)	2.0~8.0 mm	8~36 mm

KGT line up

Application

	Parting	Grooving	Turning	Copying	Special
medium and large, interrupted cutting	 Rough Parting	 Rough Grooving	 Turning-Multi Grooving	 Copying	 Blank
small, continuous cutting	 Light Parting	 Light Grooving	 T(KGMI) Internal Grooving		

▸ Lead angle applied to LP & RP chip breakers - only for parting off

▸ B chip breaker can be customized (contact required in advance)

Recommended insert

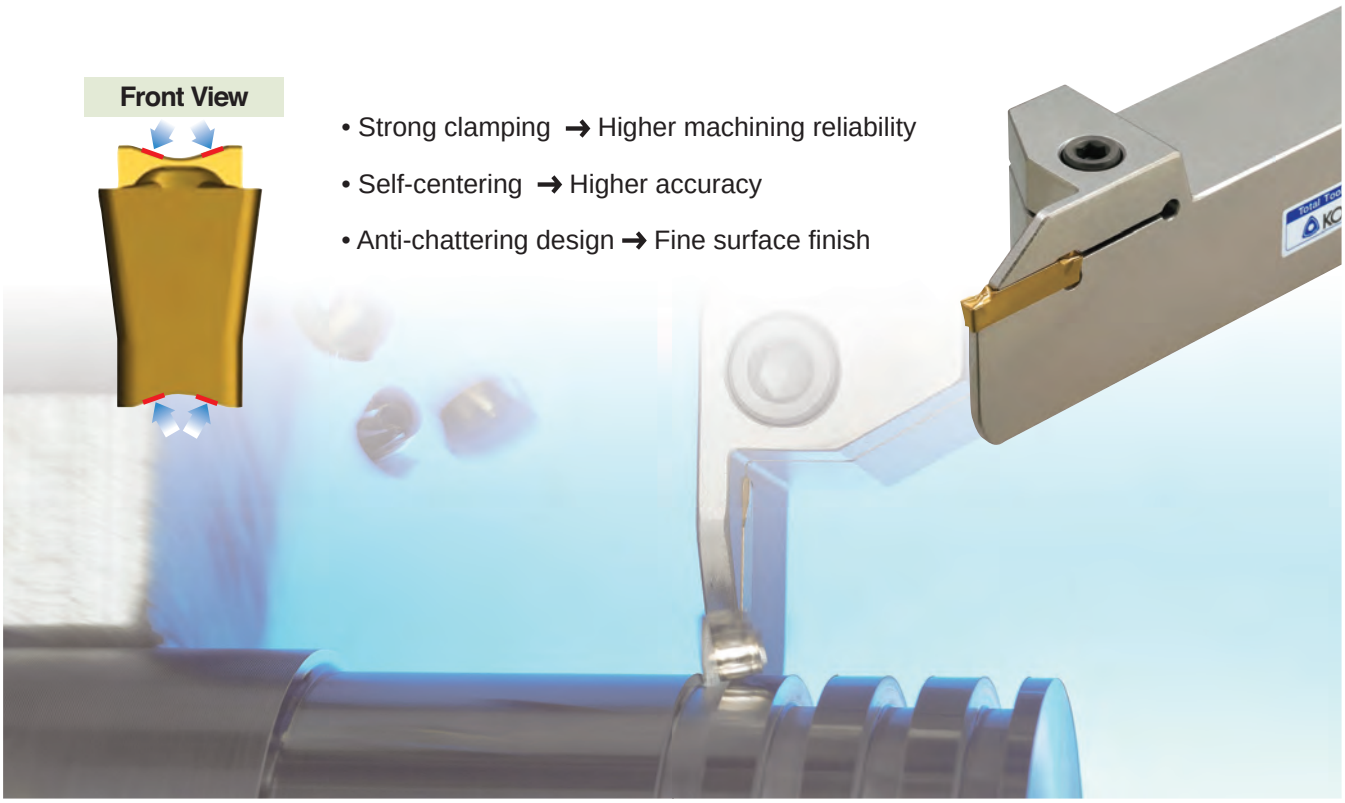
Designation	Geometry	Picture	Application									
			For external machining			For face grooving		For Internal machining		Copying	For relief	Special machining
			Parting	Grooving	Turning	Grooving	Turning	Grooving	Turning	Copying	Reliefing	Special
KGMN	L Light Grooving		○	◎		○						
	R Rough Grooving		○	◎		○						
	T Turning-Multi Grooving		○	◎	◎	◎	◎					
KGMI	T Internal Grooving							◎	◎			
KRMN	C Copying									◎	◎	
KGMR/L	LP Light Parting		◎									
	RP Rough Parting		◎									
KGGN	B Blank			○								◎
	A Aluminum Grooving		○	◎	○							
KRGN	A Aluminum Profiling									◎	◎	
KRMI	C Copying									◎	◎	

◎ First choice, ○ Second choice

Features

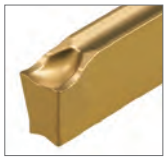
Front View

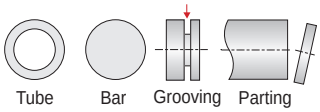
- Strong clamping ➜ Higher machining reliability
- Self-centering ➜ Higher accuracy
- Anti-chattering design ➜ Fine surface finish



C/B guide

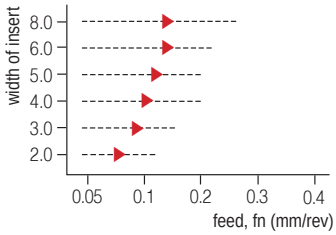
L For Light Grooving



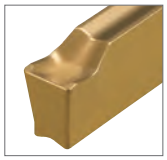


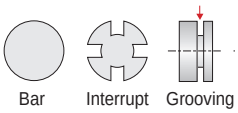
- Sharp cutting edge
- Low feed machining
- Small diameter component

- Low carbon steel
- Alloy steel
- Stainless



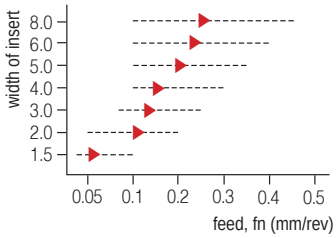
R For Rough Grooving



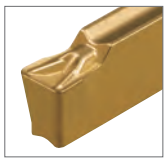


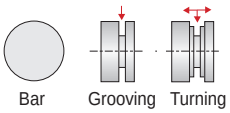
- Strong cutting edge
- High feed machining
- Interrupted cutting

- Carbon steel
- Alloy steel
- Stainless
- Cast iron



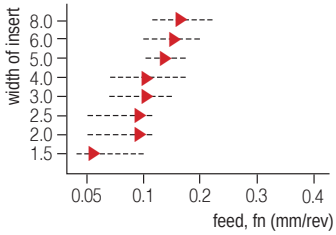
T For Turning and Multi Grooving



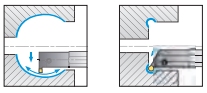


- Sharp cutting edge
- Improved chip control
- Turning & grooving machining

- Carbon steel
- Alloy steel
- Stainless
- Cast iron

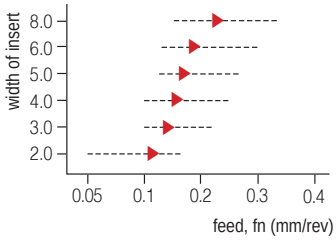


C For Copying and Relief

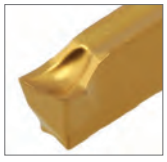


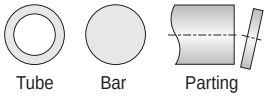
- Improved chip control
- Copying
- Relief

- Carbon steel
- Alloy steel
- Stainless
- Cast iron



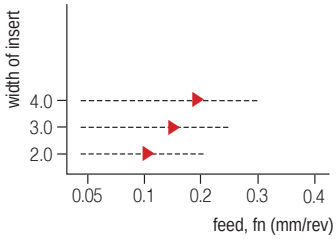
LP For Light Parting



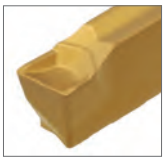


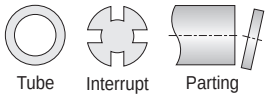
- Sharp cutting edge
- Low feed machining
- Small diameter component
- Right/left handed

- Low carbon steel
- Carbon steel
- Alloy steel
- Stainless



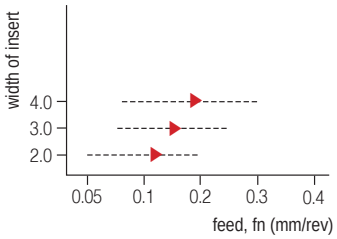
RP For Rought Parting



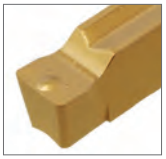


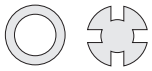
- Strong cutting edge
- High feed machining
- Interrupted cutting
- Right/left handed

- Carbon steel
- Alloy steel
- Cast iron



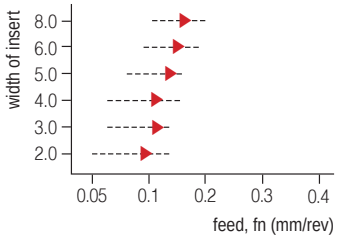
B For Precision Grooving



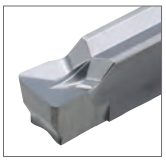


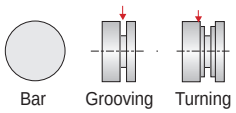
- Ground insert
- Precise tolerance
- Various cutting edge length, Nose R

- Carbon steel
- Alloy steel
- Stainless
- Cast iron



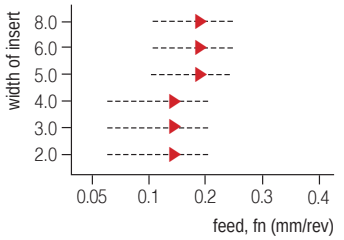
A For Aluminium Grooving





- Sharp cutting edge
- Precise tolerance

- Aluminum alloy
- Copper alloy



Grades for recommended application range

Workpiece		Grade	Order of recommended grade	Recommended cutting speed (m/min) 50 100 150 200 800
P	Steel	PC5300	1	70 – 120
		PC3035	2	70 – 130
		NC3225	3	130 – 220
		NC5330	4	120 – 200
	Alloy Steel	PC5300	1	60 – 105
		PC3035	2	60 – 110
		NC3225	3	130 – 200
		NC5330	4	90 – 180
M	Stainless steel	PC5300	1	70 – 120
		PC9030	2	70 – 115
		NC5330	3	75 – 125
K	Cast iron	PC5300	1	55 – 90
		NC5330	2	95 – 160
N	Non-ferrous metal	H01	1	200 – 790
S	HRSA	PC5300	1	20 – 35

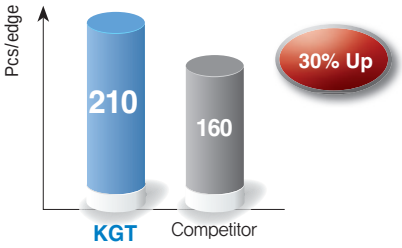
Performance evaluation

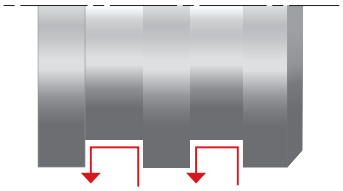
Multi-function machining

Turning + Grooving repetition

Optimized geometry for turning + grooving - High efficiency.

- **Workpiece** SM45C
- **Cutting condition** vc = 170 (m/min)
  fn = 0.15 (mm/rev)
  ap = 2 mm
  W = 3 mm
  wet
- **Designation** KGMN300-04-T (PC5300)



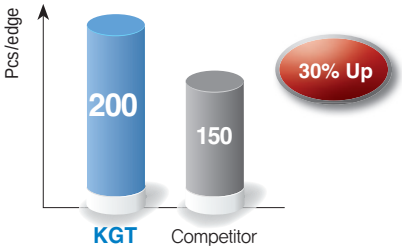


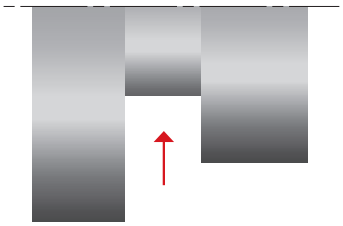
Grooving

Shoulder Grooving

Tough geometry for interrupted and deep grooving.

- **Workpiece** SUS304
- **Cutting condition** vc = 120 (m/min)
  fn = 0.12 (mm/rev)
  ap = 5 mm
  W = 4 mm
  wet
- **Designation** KGMN400-03-R (PC5300)



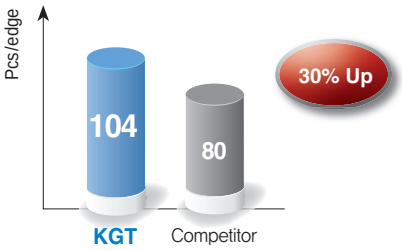


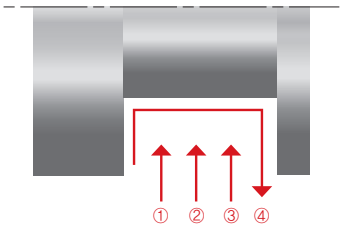
Shaft machining

Grooving (Roughing) & Turning (Finishing)

Excellent chip control for higher efficiency.

- **Workpiece** SCM440
- **Cutting condition** vc = 150 (m/min)
  fn = 0.15 (mm/rev)
  ap = 5 mm
  W = 3 mm x 3
  wet
- **Designation** KGMN300-04-T (PC5300)



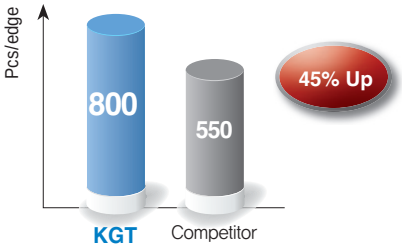


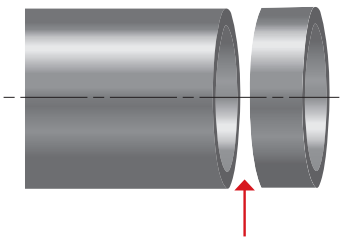
Parting off

Pipe Parting-off

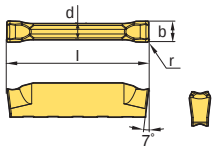
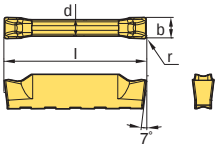
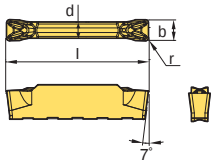
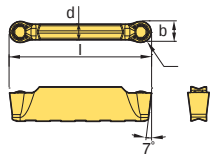
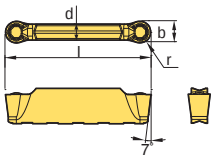
Exclusive parting-off chip breaker for longer tool life. / Sharp geometry for less burr.

- **Workpiece** SUS304
- **Cutting condition** vc = 140 (m/min)
  fn = 0.15 (mm/rev)
  ap = 2 mm
  W = 3 mm
  wet
- **Designation** KGMR300-6D-LP (PC5300)





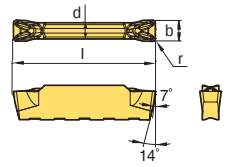
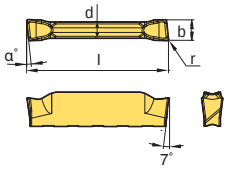
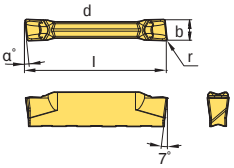
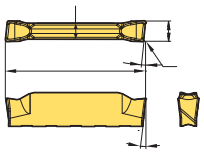
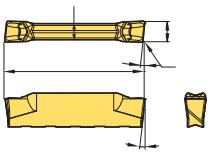
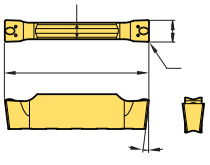
Insert

Application	Picture	Designation		Coated						Dimensions (mm)					Configuration	Page
				NC3225	NC5330	NC6315	PC3035	PC5300	PC9030	b	r	l	d	α°		
Grooving	KGMN-L	KGMN	200-02-L	●	●		●	●	●	2.0	0.2	20	1.7	-		C14~21 C23
			300-02-L	●	●		●	●	●	3.0	0.2	20	2.3	-		
			400-02-L	●	●		●	●	●	4.0	0.2	20	3.3	-		
			500-03-L	●	●		●	●		5.0	0.3	25	4.1	-		
			600-03-L	●	●			●		6.0	0.3	25	5.1	-		
Grooving · Parting off	KGMN-R	KGMN	150-015-R	●	●			●		1.5	0.15	16	1.2	-		C14~21 C23
			200-02-R	●	●		●	●	●	2.0	0.2	20	1.7	-		
			300-02-R	●	●		●	●	●	3.0	0.2	20	2.3	-		
			400-03-R	●	●		●	●	●	4.0	0.3	20	3.3	-		
			500-03-R		●			●		5.0	0.3	25	4.1	-		
			600-03-R		●			●		6.0	0.3	25	5.1	-		
			800-04-R		●			●		8.0	0.4	30	6.1	-		
Grooving · Turning	KGMN-T	KGMN	150-015-T	●	●	●		●		1.5	0.15	16	1.2			C14~21 C23
			200-02-T	●	●	●	●	●	●	2.0	0.2	20	1.7	-		
			250-02-T	●	●			●		2.5	0.2	20	2.0			
			300-02-T	●	●	●	●	●	●	3.0	0.2	20	2.3	-		
			04-T	●	●	●	●	●	●	3.0	0.4	20	2.3	-		
			400-04-T	●	●	●	●	●	●	4.0	0.4	20	3.3	-		
			08-T	●	●	●	●	●	●	4.0	0.8	20	3.3	-		
			500-04-T	●	●	●	●	●	●	5.0	0.4	25	4.1	-		
			08-T	●	●	●	●	●	●	5.0	0.8	25	4.1	-		
			600-04-T	●	●	●	●	●	●	6.0	0.4	25	5.1	-		
			08-T	●	●	●	●	●		6.0	0.8	25	5.1	-		
			800-08-T	●		●	●	●		8.0	0.8	30	6.1	-		
Relief Profiling	KRMN-C	KRMN	200-C	●	●	●	●	●		2.0	1.0	20	1.7	-		C14~22
			300-C	●	●	●	●	●		3.0	1.5	20	2.2	-		
			400-C	●	●	●	●	●		4.0	2.0	20	3.2	-		
			500-C	●	●	●	●	●		5.0	2.5	25	4.0	-		
			600-C	●	●	●	●	●		6.0	3.0	25	5.0	-		
			800-C	●	●	●		●		8.0	4.0	30	6.0	-		
Profiling	KRMI-C	KRMI	200-C							2.0	1.0	20	1.7	-		C23
			300-C							3.0	1.5	20	2.2	-		
			400-C							4.0	2.0	20	3.2	-		

• You can grind the chip breaker, 'B' as any shape you want. If you want any special shape of chip breaker, please contact your distributor.

● : Stock item

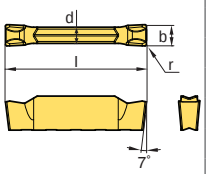
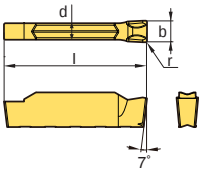
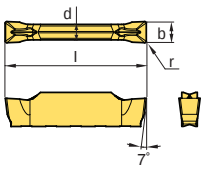
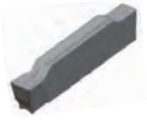
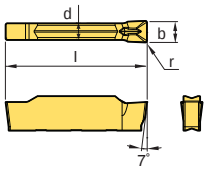
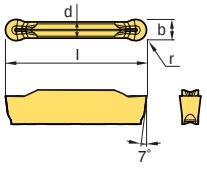
Insert

Application	Picture	Designation		Coated						Uncoated		Dimensions (mm)					Configuration	Page
				NC3215	NC3225	NC5330	NC6315	PC5300	PC9030	H01	H05	b	r	l	d	α°		
Grooving · Internal	KGMI-T	KGMI	200-02-T					●				2.0	0.2	20	1.7	-		C23
			300-04-T					●				3.0	0.4	20	2.3	-		
			400-04-T					●				4.0	0.4	20	3.3	-		
Parting off (Right handed)	KGMR-LP	KGMR	200-6D-LP			●		●				2.0	0.2	20	1.7	6		C14 C16
			8D-LP									2.0	0.2	20	1.7	8		
			15D-LP			●		●				2.0	0.2	20	1.7	15		
			300-6D-LP			●		●				3.0	0.2	20	2.3	6		
			15D-LP			●		●				3.0	0.2	20	2.3	15		
			400-4D-LP			●		●				4.0	0.3	20	3.3	4		
			15D-LP			●		●				4.0	0.3	20	3.3	15		
			500-4D-LP									5.0	0.3	25	4.1	4		
Parting off (Right handed)	KGMR-RP	KGMR	200-6D-RP			●		●				2.0	0.2	20	1.7	6		C14 C16
			8D-RP									2.0	0.2	20	1.7	8		
			15D-RP			●		●				2.0	0.2	20	1.7	15		
			300-6D-RP			●		●				3.0	0.2	20	2.3	6		
			15D-RP			●		●				3.0	0.2	20	2.3	15		
			400-4D-RP			●		●				4.0	0.3	20	3.3	4		
			15D-RP			●		●				4.0	0.3	20	3.3	15		
			500-4D-RP									5.0	0.3	25	4.1	4		
Parting off (Left handed)	KGML-LP	KGML	200-6D-LP									2.0	0.2	20	1.7	6		C14 C16
			15D-LP									2.0	0.2	20	1.7	15		
			300-6D-LP									3.0	0.2	20	2.3	6		
			15D-LP									3.0	0.2	20	2.3	15		
			400-4D-LP									4.0	0.2	20	3.3	4		
			15D-LP									4.0	0.2	20	3.3	15		
Parting off (Left handed)	KGML-RP	KGML	200-6D-RP									2.0	0.2	20	1.7	6		C14 C16
			15D-RP									2.0	0.2	20	1.7	15		
			300-6D-RP									3.0	0.2	20	2.3	6		
			15D-RP									3.0	0.2	20	2.3	15		
			400-4D-RP									4.0	0.2	20	3.3	4		
			15D-RP									4.0	0.2	20	3.3	15		
Grooving(Ground insert)	KGGN-B	KGGN	265-015-B									2.65	0.15	20	2.3	-		C14
			300-020-B									3.0	0.20	20	2.3	-		
			040-B									3.0	0.40	20	2.3	-		
			315-015-B									3.15	0.15	20	2.3	-		
			400-040-B									4.0	0.40	20	3.3	-		
			080-B									4.0	0.80	20	3.3	-		
			415-015-B									4.15	0.15	20	3.3	-		
			478-055-B									4.78	0.55	25	4.1	-		
			500-080-B									5.0	0.80	25	4.1	-		
			515-015-B									5.15	0.15	25	4.1	-		
			600-080-B									6.0	0.80	25	5.1	-		
			120-B									6.0	1.20	25	5.1	-		
			800-080-B									8.0	0.80	30	6.1	-		
			120-B									8.0	1.20	30	6.1	-		

• You can grind the chip breaker, 'B' as any shape you want. If you want any special shape of chip breaker, please contact your distributor.

● : Stock item

Insert

Application	Picture	Designation		Coated						Uncoated		Dimensions (mm)					Configuration	Page
				NC3215	NC3225	NC5330	NC6315	PC5300	PC9030	H01	H05	b	r	l	d	α°		
Grooving · Parting off (Ground insert)	new KGGN-R 	KGGN	200-02-R									2.0	0.2	20	1.7	-		C14~21
			300-02-R									3.0	0.2	20	2.3	-		
			400-03-R									4.0	0.3	20	3.3	-		
			500-03-R									5.0	0.3	25	4.1	-		
			600-03-R									6.0	0.3	25	5.1	-		
			800-04-R									8.0	0.4	30	6.1	-		
Grooving · Parting off (Single insert)	new KGGN-R 	KGGN	200S-02-R									2.0	0.2	19.9	1.7	-		C24
			300S-02-R					●				3.0	0.2	19.9	2.3	-		
			400S-03-R					●				4.0	0.3	19.9	3.3	-		
			500S-03-R					●				5.0	0.3	24.9	4.1	-		
			600S-03-R					●				6.0	0.3	24.9	5.1	-		
			800S-04-R					●				8.0	0.4	24.9	6.1	-		
Aluminum Grooving	new KGGN-A 	KGGN	200-02-A							●		2.0	0.2	20	1.7	-		C24
			300-02-A							●		3.0	0.2	20	2.3	-		
			400-04-A							●		4.0	0.4	20	3.3	-		
			500-04-A							●		5.0	0.4	25	4.1	-		
			600-04-A							●		6.0	0.4	25	5.1	-		
Aluminum Grooving (Single insert)	new KGGN-A 	KGGN	200S-02-A									2.0	0.2	20	1.7	-		C24
			300S-02-A									3.0	0.2	20	2.3	-		
			400S-04-A									4.0	0.4	20	3.3	-		
			500S-04-A									5.0	0.4	25	4.1	-		
			600S-04-A									6.0	0.4	25	5.1	-		
Aluminum Grooving	new KRGN-A 	KRGN	300-A							●		3.0	1.5	20	2.3	-		C14~21
			400-A							●		4.0	2.0	20	3.3	-		
			500-A							●		5.0	2.5	25	4.1	-		
			600-A							●		6.0	3.0	25	5.1	-		
			800-A							●		8.0	4.0	30	6.1	-		

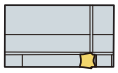
• You can grind the chip breaker, 'B' as any shape you want. If you want any special shape of chip breaker, please contact your distributor.

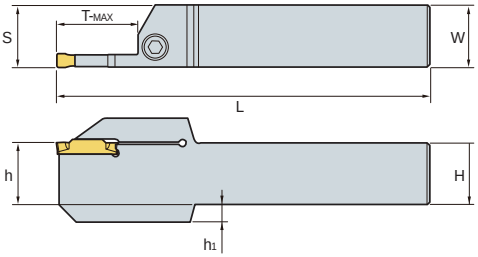
● : Stock item

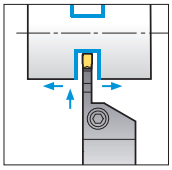
KGEHR/L

For grooving, turning, parting off, and relief machining

KGGN KGMN
KGMR/L KRMN
KRGN







• R type insert

(mm)

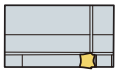
Designation		H = (h)	W	L	S	h1	T-MAX	Inserts	Screw	Wrench
KGEHR/L	1616-1.5-T14	16	16	100	16.2	-	14	KGMN150-□-□	MHA0512	HW40L
	2020-1.5-T14	20	20	125	20.2	-	14			
	2525-1.5-T14	25	25	150	25.2	-	14			
	1212-2-T08	12	12	100	12.2	-	8	KGMN200-□-□ KGMR/L200-□-□ KRMN200-C KGGN200-□-□	MHA0512	HW40L
	1616-2-T08	16	16	100	16.2	-	8			
	2020-2-T08	20	20	125	20.2	-	8			
	2525-2-T08	25	25	150	25.2	-	8			
	1616-2-T12	16	16	100	16.2	-	12			
	2020-2-T12	20	20	125	20.2	-	12			
	2525-2-T12	25	25	150	25.2	-	12			
	1616-2-T17	16	16	100	16.2	-	17			
	2020-2-T17	20	20	125	20.2	-	17			
	2525-2-T17	25	25	150	25.2	-	17			
	1616-2.5-T17	16	16	100	16.3	-	17	KGMN250-□-□	MHA0512	HW40L
	2020-2.5-T17	20	20	125	20.3	-	17			
	2525-2.5-T17	25	25	150	25.3	-	17			
	1616-3-T10	16	16	100	16.4	-	10	KGMN300-□-□ KGMR/L300-□-□ KRMN300-C KGGN300-□-□ KRGN300-□	MHA0512	HW40L
	2020-3-T10	20	20	125	20.4	-	10			
	2525-3-T10	25	25	150	25.4	-	10			
	3232-3-T10	32	32	170	32.4	-	10			
	1616-3-T13	16	16	100	16.4	-	13			
	2020-3-T13	20	20	125	20.4	-	13			
	2525-3-T13	25	25	150	25.4	-	13			
	1616-3-T20	16	16	100	16.4	-	20			
	2020-3-T20	20	20	125	20.4	-	20			
	2525-3-T20	25	25	150	25.4	-	20			
	3232-3-T20	32	32	170	32.4	-	20			
	2525-3-T25	25	25	150	25.4	-	25			
	1616-4-T10	16	16	100	16.4	-	10	KGMN400-□-□ KGMR/L400-□-□ KRMN400-C KGGN400-□-□ KRGN400-□	BHA0616	HW50L
	2020-4-T10	20	20	125	20.4	-	10			
	2525-4-T10	25	25	150	25.4	-	10			
	3232-4-T10	32	32	150	32.4	-	10			
	1616-4-T15	16	16	100	16.4	-	15			
	2020-4-T15	20	20	125	20.4	-	15			
	2525-4-T15	25	25	150	25.4	-	15			
	1616-4-T20	16	16	100	16.4	-	20			
	2020-4-T20	20	20	125	20.4	-	20			
	2525-4-T20	25	25	150	25.4	-	20			
	3232-4-T20	32	32	170	32.4	-	20			
	1616-4-T25	16	16	100	16.4	-	25			
	2020-4-T25	20	20	125	20.4	-	25			
	2525-4-T25	25	25	150	25.4	-	25			

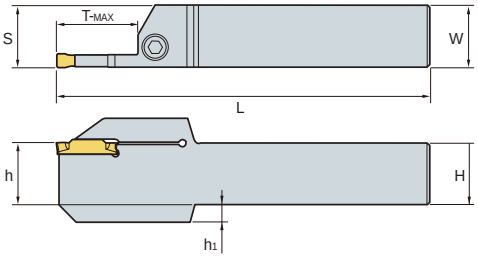
Applicable inserts C12 ~ C14

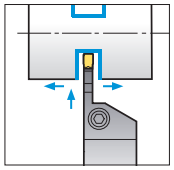
KGEHR/L

For grooving, turning, parting off, and relief machining

KGGN KGMN
KGMR/L KRMN
KRGN







• R type insert

(mm)

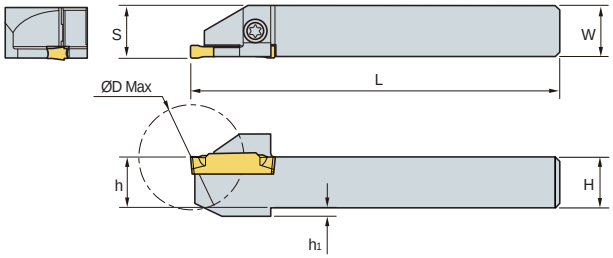
Designation		H = (h)	W	L	S	h1	T-MAX	Inserts	Screw	Wrench
KGEHR/L	2020-5-T12	20	20	125	20.5	-	12	KGMN500-□-□ KRMN500-C KGGN500-□-□ KRGN500-□	BHA0616	HW50L
	2525-5-T12	25	25	150	25.5	-	12			
	2020-5-T15	20	20	125	20.55	-	15			
	2525-5-T15	25	25	150	25.55	-	15			
	3232-5-T15	32	32	170	32.55	-	15			
	2020-5-T20	20	20	125	20.5	-	20			
	2525-5-T20	25	25	150	25.5	-	20			
	3232-5-T20	32	32	170	32.5	-	20		BHA0620	HW50L
	2525-5-T32	25	25	150	25.5	7	32			
	2020-6-T12	20	20	125	20.5	-	12	KGMN600-□-□ KRMN600-C KGGN600-□-□ KRGN600-□	BHA0616	HW50L
	2525-6-T12	25	25	150	25.5	-	12			
	2525-6-T15	25	25	150	25.55	-	15			
	3232-6-T15	32	32	170	32.55	-	15			
	2020-6-T20	20	20	125	20.5	-	20			
	2525-6-T20	25	25	150	25.5	-	20			
	3232-6-T20	32	32	170	32.5	-	20		BHA0620	HW50L
	2525-6-T32	25	25	150	25.5	7	32			
	2525-8-T16	25	25	150	26	-	16	KGMN800-□-□ KRMN800-C KGGN800-□-□ KRGN800-□	BHA0616	HW50L
	3232-8-T16	32	32	170	33.05	-	16			
	2525-8-T25	25	25	150	26	-	25			
	3232-8-T25	32	32	170	33	-	25		BHA0620	HW50L
	2525-8-T36	25	25	150	26	7	36			
	3232-8-T36	32	32	170	33	-	36			

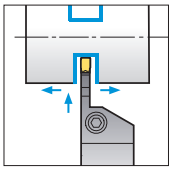
Applicable inserts **C12 ~ C14**

KGEHR/L-D00A (Auto Tool)

For grooving, turning, parting off machining

KGGN KGMN
KGMR/L KRMN





• R type insert

(mm)

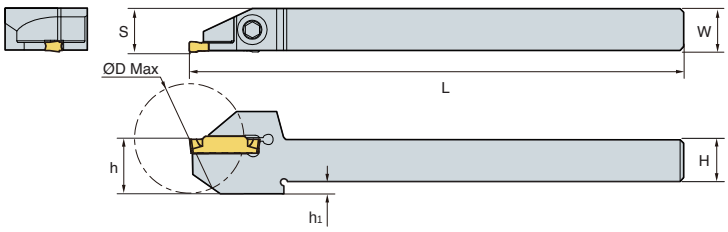
Designation		H = (h)	W	L	S	h1	ØD Max	Inserts	Screw	Wrench
KGEHR/L	1010-2-D20A	10	10	125	10.2	2	20	KGMN200-□-□ KGMR/L200-□-□ KRMN200-C KGGN200-□-□	ETNA0412	TW15L
	1212-2-D25A	12	12	125	12.2	2	25			
	1414-2-D25A	14	14	125	14.2	-	25			
	1616-2-D32A	16	16	125	16.2	-	32			
	1212-3-D25A	12	12	125	12.4	2	25	KGMN300-□-□ KGMR/L300-□-□ KRMN300-C KGGN300-□-□		
	1616-3-D32A	16	16	125	16.4	-	32			

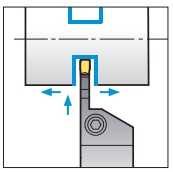
Applicable inserts C12 ~ C14

KGEHR/L-D00B (Auto Tool)

For grooving, turning, parting off machining

KGGN KGMN
KRMN KGMR/L





• R type insert

(mm)

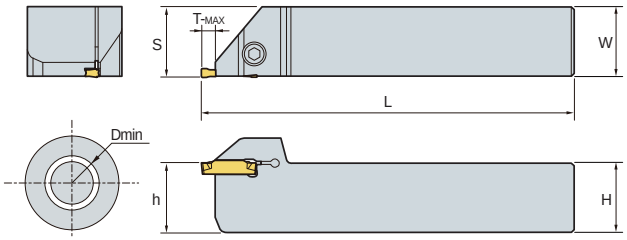
Designation		H = (h)	W	L	S	h1	ØD Max	Inserts	Screw	Wrench
KGEHR/L	1010-2-D30B	10	10	140	10.2	6.6	30	KGMN200-□-□ KGMR/L200-□-□ KRMN200-C KGGN200-□-□	MHA0512	HW40L
	1212-2-D25B	12	12	140	12.5	3.5	25			
	1212-2-D30B	12	12	140	12.2	3.5	30			
	1616-2-D25B	16	16	140	16.2	-	25			
	1616-2-D32B	16	16	140	16.2	-	32			
	1212-3-D25B	12	12	140	12.4	3.5	25	KGMN300-□-□ KGMR/L300-□-□ KRMN300-C KGGN300-□-□		
	1212-3-D32B	12	12	140	12.4	3.5	32			
	1616-3-D25B	16	16	140	16.4	-	25			
	1616-3-D32B	16	16	140	16.4	-	32			

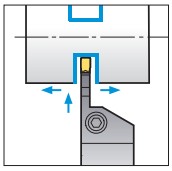
Applicable inserts C12 ~ C14

KGEHR/L-T00

For grooving, turning, face grooving machining

KGMN KRMN
KGGN KRGN





• R type insert

(mm)

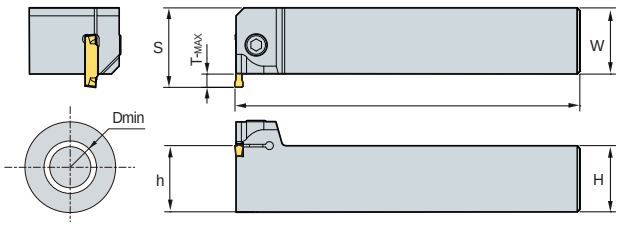
Designation		H = (h)	W	L	S	ØD Min	T-MAX	Inserts	Screw	Wrench
KGEHR/L	1616-3-T00	16	16	100	16.4	80	4.8	KGMN300-□-□ KRMN300-C KGGN300-□-□ KRGN300-□	MHA0512	HW40L
	2020-3-T00	20	20	125	20.4	80	4.8			
	2525-3-T00	25	25	150	25.4	80	4.8			
	1616-4-T00	16	16	100	16.4	80	4.8	KGMN400-□-□ KRMN400-C KGGN400-□-□ KRGN400-□	BHA0616	HW50L
	2020-4-T00	20	20	125	20.4	80	4.8			
	2525-4-T00	25	25	150	25.4	80	4.8			
	2020-6-T00	20	20	125	20.5	80	6.0	KGMN600-□-□ KRMN600-C KGGN600-□-□ KRGN600-□	BHA0616	HW50L
	2525-6-T00	25	25	150	25.5	80	6.0			

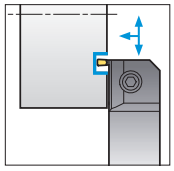
Applicable inserts **C12 ~ C14**

KGEVR/L-T00

For grooving, turning, face grooving machining

KGMN KRMN
KRGN KGGN





• R type insert

(mm)

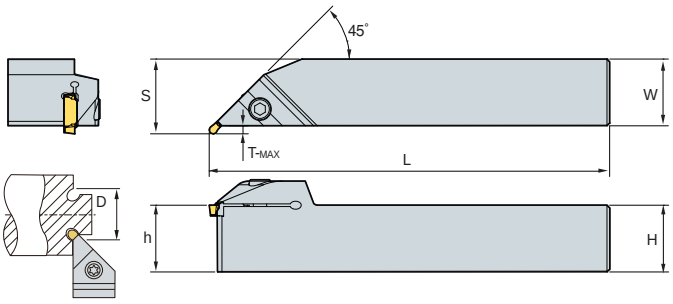
Designation		H = (h)	W	L	S	ØD Min	T-MAX	Inserts	Screw	Wrench
KGEVR/L	2020-1.5 -T00	20	20	125	23.5	120	3	KGMN150-□-□	MHA0512	HW40L
	2525-1.5 -T00	25	25	150	28.5	120	3			
	3232-1.5 -T00	32	32	170	35.5	120	3			
	2020-2 -T00	20	20	125	23.5	120	3	KGMN200-□-□ KRMN200-C KGGN200-□-□-□	MHA0512	HW40L
	2525-2 -T00	25	25	150	28.5	120	3			
	3232-2 -T00	32	32	170	35.5	120	3			
	2020-2.5 -T00	20	20	125	24.5	80	4	KGMN250-□□	MHA0512	HW40L
	2525-2.5 -T00	25	25	150	29.5	80	4			
	3232-2.5 -T00	32	32	170	36.5	80	4			
	2020-3-T00	20	20	125	25	80	4.8	KGMN300-□-□ KRMN300-C KGGN300-□-□ KRGN300-□	MHA0512	HW40L
	2525-3-T00	25	25	150	30	80	4.8			
	3232-3 -T00	32	32	170	37	80	4.8			
	2020-4-T00	20	20	125	25	80	4.8	KGMN400-□-□ KRMN400-C KGGN400-□-□ KRGN400-□	BHA0616	HW50L
	2525-4-T00	25	25	150	30	80	4.8			
	3232-4 -T00	32	32	170	37	80	4.8			
	2020-5 -T00	20	20	125	29.5	60	6	KGMN500-□-□ KRMN500-C KGGN500-□-□ KRGN500-□	BHA0616	HW50L
	2525-5 -T00	25	25	150	31.5	60	6			
	3232-5 -T00	32	32	170	38.5	60	6			
	2020-6 -T00	20	20	125	26.5	60	6	KGMN600-□-□ KRMN600-C KGGN600-□-□ KRGN600-□	BHA0616	HW50L
	2525-6-T00	25	25	150	31.5	80	6			
	3232-6 -T00	32	32	170	38.5	60	6			
	2525-8 -T00	25	25	150	33.5	50	8	KGMN800-□-□ KRMN800-C KGGN800-□-□ KRGN800-□	BHA0616	HW50L
	3232-8 -T00	32	32	170	38.5	50	8			

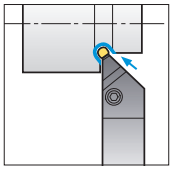
Applicable inserts C12 ~ C14

KGEUR/L

For relief machining

KRMN
KRGN





• R type insert

(mm)

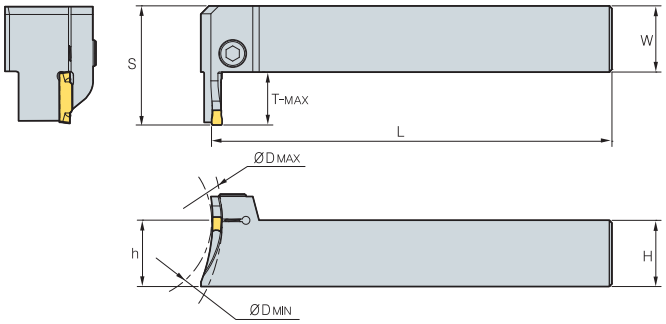
Designation		H = (h)	W	L	S	ØD Min	T-MAX	Inserts	Screw	Wrench
KGEUR/L	1616-3	16	16	100	19	40	2.8	KRMN300-C KRGN300-□	MHA0512	HW40L
	2020-3	20	20	125	23	40	2.8			
	2525-3	25	25	150	28	40	2.8			
	3232-3	32	32	170	35	40	2.8			
	1616-4	16	16	100	19	40	2.8	KRMN400-C KRGN400-□	BHA0616	HW50L
	2020-4	20	20	125	23	40	2.8			
	2525-4	25	25	150	28	40	2.8			
	3232-4	32	32	170	35	40	2.8			
	2020-5	20	20	125	23.5	50	3.3	KRMN500-C KRGN500-□	BHA0616	HW50L
	2525-5	25	25	150	28.5	50	3.3			
	3232-5	32	32	170	35.5	50	3.3			
	2020-6	20	20	125	23.5	50	3.3	KRMN600-C KRGN600-□	BHA0616	HW50L
	2525-6	25	25	150	28.5	50	3.3			
	3232-6	32	32	170	35.5	50	3.3			
	2525-8	25	25	150	28.5	65	3.3	KRMN800-C KRGN800-□	BHA0616	HW50L
	3232-8	32	32	170	35.5	65	3.3			

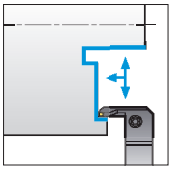
Applicable inserts **C12 ~ C14**

KGFVR/L

For face grooving machining

KGMN KRMN
KGGN KRGN





• R type insert

(mm)

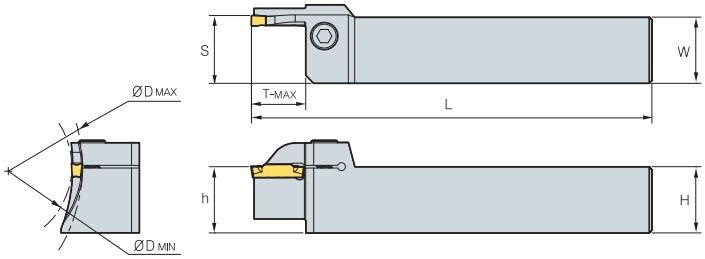
Designation		H = (h)	W	L	S	T-MAX	ØD MIN	ØD MAX	Inserts	Screw	Wrench
KGFVR/L	325-34/50-T10	25	25	150	36	10	34	50	KGMN300-□-□ KRMN300-C KGGN300-□-□ KRGN300-□	MHA0512	HW40L
	44/60-T15	25	25	150	41	15	44	60			
	54/85-T15	25	25	150	41	15	54	85			
	425-32/50-T15	25	25	150	41	15	32	50	KGMN400-□-□ KRMN400-C KGGN400-□-□ KRGN400-□	BHA0616	HW50L
	42/60-T15	25	25	150	41	15	42	60			
	44/70-T20	25	25	150	45.5	20	44	70			
	52/85-T15	25	25	150	41	15	52	85			
	60/120-T20	25	25	150	45.5	20	60	120			
	112/200-T20	25	25	150	45.5	20	112	200			
	525-50/80-T20	25	25	150	46	20	50	80	KGMN500-□-□ KRMN500-C KGGN500-□-□ KRGN500-□	BHA0616	HW50L
	70/110-T20	25	25	150	46	20	70	110			
	100/150-T20	25	25	150	46	20	100	150			
	140/200-T20	25	25	150	46	20	140	200			
	200-T20	25	25	150	46	20	200	∞			
	625-48/85-T20	25	25	150	46	20	48	85	KGMN600-□-□ KRMN600-C KGGN600-□-□ KRGN600-□	BHA0616	HW50L
	73/150-T20	25	25	150	46	20	73	150			
	138/250-T20	25	25	150	46	20	138	250			
	250-T20	25	25	150	46	20	250	∞			

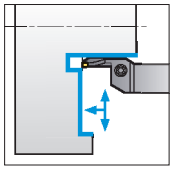
Applicable inserts C12 ~ C14

KGFHR/L

For face grooving machining

KGMN KRMN
KGGN KRGN





• R type insert

(mm)

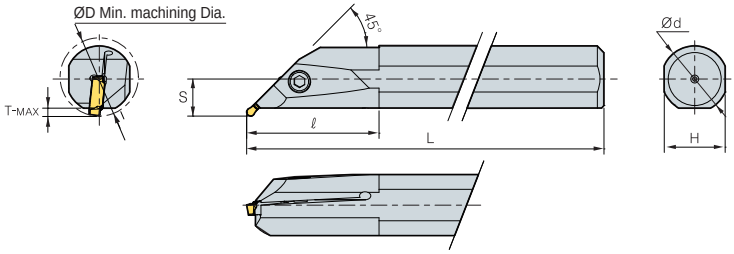
Designation		H = (h)	W	L	S	T-MAX	ØD MIN	ØD MAX	Inserts	Screw	Wrench
KGFHR/L	320-34/50-T10	20	20	150	20.5	10	34	50	KGMN300-□-□ KRMN300-C KGGN300-□-□ KRGN300-□	MHA0512	HW40L
	44/70-T15	20	20	150	20.5	15	44	70			
	64/100-T15	20	20	150	20.5	15	64	100			
	325-34/50-T10	25	25	150	25.5	10	34	50			
	44/70-T15	25	25	150	25.5	15	44	70			
	64/100-T15	25	25	150	25.5	15	64	100			
	420-34/50-T16	20	20	150	20.5	16	34	50	KGMN400-□-□ KRMN400-C KGGN400-□-□ KRGN400-□	BHA0616	HW50L
	42/70-T16	20	20	150	20.5	16	42	70			
	62/120-T16	20	20	150	20.5	16	62	120			
	112/200-T16	20	20	150	20.5	16	112	200			
	425-34/50-T20	25	25	150	25.6	20	34	50			
	40/60-T10	25	25	150	25.6	10	40	60			
	44/70-T20	25	25	150	25.6	20	44	70			
	84/92-T20	25	25	150	25.6	20	84	92			
	60/120-T20	25	25	150	25.6	20	60	120			
	112/200-T20	25	25	150	25.6	20	112	200			
	200-T20	25	25	150	25.6	20	200	∞			
	525-50/80-T15	25	25	150	25.6	15	50	80	KGMN500-□-□ KRMN500-C KGGN500-□-□ KRGN500-□	BHA0616	HW50L
	50/80-T25	25	25	150	25.6	25	50	80			
	70/110-T15	25	25	150	25.6	15	70	110			
	70/110-T25	25	25	150	25.6	25	70	110			
	100/150-T25	25	25	150	25.6	25	100	150			
	140/200-T25	25	25	150	25.6	25	140	200			
	190/220-T10	25	25	150	25.6	10	190	200			
	200-T25	25	25	150	25.6	25	200	∞			
	625-170/190-T10	25	25	150	25.6	10	170	190	KGMN600-□-□ KRMN600-C KGGN600-□-□ KRGN600-□	BHA0616	HW50L
	190/220-T10	25	25	150	25.6	10	190	200			

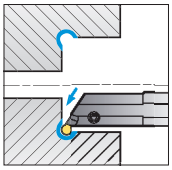
Applicable inserts **C12 ~ C14**

KGIUR/L

For relief machining

KRMN
KRGN





• R type insert

(mm)

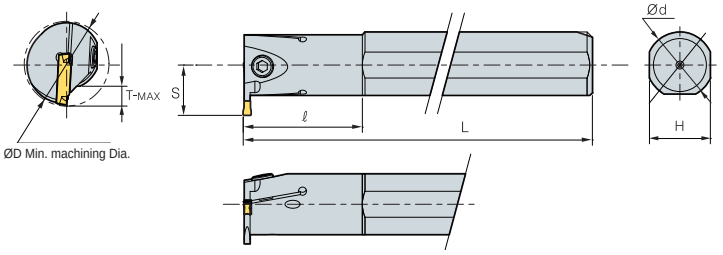
Designation		ØD	Ød	L	ℓ	T-MAX	H	S	Inserts	Screw	Wrench
KGIUR/L	3520-3	35	20	150	45	3.5	18	13	KRMN300-C KRGN300-□	MHA0512	HW40L
	4025-3	40	25	200	50	3.5	23	15.5			
	5032-3	50	32	250	65	3.5	30	19			
	3520-4	35	20	150	45	3.5	18	13	KRMN400-C KRGN400-□	MHA0512	HW40L
	4025-4	40	25	200	50	3.5	23	15.5			
	5032-4	50	32	250	65	3.5	30	19			
	4025-5	40	25	200	50	3.5	23	15.5	KRMN500-C KRGN500-□	MHA0512	HW40L
	5032-5	50	32	250	65	3.5	30	19			
	4025-6	40	25	200	50	3.5	23	15.5	KRMN600-C KRGN600-□	MHA0512	HW40L
	5032-6	50	32	250	65	3.5	30	19			
	4025-8	40	25	200	50	3.5	23	18.5	KRMN800-C KRGN800-□	MHA0512	HW40L
	5032-8	50	32	250	65	3.5	30	22			

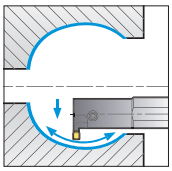
Applicable inserts **C12 ~ C14**

KGIVR/L

For grooving, turning and profil machining

KGMI KGMN
KGGN KRMI
KRMN





• R type insert

(mm)

Designation		ØD	Ød	L	ℓ	T-MAX	H	S	Inserts	Screw	Wrench
KGIVR/L	2016-1.5	20	16	125	35	4	15	12	KGMN150-□-□	MHB0410	HW30L
	2520-1.5	25	20	150	45	6	18	15.5		MHB0410	
	3225-1.5	32	25	200	45	7	23	19		MHA0512	HW40L
	2516-2	25	16	125	35	6.5	15	14	KGMI200-□-T KRMI200-C	MHB0410	HW30L
	2520-2	25	20	150	45	6.5	18	15.5			
	3225-2	32	25	200	45	7	23	19		MHB0512	HW40L
	2516-2.5	25	16	125	35	6.5	15	14	KGMN250-□-□	MHB0410	HW30L
	2520-2.5	25	20	150	45	6.5	18	15.5			
	3225-2.5	32	25	200	45	7	23	19		MHA0512	HW40L
	2520-3	25	20	150	45	6.5	18	15.5	KGMI300-□-T KRMI300-C	MHB0410	HW30L
	3225-3	32	25	200	45	7	23	19		MHA0512	HW40L
	4032-3	40	32	250	55	7.5	30	22.5		BHA0616	HW50L
	2520-4	25	20	150	45	6.5	18	15.5	KGMI400-□-T KRMI400-C	MHB0410	HW30L
	3225-4	32	25	200	45	7	23	19		MHA0512	HW40L
	4032-4	40	32	250	55	7.5	30	22.5		BHA0616	HW50L
	3225-5	32	25	200	45	7.5	23	19.5	KGMN500-□-□ KRMN500-C KGGN500-□-R KGGN500-□-A	MHA0512	HW40L
	4032-5	40	32	250	55	8.5	30	23.5		BHA0616	HW50L
	3225-6	32	25	200	45	7.5	23	19.5	KGMN600-□-□ KRMN600-C KGGN600-□-R KGGN600-□-A	MHA0512	HW40L
	4032-6	40	32	250	55	8.5	30	23.5		BHA0616	HW50L
	4032-8	40	32	250	55	8.5	30	23.5	KGMN800-□-□ KRMN800-C KGGN800-□-R	BHA0616	HW50L
	4540-8	45	40	300	70	8.5	37	26.5		BHA0616	HW50L

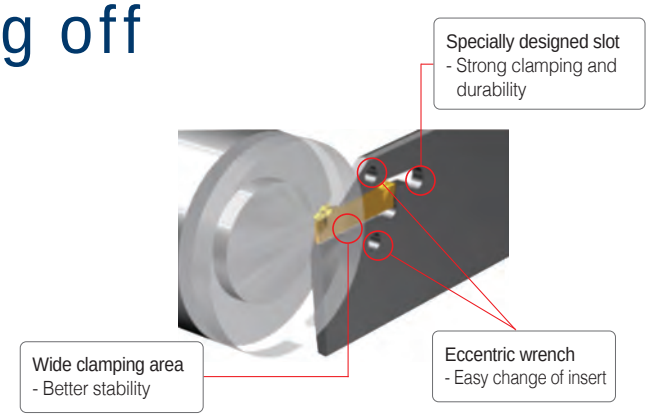
Applicable inserts C12 ~ C14

• 200, 300, 400 inserts : Internal inserts, KGMI or KRMI

KGT Blade for Parting off

Features

- Parting application with the use of existing KGT inserts
- Economical machining with a double sided insert
- Specially designed slot for strong and stable clamping
- Easy change of insert with the use of exclusive wrench



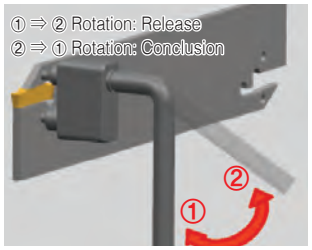
Code system

KGTB	30	32	(S)
KGTB system	Cutting width	Height of shank	S: Single pocket

How to clamp insert

① Insert the pin of wrench into the hole of blade.

② Clamp the insert on its seat after turning the handle to 45˚~160˚ for loosening the seat.



③ Finish clamp by removing the wrench after moving it back to its original state.

KGTB

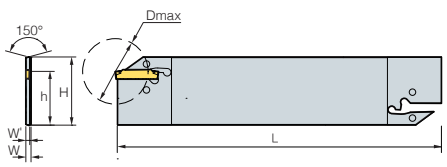


Fig. 1

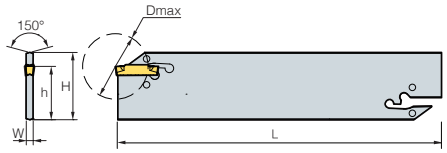


Fig. 2

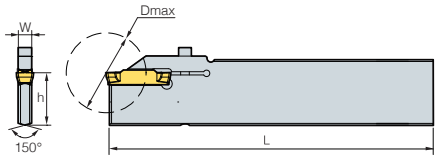


Fig. 3

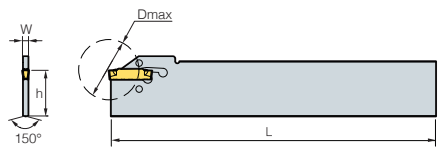


Fig. 4

(mm)

Designation		H	W	W'	L	h	ØD Max(2)	ØD Max(3)	Inserts	Wrench	Fig
KGTB	1526S	26	2.4	1.0	150	21	-	26	KG□□150-□-□	EW1203 (Separately ordered)	4
	1532	32	2.4	1	150	25	-	26	KG□□150-□-□		1
	2026S	26	2.4	1.8	150	21	50	39	KG□□200-□-□ KG□□200S-□-R(4)		4
	2032	32	2.4	1.8	150	25	50	39	KG□□200-□-□ KG□□200S-□-R(4)		1
	3026S	26	2.4	-	150	21	100	39	KG□□300-□-□ KG□□300S-□-R(4)		4
	3032	32	2.4	-	150	25	100	39	KG□□300-□-□ KG□□300S-□-R(4)		2
	4026S	26	3.2	-	150	21	100	39	KG□□400-□-□ KG□□400S-□-R(4)		4
	4032	32	3.2	-	150	25	100	39	KG□□400-□-□ KG□□400S-□-R(4)		2
	5032	32	4	-	150	25	120	49	KG□□500-□-□ KG□□500S-□-R(4)		2
	6032	32	5.2	-	150	25	120	49	KG□□600-□-□ KG□□600S-□-R(4)		2
	8032S(1)	32	6.2	-	150	25	80	59	KG□□800-□-□ KG□□800S-□-R(4)	HW30L	3

Applicable inserts **C12 ~ C14**

(1) Screw clamping (2) 1 corner use (3) 2 corner use (4) 1 corner insert

Inserts are offered with two edges, for better economical machining

MGT Series

- Inserts are offered with two edges, for better economical machining
- Multi-function operations - Reduce cycle time & increase productivity with the ability to groove, turn, face or copy in an application
- Shorten time & save on tool cost - Korloy's MGT system allows a machinist to apply one tool against many applications, reducing the number of tools
- Flat Cutting Edge - MGT tools have a flat geometry on its cutting edge to ensure excellent surface finishes. Even in high Feed applications by using a wiper function, Korloy ensures excellent surface finishes in roughing operations

Code system

- **Insert**

MG	M	N	300	-	04	-	T
System Code	**Tolerance**	**Hand**	**Cutting Edge Width**		**Nose Radius (Nose R)**		**Chip Breaker**
MG: Multi Grooving MR: Multi Grooving Round	M: Pressed G: Ground	N: Neutral R: Right L: Left I: Internal	1.5~8.0 mm		0.2 mm 0.3 mm 0.4 mm 0.8 mm		L / R / T / M / PS / PT / A

- **Holder**

MG	E	H	R/L	2525	-	3	T15
System Code	**Application**	**Holder Type**	**Hand**	**Shank Size**		**Cutting Width**	**Maximum Depth of Cut**
MG: Multi Grooving	E: External machining I: Internal machining	H: Horizontal V: Vertical U: Undercut	R: Right L: Left	Height: 25 mm Width: 25 mm (For internal machining: Minimum diameter)		1.5~8.0 mm	15~25 mm

Geometry of chip breaker

MGM(G)N-M

- Specially designed chip breaker allows a smoother chip flow versus conventional flat-top geometries through the use of a central chip breaker
- Specially placed convex dots assists with chip control in external machining, for a smoother chip flow
- Chip breaker designed for turning & grooving applications

MGMN-G

- Specially designed chip breaker allows narrower chips to promote better chip flow
- Specifically designed for grooving applications

MRMN-M

- Full radius geometry for applications that require profiling
- Available for relief machining

MFMN300

- Specially designed chip breaker allows narrower chips to promote better chip flow
- Chip breaker specially designed for face-grooving

MRGN-A

- Specially designed high positive geometry, ideal for machining aluminum
- The chip breaker's super buffed, high rake angle allows optimal chip flow of aluminum

MGMR-PS

- Sharply designed cutting edge.
- Recommended in machining low carbon steel and stainless steel
- Specially designed chip breaker allows narrower chips to promote better chip flow.
- Able to machine Feed rates and small diameter cutting

MGMR-PT

- Stronger cutting edge with a negative land for tougher applications
- Able to machine at Feed rates as high and bar stock
- Chip breaker design helps narrows chips for better flow

MGGN-A

- Smooth chip flow
- Reduced build up on cutting edge

MGMN-L

- Sharp cutting edge
- Low cutting resistance
- For auto CNC machine
- For small Dia. processing

MGMN-R

- Strong cutting edge
- For high feed rate processing

MGMN-T

- For turning & grooving
- Reduced chip width & smooth chip control by dot designed on the top corner

Parting off (MGMN/MGMR/L)

Workpiece	Cutting Speed (vc = m/min)								Feed (fn = mm/rev)				
	CVD				PVD			Uncoated	Cutting width (mm)				
	NC3120	NC3030	NCM325	NC5330	PC8110	PC5300	PC6510	ST30A	2	3	4	5	6
SM□□C	80~180			80~180		80~180			0.02~0.15	0.03~0.20	0.08~0.30	0.10~0.40	0.12~0.50
SCM	70~150	70~150	70~150	70~150		70~150			0.02~0.15	0.03~0.20	0.08~0.30	0.10~0.40	0.12~0.50
GC/GCD				50~100			50~100	50~100	0.05~0.12	0.10~0.25	0.10~0.30	0.10~0.35	0.10~0.40
STS			50~120	50~120	50~120	60~140			0.02~0.10	0.03~0.15	0.08~0.25	0.10~0.35	0.12~0.40
Non-ferrous metal (Al, Copper)								200~450	0.05~0.10	0.05~0.20	0.05~0.25	0.05~0.30	0.05~0.35

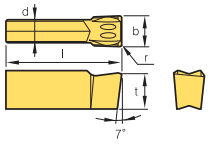
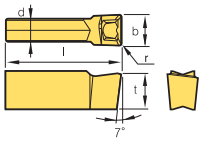
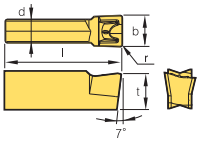
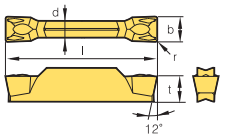
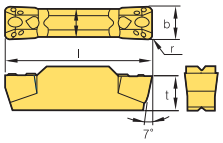
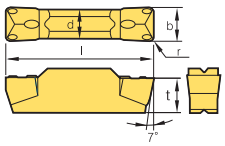
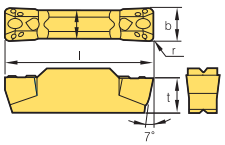
Facing (FGD/FGM/FMM/MFMN/MGMN)

Workpiece	Cutting Speed (vc = m/min)							Feed (fn = mm/rev)		
	CVD				PVD		Uncoated	Cutting width (mm)		
	NC6110	NC3030	NC5330	NC3120	PC215K	PC8110 / PC5300	H01	3	4	5
SM□□C			100~160	100~160				0.05~0.10	0.05~0.12	0.05~0.15
SCM		50~130	50~130	50~130			200~800	0.05~0.10	0.05~0.12	0.05~0.15
GC/GCD	120~150		120~150		120~150			0.05~0.10	0.05~0.12	0.05~0.15
STS			60~150			60~150		0.05~0.10	0.05~0.12	0.05~0.15
Non-ferrous metal (Al, Copper)								0.05~0.15	0.08~0.15	0.08~0.15

Grooving, Turning (MGMN/MRMN)

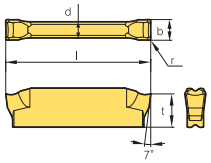
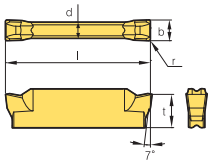
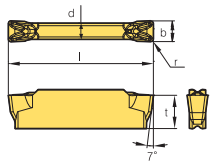
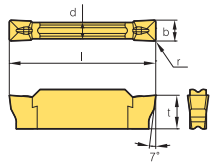
Workpiece	Cutting Speed (vc = m/min)								Feed (fn = mm/rev)					
	CVD			PVD		Cermet	Uncoated		Cutting width (mm)					
	NC3120	NC3030	NC5330	PC215K	PC5300	CN20	ST30A	ST20	0.5~1.0	1.0~2.0	2~3	3~4	4~5	6~8
SM□□C	80~200		80~200		80~180	80~120		80~120	0.03~0.08	0.04~0.09	0.05~0.1	0.05~0.12	0.05~0.15	0.05~0.2
SCM	80~180	80~180	80~180		80~160	80~120	80~120	80~120	0.03~0.07	0.04~0.08	0.05~0.08	0.05~0.1	0.05~0.12	0.05~0.15
GC/GCD			60~130		60~130				0.03~0.07	0.04~0.08	0.05~0.08	0.05~0.1	0.05~0.10	0.05~0.12
STS			60~100	60~100			60~100		0.03~0.08	0.04~0.09	0.05~0.10	0.05~0.12	0.05~0.12	0.05~0.15
Non-ferrous metal (Al, Copper)				150~300			150~400		0.05~0.12	0.05~0.15	0.05~0.15	0.08~0.15	0.08~0.15	0.10~0.20

Insert

Application	Picture	Designation		Coated							Uncoated	Dimensions (mm)					Configuration	Page
				NC3120	NC3225	NC3030	NC5330	NC6315	PC5300	PC8110	PC9030	H01	b	r	l	d	t	
Face Grooving	FGD	FGD	300R-03			●							3.0	0.3	15.0	2.0	4.0		C36 C37
			400R-04			●							4.0	0.4	15.0	3.0	4.5		
			500R-04			●							5.0	0.4	15.0	4.0	5.0		
	FGM	FGM	300R-03										3.0	0.3	15.0	2.0	4.0		C36 C37
			400R-04			●							4.0	0.4	15.0	3.0	4.5		
			500R-04										5.0	0.4	15.0	4.0	5.0		
	FMM	FMM	300R-03			●				●			3.0	0.3	15.0	2.0	3.91		C36 C37
			400R-04			●							4.0	0.4	15.0	3.0	3.96		
			500R-04							●			5.0	0.4	15.0	4.0	4.42		
Face Grooving	MFMN	MFMN	300				●						3.0	0.2	18.0	2.0	3.0		C35 C41
Grooving · Turning	MGGN-M		300-02-M										3.0	0.2	21.0	2.35	4.83		C30 C32 C34 C41
			04-M										3.0	0.4	21.0	2.35	4.83		
			08-M										3.0	0.8	21.0	2.35	4.83		
			400-02-M										4.0	0.2	21.0	3.3	4.83		
			04-M										4.0	0.4	21.0	3.3	4.83		
			08-M										4.0	0.8	21.0	3.3	4.83		
			500-02-M										5.0	0.2	26.0	4.1	5.82		
			04-M										5.0	0.4	26.0	4.1	5.82		
			08-M										5.0	0.8	26.0	4.1	5.82		
			600-02-M										6.0	0.2	26.0	5.0	5.81		
			04-M										6.0	0.4	26.0	5.0	5.81		
			08-M										6.0	0.8	26.0	5.0	5.81		
Grooving	MGMN-G	MGMN	150-G		●	●			●		●	●	1.5	0.15	16.0	1.2	3.5		C30 C32 C34 C41
			200-G	●	●	●					●	●	2.0	0.2	16.0	1.6	3.5		
			250-G		●	●			●		●		2.5	0.2	18.5	2.0	3.85		
			300-G	●	●	●	●		●		●		3.0	0.3	21.0	2.35	4.83		
			400-G	●					●		●		4.0	0.3	21.0	3.3	4.83		
			500-G										5.0	0.5	26.0	4.1	5.82		
			600-G										6.0	0.8	26.0	5.0	5.81		
Grooving · Turning	MGMN-M	MGMN	200-M	●	●	●	●		●		●	●	2.0	0.2	16.0	1.6	3.5		C30 C32 C34 C41
			250-M	●	●	●			●		●		2.5	0.2	18.5	2.0	3.85		
			300-02-M				●						3.0	0.2	21.0	2.35	4.83		
			300-M	●	●	●	●	●	●	●	●	●	3.0	0.4	21.0	2.35	4.83		
			350-03-M										3.5	0.3	21.0	2.9	4.83		
			400-02-M										4.0	0.2	21.0	3.3	4.83		
			400-M	●	●	●	●	●	●	●	●	●	4.0	0.4	21.0	3.3	4.83		
			500-04-M			●							5.0	0.4	26.0	4.1	5.82		
			500-M	●	●	●	●	●			●		5.0	0.8	26.0	4.1	5.82		
			600-M	●	●	●	●	●					6.0	0.8	26.0	5.0	5.81		
			800-M				●						8.0	0.8	31.0	6.0	6.52		

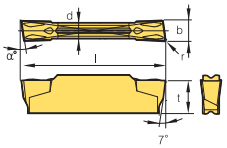
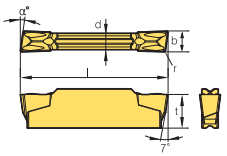
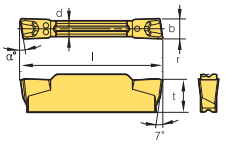
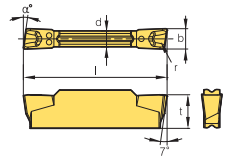
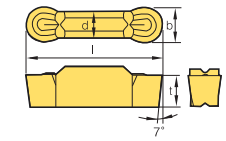
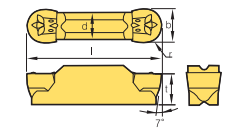
● : Stock item

Insert

Application	Picture	Designation		Coated							Uncoated		Dimensions (mm)						Configuration	Page
				NC3120	NC3225	NC3030	NC5330	NC6315	PC5300	PC8100	PC9030	H01	H05	b	r	l	d	t	α°	
Grooving	MGMN-L	MGMN	200-02-L											2.0	0.2	16	1.6	3.5	-		C30 C32 C34 C35
			04-L											2.0	0.4	20	1.7	3.5	-		
			250-02-L											2.5	0.2	18.5	2.0	3.85	-		
			300-02-L						●					3.0	0.2	21	2.35	4.83	-		
			04-L											3.0	0.4	20	2.3	4.83	-		
			400-02-L						●					4.0	0.2	21	3.3	4.83	-		
			04-L											4.0	0.4	20	3.3	4.83	-		
			500-03-L											5.0	0.3	26	4.1	5.82	-		
			04-L						●					5.0	0.4	26	4.1	5.82	-		
Grooving · Parting off	MGMN-R	MGMN	150-015-R											1.5	0.15	16	1.2	3.5	-		C30 C32 C34 C35
			200-02-R											2.0	0.2	16	1.6	3.5	-		
			04-R											2.0	0.4	20	1.7	3.5	-		
			250-02-R											2.5	0.2	18.5	2.0	3.85	-		
			300-02-R			●			●					3.0	0.2	21	2.35	4.83	-		
			04-R											3.0	0.4	20	2.3	4.83	-		
			400-02-R			●			●					4.0	0.2	21	3.3	4.83	-		
			04-R											4.0	0.4	20	3.3	4.83	-		
			500-04-R			●			●					5.0	0.4	26	4.1	5.82	-		
			08-R											5.0	0.4	26	4.1	5.82	-		
			600-04-R											6.0	0.4	26	5.0	5.81	-		
			08-R											6.0	0.8	26	5.0	5.81	-		
Grooving · Turning	MGMN-T	MGMN	150-015-T											1.5	0.15	16	1.2	3.5	-		C30 C32 C34 C35
			200-T											2.0	0.2	16	1.6	3.5	-		
			300-T			●			●					3.0	0.4	21	2.35	4.83	-		
			400-T			●			●					4.0	0.4	21	3.3	4.83	-		
			500-04-T											5.0	0.4	26	4.1	5.82	-		
			500-T						●					5.0	0.8	26	4.1	5.82	-		
			600-08-T											6.0	0.8	26	5.0	5.81	-		
Grooving	MGGN-A	MGGN	300-02-A											3.0	0.2	21	2.35	4.83	-		C28 C30 C32 C41
			04-A											3.0	0.4	21	2.35	4.83	-		
			08-A											3.0	0.8	21	2.35	4.83	-		
			400-02-A											4.0	0.2	21	3.3	4.83	-		
			04-A											4.0	0.4	21	3.3	4.83	-		
			08-A											4.0	0.8	21	3.3	4.83	-		
			500-02-A											5.0	0.2	26	4.1	5.82	-		
			04-A											5.0	0.4	26	4.1	5.82	-		
			08-A											5.0	0.8	26	4.1	5.82	-		

● : Stock item

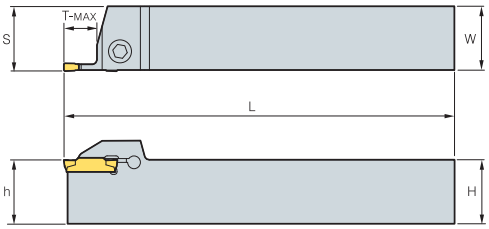
Insert

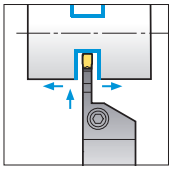
Application	Picture	Designation		Coated							Uncoated		Dimensions (mm)						Configuration	Page
				NC3120	NC3225	NC3030	NC5330	NC6315	PC5300	PC8100	PC9030	H01	H05	b	r	l	d	t	α°	
Parting off	MGMR-PS	MGMR	300-6D-PS											3.0	0.2	21	2.35	4.83	6		C30 C32
			8D-PS											3.0	0.2	21	2.35	4.83	5		
			15D-PS											3.0	0.2	21	2.35	4.83	15		
			400-4D-PS											4.0	0.3	21	3.3	4.83	4		
			500-4D-PS											5.0	0.3	26	4.1	5.82	4		
	MGML-PS	MGML	300-6D-PS											3.0	0.2	21.0	2.35	4.83	6		
			8D-PS											3.0	0.2	21.0	2.35	4.83	5		
			15D-PS											3.0	0.2	21.0	2.35	4.83	15		
			400-4D-PS											4.0	0.3	21	3.3	4.83	4		
			500-4D-PS											5.0	0.3	26	4.1	5.82	4		
Parting off	MGMR-PT	MGMR	200-6D-PT						●					2.0	0.2	16	1.6	3.5	6		C30 C32
			300-6D-PT											3.0	0.2	21	2.35	4.83	6		
			8D-PT		●									3.0	0.2	21	2.35	4.83	8		
			15D-PT											3.0	0.2	21	2.35	4.83	15		
			400-4D-PT											4.0	0.3	21	3.3	4.83	4		
			500-4D-PT											5.0	0.3	26	4.1	5.82	4		
	MGML-PT	MGML	200-6D-PT											2.0	0.2	16	1.6	3.50	6		
			300-6D-PT				●							3.0	0.2	21	2.35	4.83	6		
			8D-PT											3.0	0.2	21	2.35	4.83	8		
			15D-PT											3.0	0.2	21	2.35	4.83	15		
			400-4D-PT											4.0	0.3	21	3.30	4.83	4		
			500-4D-PT											5.0	0.3	26	4.1	5.82	4		
Aluminum	MRGN-A	MRGN	300-A											3.0	1.5	21.0	2.35	4.83	-		C30 C31 C33 C34
			400-A									●		4.0	2.0	21.0	3.3	4.83	-		
			500-A											5.0	2.5	26.0	4.1	5.82	-		
			600-A									●		6.0	3.0	26.0	5.0	5.81	-		
			800-A									●		8.0	4.0	31.0	6.0	6.52	-		
Reliefing Profiling	MRMN-M	MRMN	200-M	●	●	●					●			2.0	1.0	16.0	1.5	3.5	-		C30 ~34 C41
			300-M	●	●	●	●		●		●			3.0	1.5	21.0	2.35	4.83	-		
			400-M	●	●	●	●				●			4.0	2.0	21.0	3.3	4.83	-		
			500-M			●			●					5.0	2.5	26.0	4.1	5.82	-		
			600-M		●	●	●							6.0	3.0	26.0	5.0	5.81	-		
			800-M			●	●							8.0	4.0	31.0	6.0	6.52	-		

● : Stock item

MGEHR/L

For grooving, turning, parting off, relief, profil machining





MGMN MGMR
MGGN MRMN
MRGN

• R type insert

(mm)

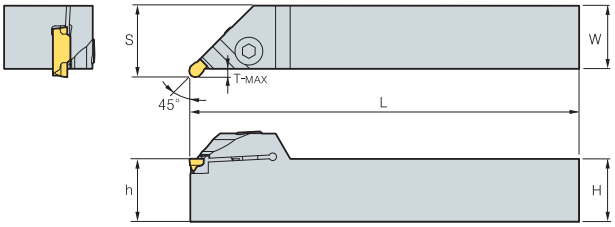
Designation		H = (h)	W	L	S	T-MAX	Inserts	Screw	Wrench
MGEHR/L	1616-1.5	16	16	100	16.2	14	MGMN150-G	LTX0514	TW20L
	2020-1.5	20	20	125	20.2	14			
	2525-1.5	25	25	150	25.2	14			
	1212-2	12	12	100	14.25	14	MGMN200-G MGMN200-M MGMR200-□□-□□	MHA0512	HW40L
	1616-2	16	16	100	16.25	14			
	2020-2	20	20	125	20.25	14			
	2525-2	25	25	150	25.25	14			
	1616-2.5	16	16	100	16.30	16	MGMN250-G MGMN250-M	MHA0512	HW40L
	2020-2.5	20	20	125	20.30	16			
	2525-2.5	25	25	150	25.30	16			
	1616-3	16	16	100	16.35	18	MGMN300-M/T MGGN300-□□-M MRMN300-M MGMR300-□□-□□ MGMN300-□□-L/R	BHA0616	HW50L
	2020-3-T10	20	20	125	20.4	10			
	2020-3	20	20	125	20.4	18			
	2525-3-T10	25	25	150	25.4	10			
	2525-3	25	25	150	25.4	18			
	3232-3-T10	32	32	170	32.4	10			
	3232-3	32	32	170	32.4	18			
	2020-4-T10	20	20	125	20.4	10	MGMN400-M/T MGGN400-□□-M MRMN400-M MGMR400-□□-□□ MGMN400-□□-L/R		
	2020-4	20	20	125	20.4	18			
	2525-4-T10	25	25	150	25.4	10			
	2525-4	25	25	150	25.4	18			
	3232-4-T10	32	32	170	32.4	10			
	3232-4	32	32	170	32.4	18			
	2020-5-T15	20	20	150	20.5	15	MGMN500-M/T MGGN500-□□-M MRMN500-M MGMR500-□□-□□ MGMN500-□□-L/R		
	2020-5	20	20	150	20.5	23			
	2525-5-T15	25	25	150	25.5	15			
	2525-5	25	25	150	25.5	23			
	3232-5-T15	32	32	170	32.5	15			
	3232-5	32	32	170	32.5	23			
	2020-6-T15	20	20	125	20.6	15	MGMN600-M MGGN600-□□-M MRMN600-M		
	2020-6	20	20	125	20.6	23			
	2525-6-T15	25	25	150	25.6	15			
	2525-6	25	25	150	25.6	23			
	3232-6-T15	32	32	170	32.6	15			
	3232-6	32	32	170	32.6	23			
	2525-8-T15	25	25	150	26.1	15	MRMN800-M MGMN800-M		
	2525-8	25	25	150	26.1	28			
	3232-8-T15	32	32	170	33.1	16			
	3232-8	32	32	170	33.1	28			
	2525-6A-T15	25	25	150	25.6	15	MRGN600-A		
	2525-6A	25	25	150	25.6	23			
	3232-6A-T15	32	32	170	32.6	15			
	3232-6A	32	32	170	32.6	23			
	2525-8A-T15	25	25	150	26.1	16	MRGN800-A		
	2525-8A	25	25	150	26.1	28			
	3232-8A-T15	32	32	170	33.1	15			
	3232-8A	32	32	170	33.1	28			

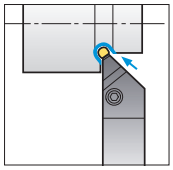
Applicable inserts C28 ~ C30

MGEUR/L

For relief, profil machining

MRMN
MRGN





• R type insert

(mm)

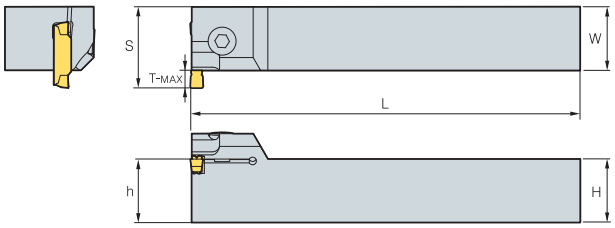
Designation		H = (h)	W	L	S	T-MAX	Inserts	Screw	Wrench
MGEUR/L	2020-3	20	20	125	23	3	MRMN300-M	BHA0616	HW50L
	2525-3	25	25	150	28	3			
	3232-3	32	32	170	35	3			
	2020-4	20	20	125	23	3	MRMN400-M		
	2525-4	25	25	150	28	3			
	3232-4	32	32	170	35	3			
	2020-5	20	20	125	24	4	MRMN500-M		
	2525-5	25	25	150	29	4			
	3232-5	32	32	170	36	4			
	2020-6	20	20	125	24	4	MRMN600-M		
	2525-6	25	25	150	29	4			
	3232-6	32	32	170	36	4			
	2525-8	25	25	150	30	5	MRMN800-M		
	3232-8	32	32	170	37	5			
	2525-6A	25	25	150	29	4	MRGN600-A		
	3232-6A	32	32	170	36	4			
	2525-8A	25	25	150	30	5	MRGN800-A		
	3232-8A	32	32	170	37	5			

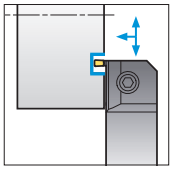
Applicable inserts **C28 ~ C30**

MGEVR/L

For grooving, turning, profil machining

MGMN MGGN
MRMN MRGN





• R type insert

(mm)

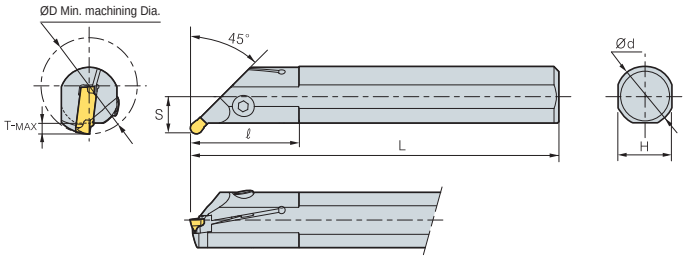
Designation		H = (h)	W	L	S	T-MAX	Min. machining Dia. (ØD)	Inserts	Screw	Wrench
MGEVR/L	2020-1.5	20	20	125	23	3	85	MGMN150-G	LTX0514	TW20L
	2525-1.5	25	25	150	28	3	85			
	3232-1.5	32	32	170	35	3	85			
	2020-2	20	20	125	23.5	3.5	65	MGMN200-M MGMN200-G	BHA0616	HW50L
	2525-2	25	25	150	28.5	3.5	65			
	3232-2	32	32	170	35.5	3.5	65			
	2020-2.5	20	20	125	24	4	65	MGMN250-M MGMN250-G		
	2525-2.5	25	25	150	29	4	65			
	3232-2.5	32	32	170	36	4	65			
	2020-3	20	20	125	25.5	5	75	MGMN300-M/T MGGN300-□-M MRMN300-M MGMN300-□□-L/R		
	2525-3	25	25	150	30.5	5	75			
	3232-3	32	32	170	37.5	5	75			
	2020-4	20	20	125	25.5	5	70	MGMN400-M/T MGGN400-□□-M MRMN400-M MGMN400-□□-L/R		
	2525-4	25	25	150	30.5	5	70			
	3232-4	32	32	170	37.5	5	70			
	2020-5	20	20	125	27	7	75	MGMN500-M/T MGGN500-□□-M MRMN500-M MGMN500-□□-L/R		
	2525-5	25	25	150	32	7	75			
	3232-5	32	32	170	39	7	75			
	2020-6	20	20	125	27	7	70	MGMN600-M MGGN600-□□-M MRMN600-M		
	2525-6	25	25	150	32	7	70			
	3232-6	32	32	170	39	7	70			
	2525-8	25	25	150	34	9	50	MRMN800-M MGMN800-M		
	3232-8	32	32	170	41	9	50			
	2525-6A	25	25	150	32	7	70	MRGN600-A		
	3232-6A	32	32	170	39	7	70			
	2525-8A	25	25	150	34	9	45	MRGN800-A		
	3232-8A	32	32	170	41	9	45			

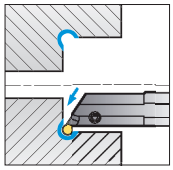
Applicable inserts **C28 ~ C30**

MGIUR/L

For relief, profil machining

MRMN
MRGN





• R type insert

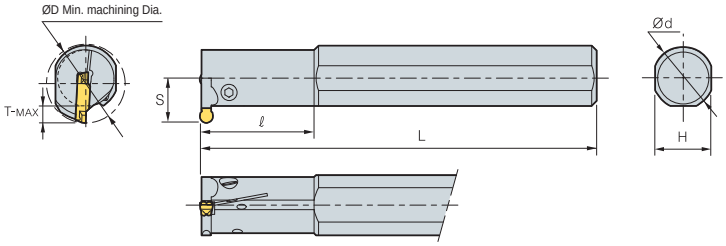
(mm)

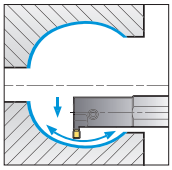
Designation		ØD	Ød	L	ℓ	T-MAX	H	S	Inserts	Screw	Wrench
MGIUR/L	3520-3	35	20	150	45	3.5	18	13	MRMN300-M	MHA0512	HW40L
	4025-3	40	25	200	45	3.5	23	15.5			
	5032-3	50	32	250	65	3.5	30	19			
	3520-4	35	20	150	45	3.5	18	13	MRMN400-M		
	4025-4	40	25	200	45	3.5	23	15.5			
	5032-4	50	32	250	65	3.5	30	19			
	4025-5	40	25	200	45	3.5	23	15.5	MRMN500-M	BHA0616 BHA0620	HW50L
	5032-5	50	32	250	65	3.5	30	19			
	4025-6	40	25	200	45	3.5	23	19	MRMN600-M	BHA0616 BHA0620	
	5032-6	50	32	250	65	3.5	30	19			
	4025-8	40	25	200	45	6.5	23	15.5	MRMN800-M	BHA0616 BHA0620	
	5032-8	50	32	250	65	6.5	30	19			
	4025-6A	40	25	200	45	3.5	23	15.5	MRGN600-A	BHA0616 BHA0620	
	5032-6A	50	32	250	65	3.5	30	19			
	4025-8A	40	25	200	45	5.0	23	18.5	MRGN800-A	BHA0616 BHA0620	
	5032-8A	50	32	250	65	6.5	30	22			

Applicable inserts **C28 ~ C30**

MGIVR/L

For grooving, turning, profil machining





MGMN MRMN
MGGN MRGN

• R type insert

(mm)

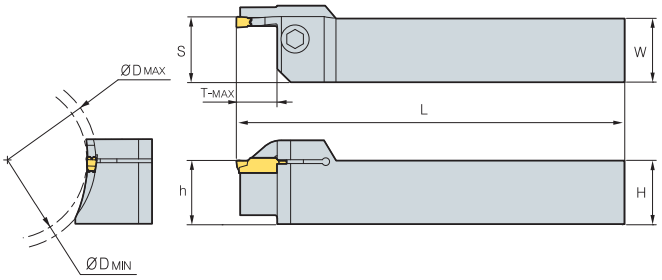
Designation		ØD	Ød	L	ℓ	T-MAX	H	S	Inserts	Screw	Wrench
MGIVR/L	2016-1.5	20	16	125	35	3.5	15	11.3	MGMN150-G	MHB0310	HW25L
	2520-1.5	25	20	150	45	3.5	18	13.1		MHA0512	HW40L
	2925-1.5	29	25	200	45	3.5	23	16.2			
	2016-2	20	16	125	35	4.5	15	12.4	MGMN200-G	MHB0310	HW25L
	2520-2	25	20	150	45	4.5	18	14.0	MGMN200-M	MHA0512	HW40L
	2925-2	29	25	200	45	4.5	23	17.2	MRMN200-M		
	2016-2.5	20	16	125	35	4.5	15	12.5	MGMN250-G	MHB0310	HW25L
	2520-2.5	25	20	150	45	4.5	18	15.1	MGMN250-M	MHA0512	HW40L
	2925-2.5	29	25	200	45	4.5	23	18.2			
	2520-3	25	20	150	45	5	18	15.6	MGMN300-M/G/T MGGN300-□□-M MRMN300-M MGMN300-□□-L/R	MHA0512	HW40L
	2520-3-T7	25	20	150	49.3	7	18	19.92			
	3125-3	31	25	200	45	6	23	18.9			
	3125-3-T10	31	25	200	45	10	23	18.9			
	3732-3	37	32	250	65	6	30	21.5			
	3732-3-T12	37	32	250	65	12	30	21.5			
	2520-4	25	20	150	45	6	18	15.6	MGMN400-M/G/T MGGN400-□□-M MRMN400-M MGMN400-□□-L/R		
	2520-4-T7	25	20	150	45	7	18	15.6			
	3125-4	31	25	200	45	6	23	18.9			
	3125-4-T10	31	25	200	45	10	23	19			
	3732-4	37	32	250	65	6	30	21.5			
	3732-4-T12	37	32	250	65	12	30	21.5			
	3125-5	31	25	200	45	8	23	19.4	MGMN500-M/G/T MGGN500-□□-M MRMN500-M MGMN500-□□-L/R	BHA0616	HW50L
	3732-5	37	32	250	65	8	30	21.5		BHA0620	
	3125-6	31	25	200	45	8	23	19.4	MGMN600-MG MGGN600-□□-M MRMN600-M	BHA0616	
	3732-6	37	32	250	65	8	30	21.5		BHA0620	
	3732-8	37	32	250	65	10	30	23.4	MRMN800-M MGMN800-M		
	4540-8	45	40	300	70	10	37	27.2			
	3125-6A	31	25	200	45	8	23	19.4	MRGN600-A	BHA0616	
	3732-6A	37	32	250	65	8	30	21.5		BHA0620	
	3732-8A	37	32	250	65	10	30	23.4	MRGN800-A		
	4540-8A	45	40	300	70	10	37	27.2			

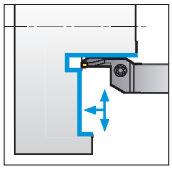
Applicable inserts **C28 ~ C30**

MGFHR/L

For face grooving machining

MFMN
MGMN





• R type insert

(mm)

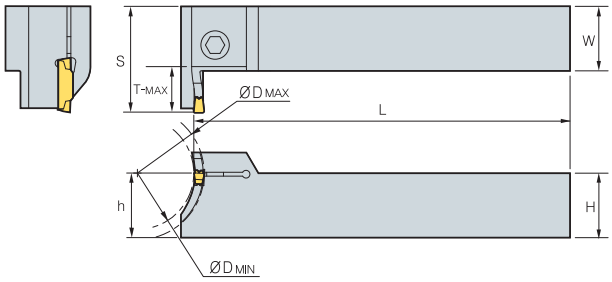
Designation		H = (h)	W	L	S	T-MAX	ØD Min	ØD Max	Inserts	Screw	Wrench
MGFHR/L	325-24/35-T10	25	25	150	25.6	10	24	35	MFMN300	BHA0616	HW50L
	29/40-T10	25	25	150	25.6	10	29	40			
	34/50-T10	25	25	150	25.6	10	34	50			
	44/70-T10	25	25	150	25.6	10	44	70			
	64/99-T10	25	25	150	25.6	10	64	99			
	425-42/63-T15	25	25	150	25.6	15	42	63			
	62/120-T15	25	25	150	25.6	15	62	120	MGMN400-M/T		
	112/200-T15	25	25	150	25.6	15	112	200	MGMN400-□□-L/R		

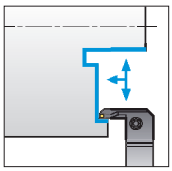
Applicable inserts **C28 ~ C30**

MGFVR/L

For face grooving machining

MFMN
MGMN





• R type insert

(mm)

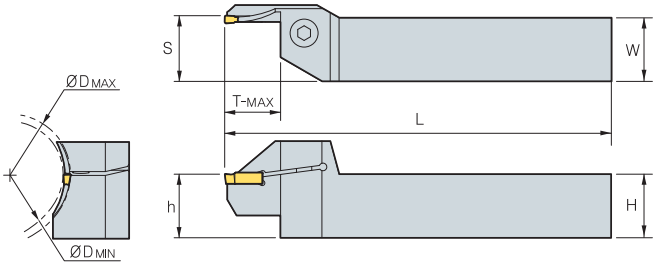
Designation		H = (h)	W	L	S	T-MAX	ØD Min	ØD Max	Inserts	Screw	Wrench
MGFVR/L	325-24/35-T10	25	25	150	36	10	24	35	MFMN300	MHA0512	HW40L
	29/40-T10	25	25	150	36	10	29	40			
	34/50-T10	25	25	150	36	10	34	50			
	44/70-T10	25	25	150	36	10	44	70			
	64/99-T10	25	25	150	36	10	64	99			
	425-44/60-T15	25	25	150	41	15	44	60	MGMN400-M/T	BHA0616	HW50L
	60/120-T15	25	25	150	41	15	60	120	MGMN400-□□-L/R		
	112/200-T15	25	25	150	41	15	112	200			

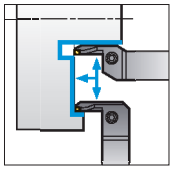
Applicable inserts **C28 ~ C30**

FGHH

For face grooving, turning machining

FGD FGM FMM





• R type insert

(mm)

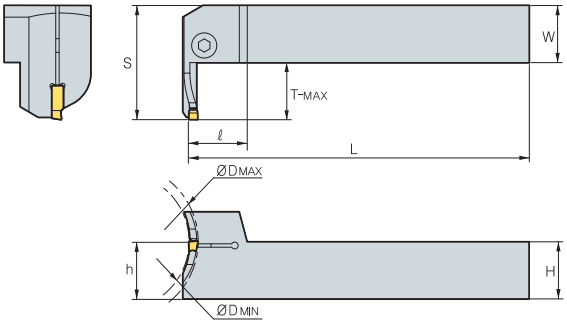
Designation		H = (h)	W	L	S	T-MAX	ØD Min	ØD Max	Inserts	Screw	Wrench
FGHH	320R - 25/30	20	20	125	20.6	12	25	30	FMM300R-03	BHA0616	HW50L
	30/35	20	20	125	20.6	12	30	35			
	35/48	20	20	125	20.6	12	35	48			
	48/60	20	20	125	20.6	22	48	60	FGD300R-03 FGM300R-03		
	60/75	20	20	125	20.6	22	60	75			
	75/100	20	20	125	20.6	22	75	100			
	100/140	20	20	125	20.6	22	100	140			
	325R - 25/30	25	25	150	25.6	12	25	30	FMM300R-03		
	30/35	25	25	150	25.6	12	30	35			
	35/48	25	25	150	25.6	12	35	48			
	48/60	25	25	150	25.6	22	48	60	FGD300R-03 FGM300R-03		
	60/75	25	25	150	25.6	22	60	75			
	75/100	25	25	150	25.6	22	75	100			
	100/140	25	25	150	25.6	22	100	140			
	420R - 25/30	20	20	125	20.6	12	25	30	FMM400R-04		
	30/35	20	20	125	20.6	12	30	35			
	35/48	20	20	125	20.6	12	35	48			
	48/60	20	20	125	20.6	25	48	60	FGD400R-04 FGM400R-04		
	60/75	20	20	125	20.6	25	60	75			
	75/100	20	20	125	20.6	25	75	100			
	100/140	20	20	125	20.6	25	100	140			
	425R - 25/30	25	25	150	25.6	12	25	30	FMM400R-04		
	30/35	25	25	150	25.6	12	30	35			
	35/48	25	25	150	25.6	12	35	48			
	48/60	25	25	150	25.6	25	48	60	FGD400R-04 FGM400R-04		
	60/75	25	25	150	25.6	25	60	75			
	75/100	25	25	150	25.6	25	75	100			
	100/140	25	25	150	25.6	25	100	140			
	520R - 25/30	20	20	125	20.6	12	25	30	FMM500R-04		
	30/35	20	20	125	20.6	12	30	35			
	35/40	20	20	125	20.6	20	35	40			
	40/48	20	20	125	20.6	20	40	48			
	48/60	20	20	125	20.6	25	48	60	FGD500R-04 FGM500R-04		
	60/75	20	20	125	20.6	25	60	75			
	75/100	20	20	125	20.6	25	75	100			
	100/140	20	20	125	20.6	25	100	140			
	525R - 25/30	25	25	150	25.6	12	25	30	FMM500R-04		
	30/35	25	25	150	25.6	12	30	35			
	35/40	25	25	150	25.6	20	35	40			
	40/48	25	25	150	25.6	20	40	48			
	48/60	25	25	150	25.6	25	48	60	FGD500R-04 FGM500R-04		
	60/75	25	25	150	25.6	25	60	75			
	75/100	25	25	150	25.6	25	75	100			
	100/140	25	25	150	25.6	25	100	140			

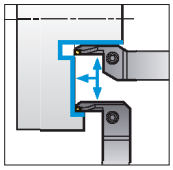
Applicable inserts **C28 ~ C30**

FGVH

For face grooving, turning machining

FGD FGM FMM





• R type insert

(mm)

Designation		H = (h)	W	L	S	T-MAX	ØD Min	ØD Max	Inserts	Screw	Wrench
FGVH	320R - 25/30	20	20	125	20.6	12	25	30	FMM300R-03	BHA0616	HW50L
	30/35	20	20	125	20.6	12	30	35			
	35/48	20	20	125	20.6	12	35	48			
	48/60	20	20	125	20.6	22	48	60	FGD300R-03 FGM300R-03		
	60/75	20	20	125	20.6	22	60	75			
	75/100	20	20	125	20.6	22	75	100			
	100/140	20	20	125	20.6	22	100	140			
	325R - 25/30	25	25	150	25.6	12	25	30	FMM300R-03		
	30/35	25	25	150	25.6	12	30	35			
	35/48	25	25	150	25.6	12	35	48			
	48/60	25	25	150	25.6	22	48	60	FGD300R-03 FGM300R-03		
	60/75	25	25	150	25.6	22	60	75			
	75/100	25	25	150	25.6	22	75	100			
	100/140	25	25	150	25.6	22	100	140			
	420R - 25/30	20	20	125	20.6	12	25	30	FMM400R-04		
	30/35	20	20	125	20.6	12	30	35			
	35/48	20	20	125	20.6	12	35	48			
	48/60	20	20	125	20.6	25	48	60	FGD400R-04 FGM400R-04		
	60/75	20	20	125	20.6	25	60	75			
	75/100	20	20	125	20.6	25	75	100			
	100/140	20	20	125	20.6	25	100	140			
	425R - 25/30	25	25	150	25.6	12	25	30	FMM400R-04		
	30/35	25	25	150	25.6	12	30	35			
	35/48	25	25	150	25.6	12	35	48			
	48/60	25	25	150	25.6	25	48	60	FGD400R-04 FGM400R-04		
	60/75	25	25	150	25.6	25	60	75			
	75/100	25	25	150	25.6	25	75	100			
	100/140	25	25	150	25.6	25	100	140			
	520R - 25/30	20	20	125	20.6	12	25	30	FMM500R-04		
	30/35	20	20	125	20.6	12	30	35			
	35/40	20	20	125	20.6	20	35	40			
	40/48	20	20	125	20.6	20	40	48			
	48/60	20	20	125	20.6	25	48	60	FGD500R-04 FGM500R-04		
	60/75	20	20	125	20.6	25	60	75			
	75/100	20	20	125	20.6	25	75	100			
	100/140	20	20	125	20.6	25	100	140			
	525R - 25/30	25	25	150	25.6	12	25	30	FMM500R-04		
	30/35	25	25	150	25.6	12	30	35			
	35/40	25	25	150	25.6	20	35	40			
	40/48	25	25	150	25.6	20	40	48			
	48/60	25	25	150	25.6	25	48	60	FGD500R-04 FGM500R-04		
	60/75	25	25	150	25.6	25	60	75			
	75/100	25	25	150	25.6	25	75	100			
	100/140	25	25	150	25.6	25	100	140			

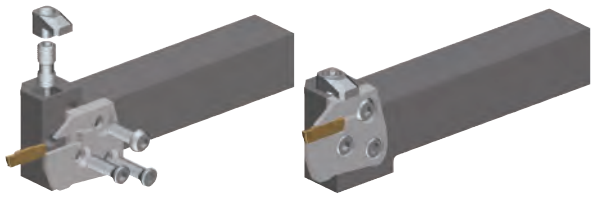
Applicable inserts C28 ~ C30

KGT/MGT cartridge

Features

- Compatible and Economical due to divided cartridge & exclusive holder system from existing single body system
- Interchangeable cartridge
  - Various assembly depends on working style
  - Reduce cutting tool costs by over 30%
  - Setting with upper clamp & side screw
- Strong & Stable setting force
  - Simultaneous assembly of insert & cartridge
  - Easy assembly & tool exchange
- Stable assembly system
  - Simple & Superior setting force

Stable Assembly thanks to double screw & clamp



Simple & Strong Setting

Code system

- **Holder**

KC	H	R/L	25	25
System Code	Holder Style	Hand	Height (mm)	Width (mm)

KC: KGT-Cartridge System
MC: MGT-Cartridge System

H: Horizontal
V: Vertical

Available cartridge

Horizontal type

MCHR

External process: KCER/MCER
Facing process: KCFL/MCFL

MCHL

External process: KCEL/MCEL
Facing process: KCFR/MCFR

Vertical type

MCVR

External process: KCEL/MCEL
Facing process: KCFR/MCFR

MCVL

External process: KCER/MCER
Facing process: KCFL/MCFL

- **Cartridge**

KC	F	R/L	3	24/35	T16
System Code	Working Style	Hand	Cutting Width (mm)	Facing Dia (min/max)	Maximum Depth (mm)

KC: KGT-Cartridge System
MC: MGT-Cartridge System

E: External Process
F: Facing Process

External Process

KCER / MCER

KCEL / MCEL

Facing Process

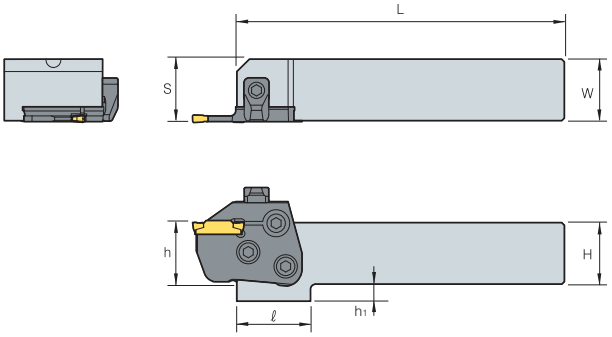
KCFR / MCFR

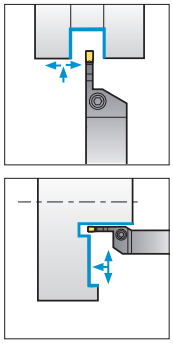
KCFL / MCFL

MCHR/L (Holder)

For grooving, turning, parting off, relief, profil machining

MCER/L
MCFR/L





• R type insert

(mm)

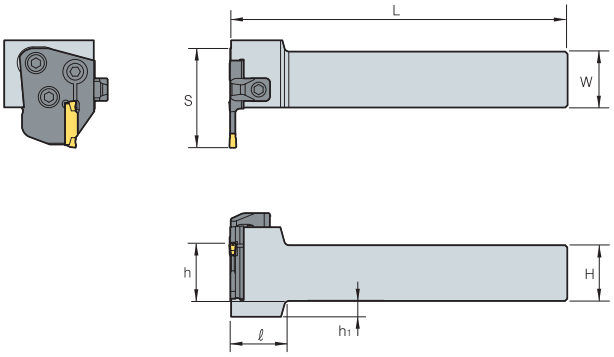
Designation		H = (h)	W	L	S	ℓ	h1	Cartridge	Clamp	Clamp Screw	Hinge Screw	Clamping Screw	Wrench
MCHR/L	2020	20	20	133	20.7	30	12	KCER/L, KCFR/L MCER/L, MCFR/L	CXH8N	DHA0818F	RHA0613	FHGA0618	HW40L
	2525	25	25	133	25.7	30	7						
	3232	32	32	153	32.7	-	-						

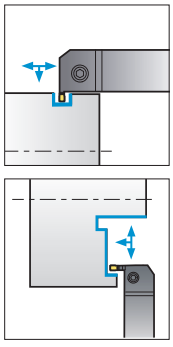
Applicable cartridge **C41 ~ C42**

MCVR/L (Holder)

For face grooving, turning machining

MCER/L
MCFR/L





• R type insert

(mm)

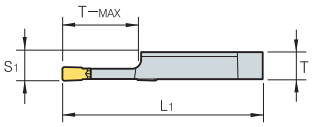
Designation		H = (h)	W	L	S	ℓ	h1	Cartridge	Clamp	Clamp Screw	Hinge Screw	Clamping Screw	Wrench
MCVR/L	2020	20	20	150	38	30	12	KCER/L, KCFR/L MCER/L, MCFR/L	CXH8N	DHA0818F	RHA0613	FHGA0618	HW40L
	2525	25	25	150	43	30	7						
	3232	32	32	170	50	-	-						

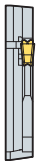
Applicable cartridge **C41 ~ C42**

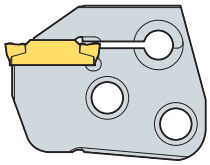
KCER/L (Cartridge)

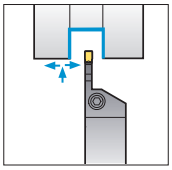
For grooving, turning, parting off, relief, profil machining

KGMN KGMR/L
KGGN KRMN









• R type insert

(mm)

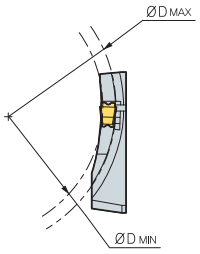
Designation		T	L_1	S_1	T-MAX	Inserts		Holder
						Width	Designation	
KCER/L	3-T16	5.97	44.5	6.35	16	3	KGMN KGMR/L KGGN KRMN	MCVR/L MCHR/L
	4-T16	5.97	44.5	6.35	16	4		
	5-T20	5.87	48.5	6.35	20	5		
	6-T20	5.82	48.5	6.35	20	6		

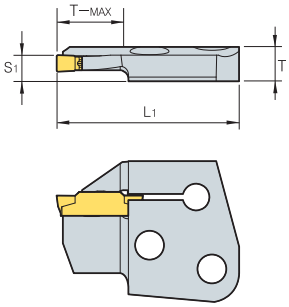
Applicable inserts C12 ~ C14

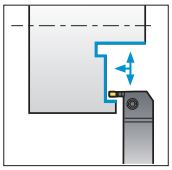
KCFR/L (Cartridge)

For face grooving, turning machining

KGMN
KGMI







• R type insert

(mm)

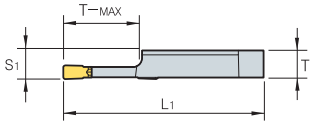
Designation		T	L_1	S_1	T-MAX	ØD		Inserts		Holder
						Min	Max	Width	Designation	
KCFR/L	3-34/50-T16	8.35	44.5	6.35	16	34	50	3	KGMN KRMN KGGN	MCVR/L MCHR/L
	44/70-T16	8.35	44.5	6.35	16	44	70	3		
	64/99-T16	8.35	44.5	6.35	16	64	99	3		
	4-44/60-T16	8.35	44.5	6.35	16	44	60	4		
	60/120-T16	8.35	44.5	6.35	16	60	120	4		
	112/200-T16	8.35	44.5	6.35	16	112	200	4		

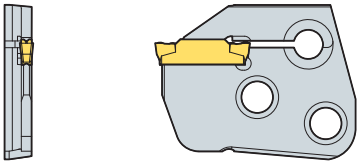
Applicable inserts C12 ~ C14

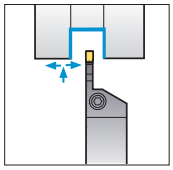
MCER/L (Cartridge)

For grooving, turning, parting off, relief, profil machining

MGMN MGMR
MGGN MRMN







• R type insert

(mm)

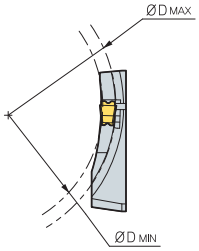
Designation		T	L_1	S_1	T_{MAX}	Inserts		Holder
						Width	Designation	
MCER/L	3-T16	6.00	44.5	6.35	16	3	MGMN	
	4-T16	5.97	44.5	6.35	16	4	MGMR/L	MCVR/L
	5-T20	5.87	48.5	6.35	20	5	MGGN	MCHR/L
	6-T20	5.82	48.5	6.35	20	6	MRMN	

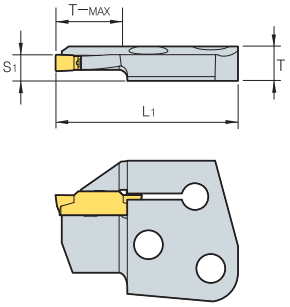
Applicable inserts C28 ~ C30

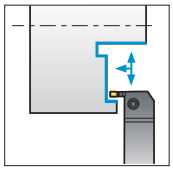
MCFR/L (Cartridge)

For face grooving, turning machining

MFNM
MGMN







• R type insert

(mm)

Designation		T	L_1	S_1	T_{MAX}	ØD		Inserts		Holder
						Min	Max	Width	Designation	
MCFR/L	3-24/35-T16	8.00	44.5	6.35	16	24	35	3		
	29/40-T16	8.00	44.5	6.35	16	29	40	3		
	34/50-T16	8.00	44.5	6.35	16	34	50	3	MFMN300	
	44/70-T16	8.00	44.5	6.35	16	44	70	3		MCVR/L
	64/99-T16	8.00	44.5	6.35	16	64	99	3		MCHR/L
	4-44/60-T16	7.97	44.5	6.35	16	44	60	4		
	60/120-T16	7.97	44.5	6.35	16	60	120	4	MGMN400	
	112/200-T16	7.97	44.5	6.35	16	112	200	4		

Applicable inserts C28 ~ C30

MGT - Machining aluminum wheels

Features

- Optimally designed inserts for aluminum wheel machining
- Longer tool life when matched with the best grade for application
- Unique clamping mechanism places a strong clamp over the insert
- A variety of insert types for multi application functions

Code system

- **Insert**

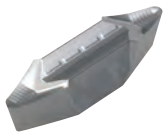
MR	G	N	6	-	A
System Code	**Tolerance**	**Hand**	**Cutting Edge Width**		**Chip Breaker**
MR: Multi Grooving Round shape MV: Multi Grooving V shape	G: Ground	N: Neutral	6 mm, 8 mm		A/AM/AP/A5

- **Holder**

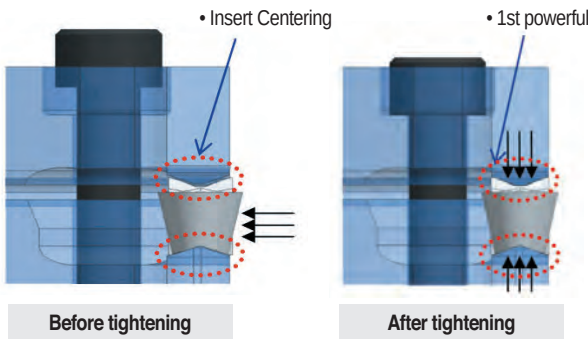
MG	E	H	R/L	25N	-	8	A	-	MR
System Code	**Application**	**Holder Type**	**Hand**	**Shank Size**		**Cutting Width**	**Chip Breaker**		**Insert Type**
MG: Multi Grooving	E: External machining I: Internal machining	H: Horizontal V: Vertical U: Undercut X: Special	R: Right L: Left	Height: 25 mm Width: 25 mm (For internal machining: Minimum diameter)		1.5~8.0 mm	A/AM/AP/A5		MR: ROUND shape MV: V shape

Various insert types

MRGN type : Full "Round" geometry

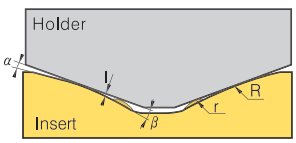
MRGN-A (For general)	MRGN-A5 (For copying)	MRGN-AM (Medium finishing)	MRGN-AP (PCD)	MVGN-A (For fine finishing)
				
High rake angle, Sharp cutting edge	Reinforced clamping force	For ductile cast iron	Improved chip control	High rake and relief angle

New clamping system

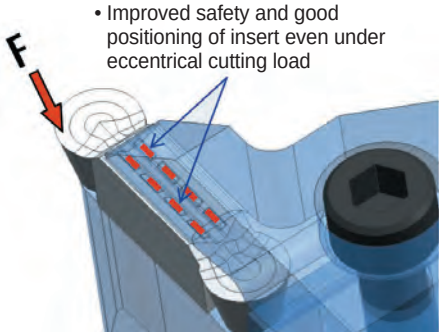


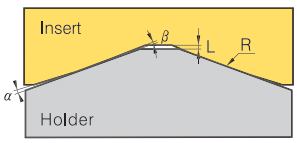
• Reinforcing the clamping force due to radius designed on the top & bottom side of insert and convex "DOT" on the top of insert

PATENT

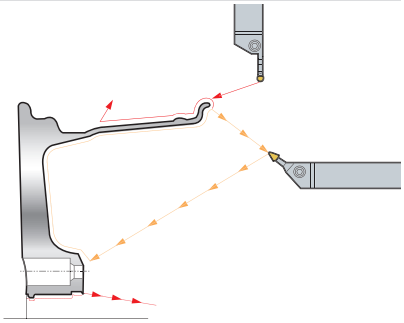
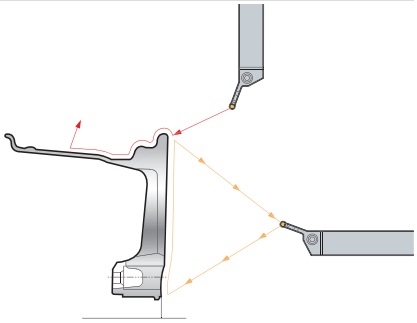
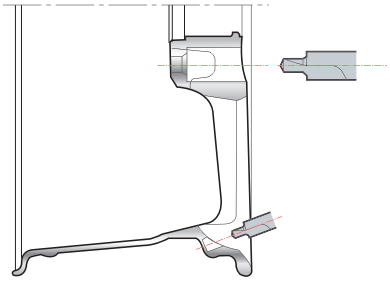


• Improved safety and good positioning of insert even under eccentrical cutting load





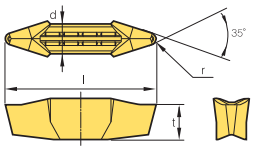
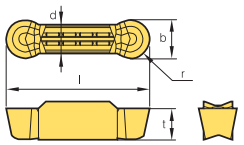
Application of aluminum wheels

Machining A	Machining B	Machining C
		

Recommended cutting condition

Workpiece		Hardness Brinell (HB)	kc (MPa)	vc (m/min)	fn (mm/rev)
Aluminum alloy (Forged)	Unhardened	50 ~ 70	500 ~ 600	1,000 ~ 2,500	0.1 ~ 0.6
	Hardened	90 ~ 110	700 ~ 900	300 ~ 1,000	0.1 ~ 0.5
Aluminum alloy (Cast)	Unhardened	70 ~ 80	700 ~ 800	300 ~ 1,000	0.1 ~ 0.5
	Hardened	80 ~ 110	800 ~ 950	200 ~ 600	0.1 ~ 0.4
Copper alloy		90 ~ 110	700 ~ 900	300 ~ 800	0.1 ~ 0.5
Magnesium alloy		70 ~ 80	700 ~ 800	300 ~ 1,000	0.1 ~ 0.5

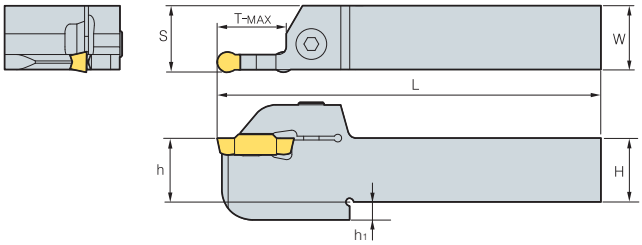
Insert

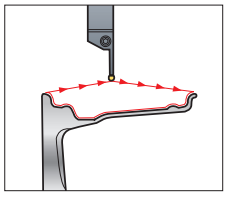
Application	Picture	Designation		Coated	Uncoated	Dimensions (mm)					Configuration	Page
				DP150	G10	b	r	l	d	t		
For Aluminum Wheel	MVGN 	MVGN	8N-A-R1.2			-	1.2	30.0	6.0	6.9		C46
			8N-A-R1.6			-	1.6	30.0	6.0	6.9		
	MRGN-A 	MRGN	6N-A		●	6.0	3.0	26.0	5.0	5.9		C45 C46
			6N-AM			6.0	3.0	26.0	5.0	5.9		
			6N-AP			6.0	3.0	26.0	5.0	5.9		
			6N-A5		●	6.0	3.0	26.0	5.0	5.9		
			8N-A			8.0	4.0	30.0	6.0	6.5		
			8N-AM			8.0	4.0	30.0	6.0	6.5		
			8N-AP			8.0	4.0	30.0	6.0	6.5		
			8N-A5		●	8.0	4.0	30.0	6.0	6.5		

● : Stock item

MGEHR/L

MRGN





• R type insert

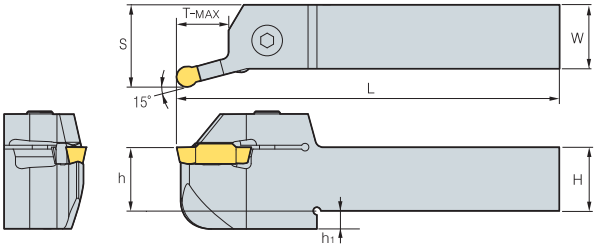
(mm)

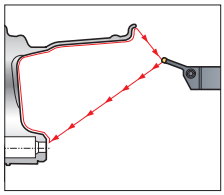
Designation		H = (h)	h1	W	L	S	T-MAX	Inserts	Screw	Wrench
MGEHR/L	25N-6A	25	7	25	150	25.55	23.5	MRGN6N-A/AP/AM	BHA0620	HW50L
	32N-6A	32	8	32	150	32.55	27			
	25N-8A	25	7	25	150	25.55	23.5	MRGN8N-A/AP/AM		
	32N-8A	32	8	32	150	32.55	27			
	25N-6A5	25	7	25	150	25.55	23.5	MRGN6N-A5		
	32N-6A5	32	8	32	150	32.55	27			
	25N-8A5	25	7	25	150	25.55	23.5	MRGN8N-A5		
	32N-8A5	32	8	32	150	32.55	27			

Applicable inserts C44

MGEHR/L-15

MRGN





• R type insert

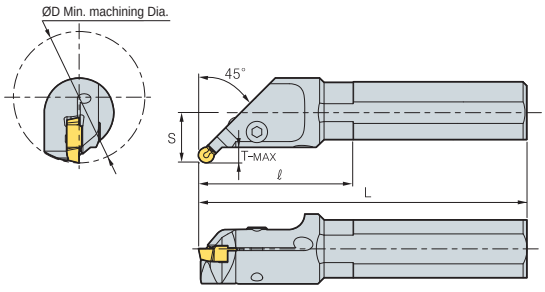
(mm)

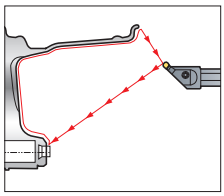
Designation		H = (h)	h1	W	L	S	T-MAX	Inserts	Screw	Wrench
MGEHR/L	25N-6A-15	25	7	25	150	32.2	20	MRGN6N-A/AP/AM	BHA0620	HW50L
	32N-6A-15	32	8	32	150	39.2	25			
	25N-8A-15	25	7	25	150	32.2	20	MRGN8N-A/AP/AM		
	32N-8A-15	32	8	32	150	39.2	25			
	25N-6A5-15	25	7	25	150	32.2	20	MRGN6N-A5		
	32N-6A5-15	32	8	32	150	39.2	25			
	25N-8A5-15	25	7	25	150	32.2	20	MRGN8N-A5		
	32N-8A5-15	32	8	32	150	39.2	25			

Applicable inserts C44

MGIUR/L-MR

MRGN





• R type insert

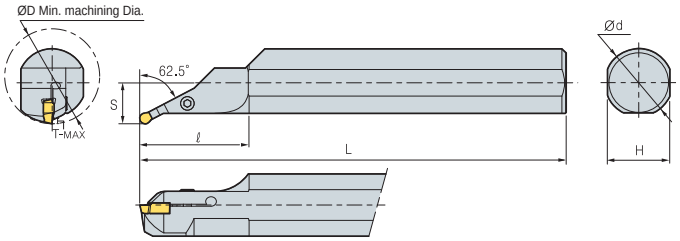
(mm)

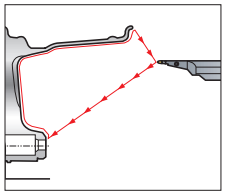
Designation		ØD	Ød	L	ℓ	T-MAX	H	S	Inserts	Screw	Wrench
MGIUR/L	6832-8A-MR	68	32	170	65	7	30	26	MRGN8N-A/AM/AP	BHA0620	HW50L
	6832-8A5-MR	68	32	170	65	7	30	26	MRGN8N-A5		

Applicable inserts C44

MGIXR/L-MR

MRGN





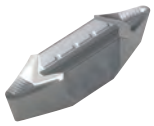
• R type insert

(mm)

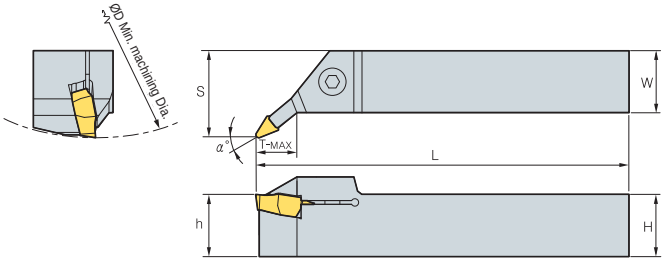
Designation		ØD	Ød	L	ℓ	T-MAX	H	S	Inserts	Screw	Wrench
MGIXR/L	7050-8A-MR	70	50	350	80	5.5	46	30.2	MRGN8N-A/AM/AP	BHA0620	HW50L
	7050-8A5-MR	70	50	350	80	5.5	46	30.2	MRGN8N-A5		

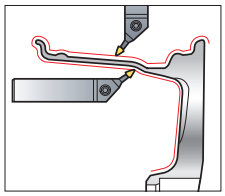
Applicable inserts **C44**

MGEXR/L



MVGN





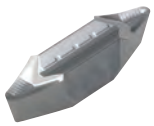
• R type insert

(mm)

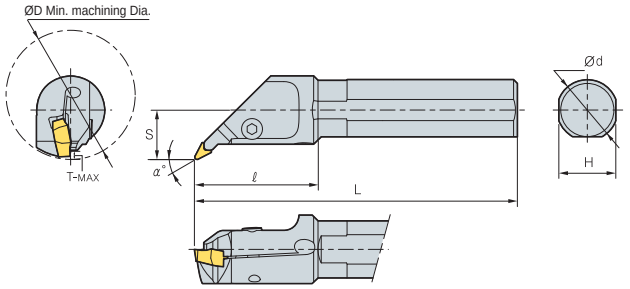
Designation		H = (h)	W	L	S	T-MAX	α°	Inserts	Screw	Wrench
MGEXR/L	25N-8A-5V	25	25	150	29	23.5	5	MVGN8N-A-R1.2	BHA0620	HW50L
	25N-8A-22.5V	25	25	150	35	27	22.5	MVGN8N-A-R1.6		

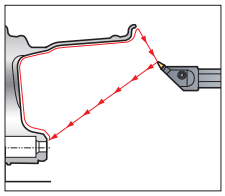
Applicable inserts **C44**

MGIUR/L-MV



MVGN





• R type insert

(mm)

Designation		ØD	Ød	L	ℓ	T-MAX	H	S	α°	Inserts	Screw	Wrench
MGIUR/L	6832-8A-MV	68	32	170	65	4.5	30	26	27.5	MVGN8N-A-R1.2 MVGN8N-A-R1.6	BHA0620	HW50L

Applicable inserts **C44**

Economical 3-corner insert for high precision grooving

TB/TB-M

- Economical 3-corner insert for grooving
- Various cutting edge size ranging from 1.25~4.5 mm
- High accuracy ground insert ensures high precision machining
- Stable chip control optimized for automated grooving process

Code system

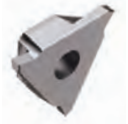
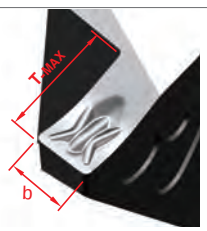
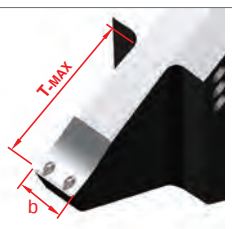
- **Insert**

TB	5	150	N	-	010	M
Triangle Blade	Inscribed circle	Cutting edge width	Hand		Nose R	Chip breaker
	3: 9.525 mm 4: 12.7 mm 5: 15.875 mm	0.5~4.5 mm	N: Neutral R: Right L: Left		0.00~0.40 mm	None M

- **Holder**

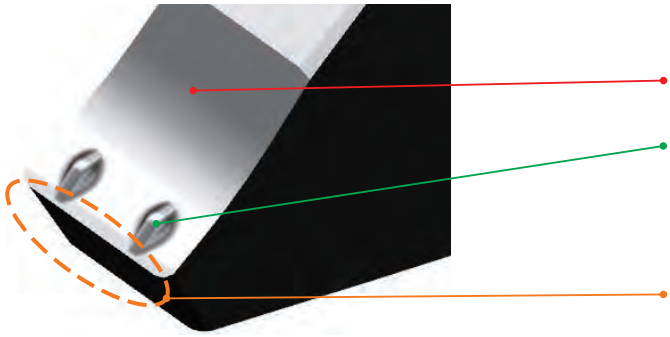
TBH	5	25	R
Triangle Blade Holder	Inscribed circle	Shank size	Hand
	3: 9.525 mm 4: 12.7 mm 5: 15.875 mm	10~25 mm	R: Right L: Left

TB/TB-M

Specification		TB3000R/L, TB4000R/L	TB4000R-M	TB5000N-000-M
Designation		TB3125R/L~TB3430R/L (Inscribed circle of 9.525 mm) TB4125R/L~TB4430R/L (Inscribed circle of 12.7 mm)	TB4150R-M~TB4450R-M (Inscribed circle of 12.7 mm)	TB5050N-000-M~TB5318-020-M (Inscribed circle of 15.875 mm)
Insert shape				
Features	Chip breaker	Ground chip breaker	Pressed chip breaker	Pressed chip breaker
	Hand	Right/Left-handed	Right-handed	Neutral
	Cutting edge width (b)	TB3000: 1.25~4.3 mm TB4000: 1.25~4.5 mm	1.5~4.5 mm	0.5~3.18 mm
	Depth of cut (T-MAX)	TB3000: ~3.5 mm TB4000: ~5.0 mm	~5.0 mm	~6.5 mm
	Shape	○	X	X
	Cutting edge width	○	○	○
Chip breaker shape				
Application range		P	P, M, K	P, M, K
Grade		CN2000, PC5300	CN2000, PC5300	PC5300

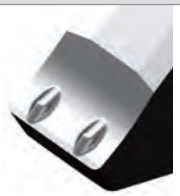
TB-M chip breaker

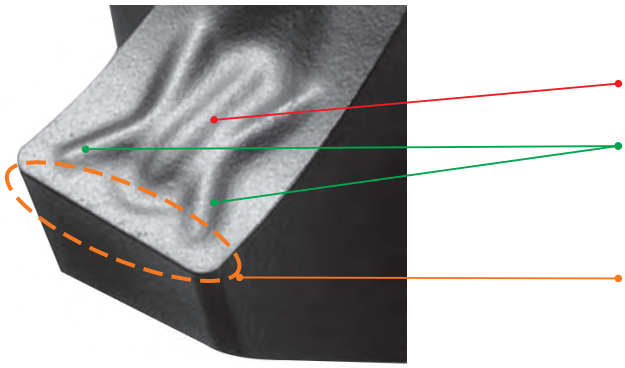
- Minimized cutting force at high speed and high feed → Smooth chip evacuation outside each groove
- High precision cutting performance → Exceptional surface finish and accurate dimensions
- Excellent chip flow and cutting results → Ideal for automated and unmanned productionw



TB5-M Chip breaker

- **Lowered back area**: reduced load of chip evacuation due to minimizing chip friction
- **Beveled protruding dot**: made regular sized chip curls good chip flow out of the groove by reducing the chip width minimized load for chip evacuation in high depth of cut
- **Land**: prevented chipping and increased stability in interrupted machining
- **Use**: for grooving with T-MAX 6.5 mm below, parting and interrupted machining

Designation	TB5050N-M ~TB5120N-M	TB5140N-M ~TB5178N-M	TB5196N-M ~TB5239N-M	TB5247N-M ~TB5287N-M	TB5300N-M ~TB5318N-M
Shape					
Cutting edge width (b)	0.5~1.2 mm	1.40~1.78 mm	1.96~2.39 mm	2.47~2.87 mm	3.0~3.18 mm



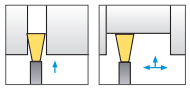
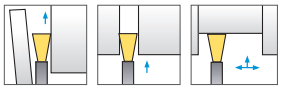
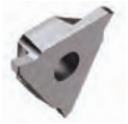
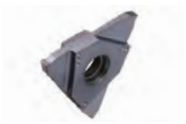
TB4-M Chip breaker

- **Second protruding dot**: stable chip curl control
- **Main protruding dot**: making regular sized chip curl good chip flow out of the groove by reducing the chip width good chip control in turning and chamfering
- **Sharp cutting edge**: increased machinability
- **Use**: for grooving with T-MAX 4.5 mm below and turning

Designation	TB4150R-M~TB4185R-M	TB4200R-M~TB4228R-M	TB4300R-M~TB4350R-M	TB4400R-M~TB4450R-M
Shape				
Cutting edge width (b)	1.5~1.85 mm	2.0~2.8 mm	3.0~3.5 mm	4.0~4.5 mm

Guide for TB

(mm)

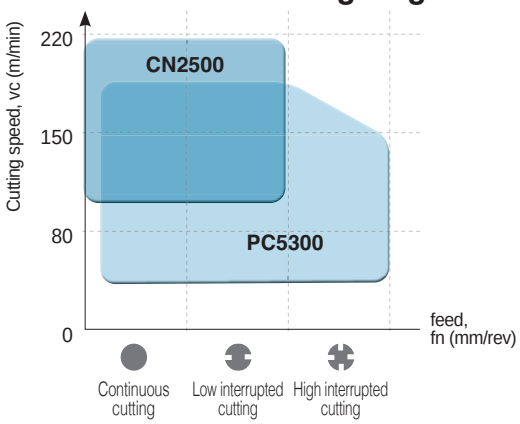
TB					TB3 / TB4	TB4-M	TB5-M
Recommended machining method							
Cutting edge width W	Depth of cut T-MAX			Recommended feed rate (mm/rev)			
	TB3/TB4	TB4-M	TB5-M				
0.50	-	-	2.5	0.05 (0.03~0.1)	-	-	●
0.80	-	-	1.6		-	-	●
1.00	-	-	3.5		-	-	●
1.04	-	-	2.0		-	-	●
1.20	-	-	2.0		-	-	●
1.25	2.0	-	2.0		●	-	-
1.40	2.0	-	6.5	0.10 (0.03~0.15)	●	-	●
1.45	2.0	-	-		●	-	-
1.47	-	-	6.5		-	-	●
1.50	3.5	3.5	6.5		●	●	●
1.57	-	-	6.5		-	-	●
1.70	-	-	6.5		-	-	●
1.75	3.5	3.5	-		●	●	-
1.78	-	-	6.5		-	-	●
1.85	3.5	3.5	-		●	●	-
1.96	-	-	6.5		-	-	●
2.00	3.5	3.5	6.5		●	●	●
2.15	3.5	3.5	-	0.12 (0.03~0.2)	●	●	-
2.22	6.5	-	6.5		-	-	●
2.30	3.5	3.5	6.5		●	●	●
2.39	-	-	6.5		-	-	●
2.47	-	-	6.5		-	-	●
2.50	4.0	4.0	6.5		●	●	●
2.65	4.0	4.0	6.5		●	●	-
2.70	-	-	6.5		-	-	●
2.80	4.0	4.0	-		●	●	-
2.87	-	-	6.5		-	-	●
3.00	4.0	4.0	6.5		●	●	●
3.15	-	-	6.5	0.15 (0.05~0.2)	-	-	●
3.18	-	-	6.5		-	-	●
3.30	4.0	-	-		●	-	-
3.50	5.0	5.0	-		●	●	-
4.00	5.0	5.0	-		●	●	-
4.30	5.0	5.0	-		●	●	-
4.50	5.0	5.0	-		●	●	-

Recommended cutting conditions

Workpiece	Grade	CN2500 (Cermet)			PC5300 (Coated)		
		Min	Recommended	Max.	Min	Recommended	Max.
P	SM□□C type	100	**160**	220	80	**140**	200
	SCM type	100	**150**	200	80	**130**	180
M	STS type	-	-	-	40	**80**	150
K	GC, GCD type	-	-	-	80	**130**	180

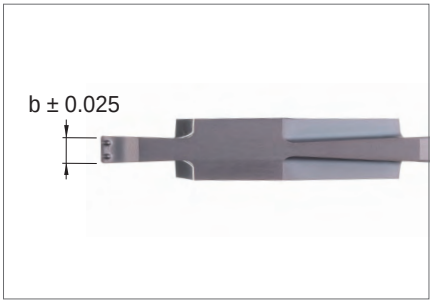
Recommended cutting speed, vc (m/min)

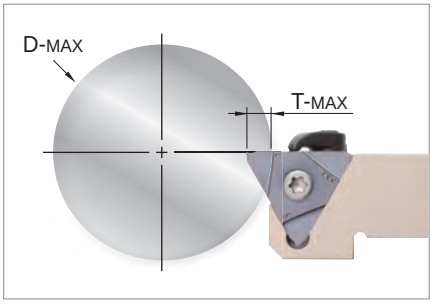
Recommended cutting range

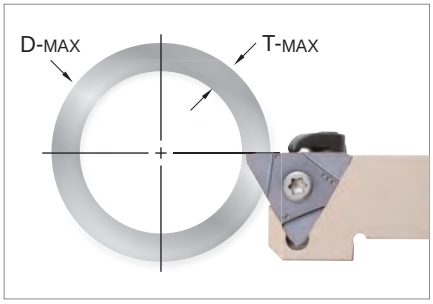


TB5-M machining range

- There is a limit to cutting diameters of TB5-M when depth of cuts are over 5 mm
  (e.g. When cutting with a TB5200N-020-M insert at the depth of 6.2 mm, Ø60 D-MAX is available)
- N.L = No limit



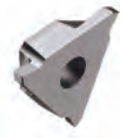
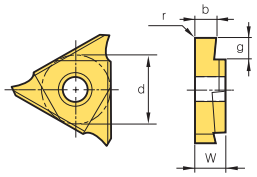
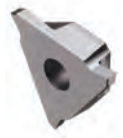
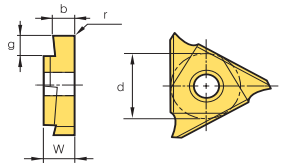




(mm)

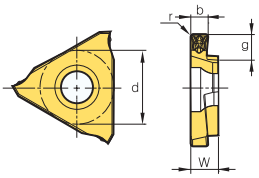
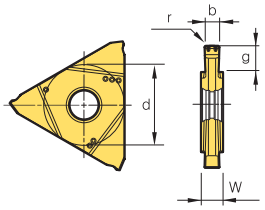
Designation		b	r	g (T-MAX)	ØD-MAX								
					T ≤ 3.0	T ≤ 3.5	T ≤ 4.0	T ≤ 4.5	T ≤ 5.0	T ≤ 5.5	T ≤ 6.0	T ≤ 6.4	T ≤ 6.5
TB	5050N- 000-M	0.50	0.00	1.0	-	-	-	-	-	-	-	-	-
	004-M	0.50	0.04	2.5	-	-	-	-	-	-	-	-	-
	5080N- 000-M	0.80	0.00	1.6	-	-	-	-	-	-	-	-	-
	5100N- 006-M	1.00	0.06	3.5	-	-	-	-	-	-	-	-	-
	5104N- 000-M	1.04	0.00	2.0	-	-	-	-	-	-	-	-	-
	5120N- 000-M	1.20	0.00	2.0	-	-	-	-	-	-	-	-	-
	5140N- 000-M	1.40	0.00	6.5	N.L	N.L	N.L	N.L	N.L	Ø300	Ø170	Ø60	Ø40
	5147N- 000-M	1.47	0.00	6.5	N.L	N.L	N.L	N.L	N.L	Ø300	Ø170	Ø60	Ø40
	5150N- 010-M	1.50	0.10	6.5	N.L	N.L	N.L	N.L	N.L	Ø300	Ø170	Ø60	Ø40
	015-M	1.50	0.15	6.5	N.L	N.L	N.L	N.L	N.L	Ø300	Ø170	Ø60	Ø40
	5157N- 015-M	1.57	0.15	6.5	N.L	N.L	N.L	N.L	N.L	Ø300	Ø170	Ø60	Ø40
	5170N- 010-M	1.70	0.10	6.5	N.L	N.L	N.L	N.L	N.L	Ø300	Ø170	Ø60	Ø40
	5178N- 018-M	1.78	0.18	6.5	N.L	N.L	N.L	N.L	N.L	Ø300	Ø170	Ø60	Ø40
	5196N- 015-M	1.96	0.15	6.5	N.L	N.L	N.L	N.L	N.L	Ø300	Ø170	Ø60	Ø40
	5200N- 020-M	2.00	0.20	6.5	N.L	N.L	N.L	N.L	N.L	Ø300	Ø170	Ø60	Ø40
	5222N- 015-M	2.22	0.15	6.5	N.L	N.L	N.L	N.L	N.L	Ø300	Ø170	Ø60	Ø40
	5230N- 020-M	2.30	0.20	6.5	N.L	N.L	N.L	N.L	N.L	Ø300	Ø170	Ø60	Ø40
	5239N- 015-M	2.39	0.15	6.5	N.L	N.L	N.L	N.L	N.L	Ø300	Ø170	Ø60	Ø40
	5247N- 020-M	2.47	0.20	6.5	N.L	N.L	N.L	N.L	N.L	Ø300	Ø170	Ø60	Ø40
	5250N- 020-M	2.50	0.20	6.5	N.L	N.L	N.L	N.L	N.L	Ø300	Ø170	Ø60	Ø40
	5270N- 010-M	2.70	0.10	6.5	N.L	N.L	N.L	N.L	N.L	Ø300	Ø170	Ø60	Ø40
	5287N- 020-M	2.87	0.20	6.5	N.L	N.L	N.L	N.L	N.L	Ø300	Ø170	Ø60	Ø40
	5300N- 000-M	3.00	0.00	6.5	N.L	N.L	N.L	N.L	N.L	Ø300	Ø170	Ø60	Ø40
	5300N- 020-M	3.00	0.20	6.5	N.L	N.L	N.L	N.L	N.L	Ø300	Ø170	Ø60	Ø40
	040-M	3.00	0.40	6.5	N.L	N.L	N.L	N.L	N.L	Ø300	Ø170	Ø60	Ø40
	5315N- 015-M	3.15	0.15	6.5	N.L	N.L	N.L	N.L	N.L	Ø300	Ø170	Ø60	Ø40
	5318N- 020-M	3.18	0.20	6.5	N.L	N.L	N.L	N.L	N.L	Ø300	Ø170	Ø60	Ø40

Insert

Picture	Designation		Cermet		Coated	Dimensions (mm)					Configuration
			CN2000	CN2500	PC5300	b	g (T-MAX)	r	w	d	
	TB (Right-handed)	3125R				1.25	1.5	0.2	4.76	9.525	
		3145R				1.45	1.5	0.2	4.76	9.525	
		3175R				1.75	2.5	0.2	4.76	9.525	
		3185R				1.85	2.5	0.2	4.76	9.525	
		3200R				2.00	2.5	0.2	4.76	9.525	
		3230R				2.30	3.5	0.3	4.76	9.525	
		3280R				2.80	3.5	0.3	4.76	9.525	
		3330R				3.30	3.5	0.3	4.76	9.525	
		3430R				4.30	3.5	0.4	4.76	9.525	
		4125R	●		●	1.25	2.0	0.2	4.76	12.7	
		4145R	●		●	1.45	2.0	0.2	4.76	12.7	
		4150R	●		●	1.50	3.5	0.2	4.76	12.7	
		4175R	●		●	1.75	3.5	0.2	4.76	12.7	
		4185R	●		●	1.85	3.5	0.2	4.76	12.7	
		4200R	●		●	2.00	3.5	0.2	4.76	12.7	
		4215R	●		●	2.15	3.5	0.2	4.76	12.7	
		4230R	●		●	2.30	3.5	0.2	4.76	12.7	
		4250R	●		●	2.50	4.0	0.3	4.76	12.7	
		4265R	●		●	2.65	4.0	0.3	4.76	12.7	
		4280R	●		●	2.80	4.0	0.3	4.76	12.7	
		4300R	●		●	3.00	4.0	0.3	4.76	12.7	
		4330R	●			3.30	4.0	0.3	4.76	12.7	
		4350R	●			3.50	5.0	0.3	4.76	12.7	
		4400R	●		●	4.00	5.0	0.4	4.76	12.7	
		4430R	●		●	4.30	5.0	0.4	4.76	12.7	
		4450R	●		●	4.50	5.0	0.4	4.76	12.7	
	TB (Left-handed)	3125L				1.25	1.5	0.2	4.76	9.525	
		3145L				1.45	1.5	0.2	4.76	9.525	
		3175L				1.75	2.5	0.2	4.76	9.525	
		3185L				1.85	2.5	0.2	4.76	9.525	
		3200L				2.00	2.5	0.2	4.76	9.525	
		3230L				2.30	3.5	0.3	4.76	9.525	
		3280L				2.80	3.5	0.3	4.76	9.525	
		3330L				3.30	3.5	0.3	4.76	9.525	
		3430L				4.30	3.5	0.4	4.76	9.525	
		4125L				1.25	2.0	0.2	4.76	12.7	
		4145L				1.45	2.0	0.2	4.76	12.7	
		4150L				1.50	3.5	0.2	4.76	12.7	
		4175L				1.75	3.5	0.2	4.76	12.7	
		4185L				1.85	3.5	0.2	4.76	12.7	
		4200L				2.00	3.5	0.2	4.76	12.7	
		4215L				2.15	3.5	0.2	4.76	12.7	
		4230L				2.30	3.5	0.2	4.76	12.7	
		4250L				2.50	4.0	0.3	4.76	12.7	
		4265L				2.65	4.0	0.3	4.76	12.7	
		4280L				2.80	4.0	0.3	4.76	12.7	
		4300L				3.00	4.0	0.3	4.76	12.7	
		4330L				3.30	4.0	0.3	4.76	12.7	
		4350L				3.50	5.0	0.3	4.76	12.7	
		4400L				4.00	5.0	0.4	4.76	12.7	
		4430L				4.30	5.0	0.4	4.76	12.7	
		4450L				4.50	5.0	0.4	4.76	12.7	

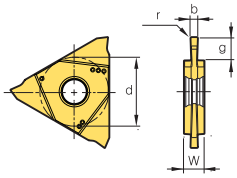
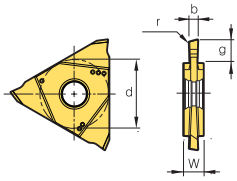
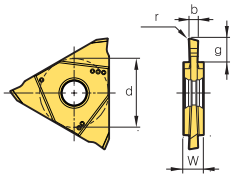
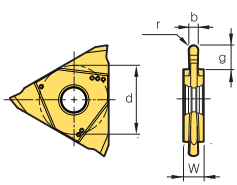
● : Stock item

Insert

Picture	Designation		Cermet		Coated	Dimensions (mm)					Configuration
			CN2000	CN2500	PC5300	b	g (T-MAX)	r	w	d	
	TB (Right-handed)	4150R-M	●		●	1.50	3.5	0.20	4.76	12.7	
		4175R-M	●		●	1.75	3.5	0.20	4.76	12.7	
		4185R-M	●		●	1.85	3.5	0.20	4.76	12.7	
		4200R-M	●		●	2.00	3.5	0.20	4.76	12.7	
		4215R-M	●		●	2.15	3.5	0.20	4.76	12.7	
		4230R-M	●		●	2.30	3.5	0.20	4.76	12.7	
		4250R-M	●		●	2.50	4.0	0.30	4.76	12.7	
		4265R-M	●		●	2.65	4.0	0.30	4.76	12.7	
		4280R-M	●		●	2.80	4.0	0.30	4.76	12.7	
		4300R-M	●		●	3.00	4.0	0.30	4.76	12.7	
		4330R-M			●	3.30	4.0	0.30	4.76	12.7	
		4350R-M	●		●	3.50	5.0	0.30	4.76	12.7	
		4400R-M	●		●	4.00	5.0	0.40	4.76	12.7	
		4430R-M	●		●	4.30	5.0	0.40	4.76	12.7	
		4450R-M	●		●	4.50	5.0	0.40	4.76	12.7	
	TB (Neutral)	5050N-000-M			●	0.50	1.0	0.00	4.50	15.875	
		5050N-004-M			●	0.50	2.5	0.04	4.50	15.875	
		5080N-000-M			●	0.80	1.6	0.00	4.50	15.875	
		5100N-006-M			●	1.00	3.5	0.06	4.50	15.875	
		5104N-000-M			●	1.04	2.0	0.00	4.50	15.875	
		5120N-000-M			●	1.20	2.0	0.00	4.50	15.875	
		5140N-000-M			●	1.40	6.5	0.00	4.50	15.875	
		5147N-000-M			●	1.47	6.5	0.00	4.50	15.875	
		5150N-010-M			●	1.50	6.5	0.10	4.50	15.875	
		5150N-015-M			●	1.50	6.5	0.15	4.50	15.875	
		5157N-015-M			●	1.57	6.5	0.15	4.50	15.875	
		5170N-010-M			●	1.70	6.5	0.10	4.50	15.875	
		5178N-018-M			●	1.78	6.5	0.18	4.50	15.875	
		5196N-015-M			●	1.96	6.5	0.15	4.50	15.875	
		5200N-020-M			●	2.00	6.5	0.20	4.50	15.875	
		5222N-015-M			●	2.22	6.5	0.15	4.50	15.875	
		5230N-020-M			●	2.30	6.5	0.20	4.50	15.875	
		5239N-015-M			●	2.39	6.5	0.15	4.50	15.875	
		5247N-020-M			●	2.47	6.5	0.20	4.50	15.875	
		5250N-020-M			●	2.50	6.5	0.20	4.50	15.875	
		5270N-010-M			●	2.70	6.5	0.10	4.50	15.875	
		5287N-020-M			●	2.87	6.5	0.20	4.50	15.875	
		5300N-000-M			●	3.00	6.5	0.00	4.50	15.875	
		5300N-020-M			●	3.00	6.5	0.20	4.50	15.875	
		5300N-040-M			●	3.00	6.5	0.40	4.50	15.875	
		5315N-015-M			●	3.15	6.5	0.15	4.50	15.875	
		5318N-020-M			●	3.18	6.5	0.20	4.50	15.875	

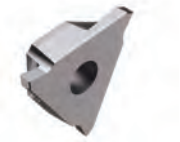
● : Stock item

Insert

Picture	Designation		Cermet		Coated	Dimensions (mm)						Configuration
			CN2000	CN2500	PC5300	b	g (T-MAX)	r	a°	w	d	
	TB (Neutral)	5050N-004-P				0.50	1.0	0.04	-	4.50	15.875	
		5100N-010-P				1.00	3.5	0.10	-	4.50	15.875	
		5150N-010-P				1.50	6.5	0.10	-	4.50	15.875	
		020-P				1.50	6.5	0.20	-	4.50	15.875	
		5200N-010-P				2.00	6.5	0.10	-	4.50	15.875	
		020-P				2.00	6.5	0.20	-	4.50	15.875	
		5239N-015-P				2.39	6.5	0.15	-	4.50	15.875	
		5250N-020-P				2.50	6.5	0.20	-	4.50	15.875	
		5300N-020-P				3.00	6.5	0.20	-	4.50	15.875	
	TB (Neutral, Right cutting)	5100N-6DR-P				1.00	3.5	0.05	6	4.50	15.875	
		15DR-P				1.00	3.5	0.05	15	4.50	15.875	
		5150N-6DR-P				1.50	6.5	0.05	6	4.50	15.875	
		15DR-P				1.50	6.5	0.05	15	4.50	15.875	
		5200N-6DR-P				2.00	6.5	0.10	6	4.50	15.875	
		15DR-P				2.00	6.5	0.10	15	4.50	15.875	
	TB (Neutral, Left cutting)	5100N-6DL-P				1.00	3.5	0.05	6	4.50	15.875	
		15DL-P				1.00	3.5	0.05	15	4.50	15.875	
		5150N-6DL-P				1.50	6.5	0.05	6	4.50	15.875	
		15DL-P				1.50	6.5	0.05	15	4.50	15.875	
		5200N-6DL-P				2.00	6.5	0.10	6	4.50	15.875	
		15DL-P				2.00	6.5	0.10	15	4.50	15.875	
	TB (Neutral, Round shape)	5157N-079-P				1.57	6.5	0.79	-	4.50	15.875	
		5200N-100-P				2.00	6.5	1.00	-	4.50	15.875	
		5239N-120-P				2.39	6.5	1.20	-	4.50	15.875	
		5300N-150-P				3.00	6.5	1.50	-	4.50	15.875	

● : Stock item

TBH



TB3000R/L
TB4000R-M

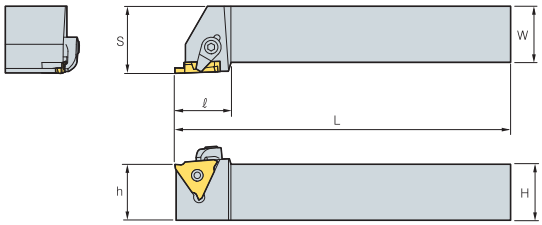
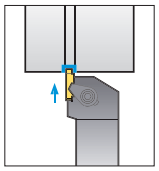
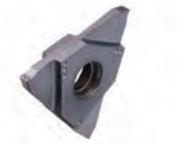


Fig. 1



• R type insert



TB5000N-□□□-M

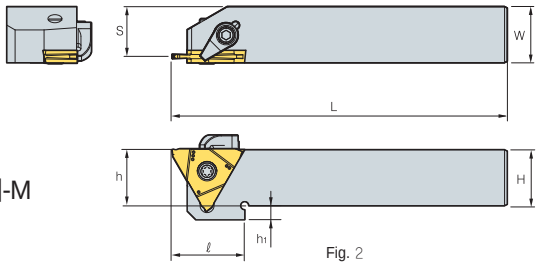


Fig. 2

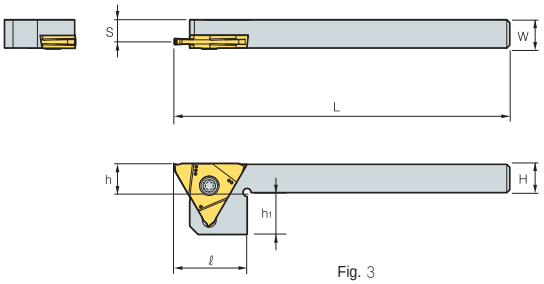


Fig. 3

(mm)

Designation		Dimensions						Inserts	Clamp	Clamp Screw	Screw	Wrench	Fig
		H = (h)	W	L	ℓ	h_1	S						
TBH	320R/L-23	20	20	125	25.5	-	25	TB3125~3230R/L	CS6R1	DHA0617	-	HW30L	1
	320R/L-33	20	20	125	25.5	-	25	TB3280~3330R/L					
	320R/L-43	20	20	125	25.5	-	25	TB3430R/L					
	325R/L-23	25	25	150	25.5	-	30	TB3125~3230R/L					
	325R/L-33	25	25	150	25.5	-	30	TB3280~3330R/L					
	325R/L-43	25	25	150	25.5	-	30	TB3430R/L					
	420R/L-23	20	20	125	25.5	-	25	TB4125~4230R/L					
	420R/L-33	20	20	125	25.5	-	25	TB4250~4330R/L					
	420R/L-45	20	20	125	25.5	-	25	TB4350~4450R/L					
	425R/L-23	25	25	150	25.5	-	30	TB4125~4230R/L					
	425R/L-33	25	25	150	25.5	-	30	TB4250~4330R/L					
	425R/L-45	25	25	150	25.5	-	30	TB4350~4450R/L					
TBH	510R/L	10	10	125	25	15	7.8	TB5050~5318N	-	-	FTNA0512	TW20L	3
	512R/L	12	12	125	25	13	9.8						
	516R/L	16	16	125	26	9	13.8		CS6R1	DHA0617	FTNA0516	HW30L, TW20L	2
	520R/L	20	20	125	26	5	17.8						
	525R/L	25	25	150	-	-	22.8						

The Solution for High-Precision Grooving

K Notch

KORLOY Grooving Tool

- KORLOY clamping system offers high rigidity for high precision machining
- High-quality cutting edge ensuring long tool life and excellent machinability
- Provides various cutting edge widths for a wide range of selection

Code system

- **Insert**

KN	G	P	3	M	200	R
K Notch	**Insert type** B: Blank G: Grooving R: Full Radius T: Threading	**Additional information** P: Positive None: Flat	**Insert size** 2, 3, 4	**Unit** M: Metric None: Inch	**Insert Width** 200: 2.00 mm	**Hand** L: Left R: Right

- **Holder**

KN	S	R	25 25	M	3
K Notch	**Clamping position** S: Side	**Hand** L: Left R: Right	**Shank size** Height: 25 mm Width: 25 mm	**Holder length** E: 70 mm K: 125 mm F: 80 mm M: 150 mm H: 100 mm P: 170 mm	**Insert size** 8~36 mm

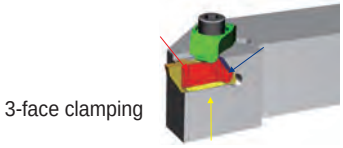
Features of holder

Clamp

- Rigid binding force relative to the clamping force
- User-oriented convenient shape

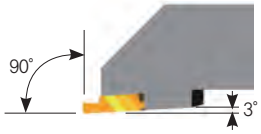
Insert clamping

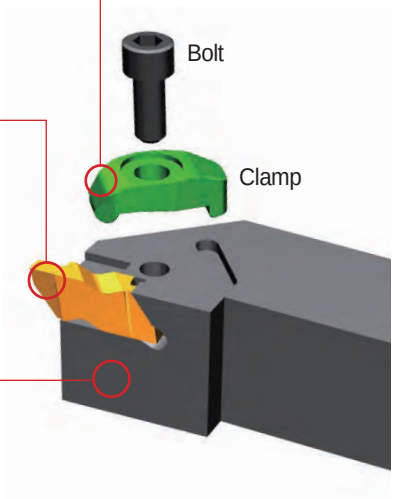
- Provides excellent clamping stability due to the 3-face (bottom, side, and rear face) binding



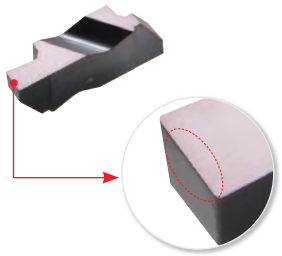
Relief angle

- The relief angle of a flank surface when clamping an insert: 3°





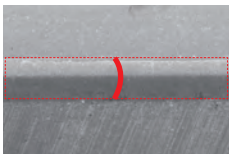
Features of insert



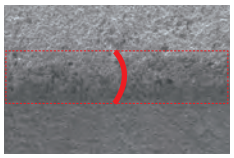
[Edge preparation]

High-quality edge preparation

- Cutting edges in uniform quality
- Long tool life



[K Notch]



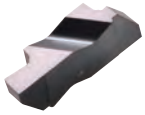
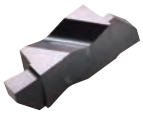
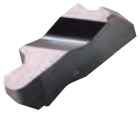
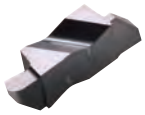
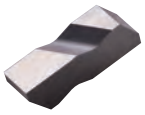
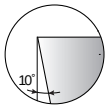
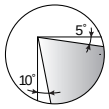
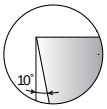
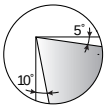
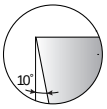
[Competitor]

Mirror-like rake surface

- Improved resistance to welding and chipping
- Improved surface finish of workpieces

[K Notch]

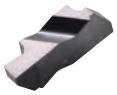
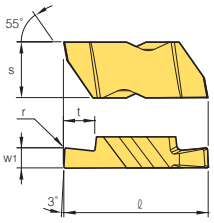
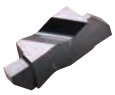
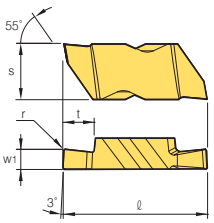
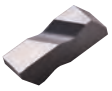
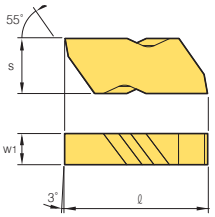
Recommended feed per insert type

Type		KNG	KNGP	KNR	KNRP	KNB
Insert shape						
Cutting-edge						
Application		General grooving	General grooving	Turning profiling	Turning profiling	Blank
Recommended workpiece	1st	P, K	M, N, S	P, K	M, N, S	-
	2nd	M, N, S	P, K	M, N, S	P, K	-
Recommended feed, fn (mm/rev)	P	0.10 - 0.28	0.08 - 0.25	0.10 - 0.28	0.08 - 0.25	-
	M	0.10 - 0.25	0.08 - 0.25	0.10 - 0.25	0.08 - 0.25	-
	K	0.10 - 0.28	0.08 - 0.25	0.10 - 0.28	0.08 - 0.25	-
	N	0.01 - 0.30	0.01 - 0.30	0.01 - 0.30	0.01 - 0.30	-
	S	0.05 - 0.15	0.05 - 0.15	0.05 - 0.15	0.05 - 0.15	-

Recommended cutting speed per grade

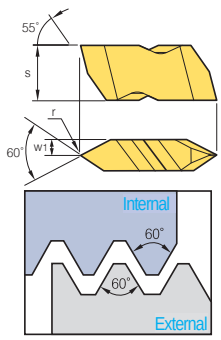
Workpiece		Grade	Recommended cutting speed, vc (m/min) 50 100 200 300 600
P	Steel	PC5300	80 – 200
	Alloy steel	PC5300	60 – 160
M	Stainless steel	PC5300	80 – 130
		PC8110	80 – 160
K	Cast iron	PC5300	90 – 200
N	Non-ferrous metal	PC5300	150 – 600
S	Heat-resistant alloy	PC8110	35 – 65

Insert (Metric)

Application	Picture	Designation		Coated PC5300	Coated PC8110	Uncoated H05	Dimensions mm s	w1	r	t	ℓ	Dimensions inch s	w1	r	t	ℓ	Configuration
Flat Top		KNG	2M 150R				5.56	1.50	0.19	2.79	13.030	0.219	0.059	0.0075	0.11	0.513	
			200R				5.56	2.00	0.19	2.79	13.030	0.219	0.079	0.0075	0.11	0.513	
			250R				5.56	2.50	0.19	2.79	13.030	0.219	0.098	0.0075	0.11	0.513	
			300R				5.56	3.00	0.19	2.79	13.030	0.219	0.118	0.0075	0.11	0.513	
			3M 150R	●	●		8.74	1.50	0.19	2.79	22.709	0.344	0.059	0.0075	0.075	0.894	
			200R	●	●		8.74	2.00	0.19	2.79	22.709	0.344	0.079	0.0075	0.11	0.894	
			250R	●	●		8.74	2.50	0.19	3.81	22.709	0.344	0.098	0.0075	0.15	0.894	
			300R	●	●		8.74	3.00	0.19	3.81	22.709	0.344	0.118	0.0075	0.15	0.894	
			400R	●	●		8.74	4.00	0.19	3.81	22.709	0.344	0.157	0.0075	0.15	0.894	
			4M 500R				11.51	5.00	0.20	6.35	28.663	0.453	0.197	0.0079	0.25	1.128	
			600R				11.51	6.00	0.20	6.35	28.663	0.453	0.236	0.0079	0.25	1.128	
C/B Ground		KNGP	2M 150R				5.56	1.50	0.19	2.79	13.030	0.219	0.059	0.0075	0.11	0.513	
			200R				5.56	2.00	0.19	2.79	13.030	0.219	0.079	0.0075	0.11	0.513	
			250R				5.56	2.50	0.19	2.79	13.030	0.219	0.098	0.0075	0.11	0.513	
			300R				5.56	3.00	0.19	2.79	13.030	0.219	0.118	0.0075	0.11	0.513	
			3M 150R	●	●		8.74	1.50	0.19	2.79	22.709	0.344	0.059	0.0075	0.075	0.894	
			200R	●	●		8.74	2.00	0.19	2.79	22.709	0.344	0.079	0.0075	0.11	0.894	
			250R	●	●		8.74	2.50	0.19	3.81	22.709	0.344	0.098	0.0075	0.15	0.894	
			300R	●	●		8.74	3.00	0.19	3.81	22.709	0.344	0.118	0.0075	0.15	0.894	
			400R	●	●		8.74	4.00	0.19	3.81	22.709	0.344	0.157	0.0075	0.15	0.894	
			4M 500R				11.51	5.00	0.20	6.35	28.663	0.453	0.197	0.0079	0.25	1.128	
			600R				11.51	6.00	0.20	6.35	28.663	0.453	0.236	0.0079	0.25	1.128	
Blank		KNB	2R				5.56	3.81	-	-	13.030	0.219	0.150	-	-	0.513	
			3R				8.74	4.95	-	-	22.709	0.344	0.195	-	-	0.894	
			4R				11.51	6.48	-	-	28.663	0.453	0.255	-	-	1.128	

● : Stock item

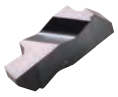
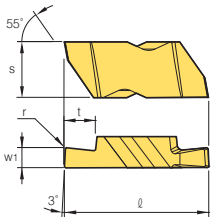
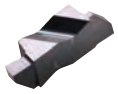
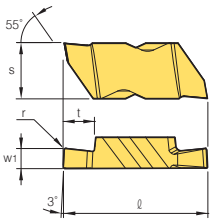
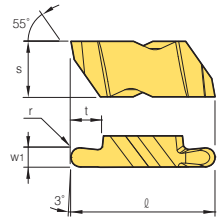
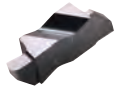
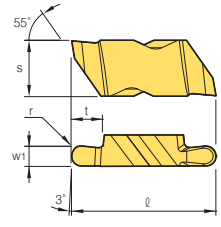
Insert (Threading)

Application	Picture	Designation		Coated PC5300	Coated PC8110	Dimensions mm s	w1	r	Dimensions inch s	w1	r	Pitch (External) mm	tpi	Configuration
Partial Profiling 60°		KNT	2R			5.56	3.81	0.10	0.219	0.150	0.004	0.70-3.00	8-36	
			3R			8.74	4.95	0.17	0.344	0.195	0.007	1.25-4.00	6-20	
			4R			11.51	6.48	0.17	0.453	0.255	0.007	1.25-6.25	4-20	

Partial Profiling 60°

● : Stock item

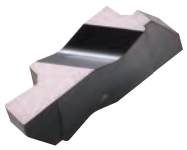
Insert (Inch)

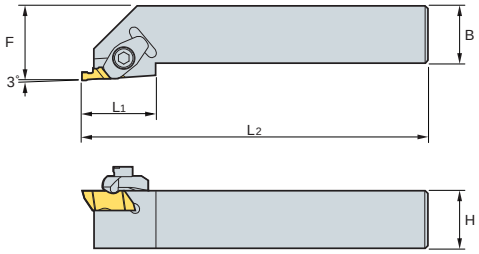
Application	Picture	Designation		Coated PC5300	Coated PC8110	Dimensions mm s	w1	r	t	ℓ	Dimensions inch s	w1	r	t	ℓ	Configuration
Flat Top		KNG	2031R			5.56	0.79	0.09	1.27	13.030	0.219	0.031	0.0035	0.05	0.513	
			2041R			5.56	1.04	0.09	1.27	13.030	0.219	0.041	0.0035	0.05	0.513	
			2047R			5.56	1.19	0.09	1.27	13.030	0.219	0.047	0.0035	0.05	0.513	
			2058R			5.56	1.47	0.19	1.27	13.030	0.219	0.058	0.0075	0.05	0.513	
			2062R			5.56	1.57	0.19	2.79	13.030	0.219	0.062	0.0075	0.11	0.513	
			2094R			5.56	2.39	0.19	2.79	13.030	0.219	0.094	0.0075	0.11	0.513	
			2125R			5.56	3.18	0.19	2.79	13.030	0.219	0.125	0.0075	0.11	0.513	
			3047R			8.74	1.19	0.19	1.91	22.709	0.344	0.047	0.0075	0.075	0.894	
			3062R	●	●	8.74	1.57	0.19	2.39	22.709	0.344	0.062	0.0075	0.094	0.894	
			3072R			8.74	1.83	0.19	2.39	22.709	0.344	0.072	0.0075	0.094	0.894	
			3078R	●	●	8.74	1.98	0.19	2.39	22.709	0.344	0.078	0.0075	0.094	0.894	
			3088R			8.74	2.24	0.19	2.39	22.709	0.344	0.088	0.0075	0.094	0.894	
			3094R			8.74	2.39	0.19	3.81	22.709	0.344	0.094	0.0075	0.15	0.894	
			3097R	●	●	8.74	2.46	0.32	3.81	22.709	0.344	0.097	0.0125	0.15	0.894	
			3105R			8.74	2.67	0.19	3.81	22.709	0.344	0.105	0.0075	0.15	0.894	
			3110R			8.74	2.79	0.32	3.81	22.709	0.344	0.110	0.0125	0.15	0.894	
			3122R			8.74	3.10	0.19	3.81	22.709	0.344	0.122	0.0075	0.15	0.894	
			3125R	●	●	8.74	3.18	0.19	3.81	22.709	0.344	0.125	0.0075	0.15	0.894	
			3142R			8.74	3.61	0.32	3.81	22.709	0.344	0.142	0.0125	0.15	0.894	
			3156R	●	●	8.74	3.96	0.19	3.81	22.709	0.344	0.156	0.0075	0.15	0.894	
			3178R			8.74	4.52	0.19	3.81	22.709	0.344	0.178	0.0075	0.15	0.894	
			3185R			8.74	4.70	0.57	3.81	22.709	0.344	0.185	0.0225	0.15	0.894	
			3189R	●	●	8.74	4.80	0.57	3.81	22.709	0.344	0.189	0.0225	0.15	0.894	
			4125R	●	●	11.51	3.18	0.19	3.81	28.663	0.453	0.125	0.0075	0.15	1.128	
			4189R			11.51	4.80	0.57	6.35	28.663	0.453	0.189	0.0225	0.25	1.128	
			4213R			11.51	5.41	0.19	6.35	28.663	0.453	0.213	0.0075	0.25	1.128	
			4219R			11.51	5.56	0.57	6.35	28.663	0.453	0.219	0.0225	0.25	1.128	
			4250R			11.51	6.35	0.57	6.35	28.663	0.453	0.250	0.0225	0.25	1.128	
C/B Ground		KNGP	2031R			5.56	0.79	0.09	1.27	13.030	0.219	0.031	0.0035	0.05	0.513	
			2062R			5.56	1.57	0.19	2.79	13.030	0.219	0.062	0.0075	0.11	0.513	
			2125R			5.56	3.18	0.19	2.79	13.030	0.219	0.125	0.0075	0.11	0.513	
			3088R			8.74	2.24	0.19	2.39	22.709	0.344	0.088	0.0075	0.094	0.894	
			3125R	●	●	8.74	3.18	0.19	3.81	22.709	0.344	0.125	0.0075	0.15	0.894	
			3156R	●	●	8.74	3.96	0.19	3.81	22.709	0.344	0.156	0.0075	0.15	0.894	
			3189R			8.74	4.80	0.57	3.81	22.709	0.344	0.189	0.0225	0.15	0.894	
			4189R			11.51	4.80	0.57	6.35	28.663	0.453	0.189	0.0225	0.25	1.128	
			4250R			11.51	6.35	0.57	6.35	28.663	0.453	0.250	0.0225	0.25	1.128	
Round Flat Top		KNR	2031R			5.56	1.57	0.79	2.79	13.030	0.219	0.062	0.031	0.11	0.513	
			2047R			5.56	2.39	1.19	2.79	13.030	0.219	0.094	0.047	0.11	0.513	
			3031R	●	●	8.74	1.57	0.79	2.39	22.709	0.344	0.062	0.031	0.094	0.894	
			3047R	●	●	8.74	2.39	1.19	3.81	22.709	0.344	0.094	0.047	0.15	0.894	
			3062R	●	●	8.74	3.18	1.59	3.81	22.709	0.344	0.125	0.0625	0.15	0.894	
			3078R	●	●	8.74	3.96	1.98	3.81	22.709	0.344	0.156	0.078	0.15	0.894	
			3094R	●	●	8.74	4.78	2.39	3.81	22.709	0.344	0.188	0.094	0.15	0.894	
			4125R			11.51	6.35	3.18	6.35	28.663	0.453	0.250	0.125	0.25	1.128	
Round C/B Ground		KNRP	2031R			5.56	1.57	0.79	2.79	13.030	0.219	0.062	0.031	0.11	0.513	
			2047R			5.56	2.39	1.19	2.79	13.030	0.219	0.094	0.047	0.11	0.513	
			3031R	●	●	8.74	1.57	0.79	2.39	22.709	0.344	0.062	0.031	0.094	0.894	
			3047R	●	●	8.74	2.39	1.19	3.81	22.709	0.344	0.094	0.047	0.15	0.894	
			3062R	●	●	8.74	3.18	1.59	3.81	22.709	0.344	0.125	0.0625	0.15	0.894	
			3078R	●	●	8.74	3.96	1.98	3.81	22.709	0.344	0.156	0.078	0.15	0.894	
			3094R	●	●	8.74	4.78	2.39	3.81	22.709	0.344	0.188	0.094	0.15	0.894	
			4125R			11.51	6.35	3.18	6.35	28.663	0.453	0.250	0.125	0.25	1.128	

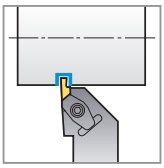
● : Stock item

KNSR

For grooving, profil machining







KNG KNGP KNT
KNR KNRP KNB

Designation		mm					inch					Insert	Clamp	Screw	Wrench
		H	B	F	L_1	L_2	H	B	F	L_1	L_2				
KNSR	**1010E2**	10	10	14	19	70	0.394	0.394	0.551	0.748	2.756	KNG2□ KNGP2□ KNR2□ KNB2R KNT2R	CM74	MHB3010	HW25L
	1212F2	12	12	16	19	80	0.472	0.472	0.630	0.748	3.150				
	1616H2	16	16	20	19	100	0.630	0.630	0.787	0.748	3.937				
	2020K2	20	20	25	19	125	0.787	0.787	0.984	0.748	4.921				
	2525M2	25	25	32	19	150	0.984	0.984	1.260	0.748	5.906				
	2020K3	20	20	25	32	125	0.787	0.787	0.984	1.260	4.921	KNG3□ KNGP3□ KNR3□ KNRP3□ KNB3R KNT3R	CM72LP	MHA0512	HW40L
	2525M3	25	25	32	32	150	0.984	0.984	1.260	1.260	5.906				
	3225P3	32	32	32	32	170	1.260	1.260	1.260	1.260	6.693				
	3232P3	32	32	40	32	170	1.260	1.260	1.575	1.260	6.693				
	2525M4	25	25	32	35	150	0.984	0.984	1.260	1.378	5.906	KNG4□ KNGP4□ KNR4□ KNB4R KNT4R	CM72LP	MHA0512	HW40L
	3225P4	32	32	32	35	170	1.260	1.260	1.260	1.378	6.693				
	3232P4	32	32	40	35	170	1.260	1.260	1.575	1.378	6.693				

For deep hole grooving/parting off

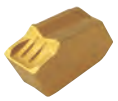
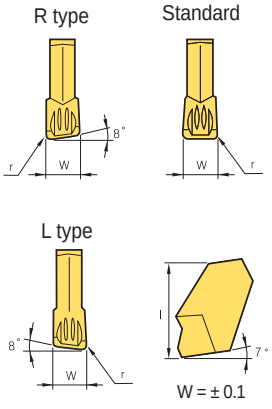
Saw Man

Features of parting insert

- Possible to machine a wide range of workpieces such as steel, cast iron, stainless steel, etc.
- Extended tool life due to low resistance rake angle
- Minimized burr due to minimal Nose R
- Various lead angle available
- Narrow chip curl due to dots on rake surface of insert

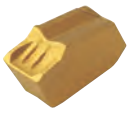
Workpiece	Cutting Speed (vc = m/min)								Feed (fn = mm/rev)				
	CVD				PVD			Uncoated	Cutting width (mm)				
	NC3120	NC3030	NCM325	NC5330	PC8110	PC5300	PC6510	ST30A	2	3	4	5	6
SM□□C	80~180			80~180		80~180			0.02~0.15	0.03~0.20	0.08~0.30	0.10~0.4	0.12~0.50
SCM	70~150	70~150	70~150	70~150		70~150			0.02~0.15	0.03~0.20	0.08~0.30	0.10~0.4	0.12~0.50
GC/GCD				50~100			50~100	50~100	0.05~0.12	0.10~0.25	0.10~0.30	0.10~0.35	0.10~0.40
STS			50~120	50~120	50~120	60~140			0.02~0.10	0.03~0.15	0.08~0.25	0.10~0.35	0.12~0.40
Non-ferrous metal (Al, Copper)								200~450	0.05~0.10	0.05~0.20	0.05~0.25	0.05~0.30	0.05~0.35

Insert

Application	Picture	Designation		Coated								Uncoated	Dimensions (mm)			Configuration
				NC3120	NC3225	NC3030	NCM325	NC5330	PC3035	PC8105	PC8110	PC5300	PC9030	ST30A	W	l	r	
Parting tools		SP	160												1.6	7.8	0.16	
			180												1.8	9.3	0.16	
			200		●	●	●	●			●	●	●		2.2	9.3	0.2	
			200R			●							●		2.2	9.3	0.2	
			200L										●		2.2	9.3	0.2	
			300	●	●	●	●	●			●	●	●	●	3.1	11.3	0.2	
			300R		●	●	●				●				3.1	11.3	0.2	
			300L			●									3.1	11.3	0.2	
			400	●	●	●	●	●			●	●	●		4.1	11.3	0.25	
			400R			●					●				4.1	11.3	0.25	
			400L			●									4.1	11.3	0.25	
			500			●	●	●			●	●			5.1	11.4	0.3	
			500R												5.1	11.4	0.3	
			500L												5.1	11.4	0.3	
			600			●		●				●			6.4	11.4	0.35	
			600R												6.4	11.4	0.35	
			600L												6.4	11.4	0.35	
			800												8.0	14.06	0.4	
			900												9.6	14.06	0.45	

● : Stock item

SPB/SPB-S (Blades)



SP

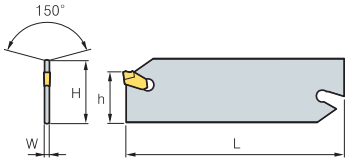


Fig. 1

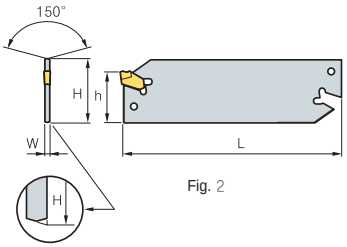
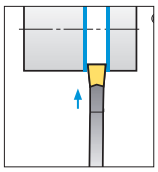


Fig. 2



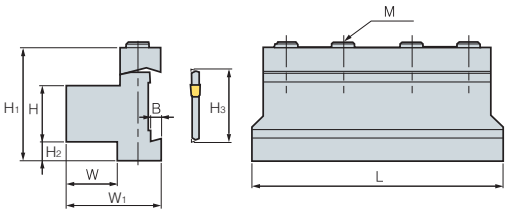
(mm)

Designation		H	W	L	h	Inserts	Wrench		Fig.
SPB	**226**	26	1.6	110	21	SP200, 200R/L	SW50L	-	1
	232	32	1.6	150	25	SP200, 200R/L			
	326	26	2.4	110	21	SP300, 300R/L			
	332	32	2.4	150	25	SP300, 300R/L			
	426	26	3.2	110	21	SP400, 400R/L			
	432	32	3.2	150	25	SP400, 400R/L			
	526	26	4.0	110	21	SP500, 500R/L			
	532	32	4.0	150	25	SP500, 500R/L			
	626	26	5.2	110	21	SP600, 600R/L			
	632	32	5.2	150	25	SP600, 600R/L			
SPB-S	**226-S**	26	1.6	110	21	SP200, 200R/L	-	SW15S (Separately ordered)	2
	232-S	32	1.6	150	25	SP200, 200R/L			
	326-S	26	2.4	110	21	SP300, 300R/L			
	332-S	32	2.4	150	25	SP300, 300R/L			
	426-S	26	3.2	110	21	SP400, 400R/L			
	432-S	32	3.2	150	25	SP400, 400R/L			
	526-S	26	4.0	110	21	SP500, 500R/L			
	532-S	32	4.0	150	25	SP500, 500R/L			
	626-S	26	5.2	110	21	SP600, 600R/L			
	632-S	32	5.2	150	25	SP600, 600R/L			
	832-S	32	6.8	150	25	SP800			
	932-S	32	8	150	25	SP900			
	8526-S	52.6	6.8	150	45	SP800			
	9526-S	52.6	8	150	45	SP900			

Applicable inserts **C60**

SMBB (Block)

SPB□□□(-S)
KGTB□□32

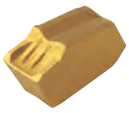


(mm)

Designation		H	W	H3	L	H1	H2	W1	B	M	Blades	Wrench
SMBB	**1626**	16	12	26	86	43	13	30	5.3	3-M6	SPB□26(-S)	HW50L
	2026	20	19	26	86	43	9	38	5.3	3-M6		
	2032	20	19	32	100	50	13	38	5.3	4-M6	SPB□32(-S) KGTB□□32	
	2526	25	23	26	86	43	4	42	5.3	4-M6	SPB□26(-S)	
	2532	25	23	32	110	50	8	42	5.3	4-M6	SPB□32(-S) KGTB□□32	
	3232	32	30	32	110	54	5	48	5.3	4-M6		
	40526	40	41	52.6	130	81.73	22	66	8	4-M8	SPB□526(-S)	HW60L

Applicable inserts **C60**

SPH/SPH-S (Holder)



SP

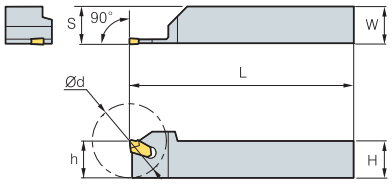


Fig. 1

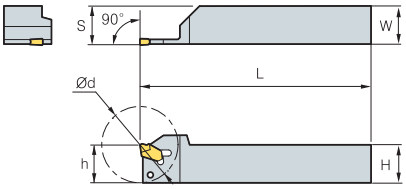
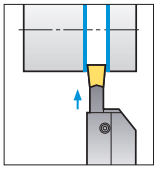


Fig. 2



• R type insert

(mm)

Designation		H = (h)	W	L	Ød	S	Inserts	Wrench		Fig.
SPH	**316R/L**	16	16	100	32	16.3	SP300, 300R/L			
	320R/L	20	20	120	40	20.3	SP300, 300R/L			
	325R/L	25	25	150	50	25.3				
	420R/L	20	20	120	50	20.4	SP400, 400R/L	SW50L	-	1
	425R/L	25	25	150	60	25.4	SP500, 500R/L			
	520R/L	20	20	120	60	20.5	SP300, 300R/L			
	525R/L	25	25	150	70	25.5	SP500, 500R/L			
SPH-S	**316R/L-S**	16	16	100	32	16.3	SP300, 300R/L			
	320R/L-S	20	20	120	40	20.3	SP300, 300R/L			
	325R/L-S	25	25	150	50	25.3	SP300, 300R/L			
	420R/L-S	20	20	120	50	20.4	SP400, 400R/L	-	SW15S (Separately ordered)	2
	425R/L-S	25	25	150	60	25.4	SP400, 400R/L			
	520R/L-S	20	20	120	60	20.5	SP500, 500R/L			
	525R/L-S	25	25	150	70	25.5	SP500, 500R/L			

Applicable inserts **C60**

A solution for parting and deep grooving

Saw Man-X new

- Stable machining in deep grooving applying clamping system with strong three-way V-Rail
- Improved clamping precision and convenient replacing of inserts with using the exclusive wrench

Code system

- **Insert**

KSP	300	-	020	-	N
KORLOY Saw Man-X Parting	Cutting edge width 200 : 2 mm 300 : 3 mm 400 : 4 mm		Nose r 020 : 0.2 mm 030 : 0.3 mm		Chip breaker N: Negaland

- **Shank**

KSPH	3	25	R
KORLOY Saw Man-X Parting Holder	Cutting edge width 2 : 2 mm 3 : 3 mm 4 : 4 mm	Shank size 16 : 1616 20 : 2020 25 : 2525	Hand R: Right L: Left

- **Blade**

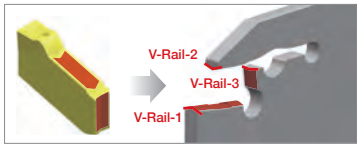
KSPB	30	26
KORLOY Saw Man-X Parting Blade	Cutting edge width 20 : 2 mm 30 : 3 mm 40 : 4 mm	Blade height 26 : 26 mm 32 : 32 mm

Features

- Three-way V-Rail – More stable clamping system
- New treatment on cutting edge – Better quality of machining and longer tool life
- Superior chip breaker – Better chip control
- Exclusive wrench – More convenient clamping system

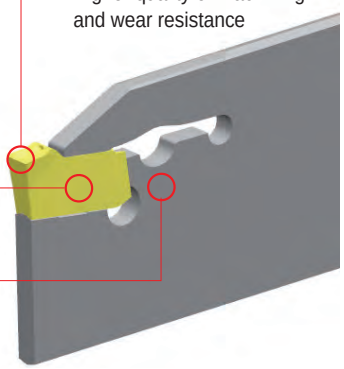
Three-way V-RAIL

- An insert is tightly clamped in the tip seat.
- Minimized vibration during the machining increases stability.
- Stable high speed, high feed and high depth of cut machining is available.



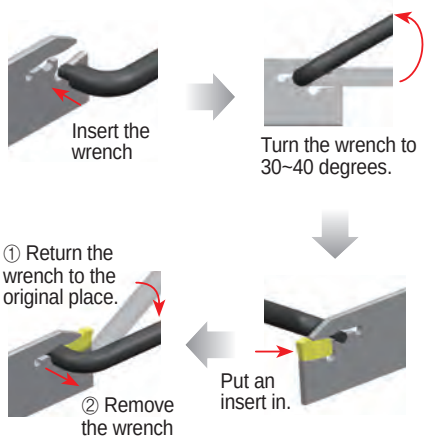
Special cutting edge

- Even cutting edge improves machinability
- Higher quality of machining and wear resistance



Exclusive wrench

- The exclusive wrench having the principle of CAM for the Saw Man-X
- More convenient clamping system

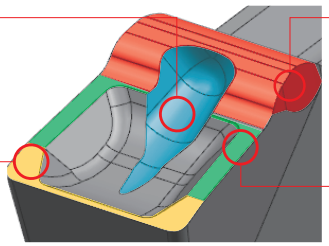


Features of chip breaker

- The design of chip breaker and its bump in the back area realize better chip evacuation
- The chip breaker with negaland is used universally.

Coolant path and guide for chip evacuation
- Inner coolant holder is available
- Guide for chip evacuation

Negaland
- Applying for various workpieces
- Stable in interrupted cutting and machining with high depth of cut



The second chip breaker in the back area
- Better chip control in machining of workpiece with a bigger diameter
- Preventing damage to holder from chip evacuation

Strong land on flank
- Smaller diameter of chip curl makes better chip control
- Higher rigidity of insert

Recommended cutting conditions

Workpiece					Grade	Cutting conditions	
ISO	Workpiece	KS	AISI	ISO (DIN)		vc (m/min)	fn (mm/rev)
P	Carbon steel	SM45C	1045	C45	PC5300	80-200	0.08-0.28
					PC3035	80-220	0.08-0.28
	Alloy steel	SCM440	4140	42CrMo4 (42CrMo4)	PC5300	80-160	0.08-0.25
					PC3035	80-180	0.08-0.25
M	Stainless steel	STS304	304	X5CrNi18-9 (X2CrNi19-11)	PC5300	80-190	0.06-0.20
		STS316	316	X5CrNiMo17-12-2	PC5300	80-190	0.06-0.20
K	Gray cast iron	GC250	No35B	250 (GG25)	PC8110	100-220	0.10-0.28
					PC5300	100-200	0.10-0.28
	Nodular graphite cast iron	GCD500	80-55-06	450-10	PC8110	80-200	0.10-0.25
					PC5300	80-180	0.10-0.25
S	HRSA	Inconel 718	7718	15156-3	PC8110	35-65	0.05-0.15
					PC5300	25-55	0.05-0.15

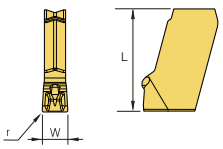
Cutting edge width and T-MAX by items

◎: First recommendation ○: Second recommendation

Shape		Cutting edge width (mm) / T-MAX (mm)	No. of corner	Machining: External diameter	Machining: Internal diameter	Machining: Cross section	Machining: Parting	Features
Saw Man-X new		2.0 – 6.0 / 125	1	○			◎	• Self clamping • Deep grooving
MGT, KGT		1.5 – 8.0 / 28	2	◎	○	○	○	• Various machining • Wide range of machining
TB		1.25 – 6.0 / 6.5	3	◎			○	• Precise ground class • Optimally automatic machining
Auto tools – Blade type		0.7 – 2.0 / 8.3	2	◎			○	• For swiss-type lathe (blade) • Small deliberate component machining
Auto tools – Multi-functional type		1.0 – 4.0 / 8.5	2	◎			○	• For swiss-type lathe (multifunctional) • Small deliberate component machining
K Notch		0.75 – 6.3 / 6.5	2	◎				• Strong clamping system • Highly qualified cutting edge

Insert

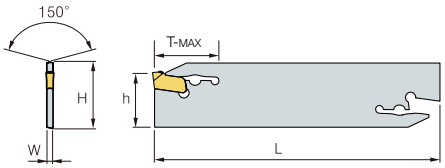
(mm)

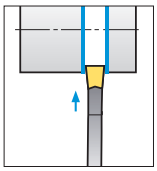
Application	Picture	Designation		Coated PC3035	Coated PC5300	Coated PC8110	W	r	L	Configuration
Parting		KSP	200-020-N	●	●	●	2.0	0.20	11.0	
			300-020-N	●	●	●	3.0	0.20	12.0	
			400-025-N	●	●	●	4.0	0.25	12.5	
			500-025-N	●	●		5.0	0.25	13.5	
			600-035-N	●	●		6.0	0.35	14.5	

● : Stock item

KSPB (Blades) new

KSP





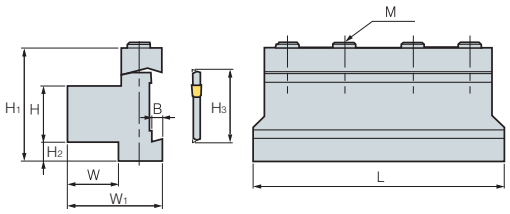
(mm)

Designation		Cutting edge width	H	W	L	h	T-MAX	Wrench
KSPB	2026	2	26	1.6	110	21	25	CW08
	2032	2	32	1.6	150	25	26	
	3026	3	26	2.4	110	21	36	
	3032	3	32	2.4	150	25	60	
	4026	4	26	3.2	110	21	36	
	4032	4	32	3.2	150	25	60	
	5026	5	26	4.0	110	21	40	CW10
	5032	5	32	4.0	150	25	60	
	6026	6	26	5.2	110	21	60	
	6032	6	32	5.2	150	25	60	

Applicable inserts **C64**

SMBB (Block)

KSPB□□□□
SPB□□□(-S)
KGTB□□□□



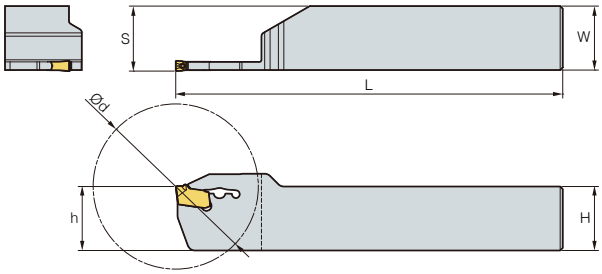
(mm)

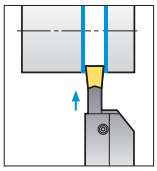
Designation		H	W	H3	L	H1	H2	W1	B	M	Wrench
SMBB	1626	16	12	26	86	43	13	30	5.3	3-M6	HW50L
	2026	20	19	26	86	43	9	38	5.3	3-M6	
	2032	20	19	32	100	50	13	38	5.3	4-M6	
	2526	25	23	26	86	43	4	42	5.3	4-M6	
	2532	25	23	32	110	50	8	42	5.3	4-M6	
	3232	32	30	32	110	54	5	48	5.3	4-M6	

Applicable inserts **C64**

KSPH (Shank)

KSP





(mm)

Designation		Cutting edge width	H	W	L	Ød	S	Wrench
KSPH	216R/L	2	16	16	100	46	16.2	CW08
	220R/L	2	20	20	120	48	20.2	
	225R/L	2	25	25	150	50	25.2	
	316R/L	3	16	16	100	52	16.2	
	320R/L	3	20	20	120	54	20.2	
	325R/L	3	25	25	150	56	25.2	
	420R/L	4	20	20	120	64	20.4	
	425R/L	4	25	25	150	66	25.4	
	520R/L	5	20	20	120	74	20.4	CW10
	525R/L	5	25	25	150	76	25.4	
	625R/L	6	25	25	150	76	25.4	

Applicable inserts **C64**

Six kinds of inserts can be used in one holder for various operations

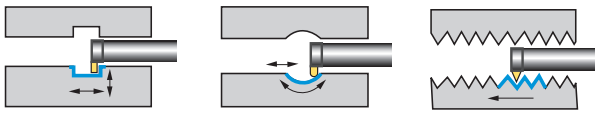
Fine Tools

- Strong clamping system and specially designed insert are suitable for small diameter machining
- Six kinds of inserts can be clamped in one holder for various operations
- Guaranteed long tool life due to good toughness substrate with new TiAlN
- High accuracy ground insert ensures high precision machining

Application range

• Internal grooving, Profiling, Threading and Boring at Ø8 mm~Ø16 mm

Features



(Grooving, Turning) (Forming) (Threading)

Code system

NFTIH 08 3 12 - S

- **Minimum Diameter**
- **Overhang (ℓ /ØD)**
- **Shank Dia.**
- **Shank Type** — S: Steel, C: Carbide

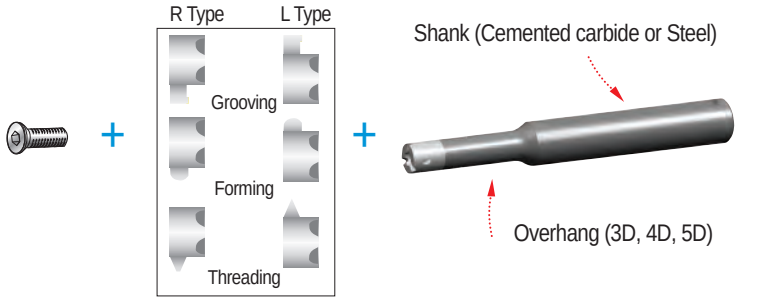
Recommended cutting condition

Workpiece	Grade (PC130)	Cutting Condition	Min. machining Dia. (ØDmin)			
			Ø8	Ø11	Ø14	Ø16
Carbon steel	◎	vc (m/min)	70~120	70~120	70~120	70~120
		fn (mm/rev)	0.01~0.04	0.01~0.05	0.02~0.05	0.02~0.06
Alloy steel	◎	vc (m/min)	70~120	70~120	70~120	70~120
		fn (mm/rev)	0.01~0.02	0.01~0.04	0.02~0.04	0.02~0.05
Cast iron	○	vc (m/min)	60~100	60~100	60~100	60~100
		fn (mm/rev)	0.01~0.05	0.01~0.05	0.02~0.05	0.02~0.05
Non-ferrous alloy	○	vc (m/min)	100~180	100~180	100~180	100~180
		fn (mm/rev)	0.02~0.06	0.02~0.06	0.02~0.06	0.02~0.06

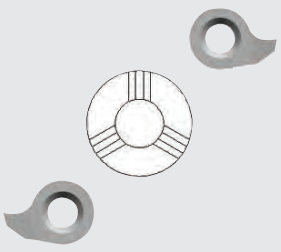
Note
- In case of chattering, reduce the cutting speed and feed
- To find the optimal cutting conditions, advise to gradually increase from the lowest cutting condition of the above recommendation
- In case of the unilateral grooving depth over 1 mm, work to the step feed rate

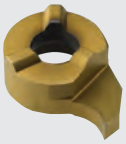
Clamping system

Screw + **Insert** + **Holder**

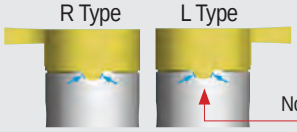


• Available R/L type insert with one holder



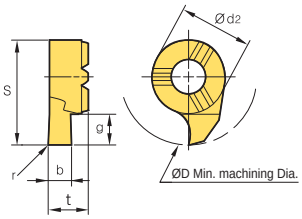
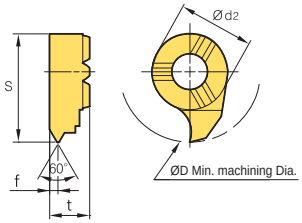


Stable clamping according to the tripod structure



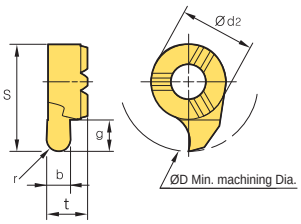
No-Spin-System design for strong clamping

Insert

Application	Picture	Designation		Coated PC5300 R	Coated PC5300 L	ØD	b	r	S	g	Ød2	t	Pitch	f	Configuration
Internal grooving		NFTG	08075R/L	●		8	0.75	-	7.75	1.3	5.9	3.85	-	-	
			08085R/L	●		8	0.85	-	7.75	1.3	5.9	3.85	-	-	
			08095R/L	●		8	0.95	-	7.75	1.3	5.9	3.85	-	-	
			08121R/L	●		8	1.21	-	7.75	1.3	5.9	3.85	-	-	
			08141R/L	●		8	1.41	-	7.75	1.3	5.9	3.85	-	-	
			08152R/L	●		8	1.52	-	7.75	1.3	5.9	3.85	-	-	
			08171R/L	●		8	1.71	-	7.75	1.3	5.9	3.85	-	-	
			08202R/L	●		8	2.02	-	7.75	1.3	5.9	3.85	-	-	
			11075R/L	●		11	0.75	-	10.7	1.8	8.0	4.9	-	-	
			11085R/L	●		11	0.85	-	10.7	1.8	8.0	4.9	-	-	
			11095R/L	●		11	0.95	-	10.7	1.8	8.0	4.9	-	-	
			11121R/L	●		11	1.21	-	10.7	2.6	8.0	4.9	-	-	
			11141R/L	●		11	1.41	-	10.7	2.6	8.0	4.9	-	-	
			11152 R/L	●		11	1.52	-	10.7	2.6	8.0	4.9	-	-	
			11171R/L	●		11	1.71	-	10.7	2.6	8.0	4.9	-	-	
			11202R/L	●		11	2.02	-	10.7	2.6	8.0	4.9	-	-	
			11202R/L-02	●		11	2.02	0.2	10.7	2.6	8.0	4.9	-	-	
			11252R/L	●		11	2.52	-	10.7	2.6	8.0	4.9	-	-	
			11302R/L	●		11	3.02	-	10.7	2.6	8.0	4.9	-	-	
			14075R/L	●		14	0.75	-	13.5	1.8	9.0	5.85	-	-	
			14085R/L	●		14	0.85	-	13.5	1.8	9.0	5.85	-	-	
			14095R/L	●		14	0.95	-	13.5	1.8	9.0	5.85	-	-	
			14121R/L	●		14	1.21	-	13.5	4.3	9.0	5.85	-	-	
			14141R/L	●		14	1.41	-	13.5	4.3	9.0	5.85	-	-	
			14152R/L	●		14	1.52	-	13.5	4.3	9.0	5.85	-	-	
			14171R/L	●		14	1.71	-	13.5	4.3	9.0	5.85	-	-	
			14202R/L	●		14	2.02	-	13.5	4.3	9.0	5.85	-	-	
			14252R/L	●		14	2.52	-	13.5	4.3	9.0	5.85	-	-	
			14302R/L	●		14	3.02	-	13.5	4.3	9.0	5.85	-	-	
			16075R/L	●		16	0.75	-	15.7	1.8	11.0	5.8	-	-	
			16085R/L	●		16	0.85		15.7	1.8	11.0	5.8	-	-	
			16095R/L	●		16	0.95	-	15.7	1.8	11.0	5.8	-	-	
			16121R/L	●		16	1.21	-	15.7	4.6	11.0	5.8	-	-	
			16141R/L	●		16	1.41	-	15.7	4.6	11.0	5.8	-	-	
			16171R/L	●		16	1.71	-	15.7	4.6	11.0	5.8	-	-	
			16202R/L	●		16	2.02	-	15.7	4.6	11.0	5.8	-	-	
			16252R/L	●		16	2.52	-	15.7	4.6	11.0	5.8	-	-	
			16302R/L	●		16	3.02	-	15.7	4.6	11.0	5.8	-	-	
			16352R/L	●		16	3.52	-	15.7	4.6	11.0	5.8	-	-	
			16402R/L	●		16	4.02	-	15.7	4.6	11.0	5.8	-	-	
Threading		NFTT	0805MR/L	●		8	-	-	7.75	-	6.0	3.85	0.5	1.0	
			0810MR/L	●		8	-	-	7.75	-	6.0	3.85	1.0	1.0	
			0815MR/L	●		8	-	-	7.75	-	6.0	3.85	1.5	1.2	
			1110MR/L	●		11	-	-	10.7	-	8.0	4.9	1.0	1.2	
			1115MR/L	●		11	-	-	10.7	-	8.0	4.9	1.5	1.2	
			1120MR/L	●		11	-	-	10.7	-	8.0	4.9	2.0	1.2	
			1125MR/L	●		11	-	-	10.7	-	8.0	4.9	2.5	1.2	
			1410MR/L	●		14	-	-	13.5	-	9.0	5.85	1.0	1.2	
			1415MR/L	●		14	-	-	13.5	-	9.0	5.85	1.5	1.2	
			1420MR/L	●		14	-	-	13.5	-	9.0	5.85	2.0	1.2	
			1425MR/L	●		14	-	-	13.5	-	9.0	5.85	2.5	1.2	
			1610MR/L	●		16	-	-	15.7	-	11.0	5.8	1.0	1.2	
			1615MR/L	●		16	-	-	15.7	-	11.0	5.8	1.5	1.2	
			1620MR/L	●		16	-	-	15.7	-	11.0	5.8	2.0	1.2	
			1625MR/L	●		16	-	-	15.7	-	11.0	5.8	2.5	1.2	
			1630MR/L	●		16	-	-	15.7	-	11.0	5.8	3.0	1.5	
			1635MR/L	●		16	-	-	15.7	-	11.0	5.8	3.5	1.6	
			1640MR/L	●		16	-	-	15.7	-	11.0	5.8	4.0	1.8	

● : Stock item

Insert

Application	Picture	Designation		Coated PC5300 R	Coated PC5300 L	D	b	r	S	g	Ød2	t	Configuration
Profiling		NFTF	08082R/L	●		8	0.82	0.41	7.75	1.3	5.9	3.85	
			08122R/L	●		8	1.22	0.61	7.75	1.3	5.9	3.85	
			08182R/L	●		8	1.82	0.91	7.75	1.3	5.9	3.85	
			11082R/L	●		11	0.82	0.41	10.7	2.6	8	4.9	
			11122R/L	●		11	1.22	0.61	10.7	2.6	8	4.9	
			11182R/L	●		11	1.82	0.91	10.7	2.6	8	4.9	
			11202R/L	●		11	2.02	1.01	10.7	2.6	8	4.9	
			11302R/L	●		11	3.02	1.51	10.7	2.6	8	4.9	
			14122R/L	●		14	1.22	0.61	13.5	4.3	9	5.85	
			14182R/L	●		14	1.82	0.91	13.5	4.3	9	5.85	
			14202R/L	●		14	2.02	1.01	13.5	4.3	9	5.85	
			14222R/L	●		14	2.22	1.11	13.5	4.3	9	5.85	
			14302R/L	●		14	3.02	1.51	13.5	4.3	9	5.85	
			16182R/L	●		16	1.82	0.91	15.7	4.6	11	5.8	
			16222R/L	●		16	2.22	1.11	15.7	4.6	11	5.8	
			16302R/L	●		16	3.02	1.51	15.7	4.6	11	5.8	
			16402R/L	●		16	4.02	2.01	15.7	4.6	11	5.8	

● : Stock item

NFTIH

NFTF
NFTT
NFTG

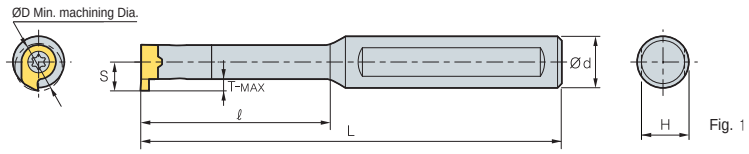


Fig. 1

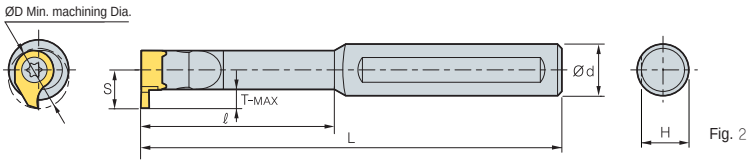


Fig. 2

• For NFTIH14~.
• R type insert

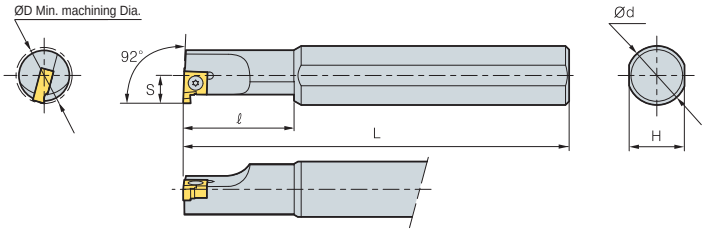
(mm)

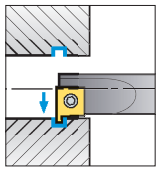
Designation		ØD	Ød	L	ℓ	T-MAX	H	S	Inserts NFTG: Grooving NFTT: Threading NFTF: Forming	Screw	Wrench	Fig
NFTIH	08206C	8	6	65	-	1.0	4	4.8	NFTG08□□□R/L NFTT08□□□R/L NFTF08□□□R/L	PTKA02508	TW08P	1
	08212C	8	12	70	16	1.0	10	4.8				
	08312C	8	12	80	24	1.0	10	4.8				
	08312S	8	12	80	24	1.0	10	4.8				
	08412C	8	12	90	32	1.0	10	4.8				
	08512C	8	12	100	40	1.0	10	4.8				
	11208C	11	8	80	-	2.3	7	6.7	NFTG11□□□R/L NFTT11□□□R/L NFTF11□□□R/L	PTKA03510	TW15P	2
	11212C	11	12	75	22	2.3	11	6.7				
	11312C	11	12	95	33	2.3	11	6.7				
	11312S	11	12	95	33	2.3	11	6.7				
	11412C	11	12	110	44	2.3	11	6.7				
	11512C	11	12	120	55	2.3	11	6.7				
	14012C	14	12	75	20	4.0	11	9.0	NFTG14□□□R/L NFTT14□□□R/L NFTF14□□□R/L	PTKA0412	TW15P	2
	14016C	14	16	75	20	4.0	15	9.0				
	14112C	14	12	100	34	4.0	11	9.0				
	14116C	14	16	100	34	4.0	15	9.0				
	14212C	14	12	110	45	4.0	11	9.0				
	14216C	14	16	110	45	4.0	15	9.0				
	14312C	14	12	130	64	4.0	11	9.0				
	14316C	14	16	130	64	4.0	15	9.0				
	16312C	16	12	130	48	4.3	11	10.2	NFTG16□□□R/L NFTT16□□□R/L NFTF16□□□R/L	PTKA0512	TW20P	2
	16312S	16	12	130	48	4.3	11	10.2				
	16412C	16	12	130	64	4.3	11	10.2				
	16512C	16	12	150	80	4.3	11	10.2				
	16316C	16	16	130	48	4.3	15	10.2				
	16416C	16	16	130	64	4.3	15	10.2				
	16516C	16	16	150	80	4.3	15	10.2				

Applicable inserts C68 ~ C69

IGH For internal grooving

IG





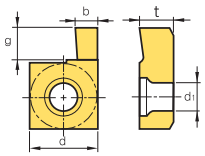
• R type insert

(mm)

Designation		ØD	Ød	H	L	ℓ	S	Inserts	Screw	Wrench
IGH	214R	14	16	15	150	25	6.6	IG125~280	FTKA02565	TW07P
	216R	16	16	15	150	30	7.6			
	220R	20	20	18	200	40	9.6			

Applicable inserts **C70**

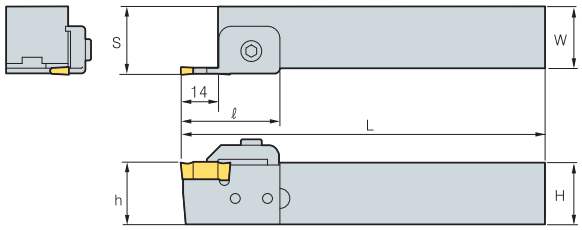
Insert

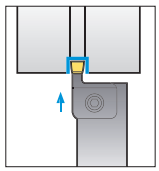
Application	Picture	Designation		Coated			Uncoated			Dimensions (mm)					Configuration
				NC3215	NC3120	NC3225	H01	G10	ST30A	b	g	t	d	d1	
Internal grooving		IG	125R						●	1.25	1.5	3.18	6.35	2.8	
			145R						●	1.45	1.5	3.18	6.35	2.8	
			175R						●	1.75	1.5	3.18	6.35	2.8	
			200R						●	2.0	2.3	3.18	6.35	2.8	
			230R						●	2.3	2.3	3.18	6.35	2.8	
			280R						●	2.8	2.3	3.18	6.35	2.8	

● : Stock item

DBH For deep and wide grooving

DB DC





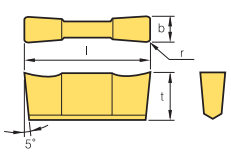
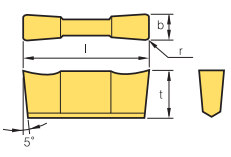
• R type insert

(mm)

Designation		H = (h)	W	L	ℓ	S		Inserts		Clamp	Clamp Screw	Screw	Locator	Wrench	
						*	**	*	**						
DBH	320R	20	20	150	40	22.3	22.8	DB300 DC300	DB400 DC400	CGH5R1	MHA0512	MHB0410	LD34	HW30L	HW40L
	325R	25	25	150	40	27.3	27.8								
	520R	20	20	150	40	23.8	24.3	DB500 DC500	DB600	CGH5R2	MHA0512	MHB0410	LD56	HW30L	HW40L
	525R	25	25	150	40	28.8	29.3								
	720R	20	20	150	40	25.8	26.3	DB700	DB800	CGH5R3	MHA0512	MHB0410	LD78	HW30L	HW40L
	725R	25	25	150	40	30.8	31.3								

Applicable inserts **C70**

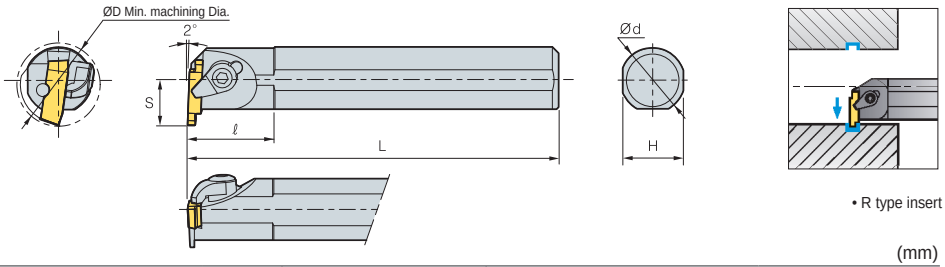
Insert

Application	Picture	Designation		Cermet	Coated			Uncoated		Dimensions (mm)				Configuration
				CN2000	NC3215	NC3120	NC3225	H01	G10	b	l	t	r	
Grooving		DB	300							3.0	20	7.5	0.2	
			400							4.0	20	7.5	0.2	
			500							5.0	20	7.5	0.2	
			600							6.0	20	7.5	0.2	
			700							7.0	20	7.5	0.2	
			800							8.0	20	7.5	0.2	
		DC	300							3.0	20	7.5	0.2	
			400							4.0	20	7.5	0.25	
			500							5.0	20	7.5	0.3	

● : Stock item

GFIP For Internal grooving

BF GW



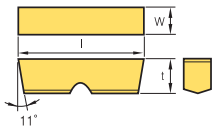
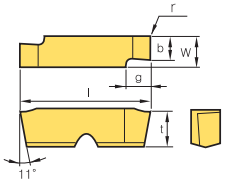
• R type insert

(mm)

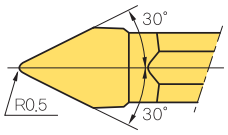
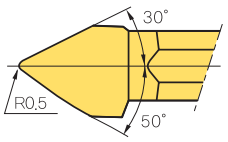
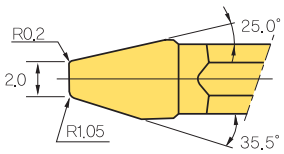
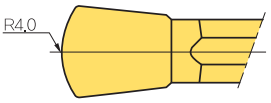
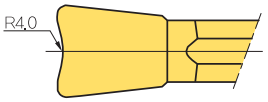
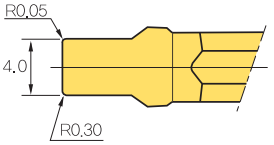
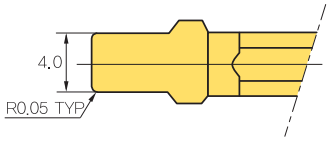
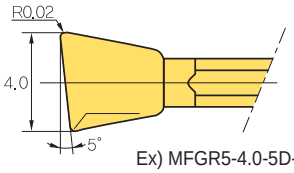
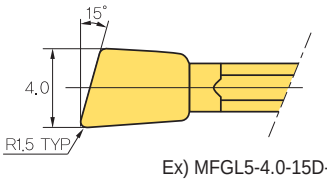
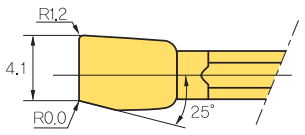
Designation		ØD	Ød	H	L	ℓ	S	Inserts	Clamp	C-ring	Screw	Pin	Wrench
GFIP	316R/L	20	16	15	150	17	11	GW110~300R/L,BF3	CH5R2	CR04	CHX0513	PN0310	HW25L
	320R/L	26	20	18	150	22	13						
	325R/L	32	25	23	200	22	17		CH6R2	CR05	CHX0616	PN0310	HW30L
	340R/L	50	40	37	300	32	27						
	525R/L	32	25	23	200	22	17	GW315~500R/L,BF5					
	540R/L	50	40	37	300	32	27						
	840R/L	50	40	37	300	32	27	GW600~800R/L,BF8	CS8R1	-	DHA0820	PN0314	HW40L

Applicable inserts C71 • Use right-hand insert for left-hand holder

Insert

Application	Picture	Designation		Uncoated ST30A		Dimensions (mm) b	g	W	l	t	r	Configuration
Blank		BF	-3	●				3.1	16.4	5.26	-	
			-5					5.1	22.4	6.26	-	
			-8					8.1	27.4	7.26	-	
				R	L							
Grooving		GW	110R/L	●	●	1.1	2.1	3.1	16	5.0	0.2	
			130R/L	●	●	1.3	2.3	3.1	16	5.0	0.2	
			160R/L	●	●	1.6	2.6	3.1	16	5.0	0.2	
			185R/L	●	●	1.85	2.9	3.1	16	5.0	0.2	
			215R/L	●	●	2.15	3.2	3.1	16	5.0	0.2	
			265R/L	●	●	2.65	3.7	3.1	16	5.0	0.2	
			300R/L	●	●	3.0	4.0	3.1	16	5.0	0.2	
			315R/L	●	●	3.15	4.2	5.1	22	6.0	0.3	
			415R/L		●	4.15	5.2	5.1	22	6.0	0.3	
			500R/L			5.0	6.0	5.1	22	6.0	0.3	
			600R/L			6.0	7.0	8.1	27	7.0	0.3	
			800R/L			8.0	9.0	8.1	27	7.0	0.3	

● : Stock item

Code system	Configuration
M F G N 4 - 0.5R - 30D ① ② ③ ④ ⑤ ⑥ ⑦ ① Multi ② Forming ③ Grinding ④ Feed Direction ⑤ Clamp part: 4 mm ⑥ Nose Radius: 0.5 ⑦ Degree: 30°	 Ex) MFGN4-0.5R-30D
MFGN4 - 0.5R - L 50 D - R 30D ① ② ③ ④ ⑤ ⑥ ① Refer to No. 1 ② Nose Radius: 0.5 ③ Left ④ Degree: 50° ⑤ Right ⑥ Degree > 30°	 Ex) MFGN4-0.5R-L50D-R30D
MFGN4 - 2.0 - R 020 250 - L 105 335 ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ① Refer to No. 1 ② Width of cutting edge: 2.0mm ③ Right ④ Nose Radius: 0.20 ⑤ Degree: 25.0° ⑥ Left ⑦ Nose Radius: 1.05 ⑧ Degree: 35.5°	 Ex) MFGN4-2.0-R020250-L105335
MFGN5 - 4.0R F ① ② ③ ① Refer to No. 1 ② Radius: 4.0 ③ Front(Concave)	 Ex) MFGN5-4.0RF
MFGN5 - 4.0R B ① ② ③ ① Refer to No. 1 ② Radius: 4.0 ③ Back(Concave)	 Ex) MFGN5-4.0RB
MFGN5 - 4.0 - R 005 - L 030 ① ② ③ ④ ⑤ ⑥ ① Refer to No. 1 ② Width of cutting edge: 4.0 mm ③ Right ④ Nose Radius: 0.05 ⑤ Left ⑥ Nose Radius : 0.30	 Ex) MFGN5-4.0-R005-L030
MFGN5 - 4.0 - 0.05 R ① ② ③ ① Refer to No. 1 ② Width of cutting edge: 4.0 mm ③ Nose Radius: 0.05	 Ex) MFGN5-4.0-0.05R
MFG R 5 - 4.0 - 5D - R 002 - L 115 ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ① Refer to No. 1 ② Right ③ Clamp part: 5mm ④ Width of cutting edge: 4.0mm ⑤ Lead angle: 5° ⑥ Right ⑦ Nose Radius: 0.02 ⑧ Left ⑨ Nose Radius: 1.15	 Ex) MFGR5-4.0-5D-R002-L115
MFG L 5 - 4.0 - 15D - 1.5R ① ② ③ ④ ⑤ ⑥ ① Refer to No. 1 ② Left ③ Clamp part: 5 mm ④ Width of cutting edge: 4.0 mm ⑤ Lead angle: 15° ⑥ Right Nose Radius: 1.5	 Ex) MFGL5-4.0-15D-1.5R
MFG R 5 - 4.10 - 25D - R012 - L000 ① ② ③ ④ ⑤ ⑥ ⑦ ① Refer to No. 1 ② Right ③ Clamp part: 5mm ④ Width of cutting edge: 4.1mm ⑤ Degree: 25° ⑥ Right Nose Radius: 1.2 ⑦ Left Nose Radius: 0.0	 Ex) MFGR5-4.10-25D-R012-L000

Code system

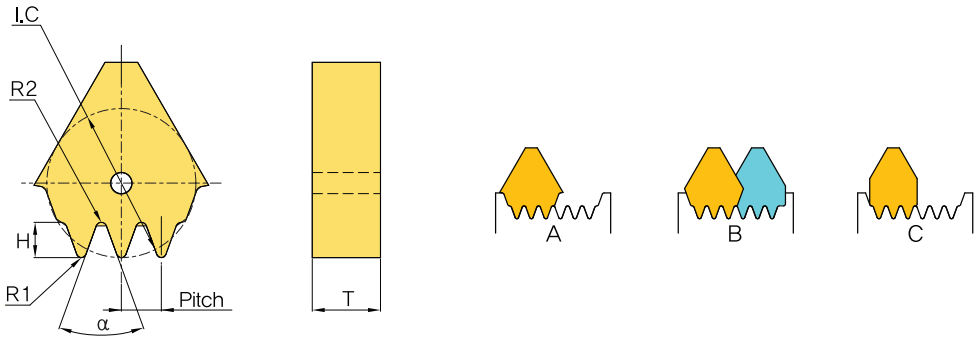
KP	27	064	-	R0.425	N3
KORLOY PULLEY	ØD	W		R1	No. of flutes

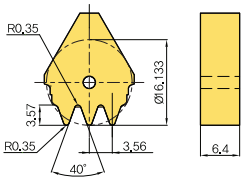
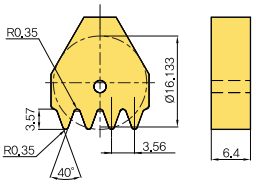
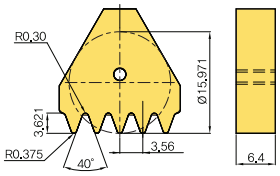
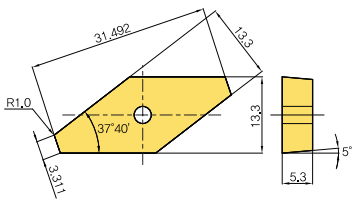
■ Ex)

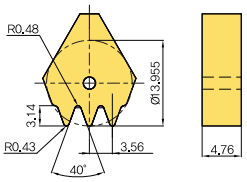
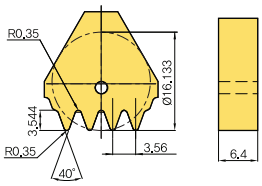
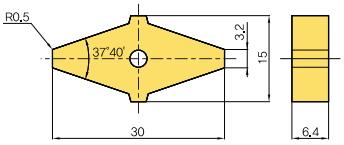
I.C	T	R	Z
Ø 15.875	6.4	0.425	3

▶ Special types are available for quotation

Insert for machining of pulley



Specifications	Standard designation
	KP27064-R0.35-N3 (Former: DF356-3B)
	KP27064-R0.35-N4 (Former: DF356-4B)
	KP27064-R0.375-N5 (Former: DF356-5B)
	VF13M522

Specifications	Standard designation
	KP27064-R0.43-N3 (Former:DF356-3SR)
	KP27064-R0.35-N4-A (Former: DF356-4X)
	UF320