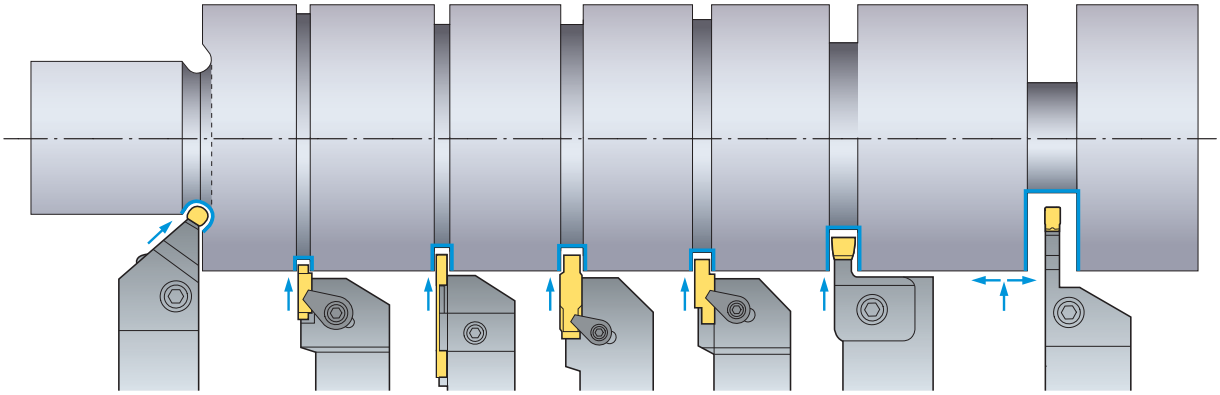
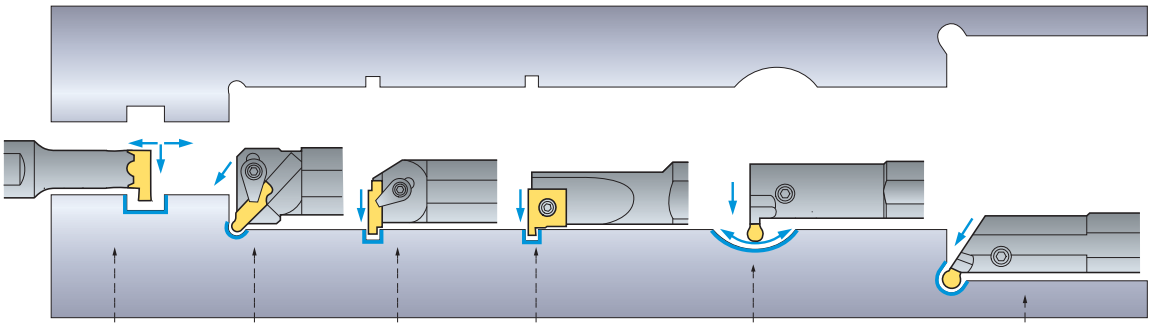
C Application Example

For external machining



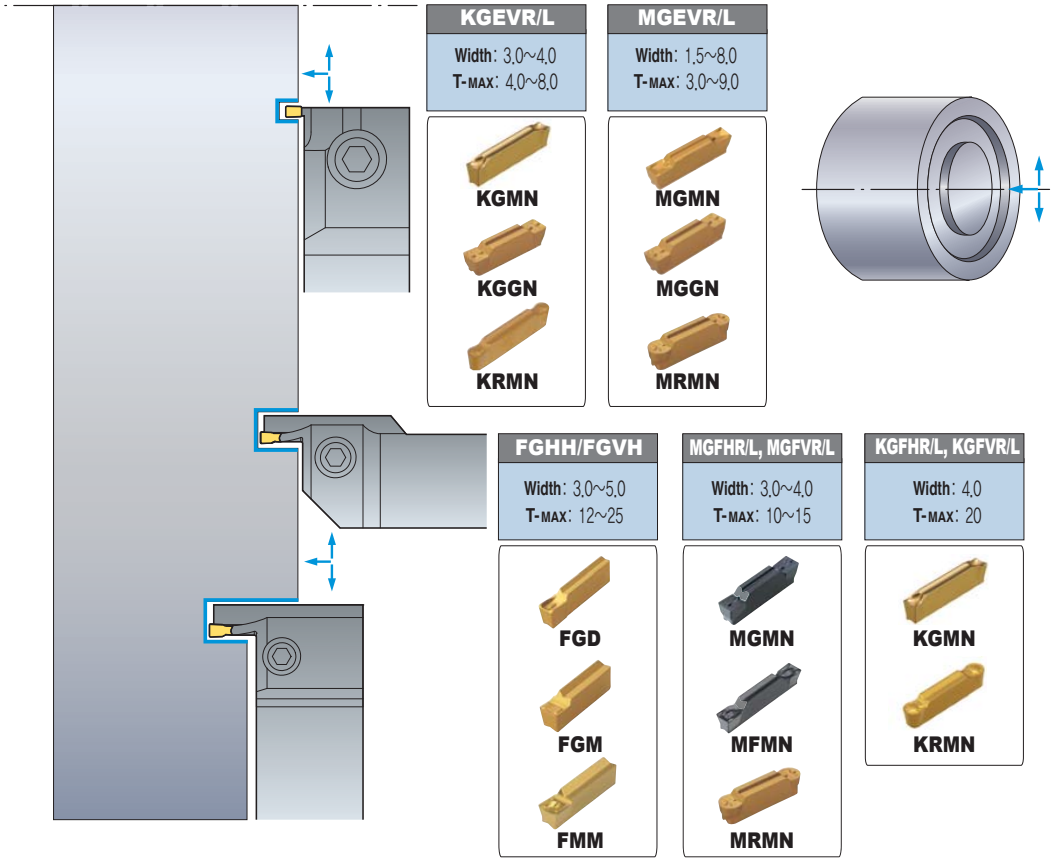
KGEUR/L	MGEUR/L	TBH	PH	GH	GFT	DBH	KGEHR/L	MGEHR/L
Width: 2.5 T-MAX: 3.0	Width: 3.0~8.0 T-MAX: 3.0~5.0	Width: 1.25~4.5 T-MAX: 1.5~5.0	Width: 3.0~5.0 ØD-MAX: 30~50	Width: 1.23~4.28 T-MAX: .5~4.0	Width: 1.1~8.0 T-MAX: 2.1~9.0	Width: 3.0~8.0 T-MAX: 14	Width: 2.0~8.0 T-MAX: 17~20	Width: 1.5~8.0 T-MAX: 10~28
KRMN	MRMN	TB TB-M	POB	GO GS	GW BF	DC DB	KGMN KRMN KGGN KRGN	MGMN MRMN MGGN MRGN

For internal machining

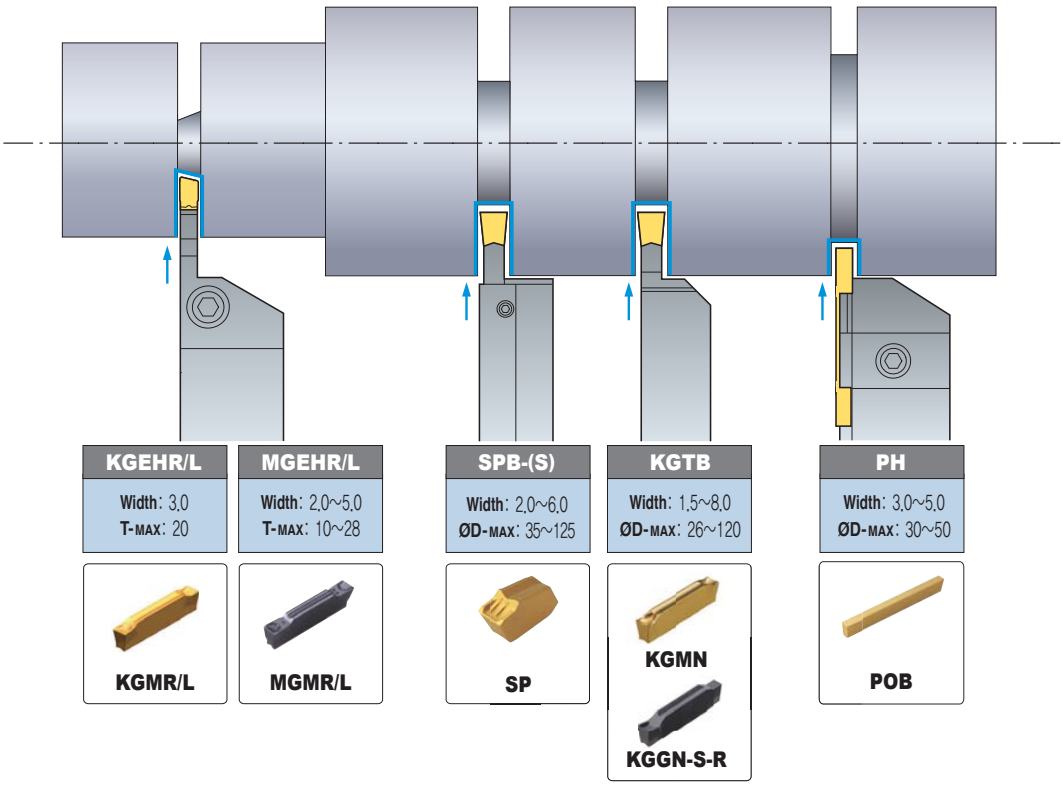


NFTIH	GFIK	GFIP	IGH	KGIVR/L	MGIVR/L	KGIUR/L	MGIUR/L
Width: 0.75~4.02 T-MAX: 1.3~4.6	Width: 2.0~8.0 T-MAX: 2.0~8.0	Width: 1.1~8.0 T-MAX: 2.1~9.0	Width: 1.25~2.8 T-MAX: 1.5~2.3	Width: 2.0~4.0 T-MAX: 7.0~8.0	Width: 1.5~8.0 T-MAX: 4.0~10	Width: 3.0 T-MAX: 3.0	Width: 3.0~8.0 T-MAX: 3.5~6.5
NFTG NFTF NFTT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

For face grooving

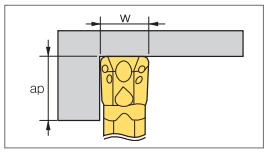


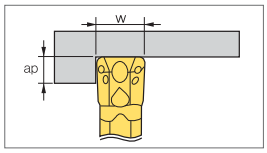
For parting off



Turning and Grooving

Selection of insert





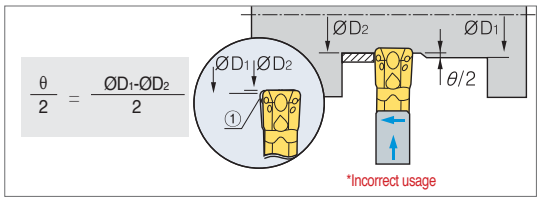
- Feed rate
  - Decide maximum feed rate after considering the insert's characteristics and machine capabilities (Fmax = W x 0.075)
  - Max feed rate should not be larger than the corner radius of the insert
  - In grooving applications, chip evacuation problems can be remedied by using step feed methods 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

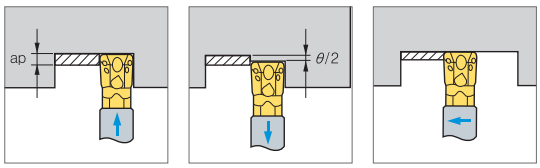
- KGT/MGT tools are designed to incur side cutting force from its clearance angle; this feature gives you advantage over a standard ISO insert
- The standard MGT insert also provides a "wiper" effect to improve surface roughness

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

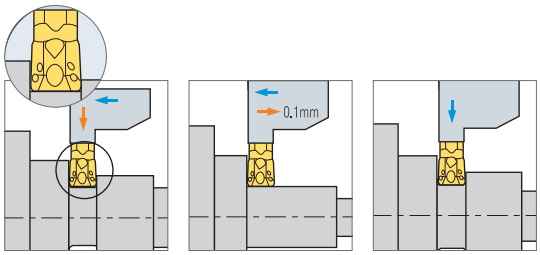


- To eliminate the difference in the machined diameter by utilizing the clearance angle (which is commonly generated during the final turning operation) follow the directions above when machining
  To obtain a good surface roughness without offsetting in an application follows the directions below
  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

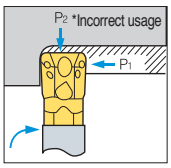


Notice for MGT turning applications

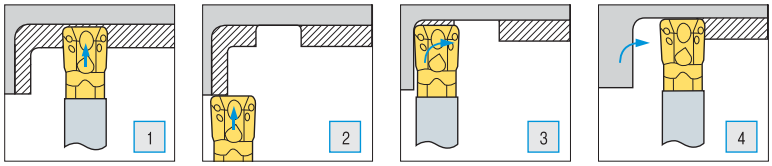
- KGT/MGT tools are available for grooving and turning as a multifunctional tool. When using a M.G.T tool keep in mind that the tool imitates a standard ISO turning application. The application uses a positive clearance angle where a tool's cutting force and depth of cut are all applied in an application. 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 0.004 inches and return to the original position of the grooving application



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

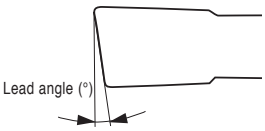
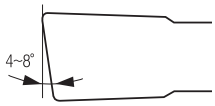
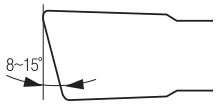


Stabilize your tool pressure. KGT/MGT tools create a cutting load when machining a workpiece with a radius larger than the corner radius of insert (shown in the picture). The unequal cutting force might initially break the insert or holder



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

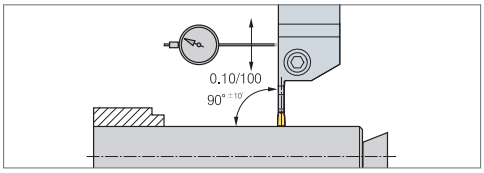
※ Available Inserts: MGMR/L□□□ – □□ – LP/RP, KGMR/L□□□ – □□ – PS/PT
(Lead angle) (Lead angle)

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

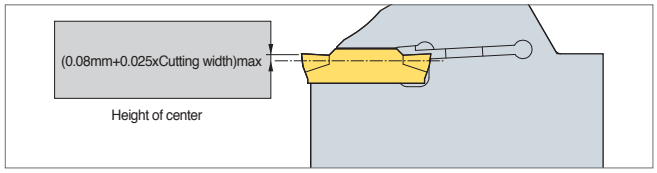
Setting of holders

- 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

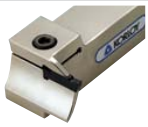
Selection of chip breaker

- 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

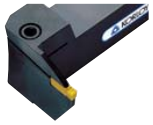
- Economical tools utilizing a double ended cutting edge system
- Newly designed chip breakers that help ensure chip control for various face grooving applications
- Korloy face grooving tools provide various holder line-ups to give you more options and benefits

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

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

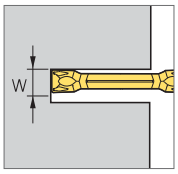
For deep grooving

- These tools are suitable for deep grooving with a single cutting edge (Tmax 25mm)
- 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. Ø25~140mm	Machining Dia. Ø25~140mm

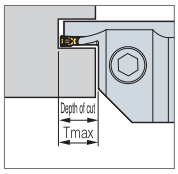
Selection system of holder

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



Insert and holder

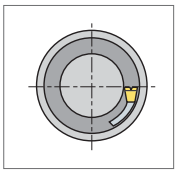
Choose an insert and holder that best applies to your application according to the cutting width and part of workpiece to be machined.



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.

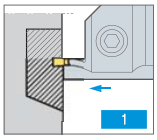


Machining Dia.

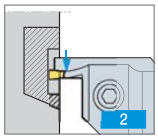
Choose the largest size of shank depending on the initial grooving diameter required in the application

Optimization of face grooving

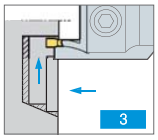
Roughing: When face grooving decreases the cutting speed 40% below a normal face turning operation



• Grooving at the initial diameter

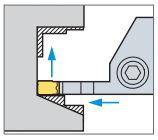


• Face turning away from center

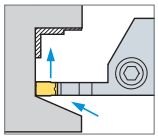


• Face turning to center

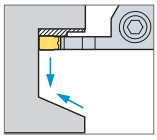
Finishing: When face grooving decreases the cutting speed 40% below a normal face turning operation



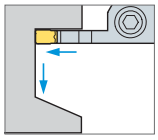
• Grooving at the initial diameter to the final cutting depth and face turning away from center



• Radius operation toward final dimension at the bottom



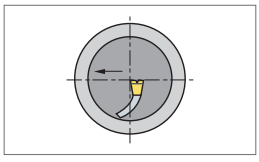
• Face turning to center



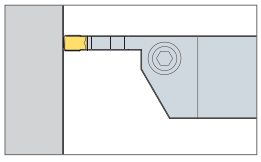
• Grooving for the right dimension you want

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

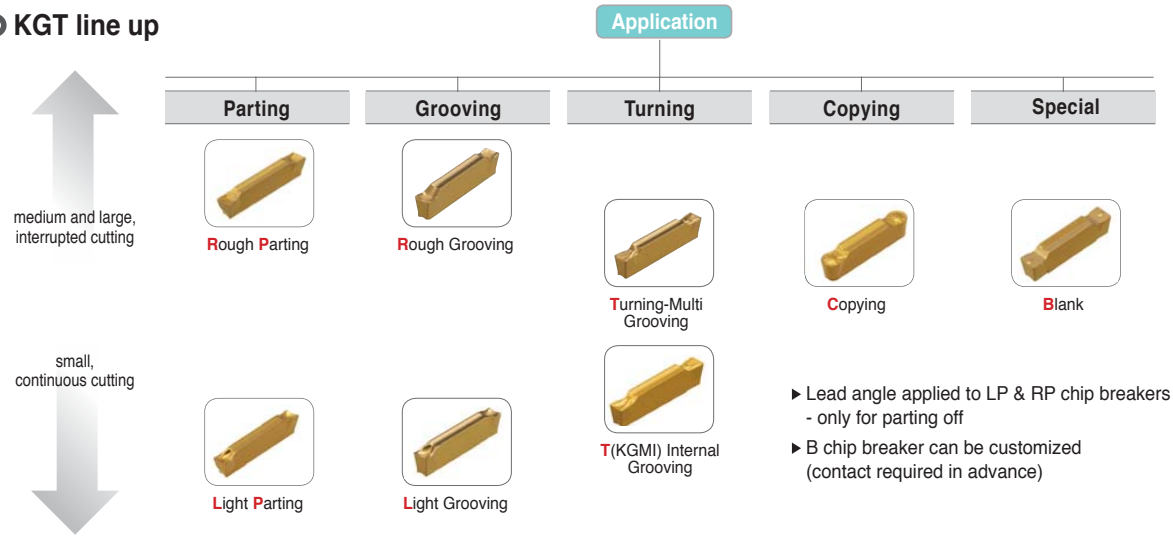
Insert code system

KG	M	N	300	-	(s)	04	-	T
KG SYSTEM (KORLOY Grooving)	Tolerance M class G class	Hand N: Neutral R: Right L: Left I: Internal	Width of cutting edge 2.0~8.0 mm		1 corner	Nose Radius 0.2 mm 0.3 mm 0.4 mm 0.8 mm		Chip Breaker L/R/T/C /LP/RP/B/A

Holder code system

KG	E	H	R/L	2525	-	3	T20
KG SYSTEM (KORLOY Grooving)	Working Style E: External Process I: Internal Process F: Facing Process	Holder Style H: Horizontal V: Vertical U: Undercut	Hand R: Right L: Left	Shank standard Height 25 mm Width 25 mm (For Internal machining : Minimum diameter for machining)		Cutting Width 2.0~8.0 mm	Maximum Depth 8~36 mm

KGT line up



- ▸ Lead angle applied to LP & RP chip breakers - only for parting off
- ▸ B chip breaker can be customized (contact required in advance)

Recommended insert

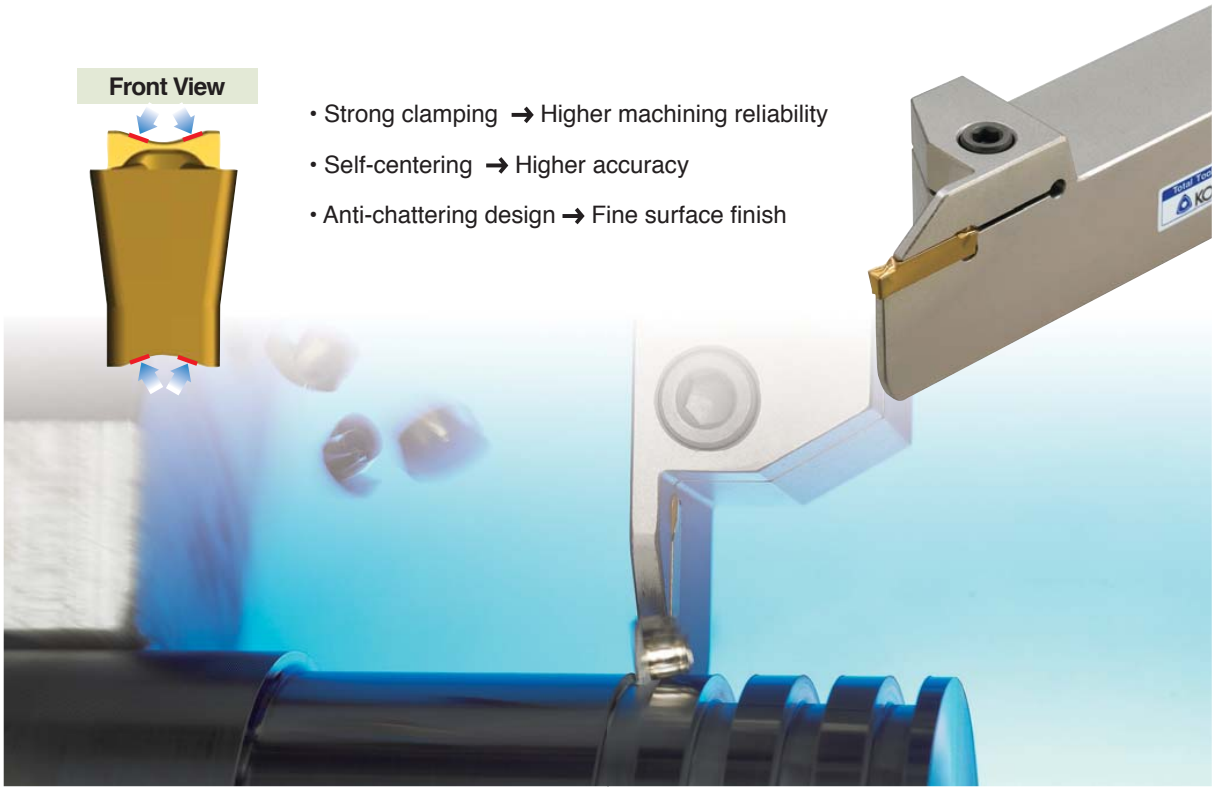
Designation	Geometry	Picture	Application									
			For external machining			For face grooving		For Internal machining		Copying	For reliefing	Special machining
			Parting	Grooving	Turning	Grooving	Turning	Grooving	Turning	Copying	Reliefing	Special
KGMN	L Light Grooving		○	◎		○						
	R Rough Grooving		○	◎		○						
	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									◎	◎	

◎ First choice, ○ Second choice

Features

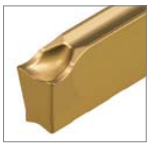
Front View

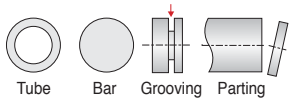
- Strong clamping ➜ Higher machining reliability
- Self-centering ➜ Higher accuracy
- Anti-chattering design ➜ Fine surface finish



C/B guide

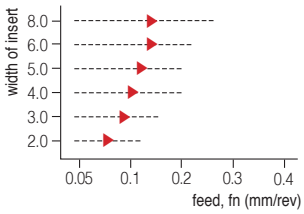
L For Light Grooving



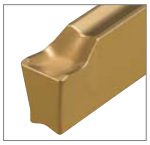


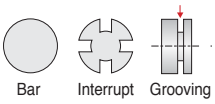
- Sharp cutting edge
- Low feed machining
- Small diameter component

- Low carbon steel
- Alloy steel
- Stainless



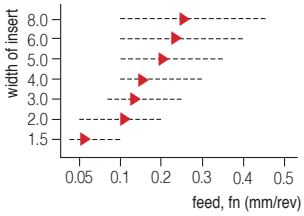
R For Rough Grooving



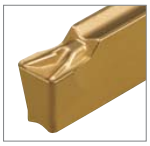


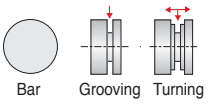
- Strong cutting edge
- High feed machining
- Interrupted cutting

- Carbon steel
- Alloy steel
- Stainless
- Cast iron



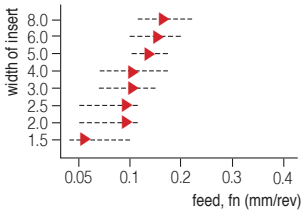
T For Turning and Multi Grooving



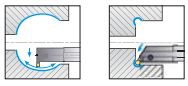


- Sharp cutting edge
- Improved chip control
- Turning & grooving machining

- Carbon steel
- Alloy steel
- Stainless
- Cast iron

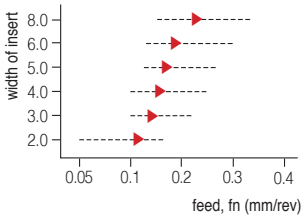


C For Copying and Relief

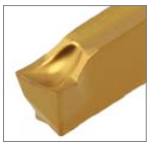


- Improved chip control
- Copying
- Relief

- Carbon steel
- Alloy steel
- Stainless
- Cast iron

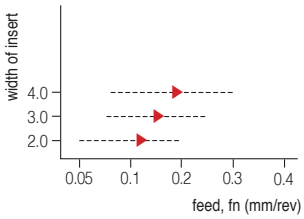


LP For Light Parting

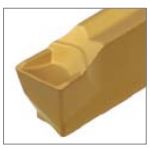


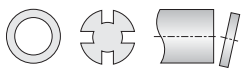
- Sharp cutting edge
- Low feed machining
- Small diameter component
- Right/left handed

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



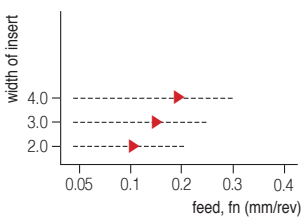
RP For Rough Parting





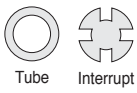
- Strong cutting edge
- High feed machining
- Interrupted cutting
- Right/left handed

- Carbon steel
- Alloy steel
- Cast iron



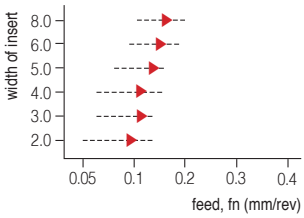
C Technical Information for KGT

B For Precision Grooving

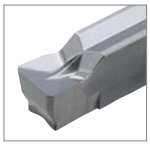


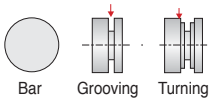
- Ground insert
- Precise tolerance
- Various cutting edge length, Nose R

- Carbon steel
- Alloy steel
- Stainless
- Cast iron



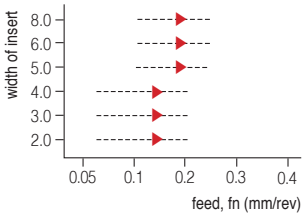
A For Aluminum Grooving





- 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
		NC3225	2	130 – 220
		NC5330	3	120 – 200
	Alloy Steel	PC5300	1	60 – 105
		NC3225	2	130 – 200
		NC5330	3	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

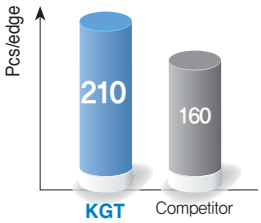
Performance evaluation

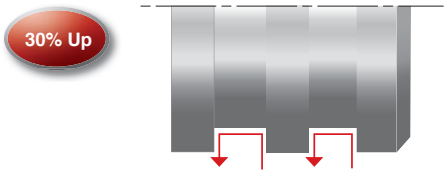
Multi-function machining

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)



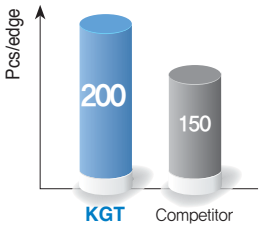


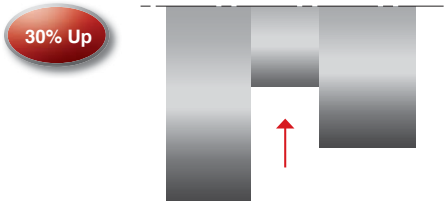
Grooving

Shoulder Grooving

Tough geometry for interrupted and deep grooving.

- **Workpiece** X5CrNI18-9
- **Cutting condition** vc = 120 (m/min)
  fn = 0.12 (mm/rev)
  ap = 5 mm
  W = 4 mm
  wet
- **Designation** KGMN400-03-R (PC5300)



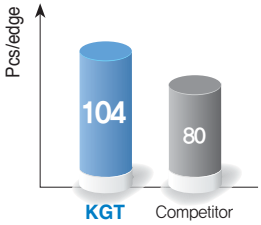


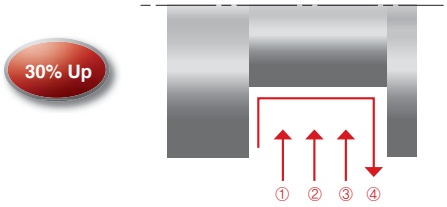
Shaft machining

Grooving (Roughing) & Turning (Finishing)

Excellent chip control for higher efficiency.

- **Workpiece** 42CrM04
- **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)



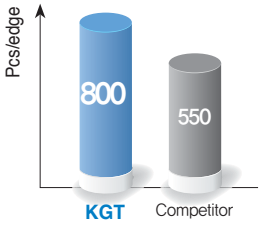


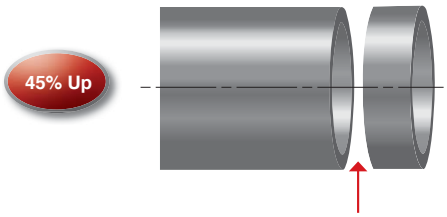
Parting off

Pipe Parting-off

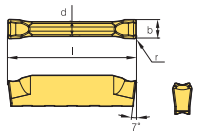
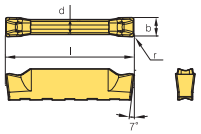
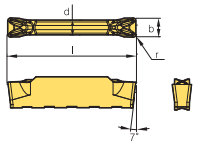
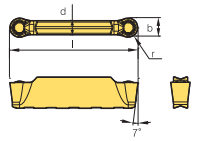
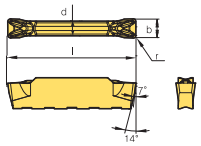
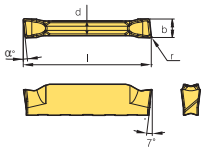
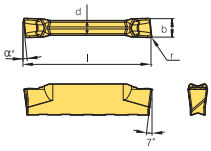
Exclusive parting-off chip breaker for longer tool life. / Sharp geometry for less burr.

- **Workpiece** X5CrNi18-9
- **Cutting condition** vc = 140 (m/min)
  fn = 0.15 (mm/rev)
  ap = 2 mm
  W = 3 mm
  wet
- **Designation** KGMR300-6D-LP (PC5300)



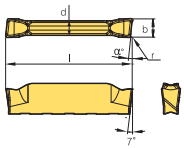
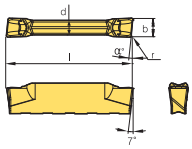
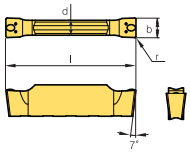
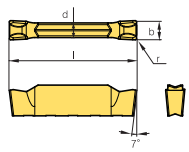
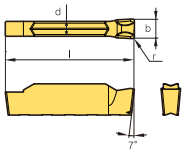
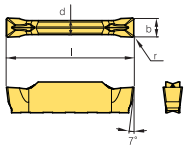
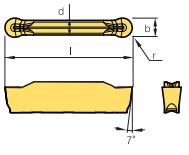


Insert

Application	Picture	Designation		Coated					Dimensions (mm)					Configuration	Page
				NC3215	NC3225	NC5330	PC5300	PC9030	b	r	l	d	α°		
Grooving	KGMN-L	KGMN	200-02-L		●	●	●	●	2.0	0.2	20	1.7	-		C14~20 C22
			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	-		C14~20 C22
			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			C14~20 C22
			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	-		
			300-04-T		●	●	●	●	3.0	0.4	20	2.3	-		
			400-04-T		●	●	●	●	4.0	0.4	20	3.3	-		
			400-08-T		●	●	●	●	4.0	0.8	20	3.3	-		
			500-04-T		●	●	●	●	5.0	0.4	25	4.1	-		
			500-08-T		●	●	●	●	5.0	0.8	25	4.1	-		
			600-04-T		●	●	●	●	6.0	0.4	25	5.1	-		
			600-08-T		●	●	●		6.0	0.8	25	5.1	-		
			800-08-T		●		●		8.0	0.8	30	6.1	-		
Profiling	KRMN-C	KRMN	200-C		●	●	●		2.0	1.0	20	1.7	-		C14~21
			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	-		
Grooving · Internal	KGMI-T	KGMI	200-02-T				●		2.0	0.2	20	1.7	-		C22
			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
			200-8D-LP						2.0	0.2	20	1.7	8		
			200-15D-LP			●	●		2.0	0.2	20	1.7	15		
			300-6D-LP			●	●		3.0	0.2	20	2.3	6		
			300-15D-LP			●	●		3.0	0.2	20	2.3	15		
			400-4D-LP			●	●		4.0	0.3	20	3.3	4		
			400-15D-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
			200-8D-RP						2.0	0.2	20	1.7	8		
			200-15D-RP			●	●		2.0	0.2	20	1.7	15		
			300-6D-RP			●	●		3.0	0.2	20	2.3	6		
			300-15D-RP			●	●		3.0	0.2	20	2.3	15		
			400-4D-RP			●	●		4.0	0.3	20	3.3	4		
			400-15D-RP			●	●		4.0	0.3	20	3.3	15		
			500-4D-RP						5.0	0.3	25	4.1	4		

● : Stock item

Insert

Application	Picture	Designation		Coated				Uncoated		Dimensions (mm)					Configuration	Page
				NC3215	NC5330	PC5300	PC9030	H01	H05	b	r	l	d	α°		
Parting off (Left handed)	KGML-LP	KGML	200-6D-LP							2.0	0.2	20	1.7	6		C14 C16
			200-15D-LP							2.0	0.2	20	1.7	15		
			300-6D-LP							3.0	0.2	20	2.3	6		
			300-15D-LP							3.0	0.2	20	2.3	15		
			400-4D-LP							4.0	0.2	20	3.3	4		
			400-15D-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
			200-15D-RP							2.0	0.2	20	1.7	15		
			300-6D-RP							3.0	0.2	20	2.3	6		
			300-15D-RP							3.0	0.2	20	2.3	15		
			400-4D-RP							4.0	0.2	20	3.3	4		
			400-15D-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 C16 C17
			300-020-B							3.0	0.20	20	2.3	-		
			300-040-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	-		
			400-080-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	20	3.3	-		
			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	-		
			600-120-B							6.0	1.20	25	5.1	-		
			800-080-B							8.0	0.80	30	6.1	-		
			800-120-B							8.0	1.20	30	6.1	-		
Grooving · Parting off (Ground insert)	new KGGN-R	KGGN	200-02-R							2.0	0.2	20	1.7	-		C14~20
			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	-		C23
			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	-		C14~20
			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 Profiling	new KRGN-A	KRGN	300-A					●		3.0	1.5	20	2.3	-		C14~19
			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	-		

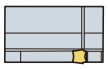
• Chip breaker 'B' : User self-grind type.

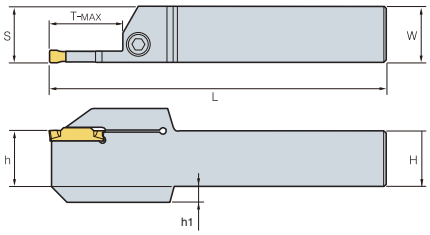
● : Stock item

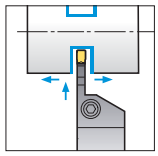
KGEHR/L

For grooving, turning, parting off, and relief machining

KGGN KGMN
KGMR/L KRMN
KRGN







• R type insert

(mm)

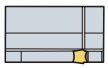
Designation		H = (h)	W	L	S	h_1	T-MAX	Inserts	Screw	Wrench
KGEHR/L	1616-1.5-T14	16	16	100	16.2	-	14	KGMN150-□-□	MHA0512	HW40L
	2020-1.5-T14	20	20	125	20.2	-	14			
	2525-1.5-T14	25	25	150	25.2	-	14			
	1212-2-T08	12	12	100	12.2	-	8	KGMN200-□-□ KGMR/L200-□-□ KRMN200-C KGGN200-□-□	MHA0512	HW40L
	1616-2-T08	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			

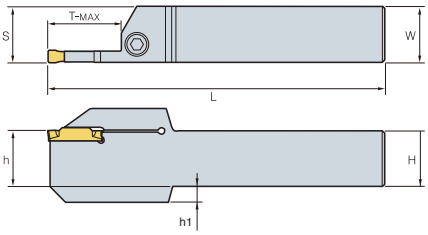
Applicable inserts C12~C13

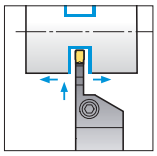
KGEHR/L

For grooving, turning, parting off, and relief machining

KGGN KGMN
KGMR/L KRMN
KRGN







• R type insert

(mm)

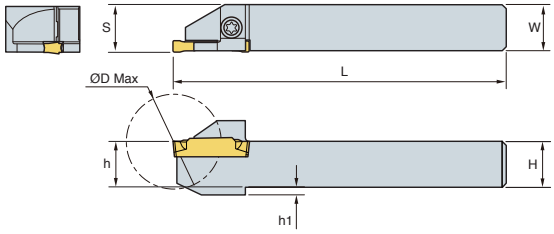
Designation		H = (h)	W	L	S	h1	T-MAX	Inserts	Screw	Wrench
KGEHR/L	2020-5-T12	20	20	125	20.5	-	12	KGMN500-□-□ KRMN500-C KGGN500-□-□ KRGN500-□	BHA0616	HW50L
	2525-5-T12	25	25	150	25.5	-	12			
	2020-5-T15	20	20	125	20.55	-	15			
	2525-5-T15	25	25	150	25.55	-	15			
	3232-5-T15	32	32	170	32.55	-	15			
	2020-5-T20	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			

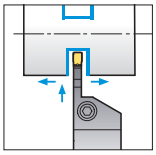
Applicable inserts C12~C13

KGEHR/L-D00A (Auto Tool)

For grooving, turning, parting off machining

KGGN KGMN
KGMR/L KRMN
KRGN





• R type insert

(mm)

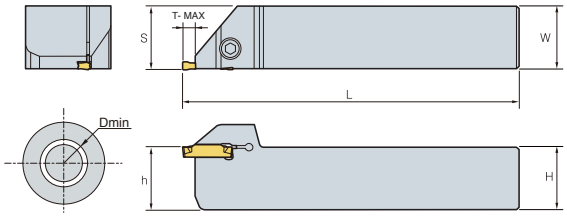
Designation		H = (h)	W	L	S	h1	ØD Max	Inserts	Screw	Wrench
KGEHR/L	1010-2-D20A	10	10	125	10.2	2	20	KGMN200-□-□ KGMR/L200-□-□ KRMN200-C KGGN200-□-□	ETNA0412	TW15L
	1212-2-D25A	12	12	125	12.2	2	25			
	1414-2-D25A	14	14	125	14.2	-	25			
	1616-2-D32A	16	16	125	16.2	-	32			
	1212-3-D25A	12	12	125	12.4	2	25	KGMN300-□-□ KGMR/L300-□-□ KRMN300-C KGGN300-□-□ KRGN300-□		
	1616-3-D32A	16	16	125	16.4	-	32			

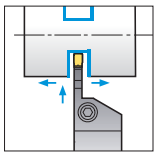
Applicable inserts C12~C13

KGEHR/L-T00

For grooving, turning, face grooving machining

KGMN KRMN
KGGN KRGN





• R type insert

(mm)

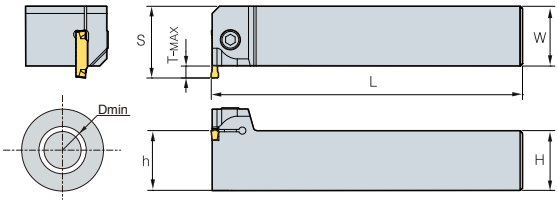
Designation		H = (h)	W	L	S	ØD Min	T-MAX	Inserts	Screw	Wrench
KGEHR/L	1616-3-T00	16	16	100	16.4	80	4.8	KGMN300-□-□ KRMN300-C KGGN300-□-□ KRGN300-□	MHA0512	HW40L
	2020-3-T00	20	20	125	20.4	80	4.8			
	2525-3-T00	25	25	150	25.4	80	4.8			
	1616-4-T00	16	16	100	16.4	80	4.8	KGMN400-□-□ KRMN400-C KGGN400-□-□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

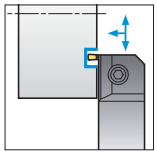
Applicable inserts C12~C13

KGEVR/L-T00

For grooving, turning, face grooving machining

KGMN KRMN
KRGN KGGN





• R type insert

(mm)

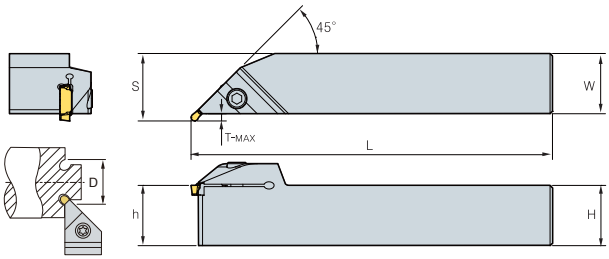
Designation		H = (h)	W	L	S	ØD Min	T-MAX	Inserts	Screw	Wrench
KGEVR/L	2020-1.5 -T00	20	20	125	23.5	120	3	KGMN150-□-□	MHA0512	HW40L
	2525-1.5 -T00	25	25	150	28.5	120	3			
	3232-1.5 -T00	32	32	170	35.5	120	3			
	2020-2 -T00	20	20	125	23.5	120	3	KGMN200-□-□ KRMN200-C KGGN200-□-□-□	MHA0512	HW40L
	2525-2 -T00	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			

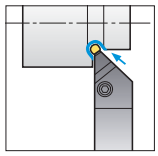
Applicable inserts C12~C13

KGEUR/L

For relief machining

KRMN
KRGN





• R type insert

(mm)

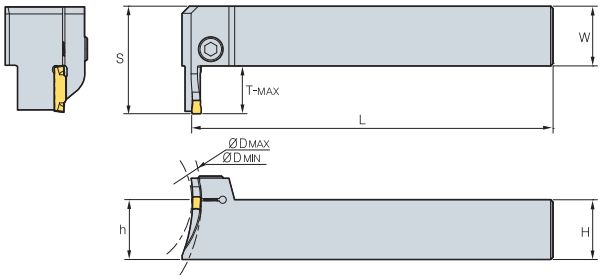
Designation		H = (h)	W	L	S	ØD Min	T-MAX	Inserts	Screw	Wrench
KGEUR/L	1616-3	16	16	100	19	40	2.8	KRMN300-C KRGN300-□	MHA0512	HW40L
	2020-3	20	20	125	23	40	2.8			
	2525-3	25	25	150	28	40	2.8			
	3232-3	32	32	170	35	40	2.8			
	1616-4	16	16	100	19	40	2.8	KRMN400-C KRGN400-□	BHA0616	HW50L
	2020-4	20	20	125	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			

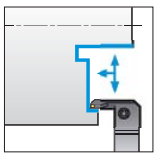
Applicable inserts **C12~C13**

KGFVR/L

For face grooving machining

KGMN KRMN
KGGN KRGN





• R type insert

(mm)

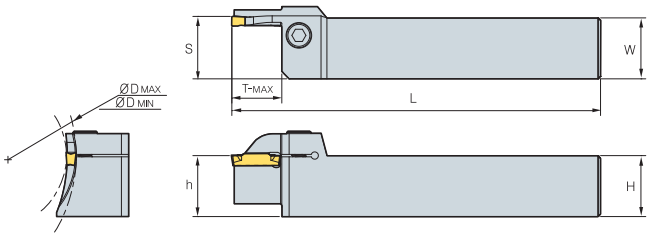
Designation		H = (h)	W	L	S	T-MAX	ØD		Inserts	Screw	Wrench
							Min	Max			
KGFVR/L	325-34/50-T10	25	25	150	36	10	34	50	KGMN300-□-□ KRMN300-C KGGN300-□-□ KRGN300-□	MHA0512	HW40L
	325-44/60-T15	25	25	150	41	15	44	60			
	325-54/85-T15	25	25	150	41	15	54	85			
	425-32/50-T15	25	25	150	41	15	32	50	KGMN400-□-□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

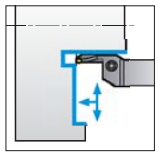
Applicable inserts **C12~C13**

KGFHR/L

For face grooving machining

KGMN KRMN
KGGN KRGN





• R type insert

(mm)

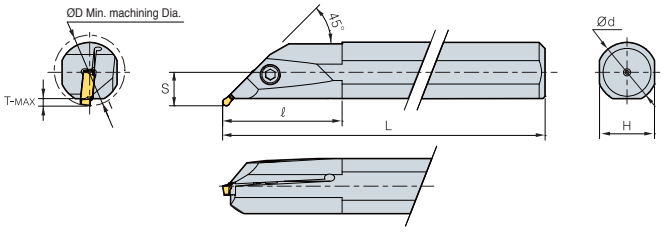
Designation		H = (h)	W	L	S	T-MAX	ØD		Inserts	Screw	Wrench
							Min	Max			
KGFHR/L	320-34/50-T10	20	20	150	20.5	10	34	50	KGMN300-□-□ KRMN300-C KGGN300-□-□ KRGN300-□	MHA0512	HW40L
	320-44/70-T15	20	20	150	20.5	15	44	70			
	320-64/100-T15	20	20	150	20.5	15	64	100			
	325-34/50-T10	25	25	150	25.5	10	34	50			
	325-44/70-T15	25	25	150	25.5	15	44	70			
	325-64/100-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
	420-42/70-T16	20	20	150	20.5	16	42	70			
	420-62/120-T16	20	20	150	20.5	16	62	120			
	420-112/200-T16	20	20	150	20.5	16	112	200			
	425-34/50-T20	25	25	150	25.6	20	34	50			
	425-40/60-T10	25	25	150	25.6	10	40	60			
	425-44/70-T20	25	25	150	25.6	20	44	70			
	425-84/92-T20	25	25	150	25.6	20	84	92			
	425-60/120-T20	25	25	150	25.6	20	60	120			
	425-112/200-T20	25	25	150	25.6	20	112	200			
	425-200-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
	525-50/80-T25	25	25	150	25.6	25	50	80			
	525-70/110-T15	25	25	150	25.6	15	70	110			
	525-70/110-T25	25	25	150	25.6	25	70	110			
	525-100/150-T25	25	25	150	25.6	25	100	150			
	525-140/200-T25	25	25	150	25.6	25	140	200			
	525-190/220-T10	25	25	150	25.6	10	190	200			
	525-200-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
	625-190/220-T10	25	25	150	25.6	10	190	200			

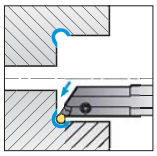
Applicable inserts C12~C13

KGIUR/L

For relief machining

KRMN
KRGN





• R type insert

(mm)

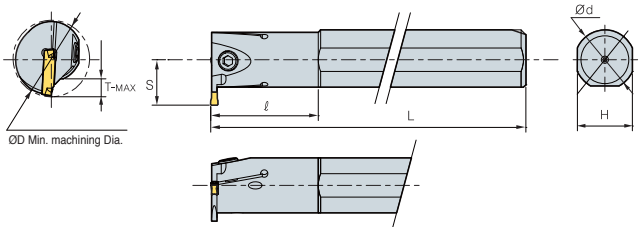
Designation		ØD	Ød	L	ℓ	T-MAX	H	S	Inserts	Screw	Wrench
KGIUR/L	3520-3	35	20	150	45	3.5	18	13	KRMN300-C KRGN300-□	MHA0512	HW40L
	4025-3	40	25	200	50	3.5	23	15.5			
	5032-3	50	32	250	65	3.5	30	19			
	3520-4	35	20	150	45	3.5	18	13	KRMN400-C KRGN400-□	MHA0512	HW40L
	4025-4	40	25	200	50	3.5	23	15.5			
	5032-4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

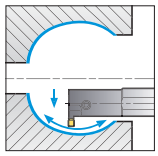
Applicable inserts **C12~C13**

KGIVR/L

For grooving, turning and profil machining

KGMI
KGMN





• 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	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	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	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-□-□	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-□-□	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-□-□	BHA0616	HW50L
	4540-8	45	40	300	70	8.5	37	26.5		BHA0616	HW50L

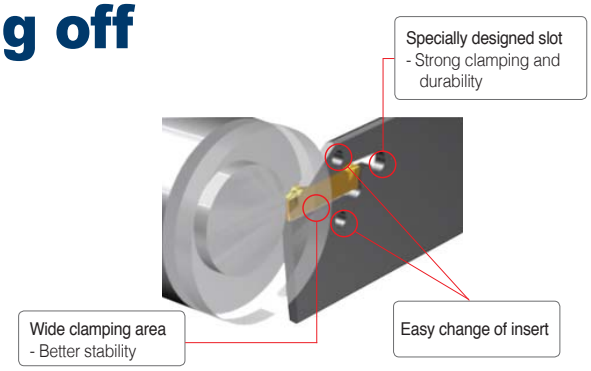
Applicable inserts **C12~C13**

• External insert: Min. machining Dia (ØD) is over 50 mm.

KGT Blade for Parting off

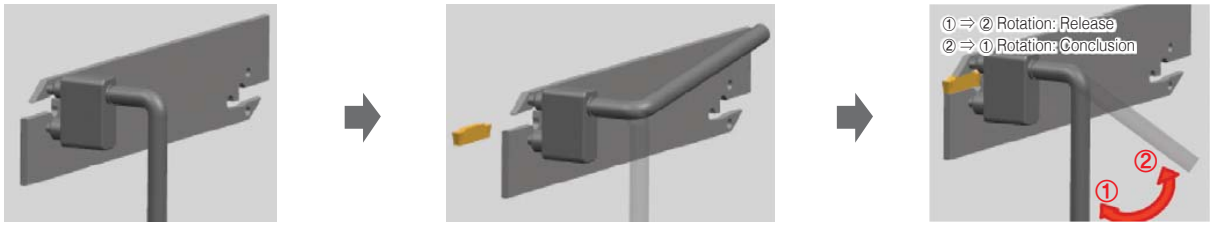
Features

- 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

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

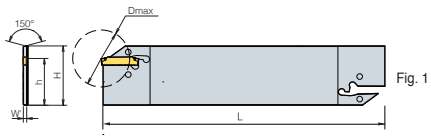


Fig. 1

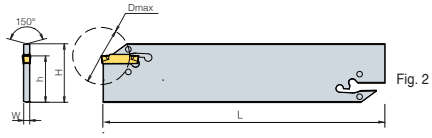


Fig. 2

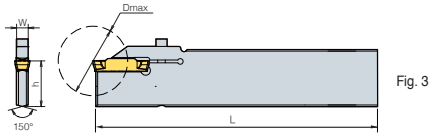


Fig. 3

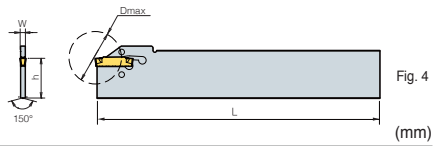


Fig. 4

(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
	2026S	26	2.4	1.8	150	21	50	39	KG□□200-□-□ KG□□200S-□-R(4)		
	3026S	26	2.4	-	150	21	100	39	KG□□300-□-□ KG□□300S-□-R(4)		
	4026S	26	3.2	-	150	21	100	39	KG□□400-□-□ KG□□400S-□-R(4)		
	1532	32	2.4	1	150	25	-	26	KG□□150-□-□		1
	2032	32	2.4	1.8	150	25	50	39	KG□□200-□-□ KG□□200S-□-R(4)		
	3032	32	2.4	-	150	25	100	39	KG□□300-□-□ KG□□300S-□-R(4)		2
	4032	32	3.2	-	150	25	100	39	KG□□400-□-□ KG□□400S-□-R(4)		
	5032	32	4	-	150	25	120	49	KG□□500-□-□ KG□□500S-□-R(4)		
	6032	32	5.2	-	150	25	120	49	KG□□600-□-□ KG□□600S-□-R(4)		
	8032S(1)	32	6.2	-	150	25	80	59	KG□□800-□-□ KG□□800S-□-R(4)	HW30L	3

Applicable inserts C12~C13

(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

- 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

Insert code system

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 code system

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	NC3225	PC8110	PC5300	PC9030	PC6510	ST30A	2	3	4	5	6
SM□□C	80~180	80~160		80~180	80~200		80~180				0.02~0.15	0.03~0.2	0.08~0.3	0.10~0.4	0.12~0.5
SCM	70~150	70~150	70~150	70~150	70~150		70~150				0.02~0.15	0.03~0.2	0.08~0.3	0.10~0.4	0.12~0.5
GC/GCD				50~100					50~100	50~100	0.05~0.12	0.1~0.25	0.1~0.30	0.1~0.35	0.1~0.40
STS			50~120	50~120		50~120	60~140	60~140			0.02~0.1	0.03~0.15	0.08~0.25	0.1~0.35	0.12~0.40
Non-ferrous metal (Al, Copper)										200~450	0.05~0.1	0.05~0.2	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)		
	NC6210	NC3030	NC5330	NC3120	PC3500	PC9030	PC8110	PC5300	H01	3	4	5
SM□□C		80~160	100~160	100~160				80~180		0.05~0.1	0.05~0.12	0.05~0.15
SCM		50~130	50~130	50~130	50~130			70~150	200~800	0.05~0.1	0.05~0.12	0.05~0.15
GC/GCD	100~200		120~150							0.05~0.1	0.05~0.12	0.05~0.15
STS			60~150			60~140	60~120	60~140		0.05~0.1	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)

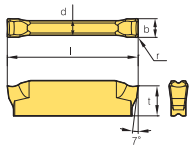
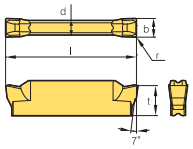
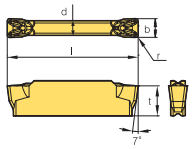
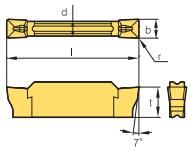
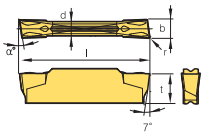
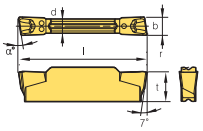
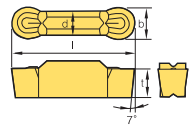
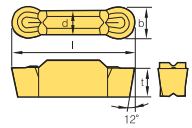
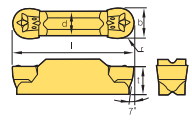
Workpiece	Cutting Speed (vc = m/min)										Feed (fn = mm/rev)					
	CVD				PVD			Cermet	Uncoated		Cutting width (mm)					
	NC3225	NC3120	NC3030	NC5330	PC9030	PC5300	PC3500	CN20	ST30A	ST20	0.5~1.0	1.0~2.0	2~3	3~4	4~5	6~8
SM□□C	80~200	80~200	80~180	80~200		80~180		80~120		80~120	0.03~0.08	0.04~0.09	0.05~0.1	0.05~0.12	0.05~0.15	0.05~0.2
SCM	80~180	80~180	80~180	80~180		80~160	80~180	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	60~140				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)									150~400		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
				NC3030	NC3120	NC3225	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	C34 C35
			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	C34 C35
			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	C34 C35
			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	C33 C38
Grooving · Turning	MGGN-M	MGGN	300-02-M										3.0	0.2	21.0	2.35	4.8	C28 C30 C32 C38
			300-04-M										3.0	0.4	21.0	2.35	4.8	
			300-08-M										3.0	0.8	21.0	2.35	4.8	
			400-02-M										4.0	0.2	21.0	3.3	4.8	
			400-04-M										4.0	0.4	21.0	3.3	4.8	
			400-08-M										4.0	0.8	21.0	3.3	4.8	
			500-02-M										5.0	0.2	26.0	4.1	5.8	
			500-04-M										5.0	0.4	26.0	4.1	5.8	
			500-08-M										5.0	0.8	26.0	4.1	5.8	
			600-02-M										6.0	0.2	26.0	5.0	5.8	
			600-04-M										6.0	0.4	26.0	5.0	5.8	
			600-08-M										6.0	0.8	26.0	5.0	5.8	
Grooving	MGMN-G	MGMN	150-G	●					●	●		●	1.5	0.15	16.0	1.2	3.5	C28 C30 C32 C38
			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	4.8	
			400-G	●	●				●	●			4.0	0.3	21.0	3.3	4.8	
			500-G										5.0	0.5	26.0	4.1	5.8	
			600-G										6.0	0.8	26.0	5.0	5.8	
Grooving · Turning	MGMN-M	MGMN	200-M	●	●		●		●	●		●	2.0	0.2	16.0	1.6	3.5	C28 C30 C32 C38
			250-M	●	●				●	●			2.5	0.2	18.5	2.0	3.85	
			300-02-M				●						3.0	0.2	21.0	2.35	4.8	
			300-M	●	●	●			●	●	●	●	3.0	0.4	21.0	2.35	4.8	
			350-03-M										3.5	0.3	21.0	2.9	4.8	
			400-02-M										4.0	0.2	21.0	3.3	4.8	
			400-M	●	●	●	●		●	●	●	●	4.0	0.4	21.0	3.3	4.8	
			500-04-M	●									5.0	0.4	26.0	4.1	5.8	
			500-M	●	●	●	●						5.0	0.8	26.0	4.1	5.8	
			600-M	●	●		●						6.0	0.8	26.0	5.0	5.8	
			800-M	●			●						8.0	0.8	31.0	6.0	6.5	

● : Stock item

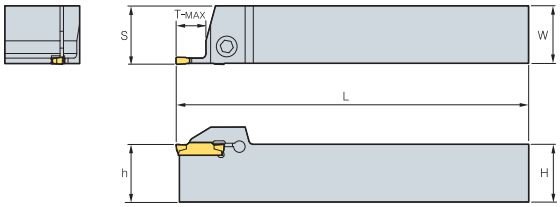
Insert

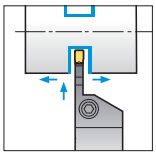
Application	Picture	Designation		Coated							Uncoated		Dimensions (mm)						Configuration	Page
				NC3030	NC3120	NC3225	NC5330	NC6315	PC5300	PC8100	PC9030	H01	H05	b	r	l	d	t	α°	
Grooving	MGMN-L	MGMN	200-02-L											2.0	0.2	16	1.60	3.5	-		C28 C30 C32 C33
			300-02-L						●					3.0	0.2	21	2.35	4.8	-		
			400-02-L						●					4.0	0.2	21	3.3	4.8	-		
			200-04-L											2.0	0.4	20	1.7	3.5	-		
			300-04-L											3.0	0.4	20	2.3	4.0	-		
			400-04-L											4.0	0.4	20	3.3	4.0	-		
			500-04-L						●					5.0	0.4	26	4.1	5.8	-		
Grooving · Parting off	MGMN-R	MGMN	200-02-R											2.0	0.2	16	1.60	3.5	-		C28 C30 C32 C33
			300-02-R	●					●					3.0	0.2	21	2.35	4.8	-		
			400-02-R	●					●					4.0	0.2	21	3.3	4.8	-		
			200-04-R											2.0	0.4	20	1.7	3.5	-		
			300-04-R											3.0	0.4	20	2.3	4.0	-		
			400-04-R											4.0	0.4	20	3.3	4.0	-		
			500-04-R	●					●					5.0	0.4	26	4.1	5.8	-		
Grooving · Turning	MGMN-T	MGMN	200-T											2.0	0.2	16	1.60	3.5	-		C28 C30 C32 C33
			300-T	●					●					3.0	0.4	21	2.35	4.8	-		
			400-T	●					●					4.0	0.4	21	3.3	4.8	-		
			500-T						●					5.0	0.8	26	4.1	5.8	-		
Grooving	MGGN-A	MGGN	300-02-A											3.0	0.2	21	2.35	4.8	-		C28 C30 C32 C38
			300-04-A											3.0	0.4	21	2.35	4.8	-		
			300-08-A											3.0	0.8	21	2.35	4.8	-		
			400-02-A											4.0	0.2	21	3.3	4.8	-		
			400-04-A											4.0	0.4	21	3.3	4.8	-		
			400-08-A											4.0	0.8	21	3.3	4.8	-		
			500-02-A											5.0	0.2	26	4.1	5.8	-		
			500-04-A											5.0	0.4	26	4.1	5.8	-		
			500-08-A											5.0	0.8	26	4.1	5.8	-		
Parting off	MGMR/L-PS	MGMR/L	300-6D-PS											3.0	0.2	21	2.35	4.8	6		C28 C30
			300-8D-PS											3.0	0.2	21	2.35	4.8	8		
			300-15D-PS											3.0	0.2	21	2.35	4.8	15		
			400-4D-PS											4.0	0.3	21	3.3	4.8	4		
			500-4D-PS											5.0	0.3	26	4.1	5.8	4		
Parting off	MGMR/L-PT	MGMR/L	200-6D-PT						●					2.0	0.2	16	1.6	3.6	6		C28 C30
			300-6D-PT				●							3.0	0.2	21	2.35	4.8	6		
			300-8D-PT											3.0	0.2	21	2.35	4.8	8		
			300-15D-PT											3.0	0.2	21	2.35	4.8	15		
			400-4D-PT											4.0	0.3	21	3.3	4.8	4		
			500-4D-PT											5.0	0.3	26	4.1	5.8	4		
Aluminum	MRGN-A	MRGN	400-A									●		4.0	2.0	21.0	3.3	4.8	-		C28 C29 C31 C32
			500-A											5.0	2.5	26.0	4.1	5.8	-		
	MRGN-A	MRGN	600-A									●		6.0	3.0	26.0	5.0	5.8	-		C28 C29 C31 C32
			800-A									●		8.0	4.0	31.0	6.0	6.5	-		
Reliefing Profiling	MRMN-M	MRMN	200-M	●	●									2.0	1.0	16.0	1.50	3.5	-		C28 ~32 C38
			300-M	●	●		●		●	●				3.0	1.5	21.0	2.35	4.8	-		
			400-M	●	●		●							4.0	2.0	21.0	3.3	4.8	-		
			500-M	●					●					5.0	2.5	26.0	4.1	5.8	-		
			600-M	●			●							6.0	3.0	26.0	5.0	5.8	-		
			800-M	●			●							8.0	4.0	31.0	6.0	6.5	-		

● : Stock item

MGEHR/L

For Grooving, Turning, Parting off, Reliefing, Profiling machining





MGMN MGMR
MGGN MRMN
MRGN

• R type insert

(mm)

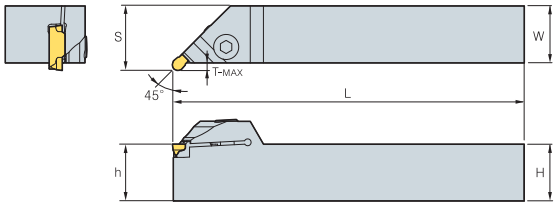
Designation		H = (h)	W	L	S	T-MAX	Inserts	Screw	Wrench
MGEHR/L	1616-1.5	16	16	100	16.2	14	MGMN150-G	LTX0514	TW20L
	2020-1.5	20	20	125	20.2	14			
	2525-1.5	25	25	150	25.2	14			
	1212-2	12	12	100	14.25	14	MGMN200-G MGMN200-M MGMR200-□□-□□	MHA0512	HW40L
	1616-2	16	16	100	16.25	14			
	2020-2	20	20	125	20.25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

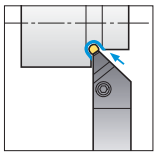
Applicable inserts C26~C27

MGEUR/L

For Reliefing, Profiling machining

MRMN
MRGN





• R type insert

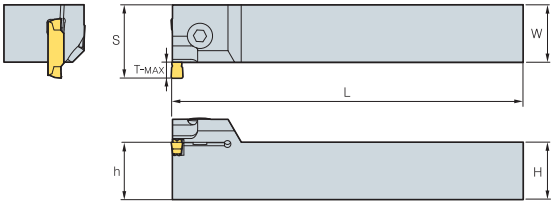
(mm)

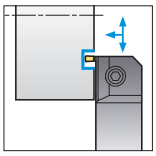
Designation		H = (h)	W	L	S	T-MAX	Inserts	Screw	Wrench
MGEUR/L	2020-3	20	20	125	23	3	MRMN300-M	BHA0616	HW50L
	2525-3	25	25	150	28	3			
	3232-3	32	32	170	35	3			
	2020-4	20	20	125	23	3	MRMN400-M		
	2525-4	25	25	150	28	3			
	3232-4	32	32	170	35	3			
	2020-5	20	20	125	24	4	MRMN500-M		
	2525-5	25	25	150	29	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 **C26~C27**

MGEVR/L

For Grooving, Turning, Profiling machining





MGMN MGGN
MRMN MRGN

• R type insert

(mm)

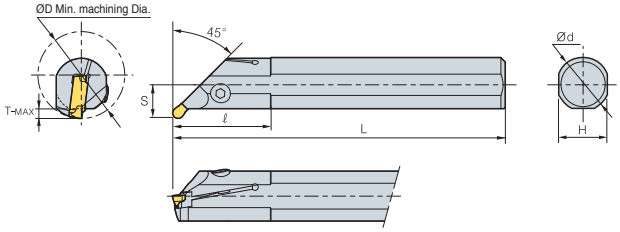
Designation		H = (h)	W	L	S	T-MAX	Min. machining Dia. (ØD)	Inserts	Screw	Wrench
MGEVR/L	2020-1.5	20	20	125	23	3	85	MGMN150-G	LTX0514	TW20L
	2525-1.5	25	25	150	28	3	85			
	3232-1.5	32	32	170	35	3	85			
	2020-2	20	20	125	23.5	3.5	65	MGMN200-M MGMN200-G	BHA0616	HW50L
	2525-2	25	25	150	28.5	3.5	65			
	3232-2	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			

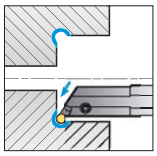
Applicable inserts C26~C27

MGIUR/L

For Reliefing, Profiling machining

MRMN
MRGN





• R type insert

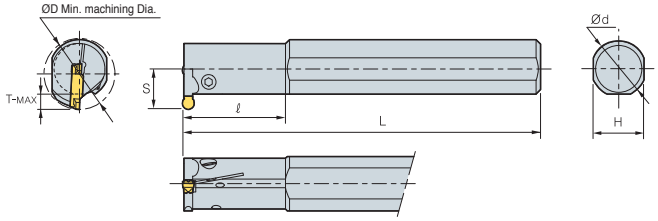
(mm)

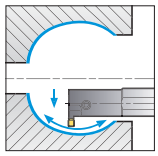
Designation		ØD	Ød	L	ℓ	T-MAX	H	S	Inserts	Screw	Wrench
MGIUR/L	3520-3	35	20	150	45	3.5	18	13	MRMN300-M	MHA0512	HW40L
	4025-3	40	25	200	45	3.5	23	15.5			
	5032-3	50	32	250	65	3.5	30	19			
	3520-4	35	20	150	45	3.5	18	13	MRMN400-M		
	4025-4	40	25	200	45	3.5	23	15.5			
	5032-4	50	32	250	65	3.5	30	19			
	4025-5	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 **C26~C27**

MGIVR/L

For Grooving, Turning, Profiling machining





MGMN MRMN
MGGN MRGN

• R type insert

(mm)

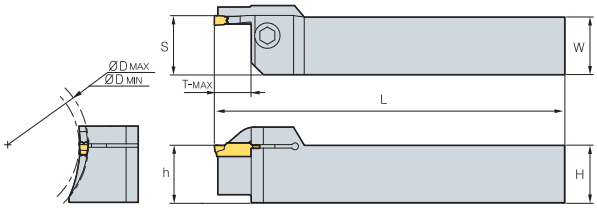
Designation		ØD	Ød	L	ℓ	T-MAX	H	S	Inserts	Screw	Wrench
MGIVR/L	2016-1.5	20	16	125	35	3.5	15	11.3	MGMN150-G	MHB0310	HW25L
	2520-1.5	25	20	150	45	3.5	18	13.1		MHA0512	HW40L
	2925-1.5	29	25	200	45	3.5	23	16.2			
	2016-2	20	16	125	35	4.5	15	12.4	MGMN200-G	MHB0310	HW25L
	2520-2	25	20	150	45	4.5	18	14.0	MGMN200-M	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
	3125-3	31	25	200	45	6	23	18.9			
	3732-3	37	32	250	65	6	30	21.5			
	2520-4	25	20	150	45	6	18	15.6	MGMN400-M/G/T MGGN400-□□-M MRMN400-M MGMN400-□□-L/R		
	3125-4	31	25	200	45	6	23	18.9			
	3732-4	37	32	250	65	6	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		
	4540-8	45	40	300	70	10	37	27.2	MGMN800-M		
	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			

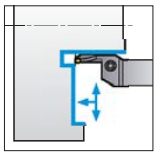
Applicable inserts **C26~C27**

MGFHR/L

For Face Grooving machining

MFMN
MGMN





• R type insert

(mm)

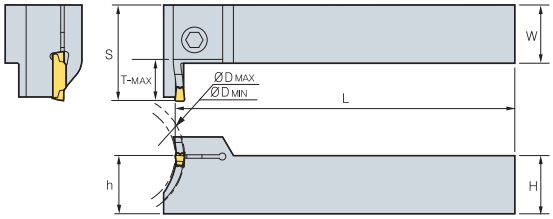
Designation		H = (h)	W	L	S	T-MAX	ØD		Inserts	Screw	Wrench
							Min	Max			
MGFHR/L	325-24/35-T10	25	25	150	25.6	10	24	35	MFMN300	BHA0616	HW50L
	325-29/40-T10	25	25	150	25.6	10	29	40			
	325-34/50-T10	25	25	150	25.6	10	34	50			
	325-44/70-T10	25	25	150	25.6	10	44	70			
	325-64/99-T10	25	25	150	25.6	10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

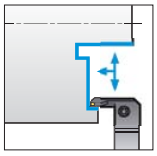
Applicable inserts C26~C27

MGFVR/L

For Face Grooving machining

MFMN
MGMN





• R type insert

(mm)

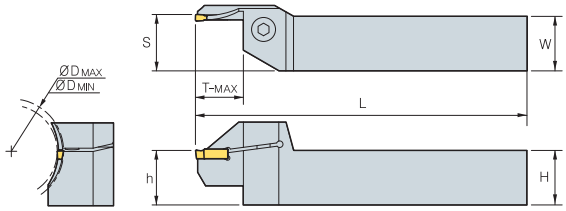
Designation		H = (h)	W	L	S	T-MAX	ØD		Inserts	Screw	Wrench
							Min	Max			
MGFVR/L	325-24/35-T10	25	25	150	36	10	24	35	MFMN300	MHA0512	HW40L
	325-29/40-T10	25	25	150	36	10	29	40			
	325-34/50-T10	25	25	150	36	10	34	50			
	325-44/70-T10	25	25	150	36	10	44	70			
	325-64/99T10	25	25	150	36	10	64	99			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

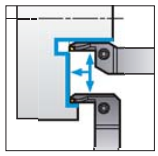
Applicable inserts C26~C27

FGHH

For Face Grooving, Turning machining

FGD FGM FMM





• R type insert

(mm)

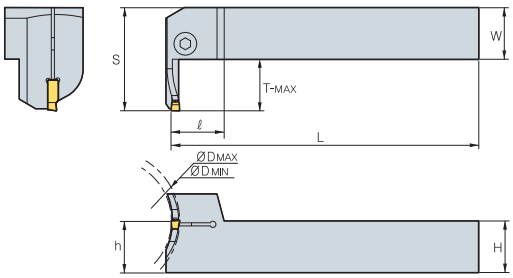
Designation		H = (h)	W	L	S	T-MAX	ØD		Inserts	Screw	Wrench
							Min	Max			
FGHH	320R - 25/30	20	20	125	20.6	12	25	30	FMM300R-03	BHA0616	HW50L
	30/35	20	20	125	20.6	12	30	35			
	35/48	20	20	125	20.6	12	35	48			
	48/60	20	20	125	20.6	22	48	60	FGD300R-03 FGM300R-03		
	60/75	20	20	125	20.6	22	60	75			
	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			

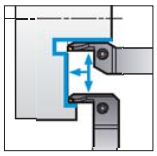
Applicable inserts C26~C27

FGVH

For Face Grooving, Turning machining

FGD FGM FMM





• R type insert

(mm)

Designation		H = (h)	W	L	S	T-MAX	ØD		Inserts	Screw	Wrench
							Min	Max			
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			

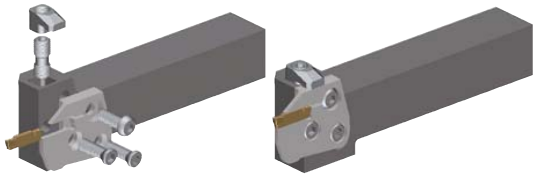
Applicable inserts C26~C27

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

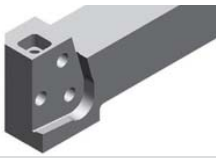
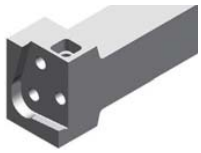


Simple & Strong Setting

Holder code system

MC	H	R/L	25	25
MGT-Cartridge System	Holder Style H: Horizontal V: Vertical	Hand	Height (mm)	Width (mm)

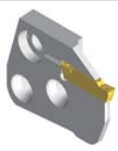
Holder

	Horizontal Type		Vertical Type	
				
	MCHR	MCHL	MCVR	MCVL
Available cartridge	External process: MCER Facing process: MCFL	External process: MCEL Facing process: MCFR	External process: MCEL Facing process: MCFR	External process: MCER Facing process: MCFL

Cartridge code system

MC	F	R/L	3	24/35	T16
MGT-Cartridge System	Working Style E: External Process F: Facing Process	Hand	Cutting Width (mm)	Facing Dia. (mm)	Maximum Depth (mm)

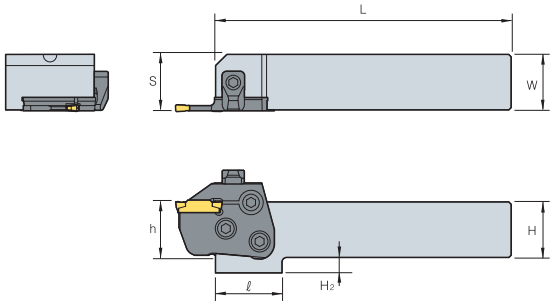
Cartridge

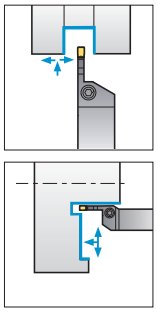
External Process		Facing Process	
			
MCER	MCEL	MCFR	MCFL

MCHR/L (Holder)

For Grooving, Turning, Parting off, Reliefing, Profiling machining

MCER/L
MCFR/L





• R type insert

(mm)

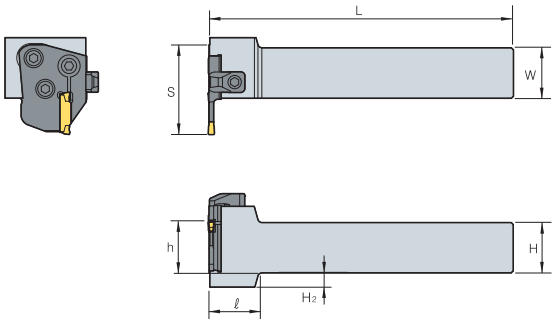
Designation		H = (h)	W	L	S	ℓ	H_2	Cartridge	Clamp	Clamp Screw	Hinge Screw	Clamping Screw	Wrench
MCHR/L	2020	20	20	133	20.7	30	12	MCER/L MCFR/L	CXH8N	DHA0818F	RHA0613	FHGA0618	HW40L
	2525	25	25	133	25.7	30	7						
	3232	32	32	153	32.7	-	-						

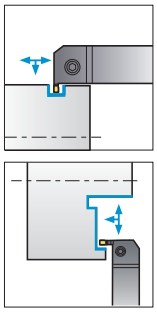
Applicable inserts **C38**

MCVR/L (Holder)

For Face Grooving, Turning machining

MCER/L
MCFR/L





• R type insert

(mm)

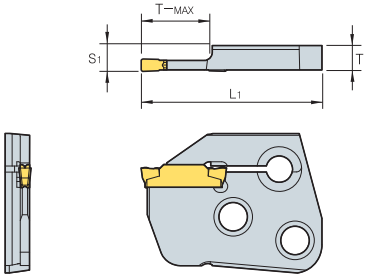
Designation		H = (h)	W	L	S	ℓ	H_2	Cartridge	Clamp	Clamp Screw	Hinge Screw	Clamping Screw	Wrench
MCVR/L	2020	20	20	150	38	30	12	MCER/L MCFR/L	CXH8N	DHA0818F	RHA0613	FHGA0618	HW40L
	2525	25	25	150	43	30	7						
	3232	32	32	170	50	-	-						

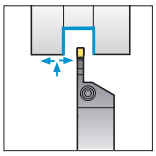
Applicable inserts **C38**

MCER/L (Cartridge)

For Grooving, Turning, Parting off, Reliefing, Profiling machining

MGMN MGMR
MGGN MRMN





• R type insert

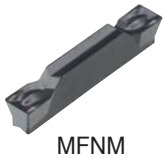
(mm)

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 MGMR/L MGGN MRMN	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		

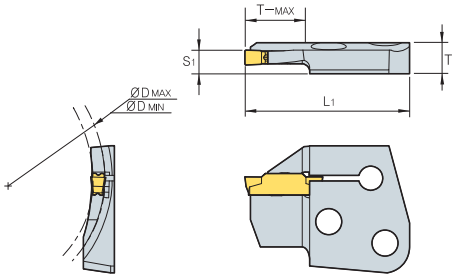
Applicable inserts C26~C27

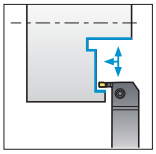
MCFR/L (Cartridge)

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	MFMN300	MCVR/L MCHR/L
	3-29/40-T16	8.00	44.5	6.35	16	29	40	3		
	3-34/50-T16	8.00	44.5	6.35	16	34	50	3		
	3-44/70-T16	8.00	44.5	6.35	16	44	70	3		
	3-64/99-T16	8.00	44.5	6.35	16	64	99	3		
	4-44/60-T16	7.97	44.5	6.35	16	44	60	4	MGMN400	
	4-60/120-T16	7.97	44.5	6.35	16	60	120	4		
	4-112/200-T16	7.97	44.5	6.35	16	112	200	4		

Applicable inserts C26~C27

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

Insert code system

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 code system

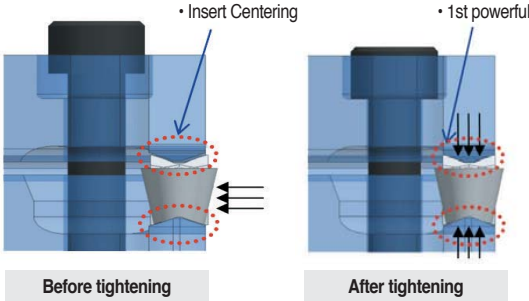
MG	E	H	R/L	25N	- 8	A	- MR
System Code	Application	Holder Type	Hand	Shank Size	Cutting Width	Chip Breaker	Insert Type
MG: Multi Grooving	E: External machining I: Internal machining	H: Horizontal V: Vertical U: Undercut X: Special	R: Right L: Left	Height: 25 mm Width: 25 mm (For internal machining: Minimum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

Various insert types

MRGN type : Full "Round" geometry

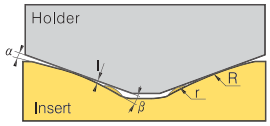
MRGN-A (For general)	MRGN-A5 (For copying)	MRGN-AM (Medium finishing)	MRGN-AP (PCD)	MVGN-A (For fine finishing)
				
High rake angle, Sharp cutting edge	Reinforced clamping force	For ductile cast iron	Improved chip control	High rake and relief angle

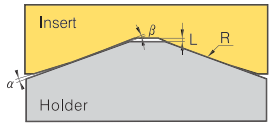
New clamping system

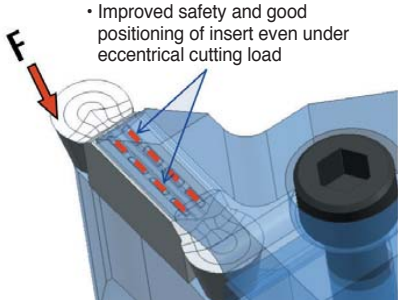


•Reinforcing the clamping force due to radius designed on the top & bottom side of insert and convex"DOT"on the top of insert

PATENT

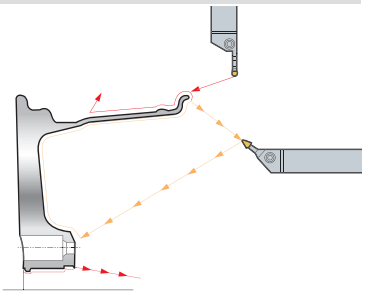
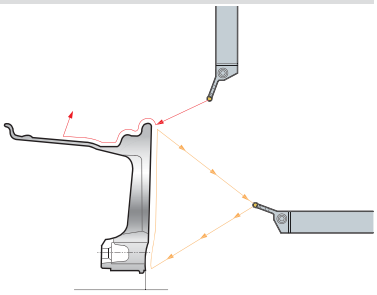
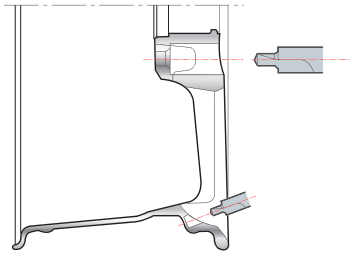






C Available Insert for MGT Aluminum Wheel

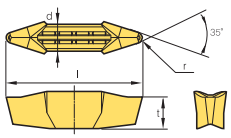
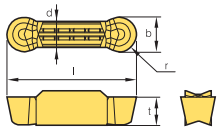
Application of aluminum wheels

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

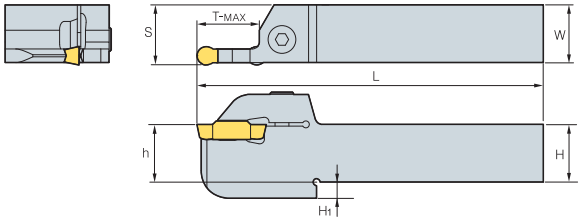
Insert

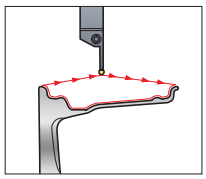
Application	Picture	Designation		Coated	Uncoated	Dimensions (mm)					Configuration	Page
				DP150	G10	b	r	l	d	t		
For Aluminum Wheel	MVGN 	MVGN	8N-A-R1.2			-	1.2	30.0	6.0	6.9		C40
			8N-A-R1.6			-	1.6	30.0	6.0	6.9		
	MRGN-A 	MRGN	6N-A		●	6.0	3.0	26.0	5.0	5.9		C39 C40
			6N-AM			6.0	3.0	26.0	5.0	5.9		
			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

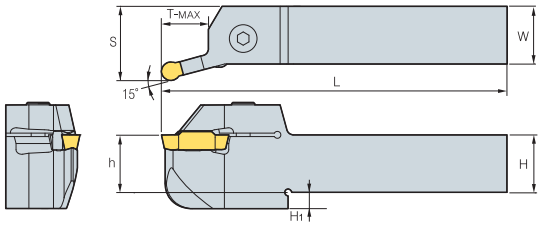
(mm)

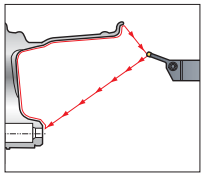
Designation		H = (h)	H1	W	L	S	T-MAX	Inserts	Screw	Wrench
MGEHR/L	25N-6A	25	7	25	150	25.55	23.5	MRGN6N-A MRGN6N-AP MRGN6N-AM	BHA0620	HW50L
	32N-6A	32	8	32	150	32.55	27			
	25N-6A5	25	7	25	150	25.55	23.5	MRGN6N-A5		
	32N-6A5	32	8	32	150	32.55	27			
	25N-8A	25	7	25	150	25.55	23.5	MRGN8N-A MRGN8N-AP MRGN8N-AM		
	32N-8A	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 **C40**

MGEHR/L-15

MRGN





• R type insert

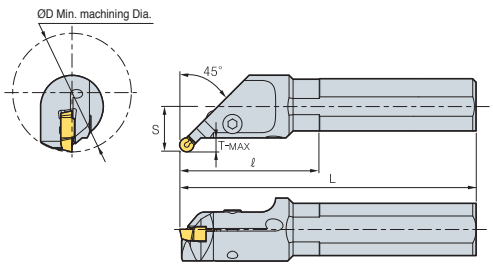
(mm)

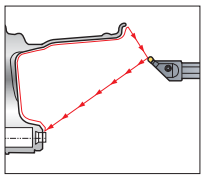
Designation		H = (h)	H1	W	L	S	T-MAX	Inserts	Screw	Wrench
MGEHR/L	25N-6A-15	25	7	25	150	32.2	20	MRGN6N-A MRGN6N-AP MRGN6N-AM	BHA0620	HW50L
	32N-6A-15	32	8	32	150	39.2	25			
	25N-6A5-15	25	7	25	150	32.2	20	MRGN6N-A5		
	32N-6A5-15	32	8	32	150	39.2	25			
	25N-8A-15	25	7	25	150	32.2	20	MRGN8N-A MRGN8N-AP MRGN8N-AM		
	32N-8A-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 **C40**

MGIUR/L-MR

MRGN





• R type insert

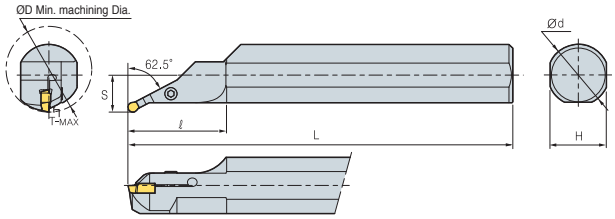
(mm)

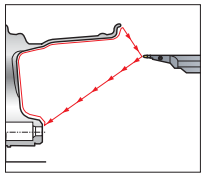
Designation		ØD	Ød	L	ℓ	T-MAX	H	S	Inserts	Screw	Wrench
MGIUR/L	6832-8A-MR	68	32	170	65	7	30	26	MRGN8N-A/AM/AP MRGN8N-A5	BHA0620	HW50L
	6832-8A5-MR	68	32	170	65	7	30	26			

Applicable inserts **C40**

MGIXR/L-MR

MRGN





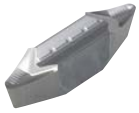
• R type insert

(mm)

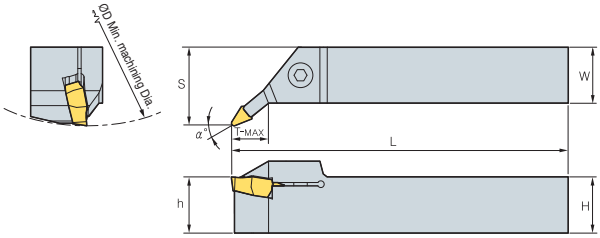
Designation		ØD	Ød	L	ℓ	T-MAX	H	S	Inserts	Screw	Wrench
MGIXR/L	7050-8A-MR	70	50	350	80	5.5	46	30.2	MRGN8N-A/AM/AP MRGN8N-A5	BHA0620	HW50L
	7050-8A5-MR	70	50	350	80	5.5	46	30.2			

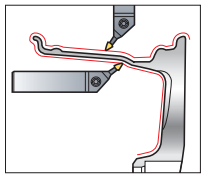
Applicable inserts **C40**

MGEXR/L



MVGN





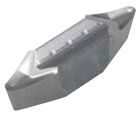
• R type insert

(mm)

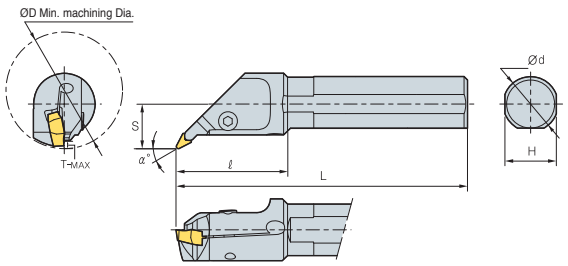
Designation		H = (h)	W	L	S	T-MAX	α°	Inserts	Screw	Wrench
MGEXR/L	25N-8A-5V	25	25	150	29	23.5	5	MVGN8N-A-R1.2 MVGN8N-A-R1.6	BHA0620	HW50L
	25N-8A-22.5V	25	25	150	35	27	22.5			

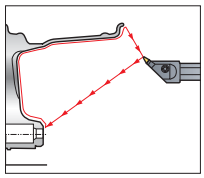
Applicable inserts **C40**

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 **C40**

Economical 3-corner insert for high precision grooving

TB/TB-M

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

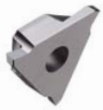
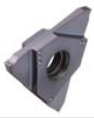
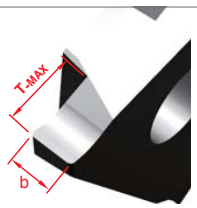
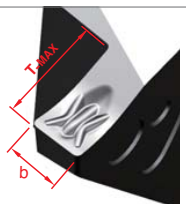
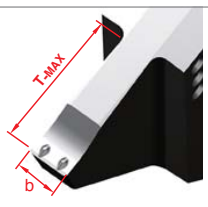
Insert code system

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 code system

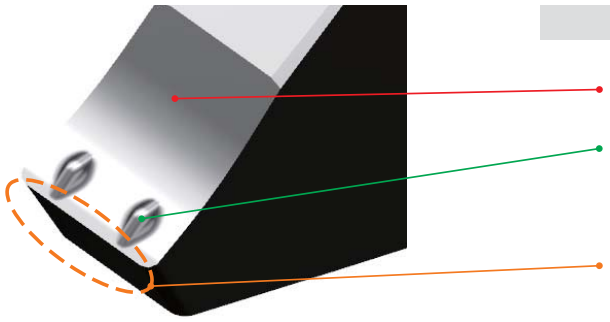
TBH	5	25	R
Triangle Blade Holder	Inscribed circle	Shank size	Hand
	3: 9.525 mm 4: 12.7 mm 5: 15.875 mm	10~25 mm	R: Right L: Left

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 ~ TB5318N-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 production

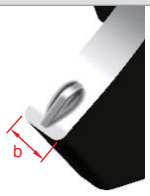


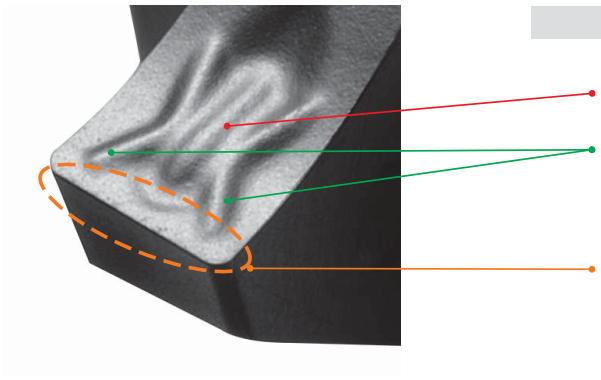
TB5-M Chip breaker

Lowered back area: Minimizes chip frictions to prevent overload when evacuating chips

Beveled protruding dots: Facilitate smooth chip evacuation outside each groove. Minimize chip control work load at high depth of cuts. Form chip curls at regular intervals

Cutting edge land: Prevents chipping and improves machining stability in interrupted cutting

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

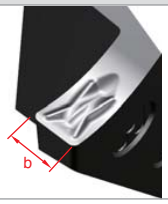


TB4-M Chip breaker

Sub dots: Control stability of chip curls at high feed

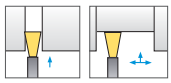
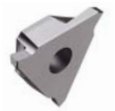
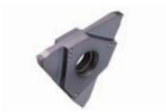
Main dots: Show exceptional chip control in turning and chamfering applications. Facilitate smooth chip evacuation outside each groove . Form chip curls at regular intervals

Sharp cutting edges: Deliver sharp cutting performance

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				
0.05	-	-	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	0.1 (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	-		●	●	-

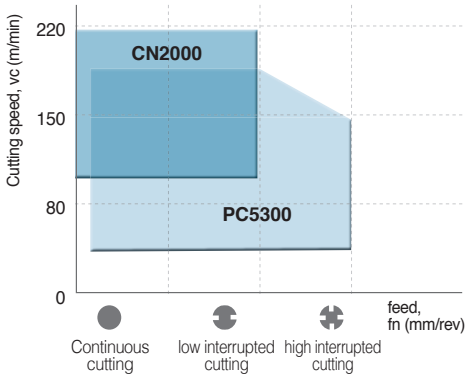
● : Stock item

Recommended cutting conditions

Workpiece		CN2000 (Cermet)			PC5300 (Coated)		
		Min.	Recommended	Max.	Min.	Recommended	Max.
P	SMOOC 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

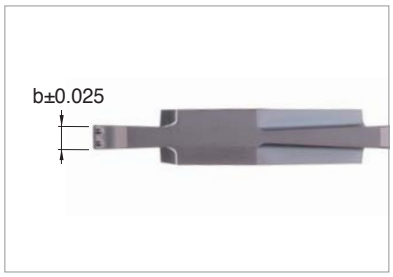
Recommended cutting speed, vc (m/min)

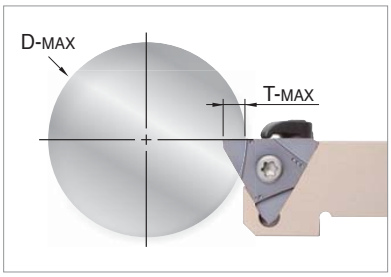
Recommended cutting range

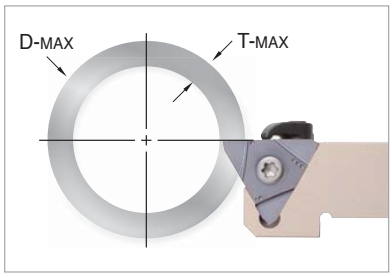


TB5-M machining range

- 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



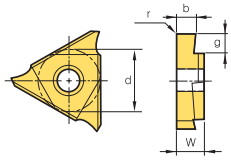
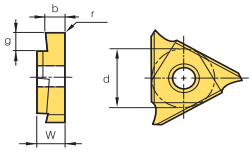




(mm)

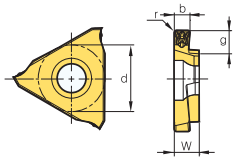
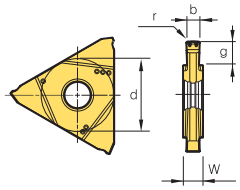
Designation		b	r	g (T-MAX)	ØD-MAX								
					T≤3.0	T≤3.5	T≤4.0	T≤4.5	T≤5.0	T≤5.5	T≤6.0	T≤6.4	T≤6.5
TB	5050N-000-M	0.50	0.00	1.0	-	-	-	-	-	-	-	-	-
	5050N-004-M	0.50	0.04	2.5	-	-	-	-	-	-	-	-	-
	5080N-000-M	0.80	0.00	1.6	-	-	-	-	-	-	-	-	-
	5100N-006-M	1.00	0.06	3.5	-	-	-	-	-	-	-	-	-
	5104N-000-M	1.04	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
	5150N-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
	5300N-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

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

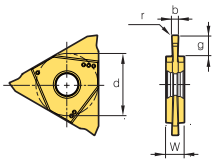
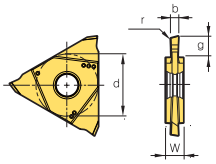
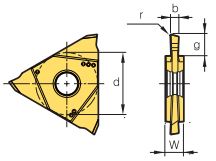
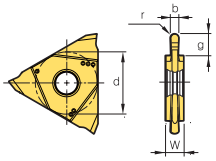
● : Stock item

Insert

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

● : Stock item

Insert

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

TBH

TB3000R/L
TB4000R-M

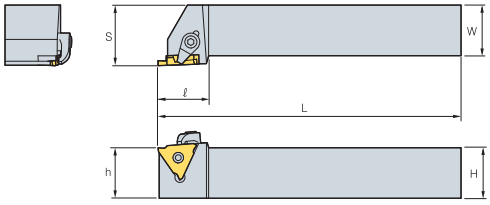
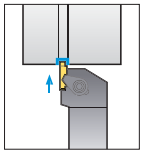
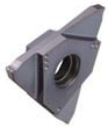


Fig. 1



• R type insert



TB5000N-000-M

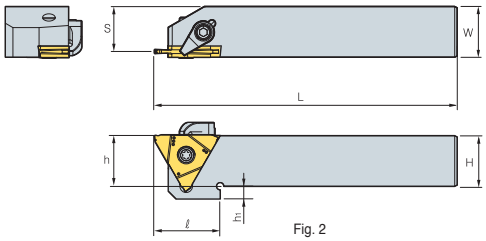


Fig. 2

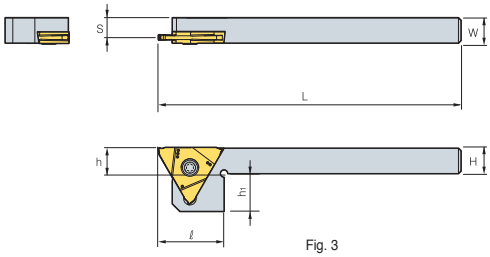


Fig. 3

(mm)

Designation		H = (h)	W	L	ℓ	h1	S	Applicable insert	Clamp	Clamp screw	Screw	Wrench	Fig.
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						

For deep hole grooving/parting off

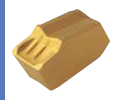
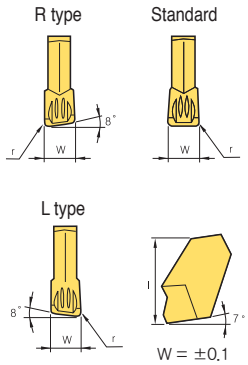
Saw-man

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	NC3225	PC8110	PC5300	PC9030	PC6510	ST30A	2	3	4	5	6
SM□□C	80~180	80~160		80~180	80~200		80~180				0.02~0.15	0.03~0.2	0.08~0.3	0.10~0.4	0.12~0.5
SCM	70~150	70~150	70~150	70~150	70~150		70~150				0.02~0.15	0.03~0.2	0.08~0.3	0.10~0.4	0.12~0.5
GC/GCD				50~100					50~100	50~100	0.05~0.12	0.1~0.25	0.1~0.30	0.1~0.35	0.1~0.40
STS			50~120	50~120		50~120	60~140	60~140			0.02~0.1	0.03~0.15	0.08~0.25	0.1~0.35	0.12~0.40
Non-ferrous metal (Al, Copper)										200~450	0.05~0.1	0.05~0.2	0.05~0.25	0.05~0.30	0.05~0.35

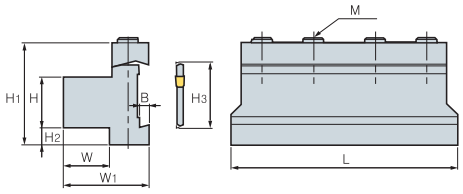
Insert

Application	Picture	Designation		Coated									Uncoated	Dimensions (mm)			Configuration
				NC3120	NC3225	NC3030	NCM325	NC5330	PC3500	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	

● : Stock item

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		

Applicable inserts **C51**

SPB/SPB-S (Blades)

SP

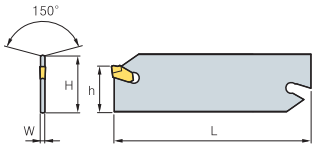


Fig. 1

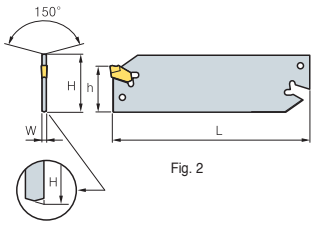
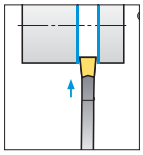


Fig. 2



(mm)

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

Applicable inserts **C51**

SPH/SPH-S (Holder)

SP

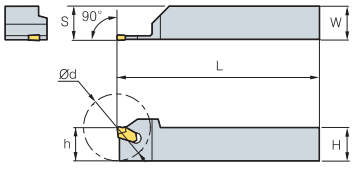


Fig. 1

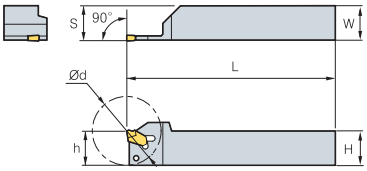
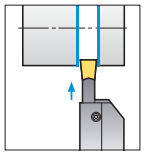


Fig. 2



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

Applicable inserts **C51**

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

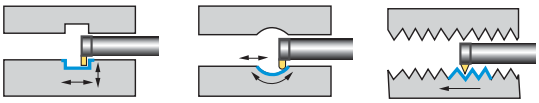
Fine Tools

- 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

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

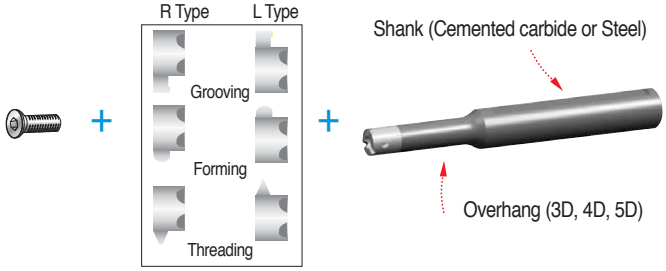
Recommended cutting condition

Workpiece	Grade		Cutting Condition			
			Min. machining Dia.			
	PC130		Ø8	Ø11	Ø14	Ø16
Carbon steel	◎	vc (m/min)	30~80	30~100	30~100	30~100
		fn (m/rev)	0.01~0.04	0.01~0.05	0.02~0.05	0.02~0.06
Alloy steel	◎	vc (m/min)	30~80	30~100	30~100	30~100
		fn (m/rev)	0.01~0.02	0.01~0.04	0.02~0.04	0.02~0.05
Cast iron	○	vc (m/min)	30~80	30~100	30~100	30~100
		fn (m/rev)	0.01~0.05	0.01~0.05	0.02~0.05	0.02~0.05
Non-ferrous alloy	○	vc (m/min)	70~150	100~150	100~150	100~150
		fn (m/rev)	0.02~0.06	0.02~0.06	0.02~0.06	0.02~0.06

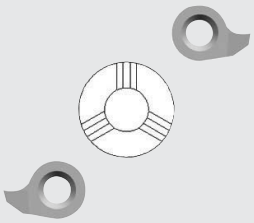
Note
- In case of chattering, reduce the cutting speed and feed
- To find the optimal cutting conditions, advise to gradually increase from the lowest cutting condition of the above recommendation
- In case of the unilateral grooving depth over 1 mm, work to the step feed rate

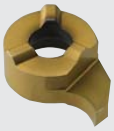
Clamping system

Screw	Insert	Holder

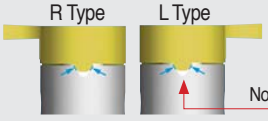


• Available R/L type insert with one holder



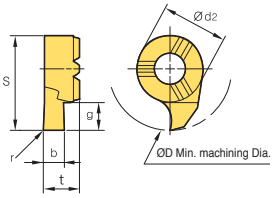
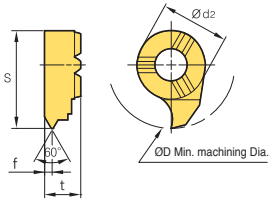


Stable clamping according to the tripod structure



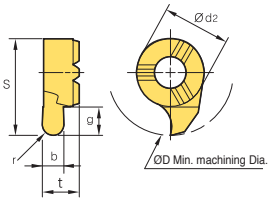
No-Spin-System design for strong clamping

Insert

Application	Picture	Designation		Coated PC5300 R	Coated PC5300 L	ØD	b	r	S	g	Ød2	t	Pitch	f	Configuration
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	5.8	-	-	
			16085R/L			16	0.85		15.7	1.8	11	5.8	-	-	
			16095R/L	●		16	0.95	-	15.7	1.8	11	5.8	-	-	
			16121R/L	●		16	1.21	-	15.7	4.6	11	5.8	-	-	
			16141R/L	●		16	1.41	-	15.7	4.6	11	5.8	-	-	
			16171R/L	●		16	1.71	-	15.7	4.6	11	5.8	-	-	
			16202R/L	●		16	2.02	-	15.7	4.6	11	5.8	-	-	
			16252R/L	●		16	2.52	-	15.7	4.6	11	5.8	-	-	
			16302R/L	●		16	3.02	-	15.7	4.6	11	5.8	-	-	
			16352R/L	●		16	3.52	-	15.7	4.6	11	5.8	-	-	
			16402R/L	●		16	4.02	-	15.7	4.6	11	5.8	-	-	
Threading		NFTT	0805MR/L	●		8	-	-	7.75	-	6	3.85	0.5	1.0	
			0810MR/L	●		8	-	-	7.75	-	6	3.85	1.0	1.0	
			0815MR/L	●		8	-	-	7.75	-	6	3.85	1.5	1.2	
			1110MR/L	●		11	-	-	10.7	-	8	4.9	1.0	1.2	
			1115MR/L	●		11	-	-	10.7	-	8	4.9	1.5	1.2	
			1120MR/L	●		11	-	-	10.7	-	8	4.9	2.0	1.2	
			1125MR/L	●		11	-	-	10.7	-	8	4.9	2.5	1.2	
			1410MR/L	●		14	-	-	13.5	-	9	5.85	1.0	1.2	
			1415MR/L	●		14	-	-	13.5	-	9	5.85	1.5	1.2	
			1420MR/L			14	-	-	13.5	-	9	5.85	2.0	1.2	
			1425MR/L	●		14	-	-	13.5	-	9	5.85	2.5	1.2	
			1610MR/L			16	-	-	15.7	-	11	5.8	1.0	1.2	
			1615MR/L			16	-	-	15.7	-	11	5.8	1.5	1.2	
			1620MR/L	●		16	-	-	15.7	-	11	5.8	2.0	1.2	
			1625MR/L			16	-	-	15.7	-	11	5.8	2.5	1.2	
			1630MR/L			16	-	-	15.7	-	11	5.8	3.0	1.5	
			1635MR/L			16	-	-	15.7	-	11	5.8	3.5	1.6	
			1640MR/L			16	-	-	15.7	-	11	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

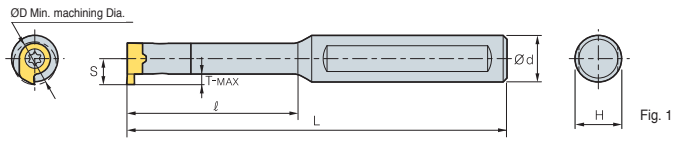


Fig. 1

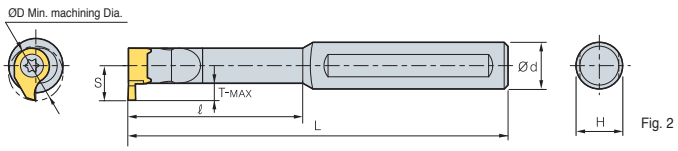


Fig. 2

• For NFTIH14~.
• R type insert

(mm)

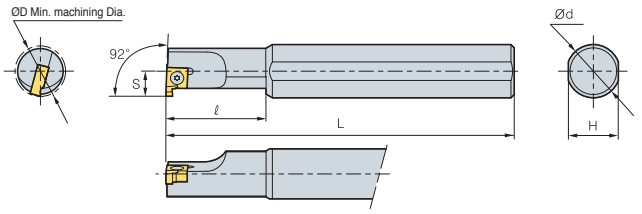
Designation		ØD	Ød	L	ℓ	T-MAX	H	S	Inserts NFTG: Grooving NFTT: Threading NFTF: Forming	Screw	Wrench	Fig.
NFTIH	08206C	8	6	65	-	1.0	4	4.8	NFTG08□□□R/L NFTT08□□□R/L NFTF08□□□R/L	PTKA02508	TW08P	1
	08212C	8	12	70	16	1.0	10	4.8				
	08312C	8	12	80	24	1.0	10	4.8				
	08312S	8	12	80	24	1.0	10	4.8				
	08412C	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				

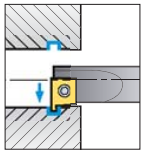
Applicable inserts **C55~C56**

● : Stock item

IGH For Internal grooving

IG





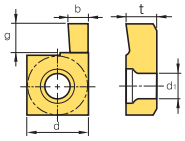
• R type insert

(mm)

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

Applicable inserts C57

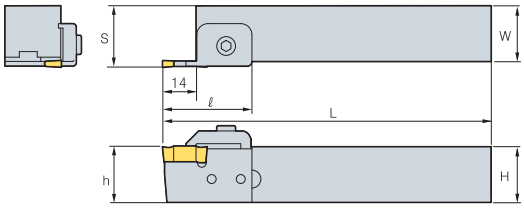
Insert

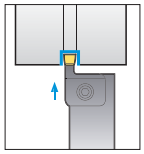
Application	Picture	Designation		Coated NC3215	Coated NC3120	Coated NC3225	Uncoated H01	Uncoated G10	Uncoated ST30A	b	g	t	d	d1	Configuration
Internal grooving		IG	125						●	1.25	1.5	3.18	6.35	2.8	
			145						●	1.45	1.5	3.18	6.35	2.8	
			175						●	1.75	1.5	3.18	6.35	2.8	
			200						●	2.0	2.3	3.18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

●: Stock item

DBH For Deep and Wide grooving

DB DC





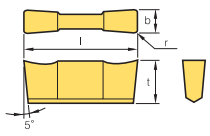
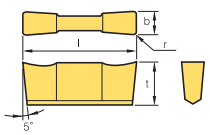
• R type insert

(mm)

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

Applicable inserts C57

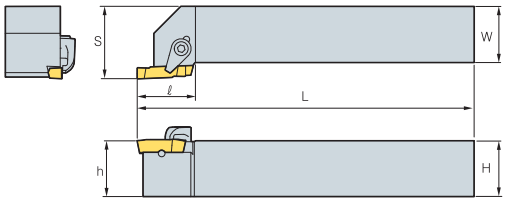
Insert

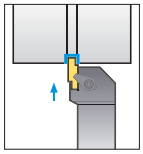
Application	Picture	Designation		Cermet CN2000	Coated NC3215	Coated NC3120	Coated NC3225	Uncoated H01	Uncoated G10	b	l	t	r	Configuration
Grooving		DB	300							3.0	20	7.5	0.2	
			400							4.0	20	7.5	0.2	
			500							5.0	20	7.5	0.2	
			600							6.0	20	7.5	0.2	
			700							7.0	20	7.5	0.2	
			800		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

GFT For External grooving

GW BF





• R type insert

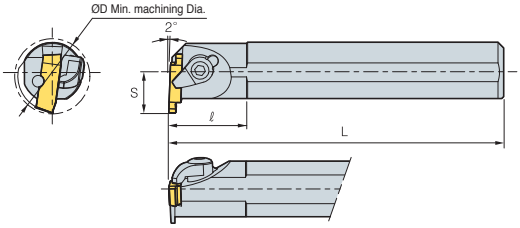
(mm)

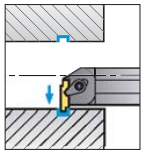
Designation		H = (h)	W	L	ℓ	S	Inserts	Clamp	Screw	Pin	Wrench
GFT	320R/L	20	20	125	23.5	25	GW110~300R/L,BF3	CS5R1	DHA0514	PN0310	HW25L
	325R/L	25	25	150	23.5	32					
	525R/L	25	25	150	25.5	32	GW315~500R/L,BF5	CS6R1	DHA0617	PN0310	HW30L
	825R/L	25	25	150	28.5	32	GW600~800R/L,BF8	CS8R1	DHA0820	PN0314	HW40L

Applicable inserts **C58** • Use right-hand insert for left-hand holder

GFIP For Internal grooving

BF GW





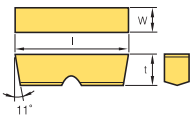
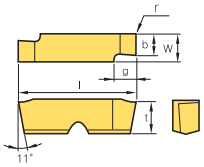
• R type insert

(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 **C58** • Use right-hand insert for left-hand holder

Insert

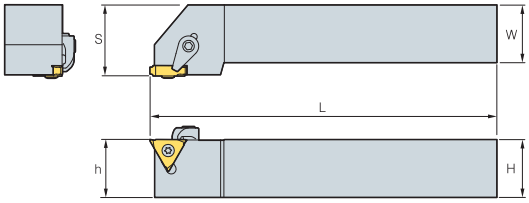
Application	Picture	Designation		Uncoated ST30A		Dimensions (mm) b	g	W	l	t	r	Configuration
Blank		BF	-3	●				3.1	16.4	5.26	-	
			-5					5.1	22.4	6.26	-	
			-8					8.1	27.4	7.26	-	
				R	L							
Grooving		GW	110R/L	●	●	1.1	2.1	3.1	16	5.0	0.2	
			130R/L	●	●	1.3	2.3	3.1	16	5.0	0.2	
			160R/L	●	●	1.6	2.6	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	

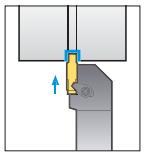
● : Stock item

GH

For O-ring grooving
Snap-ring grooving

GO GS





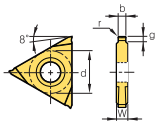
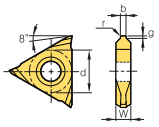
• R type insert

(mm)

Designation		H = (h)	W	L	S	Inserts	Clamp	Clamp Screw	Screw	Wrench
GH	2020R/L-3	20	20	125	22	GS125~280	CS6R1	DHA0617	PTMA03508	TW09P-HW30L
	2525R/L-3	25	25	150	27	GO250				
	2020R/L-4	20	20	125	21	GS330 / 430				
	2525R/L-4	25	25	150	26	GO320 / 410				

Applicable inserts C59

Insert

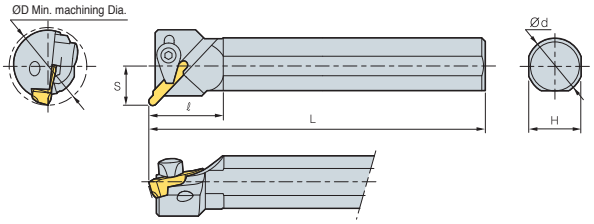
Application	Picture	Designation		Coated		Uncoated			Dimensions (mm)					Configuration
				NC3120	NC3225	H01	ST20	ST30A	b	g	W	r	d	
Grooving(Narrow · O-ring · Snap-ring)		GO	250						2.5	1.5	3.3	0.35	9.525	
			320						3.2	2.0	3.8	0.35	9.525	
			410						4.1	2.5	4.5	0.65	9.525	
		GS	125				●		1.23	1.5	2.5	0.2	9.525	
			145				●		1.43	1.5	2.5	0.2	9.525	
			175				●		1.73	2.0	2.5	0.2	9.525	
			185						1.83	2.0	2.5	0.2	9.525	
			200				●		2.03	2.5	2.5	0.2	9.525	
			230				●		2.28	3.5	2.8	0.2	9.525	
			280						2.78	3.5	3.3	0.3	9.525	
			330						3.28	4.0	3.8	0.3	9.525	
			430						4.28	4.0	4.5	0.4	9.525	

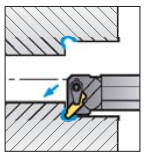
●: Stock item

GFIK

For Reliefing

GR





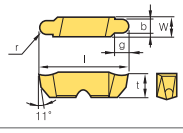
• R type insert

(mm)

Designation		ØD	Ød	H	L	ℓ	S	Inserts	Clamp	C-ring	Screw	Pin	Wrench
GFIK	316R/L	22	16	15	150	21.5	11	GR3□□	CH5R2	CR04	CHX0513	PN0310	HW25L
	325R/L	32	25	23	200	21.5	17						
	340R/L	50	40	37	300	35.4	27		CS5R1	-	DHA0514	PN0310	HW25L
	525R/L	32	25	23	200	27.5	17	GR5□□	CS6R1	-	DHA0617	PN0314	HW30L
	540R/L	50	40	37	300	39.5	27						
	840R/L	50	40	37	300	41.8	27	GR8□□	CS8R1	-	DHA0820	PN0314	HW40L

Applicable inserts C59

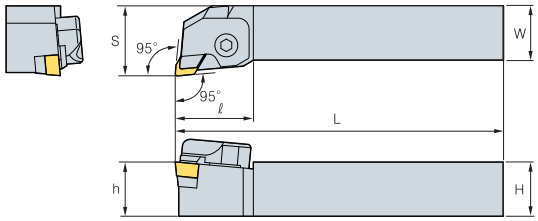
Insert

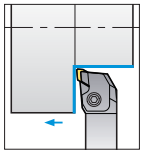
Application	Picture	Designation		Coated		Uncoated			Dimensions (mm)						Configuration
				NC3120	NC3225	H01	ST20	ST30A	b	g	W	l	t	r	
Reliefing		GR	310R						2.0	2.0	3.1	15.9	5.0	1.0	
			315R						3.0	2.9	3.1	15.9	5.0	1.5	
			520R						4.0	4.0	5.1	21.9	6.0	2.0	
			525R						5.0	5.0	5.1	21.8	6.0	2.5	
			830R						6.0	6.0	8.1	26.8	7.0	3.0	
			840R						8.0	8.0	8.1	26.7	7.0	4.0	

●: Stock item

EH Regrinding type insert

ESB





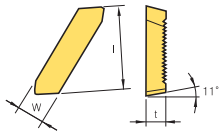
• R type insert

(mm)

Designation		H = (h)	W	L	ℓ	S	Inserts	Clamp	Clamp Screw	Chip Breaker	Shim	Shim Screw	Wrench
EH	620R	20	20	125	36	27	ESB34	CTH6R2	BHA0616	CB20	SES33C	SHX0310	HW50L HW20L
	625R	25	25	150	36	32							

Applicable inserts **C60**

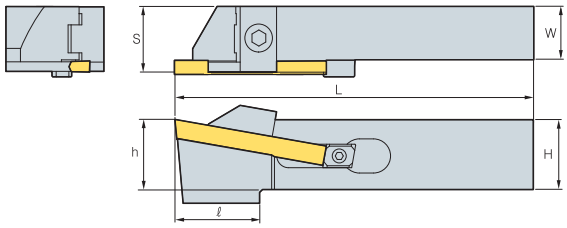
Insert

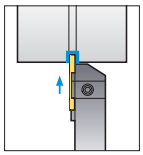
Application	Picture	Designation	Uncoated ST10	Uncoated ST20	Dimensions (mm) W	Dimensions (mm) l	Dimensions (mm) t	Configuration
General Machining		ESB 34			9.525	30.0	6.35	

●: Stock item

PH For Parting off Deep grooving

POB





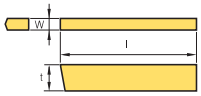
• R type insert

(mm)

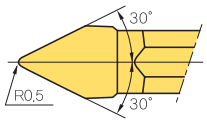
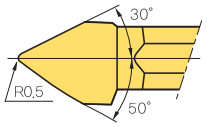
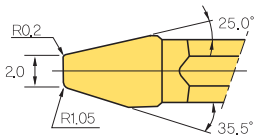
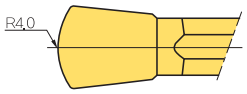
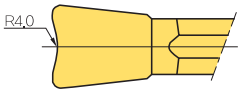
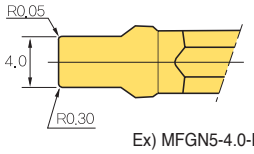
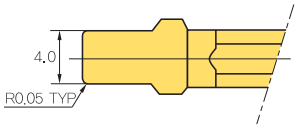
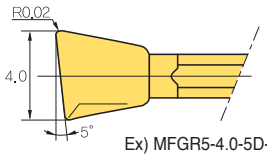
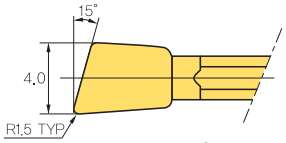
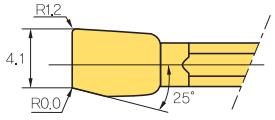
Designation		H	W	L	ℓ	S	h	Max (Ø)	Inserts	Clamp	Clamp Screw	Stopper	Stopper Screw	Wrench
PH	320R/L	19	19	150	34	22.25	19	30	POB300	CGH6R1	BHA0616	STP5	KHD0510	HW25L-HW50L
	325R/L	25	19	150	34	22.25	25	40						
	420R/L	19	19	150	34	23.5	19	30	POB400	CGH6R2	BHA0616	STP5	KHD0510	HW25L-HW50L
	425R/L	25	19	150	34	23.5	25	40						
	520R/L	19	19	150	34	24.4	19	50	POB500	CTH 6R3	BHA0616	STP5	KHD0510	HW25L-HW50L
	525R/L	25	19	150	34	24.4	25	50						

Applicable inserts **C60**

Insert

Application	Picture	Designation	Uncoated ST10	Uncoated ST20	Dimensions (mm) W	Dimensions (mm) l	Dimensions (mm) t	Configuration
Grooving · Parting off		POB 300		●	3.0	55	6.0	
		400		●	4.0	55	7.0	
		500		●	5.0	55	8.0	

●: 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: 2.0 mm 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: 5 mm ④ Width of cutting edge: 4.0 mm 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: 5 mm ④ Width of cutting edge: 4.1 mm ⑤ Degree: 25° ⑥ Right Nose Radius: 1.2 ⑦ Left Nose Radius: 0.0	 Ex) MFGR5-4.10-25D-R012-L000

C Special Order Form for V-Pulley Insert

Code system

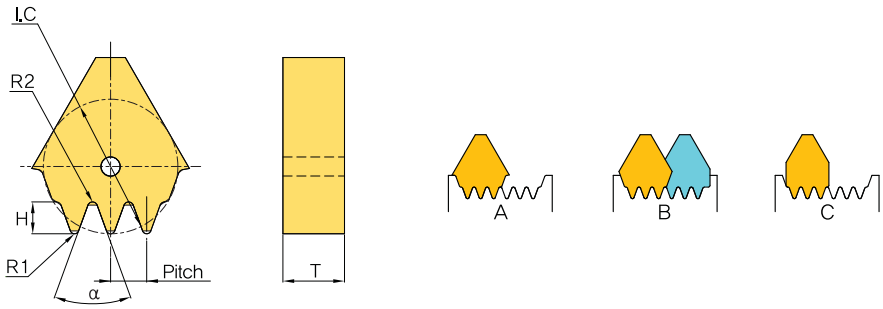
KP	27	064	-	R0.425	N3
KORLOY PULLEY	ØD	W		R1	No. of flutes

■ Ex)

I.C	T	R	Z
Ø 12.7	6.4	0.425	3

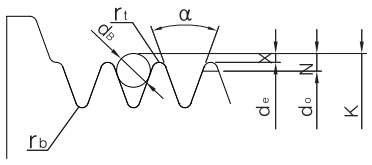
▶ Special types are available for quotation

Insert for machining of pulley



▶ For reference: KS specifications and cods for V-pulley for vehicles(PK)

Diameter



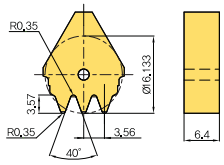
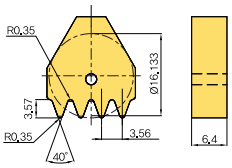
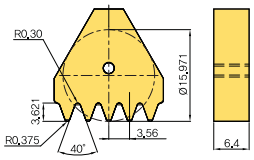
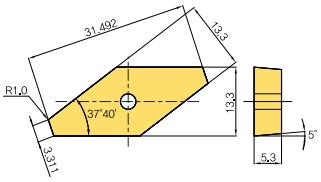
- d_e: Effective diameter
- d_o: Outer diameter
- K: Diameter of ball or rod
- d_a: Diameter of ball for inspection or rod

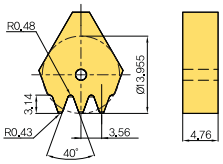
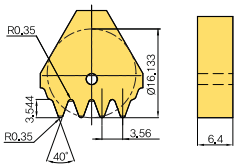
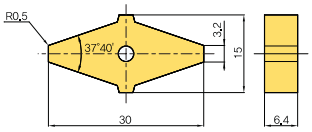
Code system

P	6	PK96.3

Pulley
No. of groove
Cross section of groove
Effective diameter(mm)

Cross section		PH	PJ	PK	PL	PM
Pitch of grrove		1.6±0.03	2.34±0.03	3.56±0.05	4.7±0.05	9.4±0.08
Groove angle	±0.5°	40°	40°	40°	40°	40°
r_t	Min.	0.15	0.2	0.25	0.4	0.75
r_b	Max.	0.3	0.4	0.5	0.4	0.75
d_B	±0.01	1	1.5	2.5	3.3	6.4
Application		electrical, electronics instrument	Machine with light duty, Compressor, Pump	Vehicles	Small agricultural machine	Large agricultural machine

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

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

KORLOY
TECH-NEWS

Eco KORLOY Grooving Tool

EKGT

Multi-functional Machining with Strong Clamping System

▣ **Optimized Economical Grooving Tool**

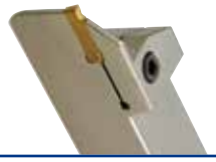
▣ **Strong Clamping System**
Strong clamping system ensures stable and accurate machining

▣ **Wide Selection of Chip Breakers**
Wide selection of chip breakers ensures excellent chip control in various applications

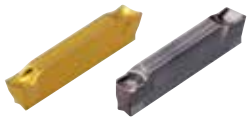
KORLOY

Improved Stability and Performance by Strong Clamping

Economical Multi-functional Grooving Tool for High Precision Machining



EKGT



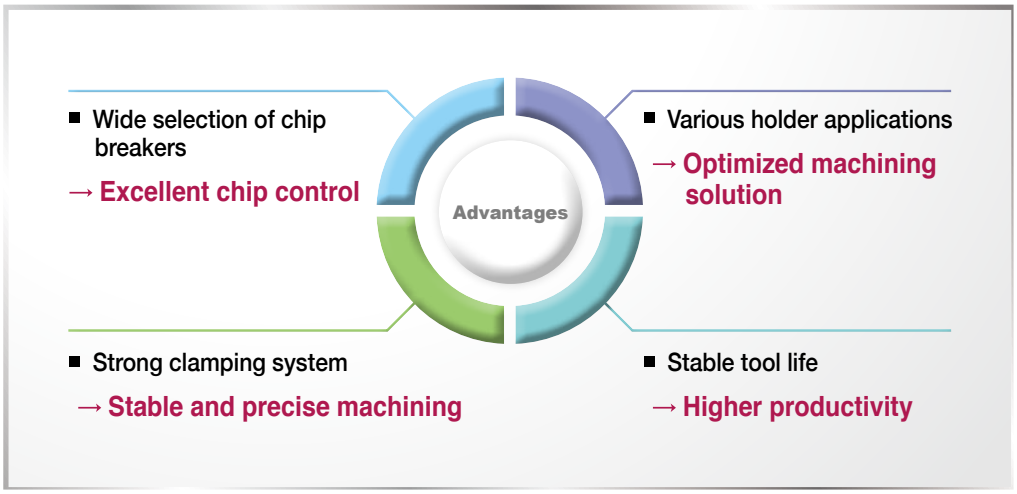
Insert

Cutting and grooving speeds are getting faster to improve productivity while higher machining quality is required to optimize the process. It was difficult to meet these requirements as the thin and long shape of grooving inserts caused vibration and reduced chip evacuation during operation, which resulted in early wear or breakage of tools.

The EKGT has an excellent 'V' type clamping system and a serrated shape on the clamping area so that it effectively minimizes vibrations. This results in improved stability and performance for highly efficient machining.

EKGT holders provide a total tooling solution with a wide selection for external / internal diameter machining, parting off, copying, auto lathes and relief machining.

KGT chip breakers are ready for a variety of workpieces and a wide application area with its characteristics of excellent chip evacuation for quality surface finish and high precision.



Code System

[Insert]

KG	M	N	300	(S)	-	04	-	T
KG SYSTEM (KORLOY Grooving)	Tolerance: M class, G class	Hand: N: Neutral, R: Right, L: Left, I: Internal	Width of cutting edge: 2.0~8.0 mm	1 Corner		Nose radius: 0.2 mm, 0.3 mm, 0.4 mm, 0.8 mm		Chip breaker: L/R/T/C/ LP/RP/B/A

[Holder]

EG	E	H	R/L	2525	-	3	-	T20
EG SYSTEM (Eco KORLOY Grooving)	Working style: E: External process, I: Internal process	Holder style: H: Horizontal, V: Vertical, U: Undercut	Hand: R: Right, L: Left	Shank standard: Height 25m Width25mm (For Internal machining: Minimum diameter for machining)		Cutting width: 2.0~8.0 mm		Maximum depth: 8~36 mm

Recommended Insert

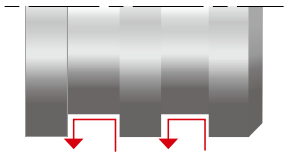
Designation	Geometry	Picture	Application							
			For external machining			For Internal machining		Copying	For relief	Special machining
			Parting	Grooving	Turning	Grooving	Turning	Copying	Relief	Special
KGMN	L Light Grooving		○	◎						
	R Rough Grooving		○	◎						
	T Turning-Multi Grooving		○	◎	◎					
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							◎	◎	

◎ First choice, ○ Second choice

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
		NC3225	2	130 – 220
		NC5330	3	120 – 200
	Alloy steel	PC5300	1	60 – 105
		NC3225	2	130 – 200
		NC5330	3	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



Turning+Grooving repetition

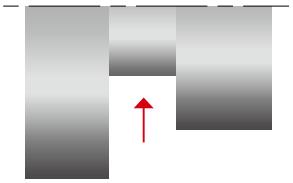
Multi-function machining

- Workpiece: C45
- Cutting conditions: vc (m/min) = 170, fz (mm/t) = 0.15, ap (mm) = 2, W (mm) = 3, wet
- Tool: KGMN300-04-T (PC5300)

EKGT	210ea/edge
Competitor	160ea/edge

30% more

Optimized geometry for turning+grooving - High efficiency.



Shoulder Grooving

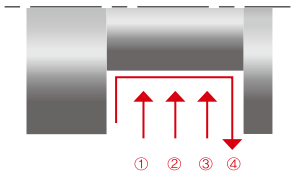
Grooving

- Workpiece: X5CrNI18-9
- Cutting conditions: vc (m/min) = 120, fz (mm/t) = 0.12, ap (mm) = 5, W (mm) = 4, wet
- Tool: KGMN400-03-R (PC5300)

EKGT	200ea/edge
Competitor	150ea/edge

30% more

Tough geometry for interrupted and deep grooving.



Grooving (Roughing)
&Turning (Finishing)

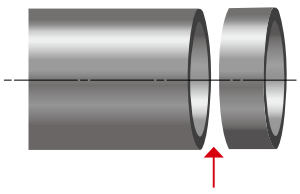
Shaft machining

- Workpiece: 42CrM04
- Cutting conditions: vc (m/min) = 150, fz (mm/t) = 0.15, ap (mm) = 5, W (mm) = 3x3, wet
- Tool: KGMN300-04-T (PC5300)

EKGT	104ea/edge
Competitor	80ea/edge

30% more

Excellent chip control for higher efficiency.



Pipe Parting-off

Parting off

- Workpiece: X5CrNI18-9
- Cutting conditions: vc (m/min) = 140, fz (mm/t) = 0.15, ap (mm) = 2, W (mm) = 3, wet
- Tool: KGMR300-6D-LP (PC5300)

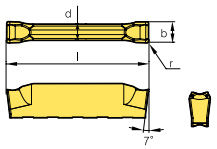
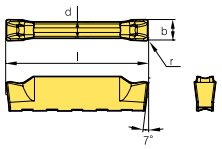
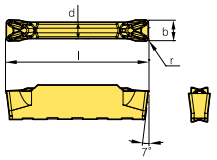
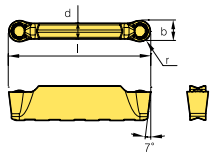
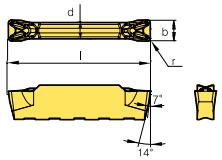
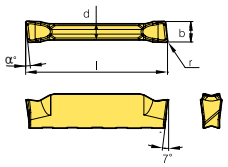
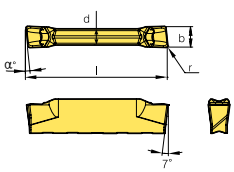
EKGT	800ea/edge
Competitor	550ea/edge

45% more

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

Insert

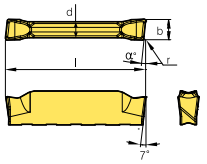
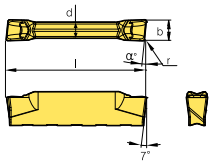
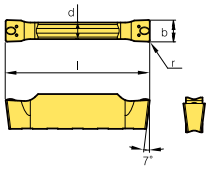
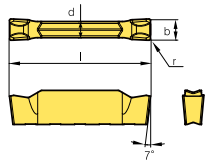
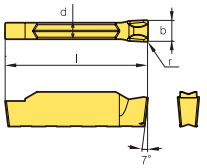
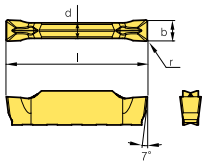
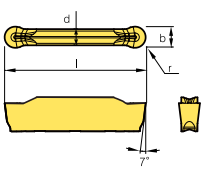
(mm)

Application	Picture	Designation		Coated					Dimensions (mm)					Figure
				NC3215	NC3225	NC5330	PC5300	PC9030	b	r	l	d	α°	
Grooving		KGMN	200-02-L		●	●	●	●	2.0	0.2	20	1.7	-	
			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	150-015-R		●	●	●		1.5	0.15	16	1.2	-	
			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	150-015-T		●	●	●		1.5	0.15	16	1.2		
			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	-	
			300-04-T		●	●	●	●	3.0	0.4	20	2.3	-	
			400-04-T		●	●	●	●	4.0	0.4	20	3.3	-	
			400-08-T		●	●	●	●	4.0	0.8	20	3.3	-	
			500-04-T		●	●	●	●	5.0	0.4	25	4.1	-	
			500-08-T		●	●	●	●	5.0	0.8	25	4.1	-	
			600-04-T		●	●	●	●	6.0	0.4	25	5.1	-	
			600-08-T		●	●	●		6.0	0.8	25	5.1	-	
			800-08-T		●		●		8.0	0.8	30	6.1	-	
Profiling		KRMN	200-C		●	●	●		2.0	1.0	20	1.7	-	
			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	-	
Grooving · Internal		KGMI	200-02-T				●		2.0	0.2	20	1.7	-	
			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	200-6D-LP			●	●		2.0	0.2	20	1.7	6	
			200-8D-LP						2.0	0.2	20	1.7	8	
			200-15D-LP			●	●		2.0	0.2	20	1.7	15	
			300-6D-LP			●	●		3.0	0.2	20	2.3	6	
			300-15D-LP			●	●		3.0	0.2	20	2.3	15	
			400-4D-LP			●	●		4.0	0.3	20	3.3	4	
			400-15D-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	200-6D-RP			●	●		2.0	0.2	20	1.7	6	
			200-8D-RP						2.0	0.2	20	1.7	8	
			200-15D-RP			●	●		2.0	0.2	20	1.7	15	
			300-6D-RP			●	●		3.0	0.2	20	2.3	6	
			300-15D-RP			●	●		3.0	0.2	20	2.3	15	
			400-4D-RP			●	●		4.0	0.3	20	3.3	4	
			400-15D-RP			●	●		4.0	0.3	20	3.3	15	
			500-4D-RP						5.0	0.3	25	4.1	4	

●: Stock item

Insert

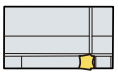
(mm)

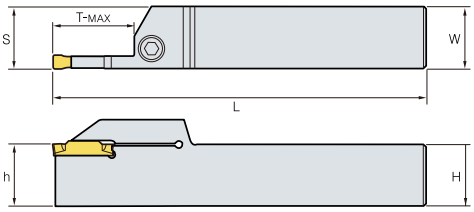
Application	Picture	Designation		Coated				Uncoated		Dimensions (mm)					Figure
				NC3215	NC5330	PC5300	PC9030	H01	H05	b	r	l	d	α°	
Parting off (Left handed)		KGML	200-6D-LP							2.0	0.2	20	1.7	6	
			200-15D-LP							2.0	0.2	20	1.7	15	
			300-6D-LP							3.0	0.2	20	2.3	6	
			300-15D-LP							3.0	0.2	20	2.3	15	
			400-4D-LP							4.0	0.2	20	3.3	4	
			400-15D-LP							4.0	0.2	20	3.3	15	
Parting off (Left handed)		KGML	200-6D-RP							2.0	0.2	20	1.7	6	
			200-15D-RP							2.0	0.2	20	1.7	15	
			300-6D-RP							3.0	0.2	20	2.3	6	
			300-15D-RP							3.0	0.2	20	2.3	15	
			400-4D-RP							4.0	0.2	20	3.3	4	
			400-15D-RP							4.0	0.2	20	3.3	15	
Grooving (Ground insert)		KGGN	265-015-B							2.65	0.15	20	2.3	-	
			300-020-B							3.0	0.20	20	2.3	-	
			300-040-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	-	
			400-080-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	20	3.3	-	
			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	-	
			600-120-B							6.0	1.20	25	5.1	-	
			800-080-B							8.0	0.80	30	6.1	-	
			800-120-B							8.0	1.20	30	6.1	-	
Grooving · Parting off (Ground insert)		KGGN	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 · Parting off (Single insert)		KGGN	200S-02-R			●				2.0	0.2	19.9	1.7	-	
			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		KGGN	200-02-A					●		2.0	0.2	20	1.7	-	
			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 Profiling		KRGN	300-A					●		3.0	1.5	20	2.3	-	
			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	-	

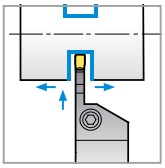
●: Stock item

EGEHR/L

• For grooving, turning, parting off, and relief machining







R type insert

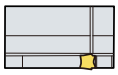
KGGN KGMN
KGMR/L KRMN KRGN

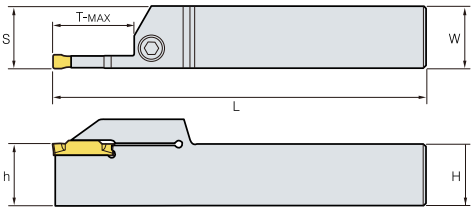
(mm)

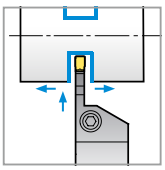
Designation		H=(h)	W	L	S	T-MAX	Insert	Screw	Wrench
EGEHR/L	**1616-1.5-T14**	16	16	100	16.20	14	KGMN150-□-□	EKS0512	EKW40L
	2020-1.5-T14	20	20	125	20.20	14			
	2525-1.5-T14	25	25	150	25.20	14			
	1616-2-T14	16	16	100	16.25	14	KGMN200-□-□ KGMR/L200-□-□ KRMN200-C KGGN200-□-□	EKS0512	EKW40L
	2020-2-T14	20	20	125	20.25	14			
	2525-2-T14	25	25	150	25.25	14			
	1616-2.5-T16	16	16	100	16.30	16	KRMN250-C KGGN250-□-□ KGMN250-□-□		
	2020-2.5-T16	20	20	125	20.30	16			
	2525-2.5-T16	25	25	150	25.30	16			
	1616-3-T18	16	16	100	16.35	18	KGMN300-□-□ KGMR/L300-□-□ KRMN300-C KGGN300-□-□ KRGN300-□	EKS0616	EKW50L
	2020-3-T10	20	20	125	20.40	10			
	2020-3-T13	20	20	125	20.40	13			
	2020-3-T20	20	20	125	20.40	20			
	2525-3-T10	25	25	150	25.40	10			
	2525-3-T13	25	25	150	25.40	13			
	2525-3-T20	25	25	150	25.40	20			
	2525-3-T25	25	25	150	25.40	25			
	3232-3-T10	32	32	170	32.40	10			
	3232-3-T13	32	32	170	32.40	13			
	3232-3-T20	32	32	170	32.40	20			
	2020-4-T10	20	20	125	20.40	10	KGMN400-□-□ KGMR/L400-□-□ KRMN400-C KGGN400-□-□ KRGN400-□	EKS0616	EKW50L
	2020-4-T15	20	20	125	20.40	15			
	2020-4-T20	20	20	125	20.40	20			
	2020-4-T25	20	20	125	20.40	25			
	2525-4-T10	25	25	150	25.40	10			
	2525-4-T15	25	25	150	25.40	15			
	2525-4-T20	25	25	150	25.40	20			
	2525-4-T25	25	25	150	25.40	25			
	3232-4-T10	32	32	170	32.40	10			
	3232-4-T18	32	32	170	32.40	18			

EGEHR/L

• For grooving, turning, parting off, and relief machining







R type insert

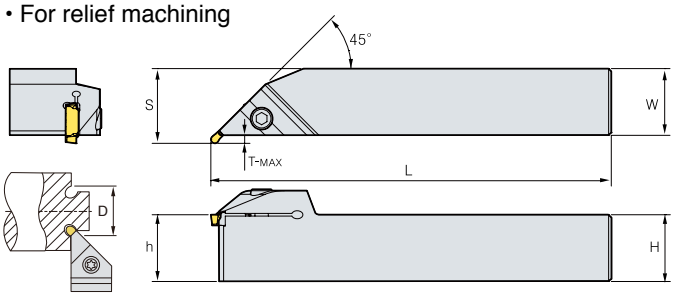
KGGN KGMN
KGMR/L KRMN KRGN

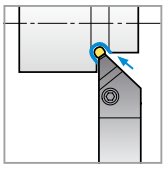
(mm)

Designation		H=(h)	W	L	S	T-MAX	Insert	Screw	Wrench
EGEHR/L	2020-5-T15	20	20	125	20.5	15	KGMN500-□-□ KRMN500-C KGGN500-□-□ KRGN500-□	EKS0616	EKW50L
	2020-5-T23	20	20	125	20.5	23			
	2525-5-T15	25	25	150	25.5	15			
	2525-5-T23	25	25	150	25.5	23			
	2525-5-T32	25	25	150	25.5	32			
	3232-5-T15	32	32	170	32.5	15			
	3232-5-T23	32	32	170	32.5	23			
	2020-6-T15	20	20	125	20.6	15	KGMN600-□-□ KRMN600-C KGGN600-□-□ KRGN600-□	EKS0616	EKW50L
	2020-6-T23	20	20	125	20.6	23			
	2525-6-T15	25	25	150	25.6	15			
	2525-6-T23	25	25	150	25.6	23			
	2525-6-T32	25	25	150	25.6	32			
	3232-6-T15	32	32	170	32.6	15			
	3232-6-T23	32	32	170	32.6	23			
	2525-8-T15	25	25	150	26.1	15	KGMN800-□-□ KRMN800-C KGGN800-□-□ KRGN800-□	EKS0616	EKW50L
	2525-8-T28	25	25	150	26.1	28			
	3232-8-T15	32	32	170	33.1	16			
	3232-8-T28	32	32	170	33.1	28			

EGEUR/L

• For relief machining





R type insert

KRMN KRGN

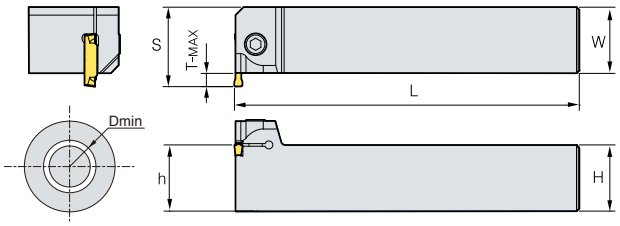
(mm)

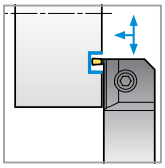
Designation		H=(h)	W	L	S	ØD Max	T-MAX	Insert	Screw	Wrench
EGEUR/L	2020-3	20	20	125	23	40	3	KRMN300-C KRGN300-□	EKS0616	EKW50L
	2525-3	25	25	150	28	40	3			
	3232-3	32	32	170	35	40	3			
	2020-4	20	20	125	23	40	3	KRMN400-C KRGN400-□	EKS0616	EKW50L
	2525-4	25	25	150	28	40	3			
	3232-4	32	32	170	35	40	3			
	2020-5	20	20	125	24	50	4	KRMN500-C KRGN500-□	EKS0616	EKW50L
	2525-5	25	25	150	29	50	4			
	3232-5	32	32	170	36	50	4			
	2020-6	20	20	125	24	50	4	KRMN600-C KRGN600-□	EKS0616	EKW50L
	2525-6	25	25	150	29	50	4			
	3232-6	32	32	170	36	50	4			
	2525-8	25	25	150	30	65	5	KRMN800-C KRGN800-□	EKS0616	EKW50L
	3232-8	32	32	170	37	65	5			

EGEVR/L

• For grooving, turning, face grooving machining

KGMN KRMN
KGGN KRGN





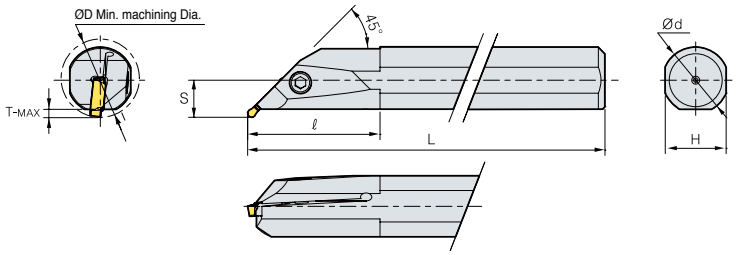
R type insert

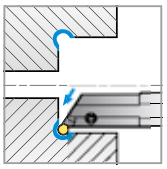
(mm)

Designation		H=(h)	W	L	S	ØD Min	T-MAX	Insert	Screw	Wrench
EGEVR/L	2020-1.5	20	20	125	23	85	3	KGMN150-□-□	EKS0512	EKW40L
	2525-1.5	25	25	150	28	85	3			
	3232-1.5	32	32	170	35	85	3			
	2020-2	20	20	125	23.5	65	3.5	KGMN200-□-□ KRMN200-C KGGN200-□-□	EKS0512	EKW40L
	2525-2	25	25	150	28.5	65	3.5			
	3232-2	32	32	170	35.5	65	3.5			
	2020-2.5	20	20	125	24	65	4	KGMN250-□-□	EKS0512	EKW40L
	2525-2.5	25	25	150	29	65	4			
	3232-2.5	32	32	170	36	65	4			
	2020-3	20	20	125	25.5	75	5	KGMN300-□-□ KRMN300-C KGGN300-□-□ KRGN300-□	EKS0616	EKW50L
	2525-3	25	25	150	30.5	75	5			
	3232-3	32	32	170	37.5	75	5			
	2020-4	20	20	125	25.5	70	5	KGMN400-□-□ KRMN400-C KGGN400-□-□ KRGN400-□	EKS0616	EKW50L
	2525-4	25	25	150	30.5	70	5			
	3232-4	32	32	170	37.5	70	5			
	2020-5	20	20	125	27	75	7	KGMN500-□-□ KRMN500-C KGGN500-□-□ KRGN500-□	EKS0616	EKW50L
	2525-5	25	25	150	32	75	7			
	3232-5	32	32	170	39	75	7			
	2020-6	20	20	125	27	70	7	KGMN600-□-□ KRMN600-C KGGN600-□-□ KRGN600-□	EKS0616	EKW50L
	2525-6	25	25	150	32	70	7			
	3232-6	32	32	170	39	70	7			
	2525-8	25	25	150	34	50	9	KGMN800-□-□ KRMN800-C KGGN800-□-□ KRGN800-□	EKS0616	EKW50L
	3232-8	32	32	170	41	50	9			

EGIUR/L

• For relief machining





R type insert

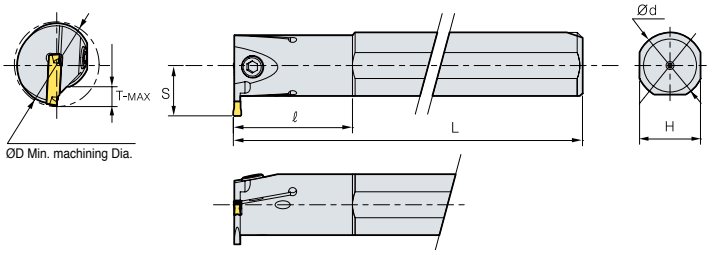
KRMN KRGN

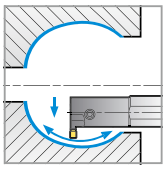
(mm)

Designation		ØD	Ød	L	ℓ	T-MAX	H	S	Insert	Screw	Wrench
EGIUR/L	**3520-3**	35	20	150	45	3.5	18	13.0	KRMN300-C KRGN300-□	EKS0616	EKW50L
	4025-3	40	25	200	45	3.5	23	15.5			
	5032-3	50	32	250	65	3.5	30	19.0			
	3520-4	35	20	150	45	3.5	18	13.0	KRMN400-C KRGN400-□	EKS0616	EKW50L
	4025-4	40	25	200	45	3.5	23	15.5			
	5032-4	50	32	250	65	3.5	30	19.0			
	4025-5	40	25	200	45	3.5	23	15.5	KRMN500-C KRGN500-□	EKS0616	EKW50L
	5032-5	50	32	250	65	3.5	30	19.0			
	4025-6	40	25	200	45	3.5	23	19.0	KRMN600-C KRGN600-□	EKS0616	EKW50L
	5032-6	50	32	250	65	3.5	30	19.0			
	4025-8	40	25	200	45	6.5	23	15.5	KRMN800-C KRGN800-□	EKS0616	EKW50L
	5032-8	50	32	250	65	6.5	30	19.0			

EGIVR/L

• For grooving, turning, profiling machining





R type insert

KGMI KGMN

(mm)

Designation		ØD	Ød	L	ℓ	T-MAX	H	S	Insert	Screw	Wrench
EGIVR/L	**2520-1.5**	25	20	150	45	3.5	18	13.1	KGMN150-□-□	EKS0512	EKW40L
	2925-1.5	29	25	200	45	3.5	23	16.2			
	2516-2	25	16	125	35	6.5	15	14.0	KGMI200-□-□	EKS0512	EKW40L
	2520-2	25	20	150	45	4.5	18	14.0			
	2925-2	29	25	200	45	4.5	23	17.2			
	3225-2	32	25	200	45	7	23	19.4			
	2520-2.5	25	20	150	45	4.5	18	15.1	KGMN250-□-□	EKS0512	EKW40L
	2925-2.5	29	25	200	45	4.5	23	17.2			
	2520-3	25	20	150	45	5	18	15.6	KGMI300-□-□	EKS0616	EKW50L
	3225-3	32	25	200	45	6	23	19.4			
	3732-3	37	32	250	65	6	30	21.5			
	4032-3	40	32	250	55	7.5	30	22.5			
	2520-4	25	20	150	45	6	18	15.6	KGMI400-□-□	EKS0616	EKW50L
	3225-4	32	25	200	45	6	23	19.4			
	3732-4	37	32	250	65	6	30	21.5			
	4032-4	40	32	250	55	7.5	30	22.5			
	3225-5	32	25	200	45	8	23	19.9	KGMI500-□-□	EKS0616	EKW50L
	3732-5	37	32	250	65	8	30	22.5			
	3225-6	32	25	200	45	8	23	19.9	KGMN600-□-□	EKS0616	EKW50L
	3732-6	37	32	250	65	8	30	22.5			
	3732-8	37	32	250	65	10	30	23.5	KGMN800-□-□	EKS0616	EKW50L
	4540-8	45	40	300	70	10	37	27.2			

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KORLOY
TECH-NEWS

TB

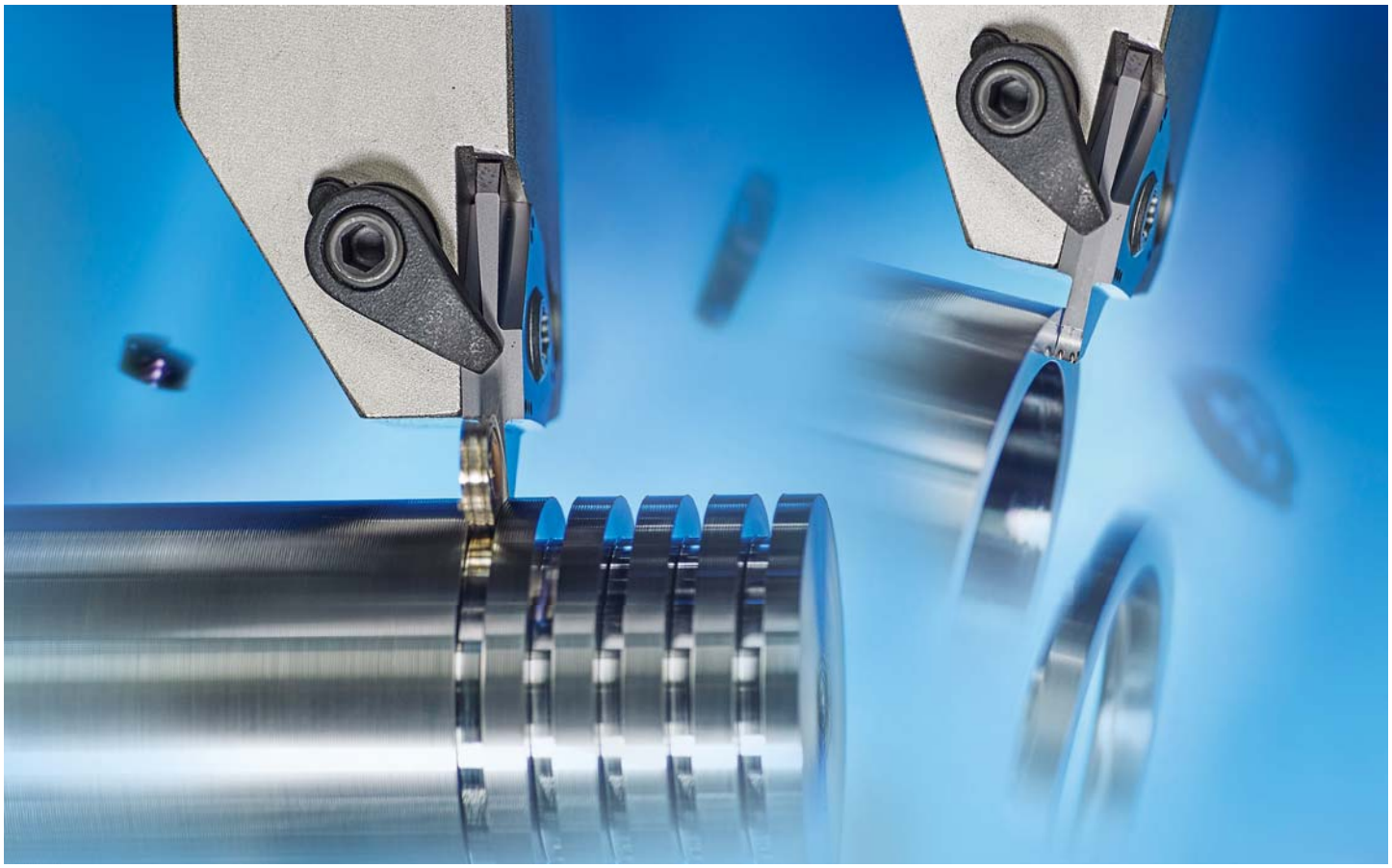
3-Corner Grooving & Parting Tools for High Speed, High Feed and Interrupted Machining

Machining Stability

Strong clamping prevents tool vibration to produce high quality finishes and longer tool life

Chip Control

Stable chip control boosts productivity at high speeds and high feeds



KORLOY

3-Corner Grooving & Parting Tools for High Efficiency

TB

TB3, TB4 Ground chip breaker

TB4-M M-class chip breaker

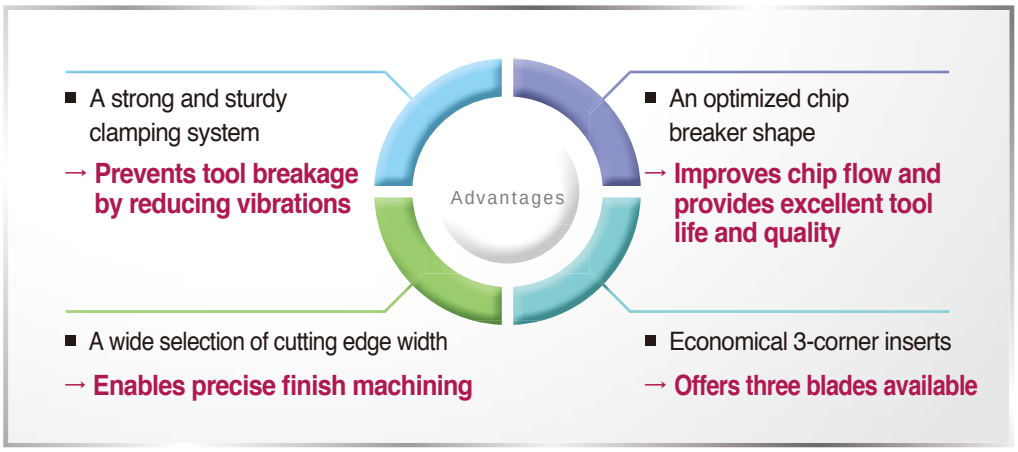
TB5-M M-class chip breaker

Machining small components requires high productivity tools that are capable of high speed and high feed work. These tough cutting conditions often involve high spindle speeds over 2,000 RPM. These high speeds cause vibrations of the spindle, and the cutting tools are negatively affected by the vibrations.

Grooving and parting inserts normally have thin and narrow cutting edges, which leads to tool vibration at high speeds and feeds. Such vibrations can cause decreased level of surface finish, dimensional changes, and shortened tool life. Clamping stability and improved rigidity of the cutting edges are essential to cutting performance.

TB was designed to have wide supporting areas along the outer edge of the equilateral triangle-shaped insert, to maximize clamping stability. A double clamping system, using both a clamp and screw, also enables stable machining at high speeds, high feeds, and high interruptions. Additionally, its specialized chip breakers help to minimize cutting force and improve chip evacuation, which results in excellent surface finish.

TB is a combination of grooving and parting tools that can boost your productivity with its high stability at high speeds, high feeds, and high interruptions.



Code System

[Insert]

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

[Holder]

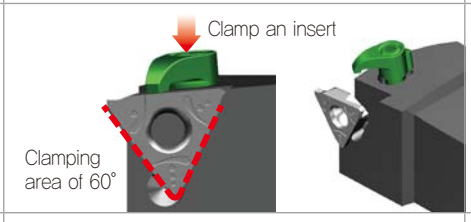
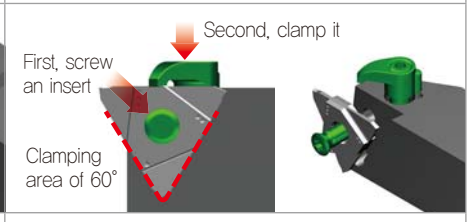
TBH	5	25	R
Triangle Blade Holder	Inscribed circle 3 : 9.525mm 4 : 12.7mm 5 : 15.875mm	Shank size 10~25mm	Hand R : Right-handed L : Left-handed

Common Problems When Grooving and Parting Off

- Vibrations and impacts are caused by low clamping stability in interrupted machining
  → **Burr creation, reduced surface quality and tool breakage**
- When chip flow is not smooth in high speed and high feed machining, chips are caught inside each groove and rough cutting edges
  → **Increased cutting force leads to inferior surface quality and shortened tool life**

Development of the TB

Higher clamping stability

Type	TB3, TB4, TB4-M	TB5-M
Shape		
Features	• Stable clamping system with an internal angle of 60° • Clamp use	• Stable clamping system with an internal angle of 60° • Double clamping using both a screw and a clamp

Improved chip control (M chip breaker)

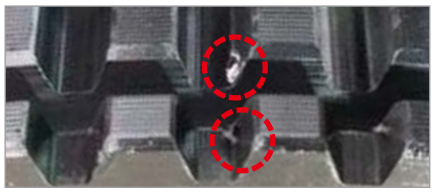
- Cutting conditions:
  vc (m/min) = 150
  ap (mm) = 3, wet

Type	Competitor		TB4-M, TB5-M	
Feed, fn (mm/rev)	0.12	0.18	0.12	0.18
C45 (Carbon steel)				
X5CrNi18-9 (Stainless steel)				
Result	Decreased machining quality owing to unstable chip evacuation		**Improved machining quality thanks to stable chip evacuation**	

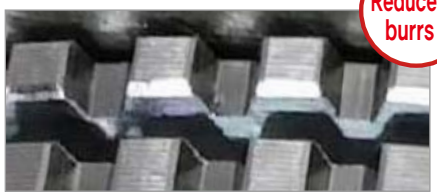
Development Effect

Interrupted machining availability

- Workpiece: 18CrMo4
- Cutting conditions :
  vc (m/min) = 120
  fn (mm/rev) = 0.1
  ap (mm) = 4.5, wet



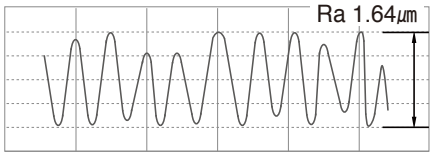
Burrs, created by vibrations in interrupted cutting
[Competitor]



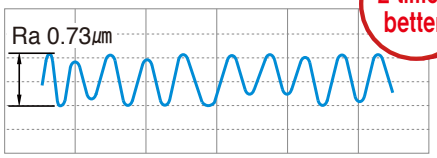
Reduced burr creation thanks to higher clamping stability
[TB5-M]

High speed and high feed machining availability

- Workpiece: C45
- Cutting conditions :
  vc (m/min) = 180
  fn (mm/rev) = 0.18
  ap (mm) = 5.0, wet



Decreased level of surface finish owing to poor chip flow
[Competitor]

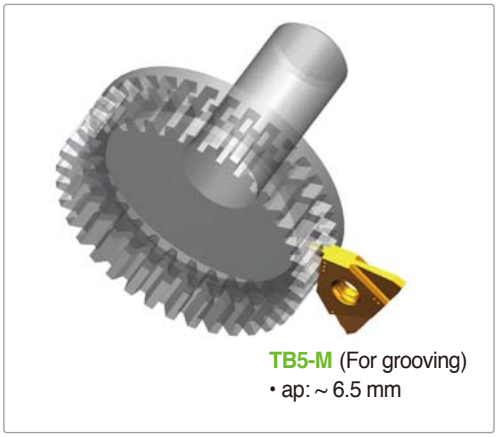


Improved surface finish thanks to smooth chip flow
[TB5-M]

TB Features

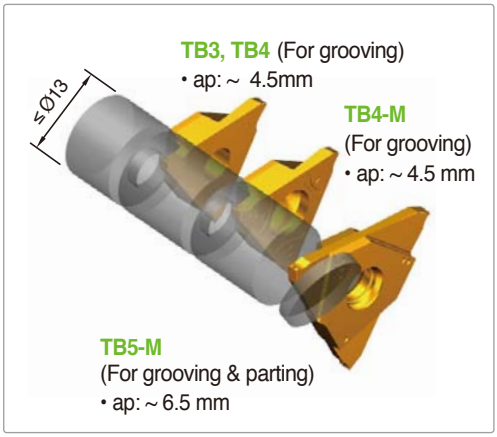
- **TB3, TB4, TB4-M**
  (For grooving)
  → Recommended for continuous cutting
- **TB5-M** (For grooving)
  → Recommended for both continuous and interrupted cutting

For interrupted machining

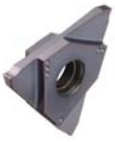
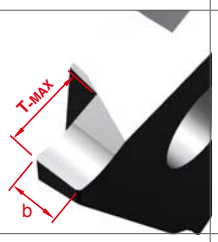
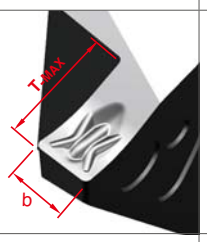
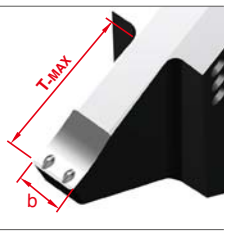


→ **TB5-M is recommended for interrupted machining**

For grooving and parting off



→ **TB5-M is capable of cutting off a steel bar with external diameter ≤ Ø13**

Specification			TB3000R/L TB4000R/L	TB4000R-M	TB5000N-000-M Neu
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 ~TB5318N-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
	Specialized	Shape	○	X	X
		Cutting edge width	○	○	○
Chip breaker shape					
Application range			P	P, M, K	P, M, K
Grade			CN2000, PC5300	CN2000, PC5300	PC5300

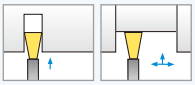
Guide for TB

[Recommended machining method]

• TB3, TB4

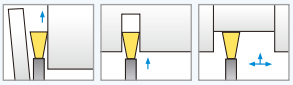
For grooving

• TB4-M



For grooving For turning

• TB5-M



For parting off For grooving For turning

(mm)

TB					TB3, TB4	TB4-M	TB5-M
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	0.1 (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	-		●	●	-

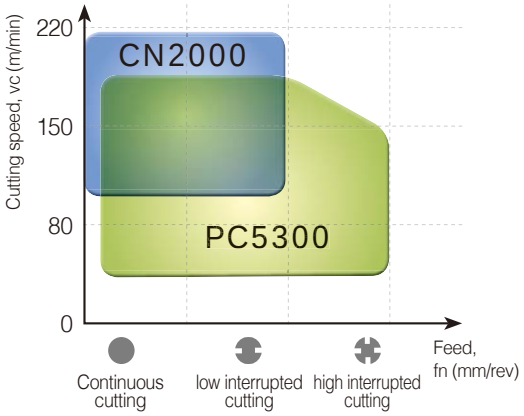
● : Managed item

Recommended Cutting Conditions

Recommended cutting speed, vc (m/min)

Workpiece		CN2000 (Cermet)			PC5300 (Coated)		
		Min.	Recommended	Max.	Min.	Recommended	Max.
P	SMOOC type	100	**160**	220	80	**140**	200
P	SCM type	100	**150**	200	80	**130**	180
M	STS type	-	-	-	40	**80**	150
K	GC, GCD type	-	-	-	80	**130**	180

Recommended Cutting Range

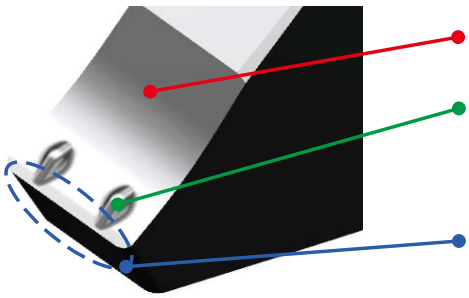


TB-M Chip Breaker

- 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 production**

TB5-M Chip breaker

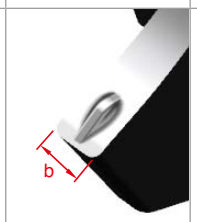
• Purpose: Grooving, parting off and interrupted cutting ≤ 6.5 mm with T-MAX



Lowered back area: Minimizes chip frictions to prevent overload when evacuating chips.

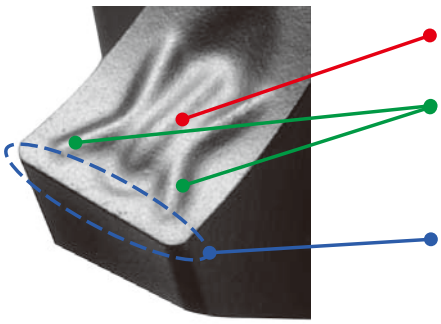
Beveled protruding dots: Facilitate smooth chip evacuation outside each groove. Minimize chip control work load at high depth of cuts. Form chip curls at regular intervals.

Cutting edge land: Prevents chipping and improves machining stability in interrupted cutting.

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

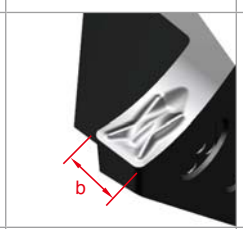
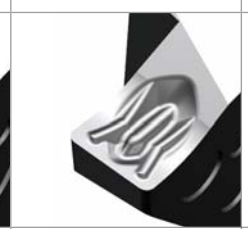
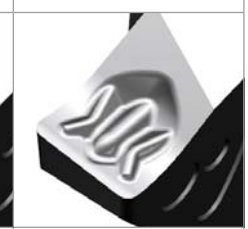
• Purpose: Grooving and turning ≤ 4.5 mm with T-MAX



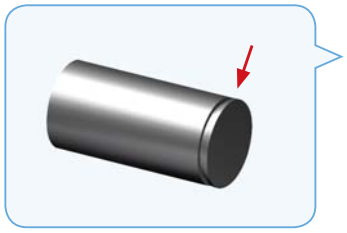
Sub dots: Control stability of chip curls at high feed.

Main dots: Show exceptional chip control in turning and chamfering applications. Facilitate smooth chip evacuation outside each groove . Form chip curls at regular intervals.

Sharp cutting edges: Deliver sharp cutting performance.

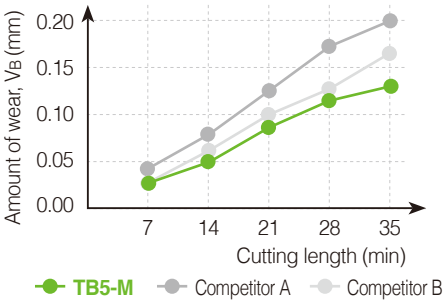
Designation	TB4150R-M ~TB4185R-M	TB4200R-M ~TB4228R-M	TB4300R-M ~TB4350R-M	TB4400R-M ~TB4450R-M
Shape				
Cutting edge width (b)	1.5~1.85 mm	2.0~2.8 mm	3.0~3.5 mm	4.0~4.5 mm

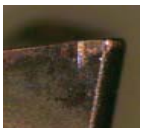
Wear Resistance Test



35 min. long machining

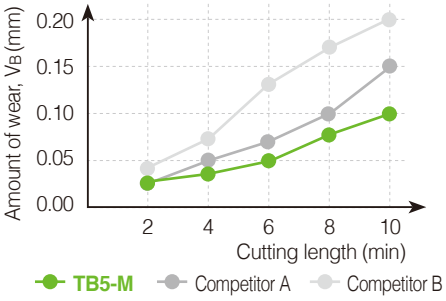
- Workpiece — C45 (Carbon steel), External turning and grooving
- Cutting conditions — vc (m/min) = 200, ap (mm) = 3, fn (mm/rev) = 0.12, wet
- Tools — TB5200N-020-M (PC5300)

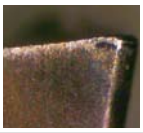
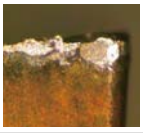


Type	TB5200N-020-M (PC5300)	Competitor A (Universal grade)	Competitor B (Universal grade)
Picture of wear			
Tool life comparison	**100%**	70%	40%

10 min. long machining

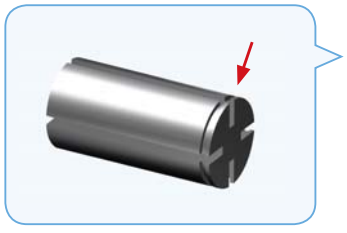
- Workpiece — X5CrNi18-9 (Stainless steel), External turning and grooving
- Cutting conditions — vc (m/min) = 120, ap (mm) = 3, fn (mm/rev) = 0.1, wet
- Tools — TB5200N-020-M (PC5300)



Type	TB5200N-020-M (PC5300)	Competitor A (Universal grade)	Competitor B (Universal grade)
Picture of wear			
Tool life comparison	**100%**	70%	40%

Evaluation of Wear

- Workpiece — C45 (Carbon steel), Grooving with four times of interruption
- Cutting conditions — vc (m/min) = 100, ap (mm) = 3, fn (mm/rev) = 0.1, wet
- Tools — TB5200N-020-M (PC5300)

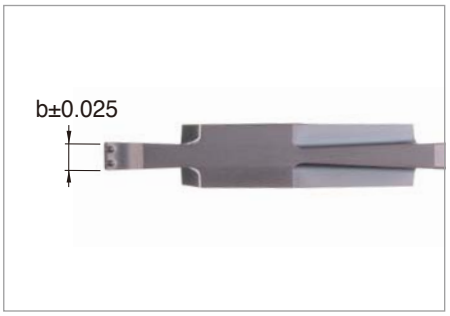


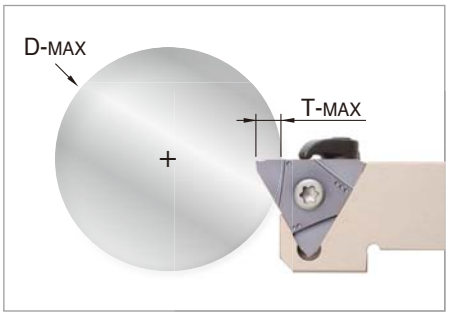
Feed rate (0.1 mm/rev)

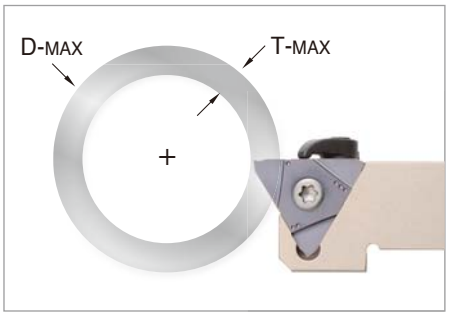
TB5-M Machining Range

* 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



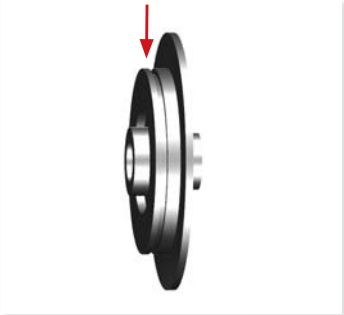




(mm)

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

Application Examples



Servo piston

- Workpiece: 18CrMo4
- Cutting conditions: vc (m/min) = 120, ap (mm) = 2.0, fn (mm/rev) = 0.1, wet
- Tools: TB4200R-M (PC5300)

TB4-M	1000 ea/tooth
Competitor	820 ea/tooth

20% more

20% longer tool life than the competitor, thanks to improved chip flow

Sleeve

- Workpiece: C20
- Cutting conditions: vc (m/min) = 200, ap (mm) = 2.0, fn (mm/rev) = 0.12, wet
- Tools: TB5200N-020-M (PC5300)

TB5-M	600 ea/tooth
Competitor	460 ea/tooth

30% more

Reduced burr creation and 30% longer than the competitor, tool life thanks to improved stability at high speed

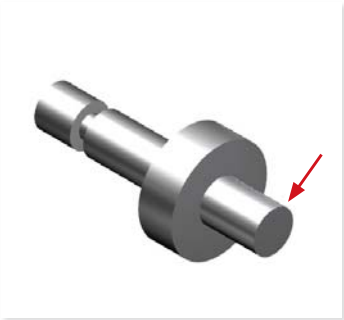
Clutch hub

- Workpiece: 20Cr4
- Cutting conditions: vc (m/min) = 150, ap (mm) = 4.5, fn (mm/rev) = 0.12, wet
- Tools: TB5200N-020-M (PC5300)

TB5-M	110 ea/tooth
Competitor	100 ea/tooth

10% more

10% longer tool life than the competitor, thanks to excellent machining stability and quality results even at high feed



Gate valve spindle

- Workpiece: B1
- Cutting conditions: vc (m/min) = 130, ap (mm) = 3.5, fn (mm/rev) = 0.1, wet
- Tools: TB5200N-020-M (PC5300)

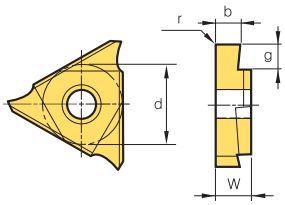
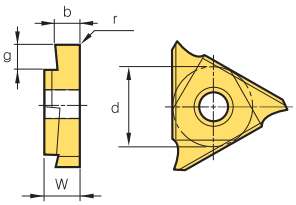
TB5-M	720 ea/tooth
Competitor	600 ea/tooth

20% more

20% longer tool life than the competitor, thanks to excellent machining quality

Insert

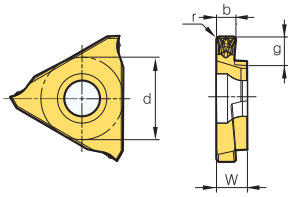
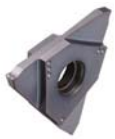
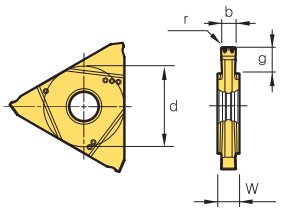
(mm)

Shape	Designation		Cermet	Coated	Dimensions (mm)					Figure
			CN2000	PC5300	b	g (T-MAX)	r	w	d	
	TB (Right-handed)	3125R			1.25	1.5	0.20	4.76	9.525	
		3145R			1.45					
		3175R			1.75	2.5				
		3185R			1.85					
		3200R			2.00					
		3230R			2.30	3.5	0.30			
		3280R			2.80					
		3330R			3.30					
		3430R			4.30		0.40			
		4125R	●	●	1.25	2.0	0.20			
		4145R	●	●	1.45					
		4150R	●	●	1.50	3.5				
		4175R	●	●	1.75					
		4185R	●	●	1.85					
		4200R	●	●	2.00					
		4215R	●	●	2.15					
		4230R	●	●	2.30					
		4250R	●	●	2.50	4.0	0.30	4.76	12.7	
		4265R	●	●	2.65					
		4280R	●	●	2.80					
		4300R	●	●	3.00					
		4330R	●	●	3.30					
		4350R	●	●	3.50	5.0	0.40			
		4400R	●	●	4.00					
		4430R	●	●	4.30					
		4450R	●	●	4.50					
	TB (Left-handed)	3125L			1.25	1.5	0.20	4.76	9.525	
		3145L			1.45					
		3175L			1.75	2.5				
		3185L			1.85					
		3200L			2.00					
		3230L			2.30	3.5	0.30			
		3280L			2.80					
		3330L			3.30					
		3430L			4.30		0.40			
		4125L			1.25	2.0	0.20			
		4145L			1.45					
		4150L			1.50	3.5				
		4175L			1.75					
		4185L			1.85					
		4200L			2.00					
		4215L			2.15					
		4230L			2.30					
		4250L			2.50	4.0	0.30	4.76	12.7	
		4265L			2.65					
		4280L			2.80					
		4300L			3.00					
		4330L			3.30					
		4350L			3.50	5.0	0.40			
		4400L			4.00					
		4430L			4.30					
		4450L			4.50					

● : Managed item

Insert

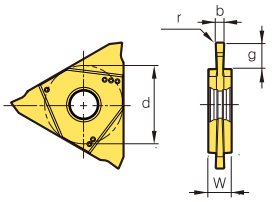
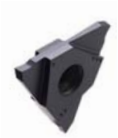
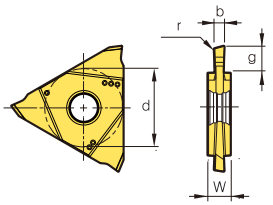
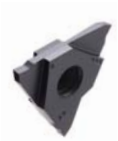
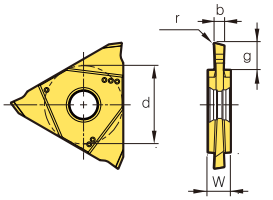
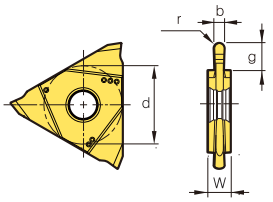
(mm)

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

● : Managed item

Insert

(mm)

Shape	Designation		Cermet	Coated	Dimensions (mm)						Figure
			CN2000	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				
		5150N-010-P			1.50	6.5					
		5150N-020-P					0.20				
		5200N-010-P			2.00		0.10				
		5200N-020-P					0.20				
		5239N-015-P			2.39		0.15				
		5250N-020-P			2.50		0.20				
		5300N-020-P			3.00						
	TB (Neutral, Right cutting)	5100R-6D-P			1.00	3.5	0.05	6	4.50	15.875	
		5100R-15D-P						15			
		5150R-6D-P			1.50	6.5		6			
		5150R-15D-P						15			
		5200R-6D-P			2.00		0.10	6			
		5200R-15D-P						15			
	TB (Neutral, Left cutting)	5100L-6D-P			1.00	3.5	0.05	6	4.50	15.875	
		5100L-15D-P						15			
		5150L-6D-P			1.50	6.5		6			
		5150L-15D-P						15			
		5200L-6D-P			2.00		0.10	6			
		5200L-15D-P						15			
	TB (Neutral, Round shape)	5157N-079-P			1.57	6.5	0.79	-	4.50	15.875	
		5200N-100-P			2.00		1.00				
		5239N-120-P			2.39		1.20				
		5300N-150-P			3.00		1.50				

● : Managed item

TB3000R/L
TB4000R-M

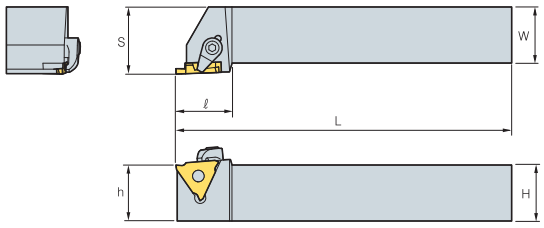
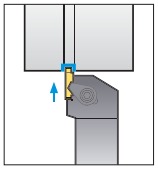
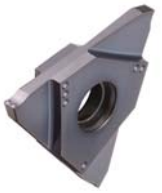


Fig. 1



This figure applies to right-hand



TB5000N-000-M

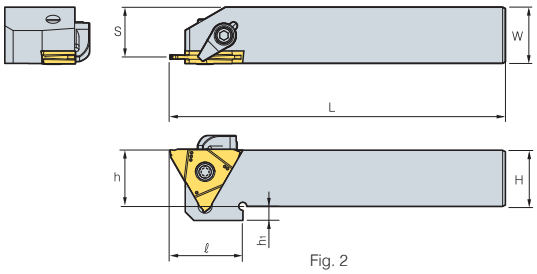


Fig. 2

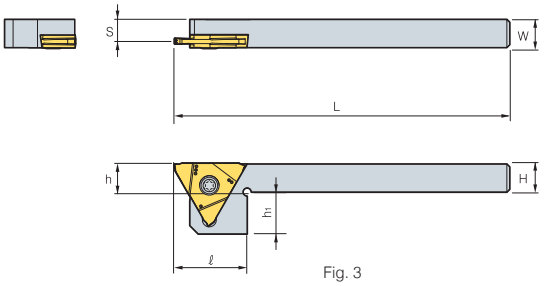


Fig. 3

(mm)

Designation		H = (h)	W	L	ℓ	h_1	S	Applicable insert	Clamp	Clamp screw	Screw	Wrench	Fig.
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-45	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-45	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						

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KORLOY
TECH-NEWS

KORLOY Grooving Tool

KGT Series

Multi-functional Machining with Strong Clamping System

- **Strong Clamping System**
  Strong clamping system ensures stable and accurate machining
- **Wide Selection of Chip Breakers**
  Wide selection of chip breakers ensures excellent chip control in various applications

KORLOY

KGT

Insert

Improved Stability and Performance by Strong Clamping

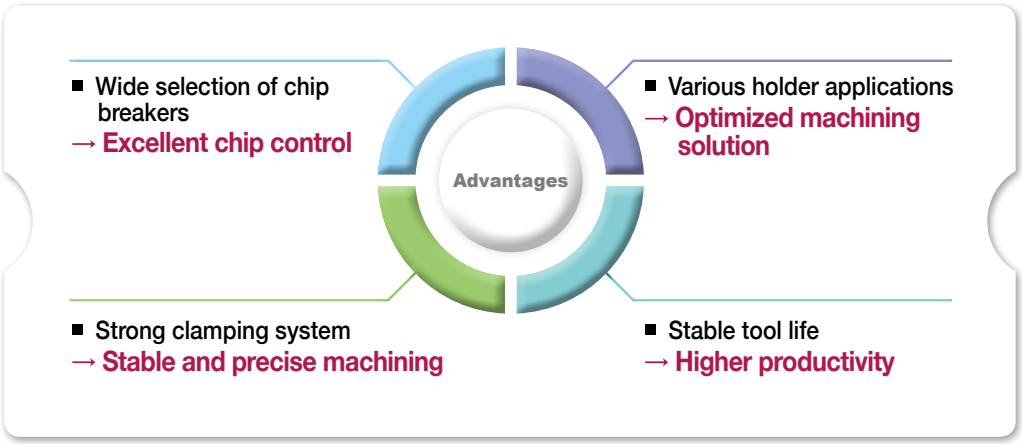
Multi-operational Grooving Tool for High Precision Machining

Cutting and grooving speeds are getting faster to improve productivity while higher machining quality is required to optimize the process. It was difficult to meet these requirements as the thin and long shape of grooving inserts caused vibration and reduced chip evacuation during operation, which resulted in early wear or breakage of tools.

However, KGT has an excellent 'V' type clamping system and a serrated shape on the clamping area so that it effectively minimizes vibrations. This results in improved stability and performance for highly efficient machining.

KGT holders provide a total tooling solution with a wide selection for external / internal diameter machining, parting off, copying, auto lathes and relief machining.

KGT chip breakers are ready for various workpieces and a wide application area with its characteristics of excellent chip evacuation for quality surface finish and high precision.



Code System

[Insert]

KG	M	N	300	-	04	-	T
KG SYSTEM (KORLOY Grooving)	Tolerance	Hand	Width of cutting edge		Nose radius		Chip breaker
	M class G class	N: Neutral R: Right L: Left I : Internal	2.0~8.0mm		0.2mm 0.3mm 0.4mm 0.8mm		L / R / T / C / LP / RP / B / A

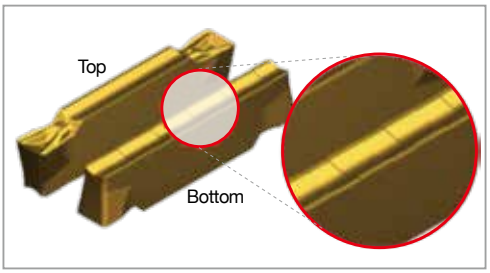
[Holder]

KG	E	H	R/L	2525	-	3	-	T20
KG SYSTEM (KORLOY Grooving)	Working style	Holder style	Hand	Shank stsndard		Cutting width		Maximum depth
	E: External process I : Internal process	H: Horizontal V: Vertical U: Undercut	R: Right L: Left	Height 25m Width25mm (For Internal machining : Minimum diameter for machining)		2.0~8.0mm		8~36mm

Features

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

Insert design



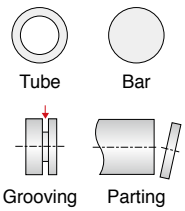
Clamp design

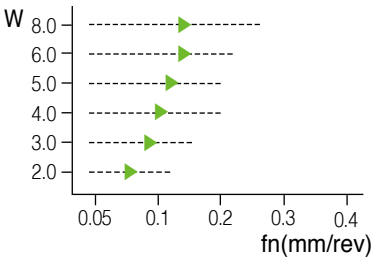
Clamping force is equally dispersed.

Chip Breaker Guide

For Light Grooving

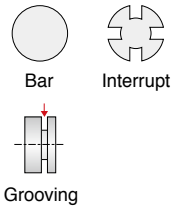
- Sharp cutting edge
- Low feed machining
- Small diameter component
- Low carbon steel
- Carbon steel
- Alloy steel
- Stainless

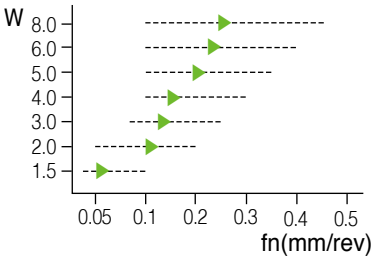




For Rough Grooving

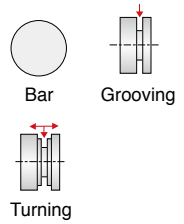
- Strong cutting edge
- High feed machining
- Interrupted cutting
- Carbon steel
- Alloy steel
- Stainless
- Cast iron

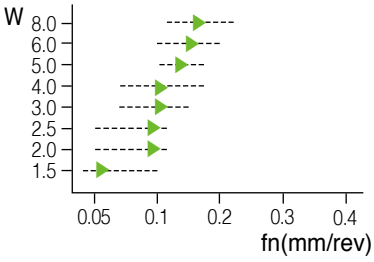




For Turning and Multi Grooving

- Sharp cutting edge
- Improved chip control
- Turning & grooving machining
- Carbon steel
- Alloy steel
- Stainless
- Cast iron



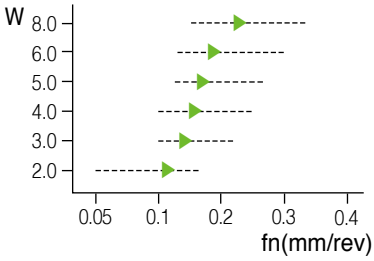


Chip Breaker Guide

For Copying and Relief

- Improved chip control
- Copying
- Relief
- Carbon steel
- Alloy steel
- Stainless
- Cast iron

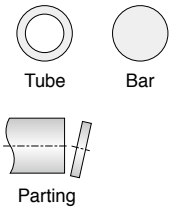
C

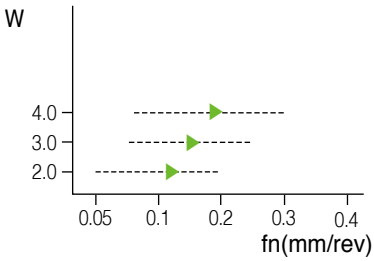


For Light Parting

- Sharp cutting edge
- Low feed machining
- Small diameter component
- Right / Left handed
- Low carbon steel
- Carbon steel
- Alloy steel
- Stainless

LP

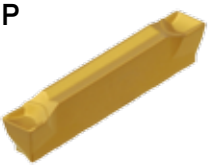


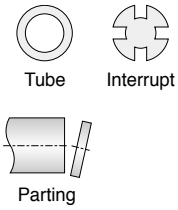


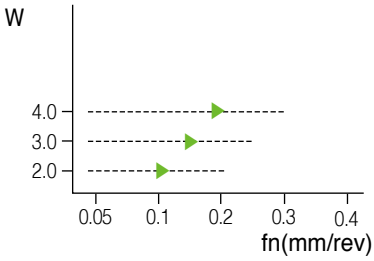
For Rough Parting

- Strong cutting edge
- High feed machining
- Interrupted cutting
- Right / Left handed
- Carbon steel
- Alloy steel
- Cast iron

RP



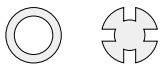


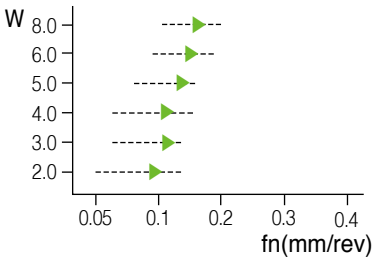


For Precision Grooving

- Ground insert
- Precise tolerance
- Various cutting edge length,Nose R
- Improved chip control
- Carbon steel
- Alloy steel
- Stainless
- Cast iron

B

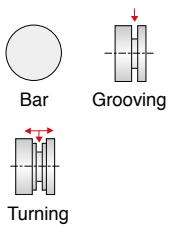


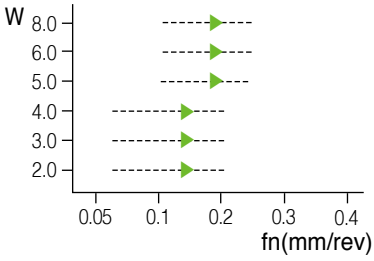


For Aluminium Grooving

- Sharp cutting edge
- Precise tolerance
- Aluminium alloy
- Copper alloy

A





Recommended Insert

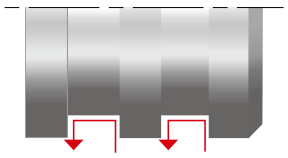
Designation	Geometry	Picture	Application									
			For external machining			For face grooving		For Internal machining		Copying	For reliefing	Special machining
			Parting	Grooving	Turning	Grooving	Turning	Grooving	Turning	Copying	Reliefing	Special
KGMN	L Light Grooving		○	◎		○						
	R Rough Grooving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

◎ First choice, ○ Second choice

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
		NC3220 NC3225	2	130 220
		NC5330	3	120 200
	Alloy Steel	PC5300	1	60 105
		NC3220 NC3225	2	130 200
		NC5330	3	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

Cutting Performance



Turning + Grooving repetition

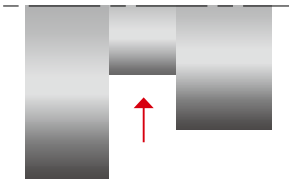
Multi-function machining

- Workpiece: C45
- Cutting conditions: vc(m/min) = 170, fn(mm/rev) = 0.15, ap(mm) = 2, W(mm) = 3, wet
- Tools: KGMN300-04-T (PC5300)

KGT	210ea/edge
Competitor	160ea/edge

30% more

Optimized geometry for turning + grooving - High efficiency.



Shoulder Grooving

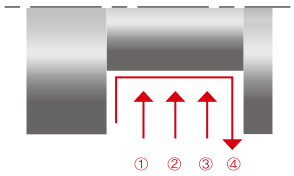
Grooving

- Workpiece: X5CrNI18-9
- Cutting conditions: vc(m/min) = 120, fn(mm/rev) = 0.12, ap(mm) = 5, W(mm) = 4, wet
- Tools: KGMN400-03-R (PC5300)

KGT	200ea/edge
Competitor	150ea/edge

30% more

Tough geometry for interrupted and deep grooving.



Grooving(Roughing)
&Turning(Finishing)

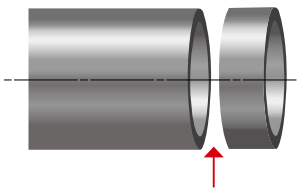
Shaft machining

- Workpiece: 42CrM04
- Cutting conditions: vc(m/min) = 150, fn(mm/rev) = 0.15, ap(mm) = 5, W(mm) = 3 x 3, wet
- Tools: KGMN300-04-T (PC5300)

KGT	104ea/edge
Competitor	80ea/edge

30% more

Excellent chip control for higher efficiency.



Pipe Parting-off

Parting off

- Workpiece: X5CrNI18-9
- Cutting conditions: vc(m/min) = 140, fn(mm/rev) = 0.15, ap(mm) = 2, W(mm) = 3, wet
- Tools: KGMR300-6D-LP (PC5300)

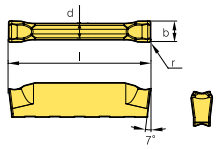
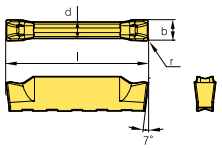
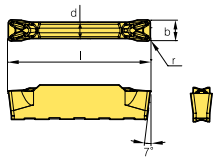
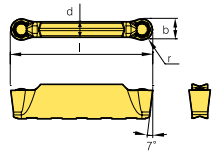
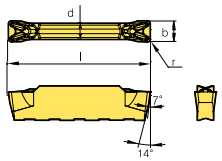
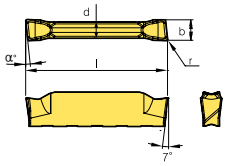
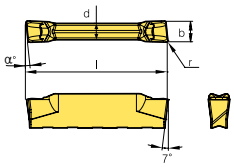
KGT	800ea/edge
Competitor	550ea/edge

45% more

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

Insert

(mm)

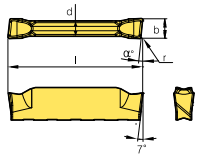
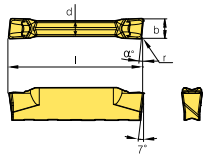
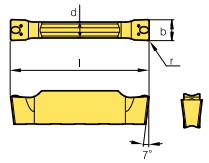
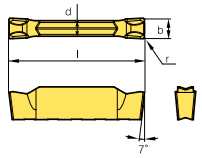
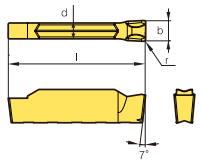
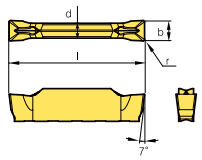
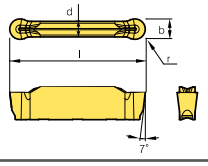
Application	Picture	Designation		Coated						Dimensions (mm)					Figure
				NC3220	NC3225	NC5330	PC5300	PC9030	H01	b	r	l	d	α°	
Grooving		KGMN	200-02-L	●	●	●	●	●		2.0	0.2	20	1.7	-	
			300-02-L	●	●	●	●	●		3.0	0.2	20	2.3	-	
			400-02-L	●	●	●	●	●		4.0	0.2	20	3.3	-	
			500-03-L		●	●	●			5.0	0.3	25	4.1	-	
			600-03-L		●	●	●			6.0	0.3	25	5.1	-	
			-							-	-	-	-	-	
Grooving · Parting off		KGMN	150-015-R		●	●	●			1.5	0.15	16	1.2	-	
			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	150-015-T		●	●	●			1.5	0.15	16	1.2	-	
			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	-	
			300-04-T	●	●	●	●	●		3.0	0.4	20	2.3	-	
			400-04-T	●	●	●	●	●		4.0	0.4	20	3.3	-	
			400-08-T	●	●	●	●	●		4.0	0.8	20	3.3	-	
			500-04-T	●	●	●	●	●		5.0	0.4	25	4.1	-	
			500-08-T	●	●	●	●	●		5.0	0.8	25	4.1	-	
			600-04-T	●	●	●	●	●		6.0	0.4	25	5.1	-	
			600-08-T	●	●	●	●			6.0	0.8	25	5.1	-	
			800-08-T	●	●		●			8.0	0.8	30	6.1	-	
Grooving · Turning		KRMN	200-C		●	●	●			2.0	1.0	20	1.7	-	
			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	-	
Grooving · Internal		KGMI	200-02-T				●			2.0	0.2	20	1.7	-	
			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	200-6D-LP			●	●			2.0	0.2	20	1.7	6	
			200-8D-LP							2.0	0.2	20	1.7	6	
			200-15D-LP			●	●			2.0	0.2	20	1.7	15	
			300-6D-LP			●	●			3.0	0.2	20	2.3	6	
			300-15D-LP			●	●			3.0	0.2	20	2.3	15	
			400-4D-LP			●	●			4.0	0.3	20	3.3	4	
			400-15D-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	200-6D-RP			●	●			2.0	0.2	20	1.7	6	
			200-8D-RP							2.0	0.2	20	1.7	6	
			200-15D-RP			●	●			2.0	0.2	20	1.7	15	
			300-6D-RP			●	●			3.0	0.2	20	2.3	6	
			300-15D-RP			●	●			3.0	0.2	20	2.3	15	
			400-4D-RP			●	●			4.0	0.3	20	3.3	4	
			400-15D-RP			●	●			4.0	0.3	20	3.3	15	
			500-4D-RP							5.0	0.3	25	4.1	4	

● : Stock item

KGT Series

Insert

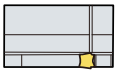
(mm)

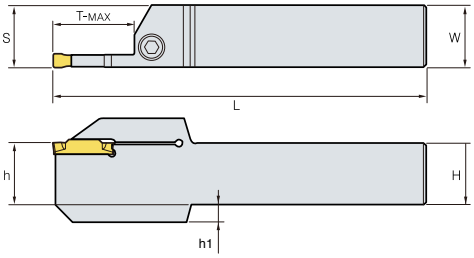
Application	Picture	Designation		Coated						Dimensions (mm)					t
				NC3220	NC3225	NC5330	PC5300	PC9030	H01	b	r	l	d	α°	
Parting off (Left handed)		KGML	200-6D-LP							2.0	0.2	20	1.7	6	
			200-15D-LP							2.0	0.2	20	1.7	15	
			300-6D-LP							3.0	0.2	20	2.3	6	
			300-15D-LP							3.0	0.2	20	2.3	15	
			400-4D-LP							4.0	0.2	20	3.3	4	
			400-15D-LP							4.0	0.2	20	3.3	15	
Parting off (Left handed)		KGML	200-6D-RP							2.0	0.2	20	1.7	6	
			200-15D-RP							2.0	0.2	20	1.7	15	
			300-6D-RP							3.0	0.2	20	2.3	6	
			300-15D-RP							3.0	0.2	20	2.3	15	
			400-4D-RP							4.0	0.2	20	3.3	4	
			400-15D-RP							4.0	0.2	20	3.3	15	
Grooving (Ground insert)		KGGN	265-015-B							2.65	0.15	20	2.3	-	
			300-020-B							3.0	0.20	20	2.3	-	
			300-040-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	-	
			400-080-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	20	3.3	-	
			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	-	
			600-120-B							6.0	1.20	25	5.1	-	
			800-080-B							8.0	0.80	30	6.1	-	
			800-120-B							8.0	1.20	30	6.1	-	
Grooving · Parting off (Ground insert)		KGGN	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 · Parting off (Single insert)		KGGN	200S-02-R							2.0	0.2	19.9	1.7	-	
			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	29.9	6.1	-	
Aluminum Grooving		KGGN	200-02-A						●	2.0	0.2	20	1.7	-	
			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 Profiling		KRGN	300-A						●	3.0	1.5	20	2.3	-	
			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	-	

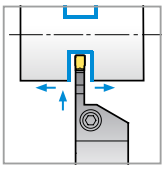
● : Stock item

KGEHR/L

• For grooving, turning, parting off, reliefing machining







R type insert

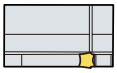
KGGN KGMN
KGMR/L KRMN KRGN

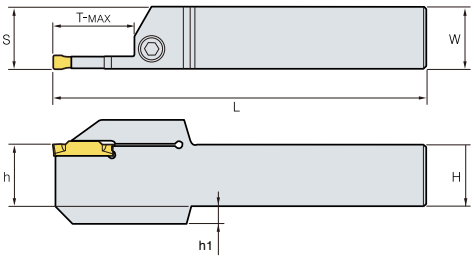
(mm)

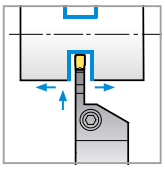
Designation		H=(h)	W	L	S	h_1	T-MAX	Insert	Screw	Wrench
KGEHR/L	1616-1.5-T14	16	16	100	16.2	-	14	KGMN150-□-□	MHA0512	HW40L
	2020-1.5-T14	20	20	125	20.2	-	14			
	2525-1.5-T14	25	25	150	25.2	-	14			
	1212-2-T08	12	12	100	12.2	-	8	KGMN200-□-□ KGMR/L200-□-□ KRMN200-C KGGN200-□-□	MHA0512	HW40L
	1616-2-T08	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			

KGEHR/L

• For grooving, turning, parting off, reliefing machining







R type insert

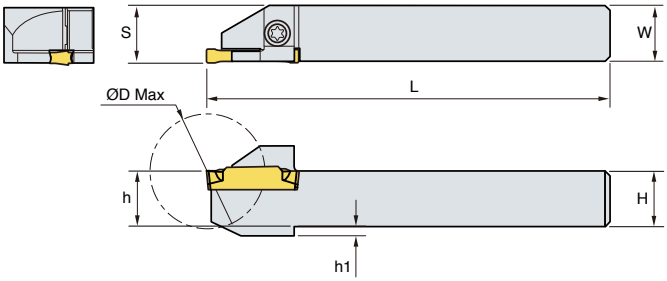
KGGN KGMN
KGMR/L KRMN KRGN

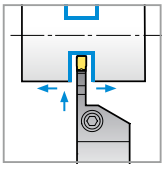
(mm)

Designation		H=(h)	W	L	S	h_1	T-MAX	Insert	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			
	2525-8-T36	25	25	150	26	7	36		BHA0620	HW50L
	3232-8-T36	32	32	170	33	-	36			

KGEHR/L-D00A (AUTO-TOOL)

• For grooving, turning, parting off machining





R type insert

KGGN KGMN
KGMR/L KRMN KRGN

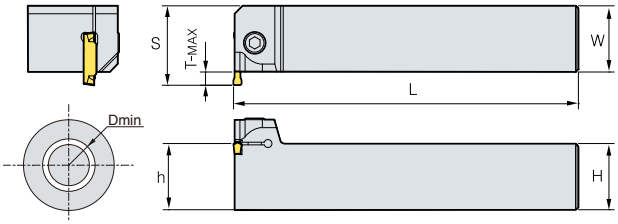
(mm)

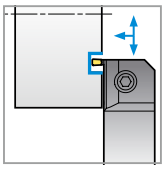
Designation		H=(h)	W	L	S	h_1	ØD Max	Insert	Screw	Wrench
KGEHR/L	1010-2-D20A	10	10	125	10.2	2	20	KGMN200-□-□ KGMR/L200-□-□ KRMN200-C KGGN200-□-□	ETNA0412	TW15L
	1212-2-D25A	12	12	125	12.2	2	25			
	1414-2-D25A	14	14	125	14.2	-	25			
	1616-2-D32A	16	16	125	16.2	-	32			
	1212-3-D25A	12	12	125	12.4	2	25	KGMN300-□-□ KGMR/L300-□-□ KRMN300-C KGGN300-□-□ KRGN300-□		
	1616-3-D32A	16	16	125	16.4	-	32			

KGEVR/L-T00

• For grooving, turning, face grooving machining

KGMN KRMN
KGGN KRGN





R type insert

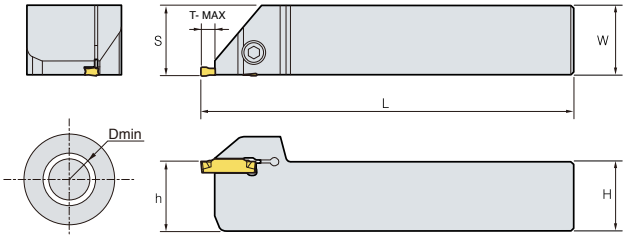
(mm)

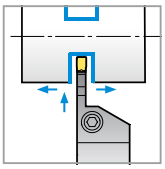
Designation		H=(h)	W	L	S	ØD Min	T-MAX	Insert	Screw	Wrench
KGEVR/L	2020-1.5 -T00	20	20	125	23.5	120	3	KGMN200-□-□ KRMN200-C KGGN200-□-□-□	MHA0512	HW40L
	2525-1.5 -T00	25	25	150	28.5	120	3			
	3232-1.5 -T00	32	32	170	35.5	120	3			
	2020-2 -T00	20	20	125	23.5	120	3			
	2525-2 -T00	25	25	150	28.5	120	3			
	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	KGMN600-□-□ KRMN600-C KGGN600-□-□ KRGN600-□	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			
	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			

KGEHR/L-T00

• For grooving, turning, face grooving machining

KGMN KRMN
KGGN KRGN





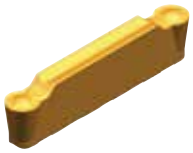
R type insert

(mm)

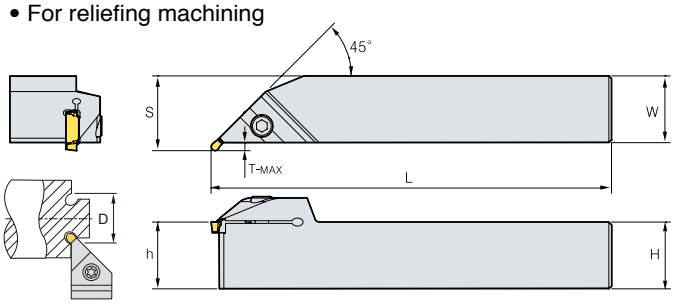
Designation		H=(h)	W	L	S	ØD Min	T-MAX	Insert	Screw	Wrench
KGEHR/L	1616-3-T00	16	16	100	16.4	80	4.8	KGMN300-□-□ KRMN300-C KGGN300-□-□ KRGN300-□	MHA0512	HW40L
	2020-3-T00	20	20	125	20.4	80	4.8			
	2525-3-T00	25	25	150	25.4	80	4.8			
	1616-4-T00	16	16	100	16.4	80	4.8	KGMN400-□-□ KRMN400-C KGGN400-□-□ KRGN400-□	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			

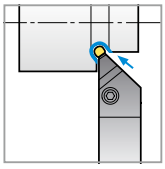
KGEUR/L

• For reliefing machining



KRMN KRGN





R type insert

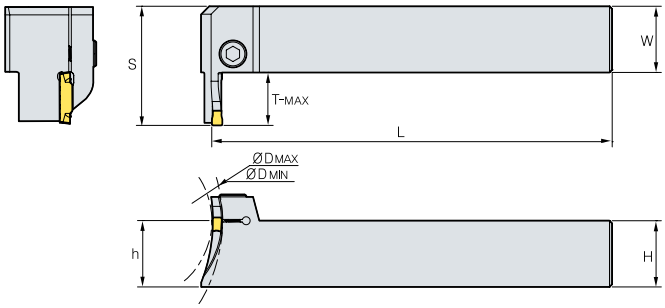
(mm)

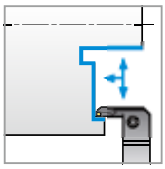
Designation		H=(h)	W	L	S	ØD Max	T-MAX	Insert	Screw	Wrench
KGEUR/L	1616-3	16	16	100	19	40	2.8	KRMN300-C KRGN300-□	MHA0512	HW40L
	2020-3	20	20	125	23	40	2.8			
	2525-3	25	25	150	28	40	2.8			
	3232-3	32	32	170	35	40	2.8			
	1616-4	16	16	100	19	40	2.8	KRMN400-C KRGN400-□	BHA0616	HW50L
	2020-4	20	20	125	23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

KGFVR/L

• For face grooving machining

KGMN KRMN
KGGN KRGN





R type insert

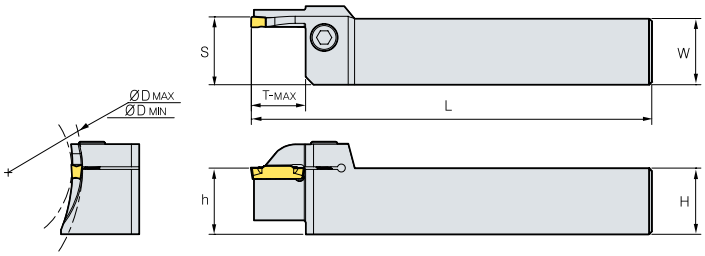
(mm)

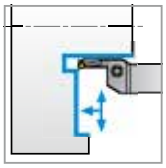
Designation		H=(h)	W	L	S	T-Max	ØD		Insert	Screw	Wrench
							Min	Max			
KGFVR/L	425-44/70-T20	25	25	150	45.5	20	44	70	KGMN400-□-□ KRMN400-C KGGN400-□-□ KRGN400-□	BHA0616	HW50L
	425-60/120-T20	25	25	150	45.5	20	60	120			
	425-112/200-T20	25	25	150	45.5	20	112	200			

KGFHR/L

• For face grooving machining

KGMN KRMN
KGGN KRGN





R type insert

(mm)

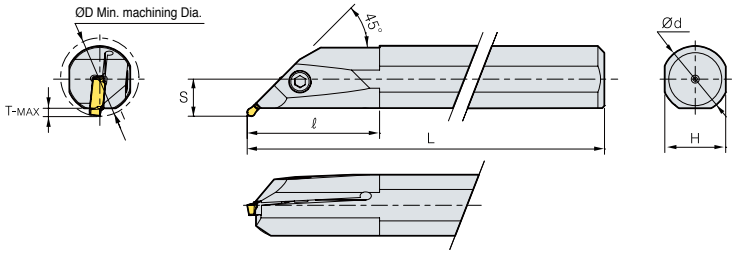
Designation		H=(h)	W	L	S	T-MAX	ØD		Insert	Screw	Wrench
							Min	Max			
KGFHR/L	325-34/50-T10	25	25	150	25.5	10	34	50	KGMN300-□-□ KRMN300-C KGGN300-□-□ KRGN300-□	MHA0512	HW40L
	325-44/70-T15	25	25	150	25.5	15	44	70			
	325-64/100-T15	25	25	150	25.5	15	64	100			
	425-40/60-T10	25	25	150	25.6	10	40	60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

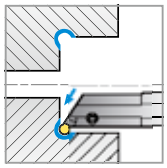
KGT Series

KGIUR/L

• For reliefing machining

KRMN KRGN





R type insert

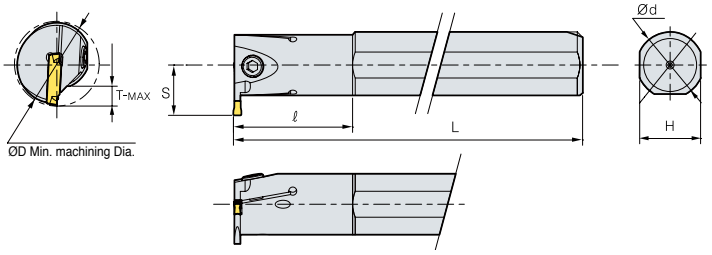
(mm)

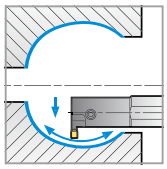
Designation		ØD	Ød	L	ℓ	T-MAX	H	S	Insert	Screw	Wrench
KGIUR/L	3520-3	35	20	150	45	3.5	18	13	KRMN300-C KRGN300-□	MHA0512	HW40L
	4025-3	40	25	200	50	3.5	23	15.5			
	5032-3	50	32	250	65	3.5	30	19			
	3520-4	35	20	150	45	3.5	18	13			
	4025-4	40	25	200	50	3.5	23	15.5	KRMN400-C KRGN400-□	MHA0512	HW40L
	5032-4	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			

KGIVR/L

• For grooving, turning, profiling machining

KGMI KGMN





R type insert

(mm)

Designation		ØD	Ød	L	ℓ	T-MAX	H	S	Insert	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	HW30L
	3225-1.5	32	25	200	45	7	23	19		MHA0512	HW40L
	2516-2	25	16	125	35	6.5	15	14	KGMI200-□-□	MHB0410	HW30L
	2520-2	25	20	150	45	6.5	18	15.5		MHB0410	HW30L
	3225-2	32	25	200	45	7	23	19		MHA0512	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		MHB0410	HW30L
	3225-2.5	32	25	200	45	7	23	19		MHA0512	HW40L
	2520-3	25	20	150	45	6.5	18	15.5	KGMI300-□-□	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-□-□	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	KGMN600-□-□	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		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-□-□	BHA0616	HW50L
	4540-8	45	40	300	70	8.5	37	26.5		BHA0616	HW50L

• External insert : Min. machining Dia(ØD) is over 50mm.

KGT Blade for Parting off

Code System

KGTB	80	-	32	-	S
KGTB system	Height of shank		Cutting width		S :Single pocket

- 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

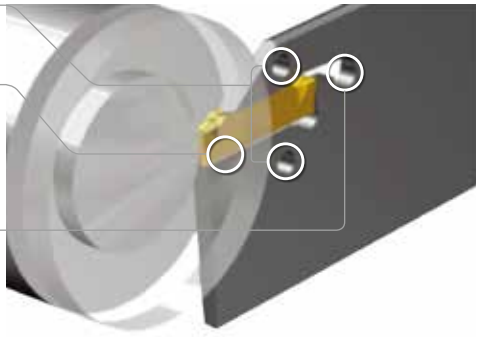
Easy change of insert

Wide clamping area

- Better stability

Specially designed slot

- Strong clamping and durability



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

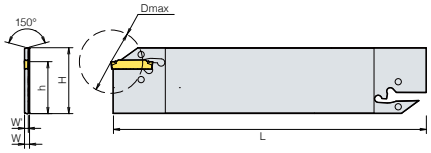


Fig. 1

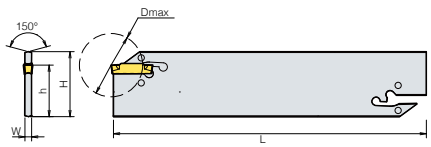


Fig. 2

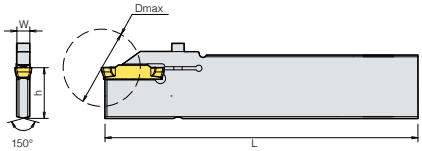


Fig. 3

(mm)

Designation		H	W	W'	L	h	ØD Max(2)	ØD Max(3)	Insert	Wrench	Fig.
KGTB	1532	32	2.4	1.0	150	25	-	26	KG□□150-□-□	EW1203 (Separately ordered)	1
	2032	32	2.4	1.8	150	25	50	39	KG□□200-□-□ KG□□200S-□-R(4)		
	3032	32	2.4	-	150	25	100	39	KG□□300-□-□ KG□□300S-□-R(4)		2
	4032	32	3.2	-	150	25	100	39	KG□□400-□-□ KG□□400S-□-R(4)		
	5032	32	4.0	-	150	25	120	49	KG□□500-□-□ KG□□500S-□-R(4)		
	6032	32	5.2	-	150	25	120	49	KG□□600-□-□ KG□□600S-□-R(4)		
	8032S(1)	32	6.2	-	150	25	80	59	KG□□800-□-□ KG□□800S-□-R(4)	HW30L	3

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

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KORLOY TECH-NEWS

WE CREATE YOUR TOMORROW!

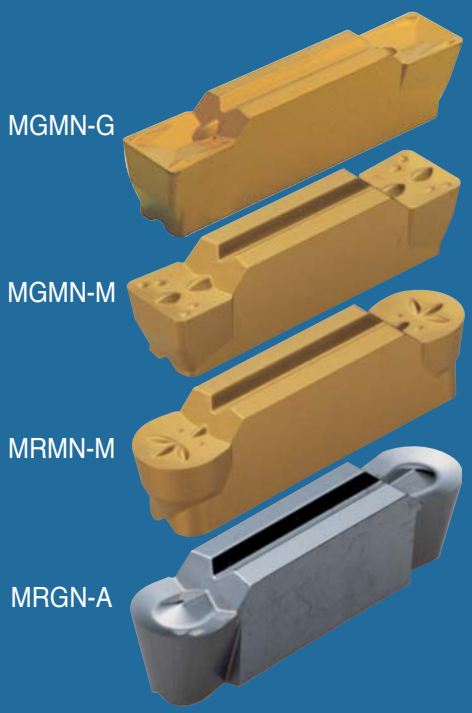
ISO9001 Certified

No: 96-10

Multi Grooving Tools

Multitude of operations

M G T

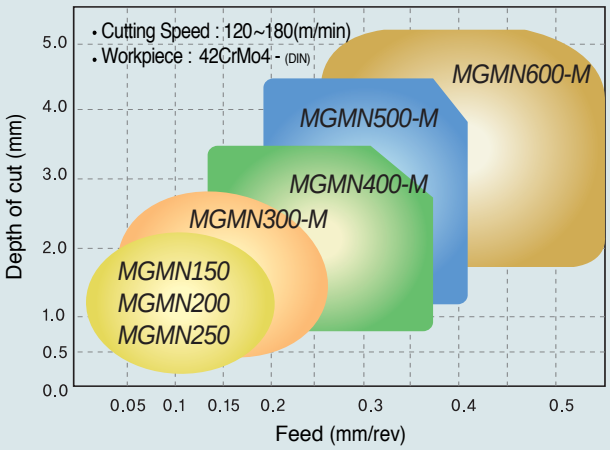


Features

- Unique W shape strong clamping system ensures stability of machining
- M.G.T Insert can be used at Internal operations as well as External operations
- M.G.T Insert's M chip breaker covers a wide range of application from finishing to roughing
- M.G.T has wide application range because a M.G.T Holder can adopt various inserts

KORLOY Inc.

Application Range of MGMN Inserts



- Depth of cut, feed and Width of Cutting edge
  - If the depth of cut and feed are too bigger than the width of cutting edge, it may bring to breakage due to increasing of cutting resistance of insert.
  - If the depth of cut and feed are too smaller than the width of cutting edge, it may lead to a vibration or unstable machining due to no formation of the sub cutting edge relief angle against no direct influence of tool deflection.

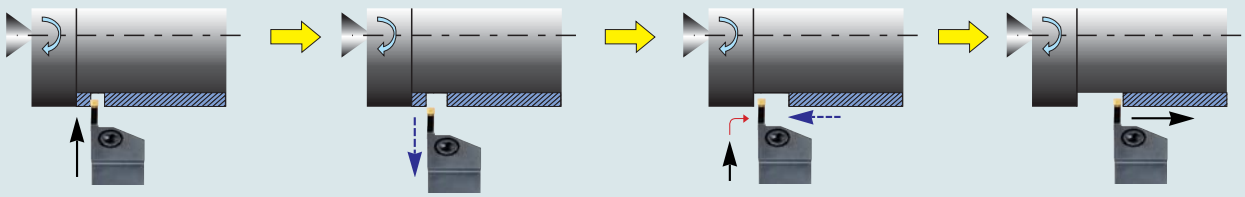
- Grooving Depth of cut
  - Up to T_{MAX}(projecting part)of holder

Recommended Grade

Workpiece			Wear resistance (Grooving, Turning)				
ISO	Material	Grade	Wear Resistance ↔ Toughness				
			01	10	20	30	40
P	Carbon steel · Alloy steel	CVD	NC3010	NC3015	NC3020,NC3120	NC3030	
		PVD	PC230				
		Cermet	CT10	CN20			
M	Stainless steel	CVD	NC9020	NC3030			
		PVD	PC9030				
K	Cast irons	CVD		NC315K			
		PVD	PC205K	PC215K			
	Aluminum	Uncoated	H01			G10	

※ : 1st Choice

M.G.T for External Machining



Tooling Guide

Holder \ Insert	Grooving,Turning	Relief , Copy	for Aluminum
	MGMNOOO-M MGMNOOO-G MGGNOOO-OO-M	MRMNOOO-M	MRGNOOO-A
External			
	1.5, 2, 2.5, 3, 4, 5, 6, 8 mm	IR,1.5R,2R,2.5R,3R,4R mm	2R, 2.5R, 3R, 4R mm
	MGEHR/L 2020-1.5, 2, 2.5, 3, 4, 5, 6 2525-1.5, 2, 2.5, 3, 4, 5, 6, 8 3232-3, 4, 5, 6, 8		MGEHR/L 2020-6A 2525-6A, 8A 3232-6A, 8A
	1.5, 2, 2.5, 3, 4, 5, 6, 8 mm	1.5R,2R,2.5R,3R,4R mm	
	MGEVR/L 2020-1.5, 2, 2.5 3, 4, 5, 6 2525-1.5, 2, 2.5, 3, 4, 5, 6, 8 3232-3, 4, 5, 6, 8		
		1R,1.5R,2R,2.5R,3R,4R mm	2R, 2.5R, 3R, 4R mm
	MGEUR/L 2020-3, 4, 5, 6 2525-3, 4, 5, 6, 8 3232-3, 4, 5, 6, 8		MGEUR/L 2020-6A 2525-6A, 8A 3232-6A, 8A
Internal			
	1.5, 2, 2.5, 3, 4, 5, 6, 8 mm	1.5R,2R,2.5R,3R,4R mm	2R, 2.5R, 3R, 4R mm
	ø d ø 20 ø 25 ø 32 MGIVR/L 2016-1.5, 2, 2.5 2520-1.5, 2, 2.5, 3, 4 2925-1.5, 2, 2.5 3125-3, 4, 5, 6 3732-3, 4, 5, 6, 8 4540-8		MGIVR/L 3125-6A 3732-6A, 8A 4540-6A, 8A
		1.5R,2R,2.5R,3R,4R mm	2R, 2.5R, 3R, 4R mm
	ø d ø 20 ø 25 ø 32 MGIUR/L 3020-3, 4 4025-3, 4, 5, 6, 8 5032-3, 4, 5, 6, 8		MGIUR/L 4025-6A, 8A 5032-6A, 8A

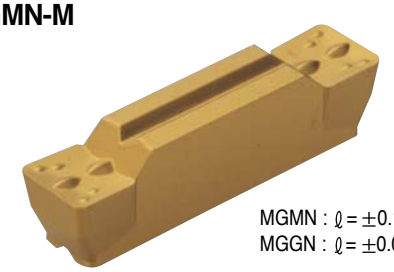
Insert Code System

MG M N OOO - OO - M

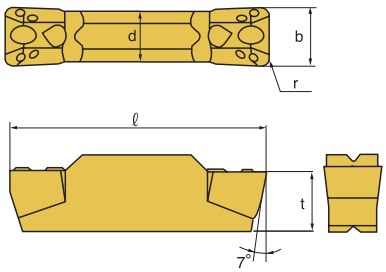
- M: C/B shape(M:Steel, Stainless steel, Cast irons, A:Al)
- OO: G class insert corner-R(R 0.2, R0.3→0.3...)
- OOO: width of cutting edge(3mm→300, 4mm→400, 3R mm → 600..)
- N: feed direction(R/L/N)
- M: tolerance(M class, G class)
- MG: product code (MG : Multi Grooving Square, MR : Multi Grooving Round)

MGT Insert

MGMN-M



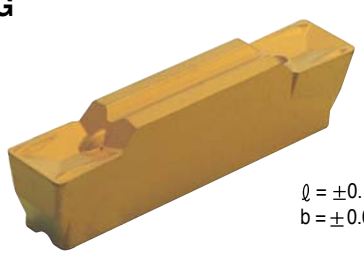
MGMN : ℓ = ±0.1 b = ±0.05
MGGN : ℓ = ±0.025 b = ±0.02



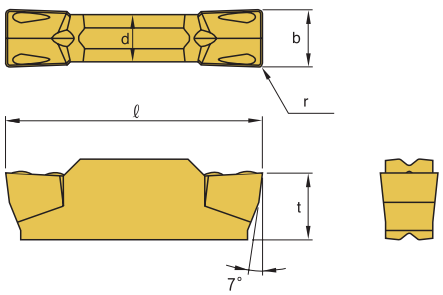
Designation	Grades							Dimensions(mm)				
	NC3010	NC3120	NC3030	PC215K	PC9030	PC230	CN20	b	r	ℓ	d	t
MGMN200-M		●			●			2.0	0.2	16.0	1.2	3.5
MGMN250-M		●			●			2.5	0.2	18.5	2.0	3.85
MGMN300-02-M				○		○		3.0	0.2	21.0	2.35	4.8
MGMN300-M	○	●	●	●	●	●		3.0	0.4	21.0	2.35	4.8
MGMN350-03-M				○		○		3.5	0.3	21.0	2.9	4.8
MGMN400-02-M				○		○		4.0	0.2	21.0	3.3	4.8
MGMN400-M		●	●	●		●		4.0	0.4	21.0	3.3	4.8
MGMN500-04-M		○	○	○		○		5.0	0.4	26.0	4.1	5.8
MGMN500-M		●		○		●		5.0	0.8	26.0	4.1	5.8
MGMN600-M		●		○				6.0	0.8	26.0	5.0	5.8
MGMN800-M			●					8.0	0.8	31.0	6.0	6.5
MGGN300-02-M							●	3.0	0.2	21.0	2.35	4.8
MGGN300-04-M							●	3.0	0.4	21.0	2.35	4.8
MGGN300-08-M							○	3.0	0.8	21.0	2.35	4.8
MGGN400-02-M							●	4.0	0.2	21.0	3.3	4.8
MGGN400-04-M							●	4.0	0.4	21.0	3.3	4.8
MGGN400-08-M							○	4.0	0.8	21.0	3.3	4.8
MGGN500-02-M							○	5.0	0.2	26.0	4.1	5.8
MGGN500-04-M							●	5.0	0.4	26.0	4.1	5.8
MGGN500-08-M							●	5.0	0.8	26.0	4.1	5.8
MGGN600-02-M							○	6.0	0.2	26.0	5.0	5.8
MGGN600-04-M								6.0	0.4	26.0	5.0	5.8
MGGN600-08-M								6.0	0.8	26.0	5.0	5.8

●Stock item, ○Under preparing for stock

MGMN-G



ℓ = ±0.1
b = ±0.05

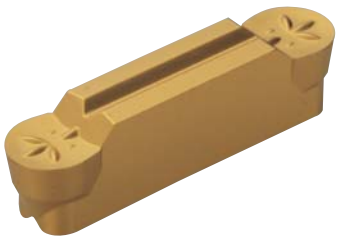


Designation	Grades				Dimensions(mm)				
	NC3120	PC9030	PC3535	PC215K	b	r	ℓ	d	t
MGMN150-G	●		●		1.5	0.15	16.0	1.2	3.5
MGMN200-G	●	●			2.0	0.2	16.0	1.6	3.5
MGMN250-G	●	●			2.5	0.2	18.5	2.0	3.85
MGMN300-G		○			3.0	0.4	21.0	2.35	4.8
MGMN400-G		○			4.0	0.4	21.0	3.3	4.8
MGMN500-G		○			5.0	0.8	26.0	4.1	5.8
MGMN600-G					6.0	0.8	26.0	5.0	5.8

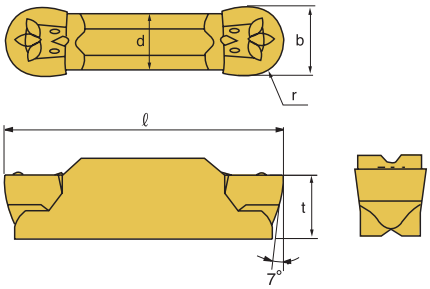
●Stock item, ○Under preparing for stock

MGT Insert

MRMN-M



ℓ = ±0.1
b = ±0.05

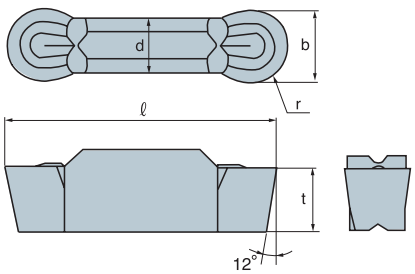


Designation	Grades				Dimensions(mm)				
	NC3120	NC3030	PC9030	PC230	b	r	ℓ	d	t
MRMN200-M	●		○		2.0	1.0	16.0	1.50	3.5
MRMN300-M	●		○	●	3.0	1.5	21.0	2.35	4.8
MRMN400-M	●	●	○	○	4.0	2.0	21.0	3.3	4.8
MRMN500-M	●		○	●	5.0	2.5	26.0	4.1	5.8
MRMN600-M	●	●	○		6.0	3.0	26.0	5.0	5.8
MRMN800-M	●		○		8.0	4.0	31.0	6.0	6.5

●Stock item, ○Under preparing for stock

MRGN-A

ℓ = ±0.03
b = ±0.03

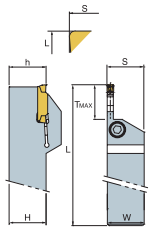


Designation	Grades		Dimensions(mm)				
	H01	G10	b	r	ℓ	d	t
MRGN400-A	○		4.0	2.0	21.0	3.3	4.8
MRGN500-A	○		5.0	2.5	26.0	4.1	5.8
MRGN600-A	●		6.0	3.0	26.0	5.0	5.8
MRGN800-A	●		8.0	4.0	31.0	6.0	6.5

●Stock item, ○Under preparing for stock

External Holder

MGEHR/L

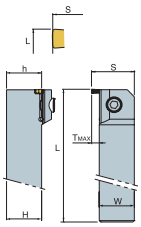


Designation	Stock R	Stock L	H(h)	W	L	S	TMAX	Insert	Screw	Wrench
MGEHR/L1616-1.5	●	●	16	16	100	16.25	14.5	MGMN150-G	LTX0514	TW20L
MGEHR/L2020-1.5	●	●	20	20	125	20.25	14.5			
MGEHR/L2525-1.5	●	●	25	25	150	25.25	14.5			
MGEHR/L1212-2	●		12	12	100	14.25	14.5	MGMN200-G MGMN200-M	MHA0512	HW40L
MGEHR/L1616-2	●	●	16	16	100	16.25	14.5			
MGEHR/L2020-2	●	●	20	20	125	20.25	14.5			
MGEHR/L2525-2	●	●	25	25	150	25.25	14.5			
MGEHR/L1616-2.5	●	●	16	16	100	16.30	16.5	MGMN250-G MGMN250-M	MHA0512	HW40L
MGEHR/L2020-2.5	●	●	20	20	125	20.30	16.5			
MGEHR/L2525-2.5	●	●	25	25	150	25.30	16.5			
MGEHR/L1616-3	●	●	16	16	100	16.35	18.5	MGMN300-M MGGN300-□□-M MRMN300-M	BHA0616	HW50L
MGEHR/L2020-3	●	●	20	20	125	20.4	18			
MGEHR/L2020-3-T10	●		20	20	125	20.4	10			
MGEHR/L2525-3	●	●	25	25	150	25.4	18			
MGEHR/L2525-3-T10	●		25	25	150	25.4	10			
MGEHR/L3232-3	●	●	32	32	170	32.4	18			
MGEHR/L3232-3-T10			32	32	170	32.4	10			
MGEHR/L2020-4	●	●	20	20	125	20.4	18	MGMN400-M MGGN400-□□-M MRMN400-M		
MGEHR/L2020-4-T10	●		20	20	125	20.4	10			
MGEHR/L2525-4	●	●	25	25	150	25.4	18			
MGEHR/L2525-4-T10	●	●	25	25	150	25.4	10			
MGEHR/L3232-4	●	●	32	32	170	32.4	18			
MGEHR/L3232-4-T10			32	32	170	32.4	10			
MGEHR/L2020-5	●	●	20	20	150	20.5	23	MGMN500-M MGGN500-□□-M MRMN500-M		
MGEHR/L2020-5-T15			20	20	150	20.5	15			
MGEHR/L2525-5	●	●	25	25	150	25.5	23			
MGEHR/L2525-5-T15			25	25	150	25.5	15			
MGEHR/L3232-5	●	●	32	32	170	32.5	23			
MGEHR/L3232-5-T15			32	32	170	32.5	15			
MGEHR/L2020-6	●	●	20	20	125	20.6	23	MGMN600-M MGGN600-□□-M MRMN600-M		
MGEHR/L2020-6-T15			20	20	125	20.6	15			
MGEHR/L2525-6	●	●	25	25	150	25.6	23			
MGEHR/L2525-6-T15			25	25	150	25.6	15			
MGEHR/L3232-6	●	●	32	32	170	32.6	23			
MGEHR/L3232-6-T15			32	32	170	32.6	15			
MGEHR/L2525-8	●	●	25	25	150	26.1	28	MRMN800-M MGMN800-M		
MGEHR/L2525-8-T15	●		25	25	150	26.1	15			
MGEHR/L3232-8	●		32	32	170	33.1	28			
MGEHR/L3232-8-T15			32	32	170	33.1	16			
MGEHR/L2525-6A	●	●	25	25	150	25.6	23	MRGN600-A		
MGEHR/L2525-6A-T15			25	25	150	25.6	15			
MGEHR/L3232-6A			32	32	170	32.6	23			
MGEHR/L3232-6A-T15			32	32	170	32.6	15			
MGEHR/L2525-8A	●	●	25	25	150	26.1	28	MRGN800-A		
MGEHR/L2525-8A-T15	●	●	25	25	150	26.1	16			
MGEHR/L3232-8A			32	32	170	33.1	28			
MGEHR/L3232-8A-T15			32	32	170	33.1	15			

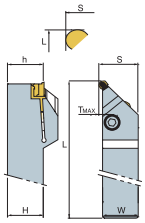
●Stock item, ○Under preparing for stock

External Holder

MGEVR/L



MGEUR/L



Designation	Stock R	Stock L	H(h)	W	L	S	TMAX	Insert	Screw	Wrench
MGEVR20201.5	○		20	20	125	23	3	MGMN150-G	LTX0514	TW 20L
MGEVR25251.5			25	25	150	28	3			
MGEVR32321.5			32	32	170	35	3			
MGEVR/L2020-2	●		20	20	125	23.5	3.5	MGMN200-M MGMN200-G	BHA0616	HW 50L
MGEVR/L2525-2	○		25	25	150	28.5	3.5			
MGEVR3232-2			32	32	170	35.5	3.5			
MGEVR2020-2.5	○		20	20	125	24	4	MGMN250-M MGMN250-G		
MGEVR2525-2.5	○		25	25	150	29	4			
MGEVR3232-2.5			32	32	170	36	4			
MGEVR/L2020-3	●		20	20	125	25.5	5	MGMN300-M MGGN300-□□-M MRMN300-M		
MGEVR/L2525-3	●	●	25	25	150	30.5	5			
MGEVR/L3232-3	○		32	32	170	37.5	5			
MGEVR/L2020-4	●		20	20	125	25.5	5	MGMN400-M MGGN400-□□-M MRMN400-M		
MGEVR/L2525-4	●		25	25	150	30.5	5			
MGEVR/L3232-4	○		32	32	170	37.5	5			
MGEVR/L2020-5			20	20	125	27	7	MGMN500-M MGGN500-□□-M MRMN500-M		
MGEVR/L2525-5	○		25	25	150	32	7			
MGEVR/L3232-5	○		32	32	170	39	7			
MGEVR/L2020-6			20	20	125	27	7	MGMN600-M MGGN600-□□-M MRMN600-M		
MGEVR/L2525-6	○		25	25	150	32	7			
MGEVR/L3232-6	○		32	32	170	39	7			
MGEVR/L2525-8			25	25	150	34	9	MRMN800-M		
MGEVR/L3232-8	○		32	32	170	41	9			
MGEVR/L2525-6A			25	25	150	32	7	MRGN600-A		
MGEVR/L3232-6A			32	32	170	39	7			
MGEVR/L2525-8A			25	25	150	34	9	MRGN800-A		
MGEVR/L3232-8A			32	32	170	41	9			

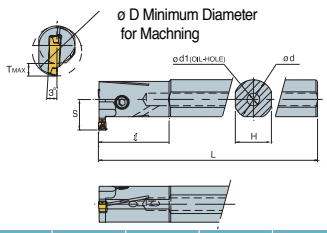
●Stock item, ○Under preparing for stock

Designation	Stock R	Stock L	H(h)	W	L	S	TMAX	Insert	Screw	Wrench
MGEUR/L2020-3	●		20	20	125	23	3	MRMN300-M	BHA0616	HW 50L
MGEUR/L2525-3	●		25	25	150	28	3			
MGEUR/L3232-3			32	32	170	35	3			
MGEUR/L2020-4	○		20	20	125	23	3	MRMN400-M		
MGEUR/L2525-4	●		25	25	150	28	3			
MGEUR/L3232-4	○		32	32	170	35	3			
MGEUR/L2020-5			20	20	125	24	4	MRMN500-M		
MGEUR/L2525-5	○		25	25	150	29	4			
MGEUR/L3232-5	○		32	32	170	36	4			
MGEUR/L2020-6			20	20	125	24	4	MRMN600-M		
MGEUR/L2525-6	○		25	25	150	29	4			
MGEUR/L3232-6	○		32	32	170	36	4			
MGEUR/L2525-8			25	25	150	30	5	MRMN800-M		
MGEUR/L3232-8			32	32	170	37	5			
MGEUR/L2525-6A			25	25	150	29	4	MRGN600-A		
MGEUR/L3232-6A			32	32	170	36	4			
MGEUR/L2525-8A			25	25	150	30	5	MRGN800-A		
MGEUR/L3232-8A			32	32	170	37	5			

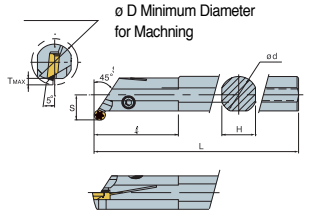
●Stock item, ○Under preparing for stock

Internal Holder

MGIVR/L



MGIUR/L



Designation	Stock R	Stock L	ø D	ød	L	ℓ	TMAX	H	S	Insert	Screw	Wrench
MGIVR/L20161.5	○		20	16	125	35	4	15	11.3	MGMN150-G	MHB0310	HW25L
MGIVR/L25201.5			25	20	150	45	4	18	13.1		MHA0512	HW40L
MGIVR/L29251.5			29	25	200	45	4	23	16.2			
MGIVR/L2016-2	●	●	20	16	125	35	5	15	12.4	MGMN200-G MGMN200-M	MHB0310	HW25L
MGIVR/L2520-2	●	●	25	20	150	45	5	18	14.0		MHA0512	HW40L
MGIVR/L2925-2	●	●	29	25	200	45	5	23	17.2			
MGIVR/L20162.5			20	16	125	35	6	15	12.5	MGMN250-G MGMN250-M	MHB0310	HW25L
MGIVR/L25202.5	○		25	20	150	45	6	18	15.1		MHB0512	HW40L
MGIVR/L29252.5	○		29	25	200	45	6	23	18.2			
MGIVR/L2520-3	●	●	25	20	150	45	6	18	15.6	MGMN300-M MGGN300-□□-M MRMN300-M	MHA0512	HW40L
MGIVR/L3125-3	●	●	31	25	200	45	6	23	18.9			
MGIVR/L3732-3	●	●	37	32	250	65	6	30	21.5			
MGIVR/L2520-4	●	●	25	20	150	45	6	18	15.6	MGMN400-M MGGN400-□□-M MRMN400-M		
MGIVR/L3125-4	●		31	25	200	45	6	23	18.9			
MGIVR/L3732-4	●		37	32	250	65	6	30	21.5			
MGIVR/L3125-5	●		31	25	200	45	8	23	19.4	MGMN500-M MGGN500-□□-M MRMN500-M		
MGIVR/L3732-5			37	32	250	65	8	30	21.5			
MGIVR/L3125-6	●	●	31	25	200	45	8	23	19.4	MGMN600-M MGGN600-□□-M MRMN600-M		
MGIVR/L3732-6	●		37	32	250	65	8	30	21.5			
MGIVR/L3732-8			37	32	250	65	10	30	23.4	MRMN800-M		
MGIVR/L4540-8	●		45	40	300	70	10	37	27.2			
MGIVR/L3125-6A	●		31	25	200	45	8	23	19.4	MRGN600-A		
MGIVR/L3732-6A			37	32	250	65	8	30	21.5			
MGIVR/L3732-8A			37	32	250	65	10	30	23.4	MRGN800-A		
MGIVR/L4540-8A			45	40	300	70	10	37	27.2			

●Stock item, ○Under preparing for stock

Designation	Stock R	Stock L	ø D	ød	L	ℓ	TMAX	H	S	Insert	Screw	Wrench
MGIUR/L3520-3	○		35	20	150	45	3.5	18	13	MRMN300-M	MHA0512	HW40L
MGIUR/L4025-3	●		40	25	200	45	3.5	23	15.5			
MGIUR/L5032-3			50	32	250	65	3.5	30	19			
MGIUR/L3520-4			35	20	150	45	3.5	18	13	MRMN400-M		
MGIUR/L4025-4	●		40	25	200	45	3.5	23	15.5			
MGIUR/L5032-4	●		50	32	250	65	3.5	30	19			
MGIUR/L4025-5	○		40	25	200	45	3.5	23	15.5	MRMN500-M		
MGIUR/L5032-5	○		50	32	250	65	3.5	30	19			
MGIUR/L4025-6			40	25	200	45	3.5	23	19	MRMN600-M		
MGIUR/L5032-6	○		50	32	250	65	3.5	30	19			
MGIUR/L4025-8			40	25	200	45	6.5	23	15.5	MRMN800-M		
MGIUR/L5032-8	○		50	32	250	65	6.5	30	19			
MGIUR/L4025-6A			40	25	200	45	3.5	23	15.5	MRGN600-A		
MGIUR/L5032-6A			50	32	250	65	3.5	30	19			
MGIUR/L4025-8A			40	25	200	45	5.0	23	18.5	MRGN800-A		
MGIUR/L5032-8A			50	32	250	65	6.5	30	22			

●Stock item, ○Under preparing for stock

Recommended Cutting Conditions

Designation	feed (mm/rev) (ipr)	Cutting Speed V(m/min) (sfm)											
		Carbon steel			Alloy steel			High Hardened Alloy steel			STS	Cast irons	Al
		NC3020 NC3120	NC3030	CN20 CT10	NC3020 NC3120	NC3030 PC230	CN20 CT10	NC3020 NC3120	NC3030	CN20 CT10	PC230 PC9030	PC215K	H01
MGMN150-G MGMN200-G MGMN200-M MGMN250-G MGMN250-M	0.05	200	170	170	180	150	150	130	100	100	160	210	
	0.002	660	560	560	595	495	495	430	330	330	530	695	
	0.12	180	150	150	160	130	130	120	90	90	150	180	
	0.005	595	495	495	530	430	430	395	295	295	495	595	
	0.20	150	120	120	130	100	100	90	60	60	130	150	
	0.008	495	395	395	430	330	330	395	200	200	430	495	
MGMN300-M MGMN300-G MGGN300-00-M MRMN300-M	0.07	190	160	160	160	130	130	120	90	90	160	200	
	0.003	625	530	530	530	430	430	395	295	295	530	660	
	0.15	170	140	140	140	110	110	100	70	70	140	180	
	0.006	560	460	460	460	365	365	330	230	230	460	595	
	0.25	140	110	110	120	90	90	60	40	40	120	150	
	0.010	460	365	365	395	295	295	200	130	130	395	495	
MGMN400-M MGMN400-G MGGN400-00-M MRMN400-M	0.13	200	170	170	180	150	150	130	100	100	160	210	
	0.005	660	560	560	595	495	495	430	330	330	530	695	
	0.25	170	140	140	160	130	130	110	80	80	140	180	
	0.010	560	460	460	530	430	430	365	265	265	460	595	
	0.35	120	100	100	130	100	100	70	50	50	120	130	
	0.014	395	330	330	430	330	330	230	165	165	395	430	
MGMN500-M MGMN500-G MGGN500-00-M MRMN500-M	0.15-0.20	180	150	150	160	130	130	120	90	90	150	180	
	0.006-0.008	595	495	495	530	430	430	395	295	295	495	595	
	0.30	150	120	120	130	100	100	90	60	60	130	150	
	0.012	495	395	395	430	330	330	295	200	200	430	495	
	0.40	120	100	100	100	80	80	60	40	40	100	120	
	0.016	395	330	330	330	265	265	200	130	130	330	395	
MGMN600-M MGGN600-00-M MRMN600-M	0.25	190	160	160	160	130	130	100	70	70	160	190	
	0.010	625	530	530	530	430	430	330	230	230	530	625	
	0.35	150	120	120	100	80	80	70	50	50	110	150	
	0.014	495	395	395	330	265	265	230	165	165	365	495	
	0.50	120	90	90	80	50	50	50	30	30	80	120	
	0.020	395	295	295	265	165	165	165	100	100	265	395	
MGMN800-M MRMN800-M	0.25	190	160	160	160	130	130	100	70	70	160	190	
	0.010	625	530	530	530	430	430	330	230	230	530	625	
	0.35	150	120	120	100	80	80	70	50	50	110	150	
	0.014	495	395	395	330	265	265	230	165	165	365	495	
	0.40	120	90	90	80	50	50	50	30	30	80	120	
	0.016	395	295	295	265	165	165	165	100	100	265	395	
MRGN600-A	0.10												250-1000
	0.004												825-3300
	0.25												250-800
	0.010												825-2640
	0.40												250-700
	0.016												825-2310
MRGN800-A	0.10												250-1000
	0.004												825-3300
	0.25												250-800
	0.010												825-2640
	0.40												250-700
	0.016												825-2310

※ Above cutting conditions can be adjusted by each machine, workpiece and other factors.

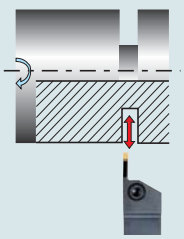
Recommended Grade

Designation	Steel						Stainless steel			Cast iron		Al
	CVD		PVD		Cermet		CVD	PVD		PVD	Uncoated	Uncoated
	NC3020 NC3120	NC3030	PC230	PC3535	CN20	CT10	NC3030	PC230	PC9030	PC215K	G10	H01
MGMN150-G	●			●					●			
MGMN200-G	●	△	△		-	-	△	△	●	△	△	
MGMN200-M	●								●			
MGMN250-G	●								●			
MGMN250-M	●											
MGMN300-G	△	△	△		-	-	△	△		△	△	-
MGMN400-G	△	△	△		-	-	△	△		△	△	-
MGMN500-G	△	△	△		-	-	△	△		△	△	-
MGMN300-M	●	●	●		-	-	●	●		●	△	-
MGMN400-M	●	●	●		-	-	●	●		●	△	-
MGMN500-M	●	△	●		-	-	△	●		△	△	-
MGMN600-M	●	△	△		-	-	△	△		△	△	-
MGMN800-M	△	△	△		-	-	△	△		△	△	-
MGGN300-00-M	-	-	-		△	△	-	-		-	-	-
MGGN400-00-M	-	-	-		△	△	-	-		-	-	-
MGGN500-00-M	-	-	-		△	△	-	-		-	-	-
MGGN600-00-M	-	-	-		△	△	-	-		-	-	-
MRMN300-M	●	△	△		-	-	△	△		△	△	-
MRMN400-M	●	△	△		-	-	△	△		△	△	-
MRMN500-M	●	△	△		-	-	△	△		△	△	-
MRMN600-M	●	△	△		-	-	△	△		△	△	-
MRMN800-M	△	△	△		-	-	△	△		△	△	-
MRGN600-A	-	-	-		-	-	-	△		-	-	●
MRGN800-A	-	-	-		-	-	-	△		-	-	●

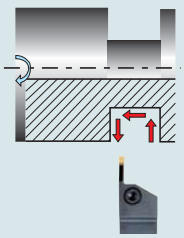
● : Stock △ : Order made

Applications for M.G.T

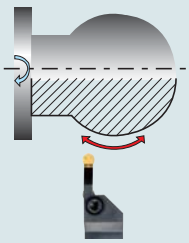
■ External



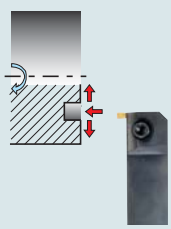
Grooving, Parting



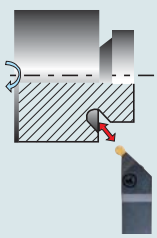
Grooving & Turning



Profiling

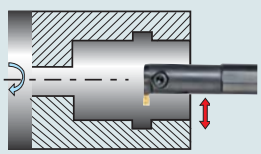


Face Grooving

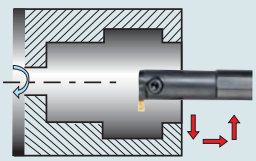


Under Cut

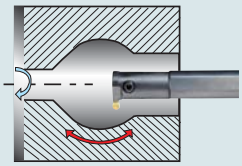
■ Internal



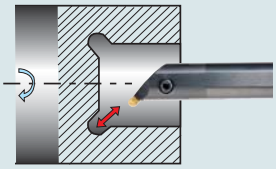
Internal Grooving



Internal Grooving & Turning



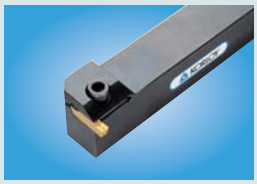
Internal Profiling



Internal Under Cut

Multi Grooving Tools


MGEHR

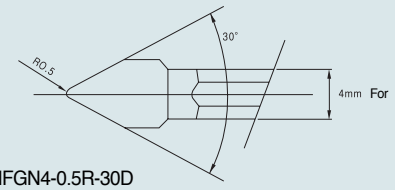
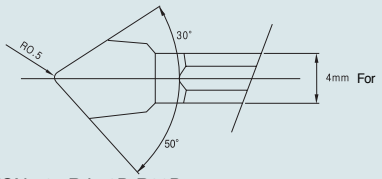
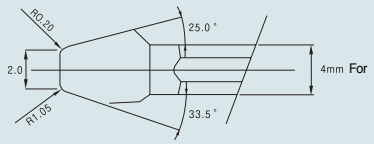
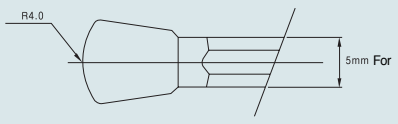
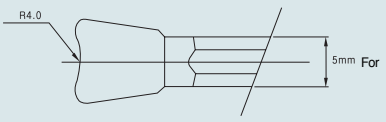
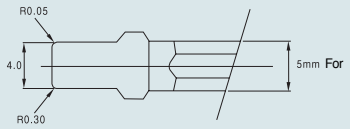

MGEVR


MGEUR


MGIVR


MGIUR

MGT FORMING INSERT Code System

Classification	Designation	Configuration
NO.1	**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 : 4mm ⑥ Nose Radius : 0.5 ⑦ Degree : 30°	 ex) MFGN4-0.5R-30D
NO.2	**MFGN4 - 0.5R - L 50D - 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
NO.3	**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 : 33.5°	 ex) MFGN4-2.0-R020250-L105335
NO.4	**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 ③ ④ ① Refer to No.1 ② Radius : 4.0 ③ Back(Concave)	 ex) MFGN5-4.0RB
NO.5	**MFGN5 - 4.0 - R 005 - L 030** ① ② ③ ④ ⑤ ⑥ ① Refer to No.1 ② Width of cutting edge : 4.0mm ③ Right ④ Nose Radius : 0.05 ⑤ Left ⑥ Nose Radius : 0.30	 ex) MFGN5-4.0-R005-L030

※ Please contact to KORLOY e-mail : export@korloy.com if you find more special configuration of forming tools above else.

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KORLOY Inc.