50th Anniversary Since 1966

KORLOY

C

Multi functional Tools

Korloy Multi-functional tool can maching grooving, part-off, facing and forming in various applications. It design ensures superior machinability and productivity.

Application Example

C02 Application Example

C04 Technical Information for Multi Functional Tools Series

KGT Series

C07 Technical Information for KGT

C12 Available Insert for KGT

C14 KGT Holder

C22 KGT Blade for Parting off

MGT Series

C23 Technical Information for MGT

C24 Available Insert for MGT

C26 MGT Holder

C31 MGT Holder (Face Grooving)

C34 MGT Cartridge

MGT Aluminum Wheel Series

C37 Technical Information for MGT Aluminum Wheel

C38 Available Insert for MGT Aluminum Wheel

C39 MGT Aluminum Wheel

Saw-man

C41 Technical Information for Saw-man

C42 Saw-man

TB-M/TB

C44 Technical Information for TB-M/TB

C45 Available Insert for TB-M/TB

Grooving / Parting off

C45 TBH

C46 IGH

C46 DBH

C47 GFT

C47 GFIP

C48 GH

C48 GFIK

C49 EH

C49 PH

NEW Fine Tools

C50 Technical Information for New Fine Tools

C51 Available Insert for New Fine Tools

C52 New Fine Tools

Multi Turn

C53 Technical Information for Multi Turn

C55 Multi Turn

Bearing Solutions

C56 Technical Information for Bearing Solution

C57 Bearing Solution

C63 Special Order Form for Bearing Inserts

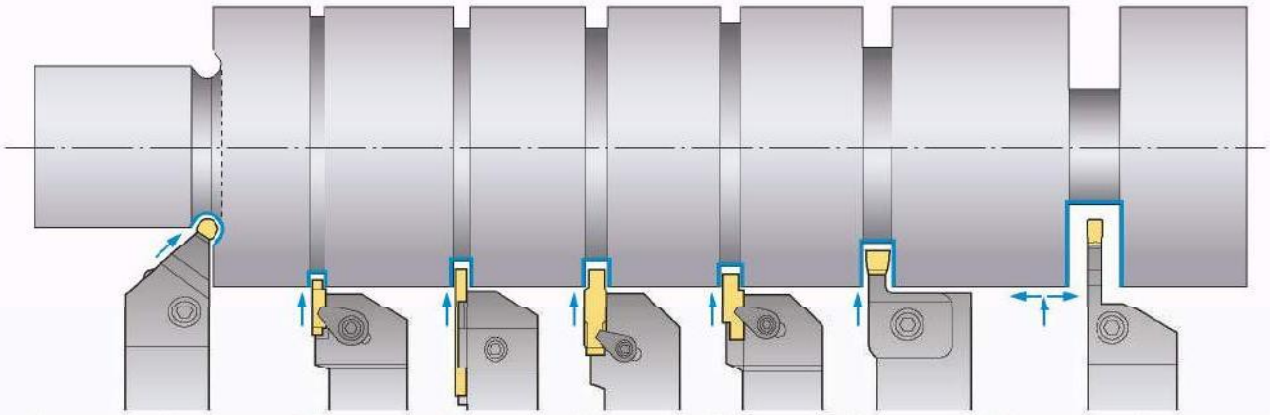
Special Order Form

C64 MGT Special Order Form for MGT

C65 Special Order Form for V-Pulley Insert

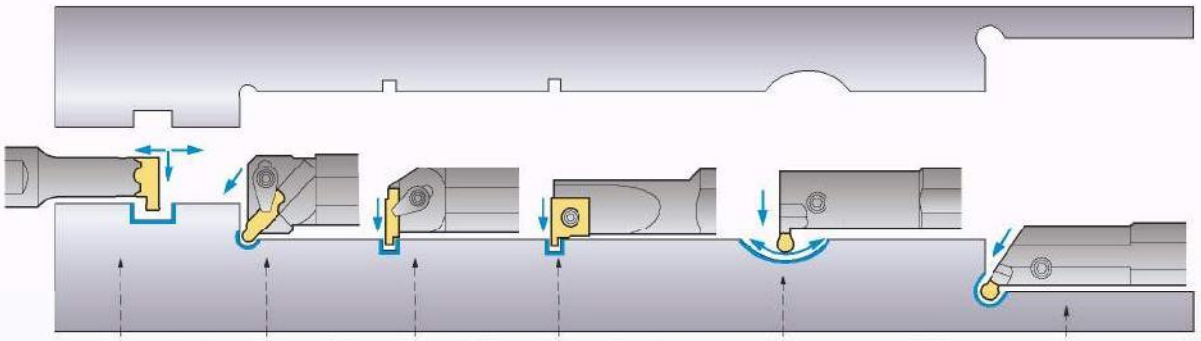
C Application Example

For external machining



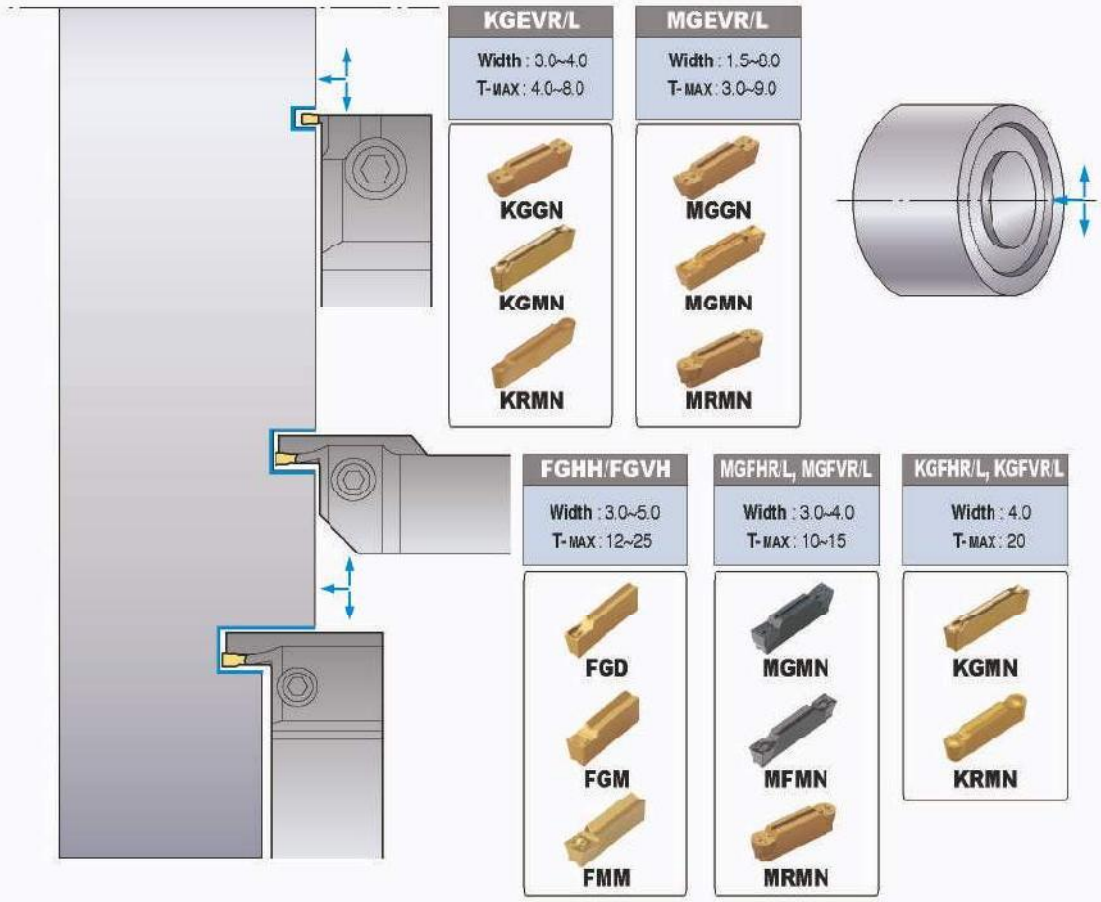
KGEUR/L	MGEUR/L	TBH	PH	GH	GFT	DBH	KGEHR/L	MGEHR/L
Width : 2.5 T-MAX : 3.0	Width : 3.0~8.0 T-MAX : 3.0~5.0	Width : 1.25~4.5 T-MAX : 1.5~5.0	Width : 3.0~5.0 ØD-MAX : 30~50	Width : 1.23~4.28 T-MAX : 1.5~4.0	Width : 1.1~8.0 T-MAX : 2.1~9.0	Width : 3.0~8.0 T-MAX : 14	Width : 2.0~8.0 T-MAX : 17~20	Width :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

For internal machining

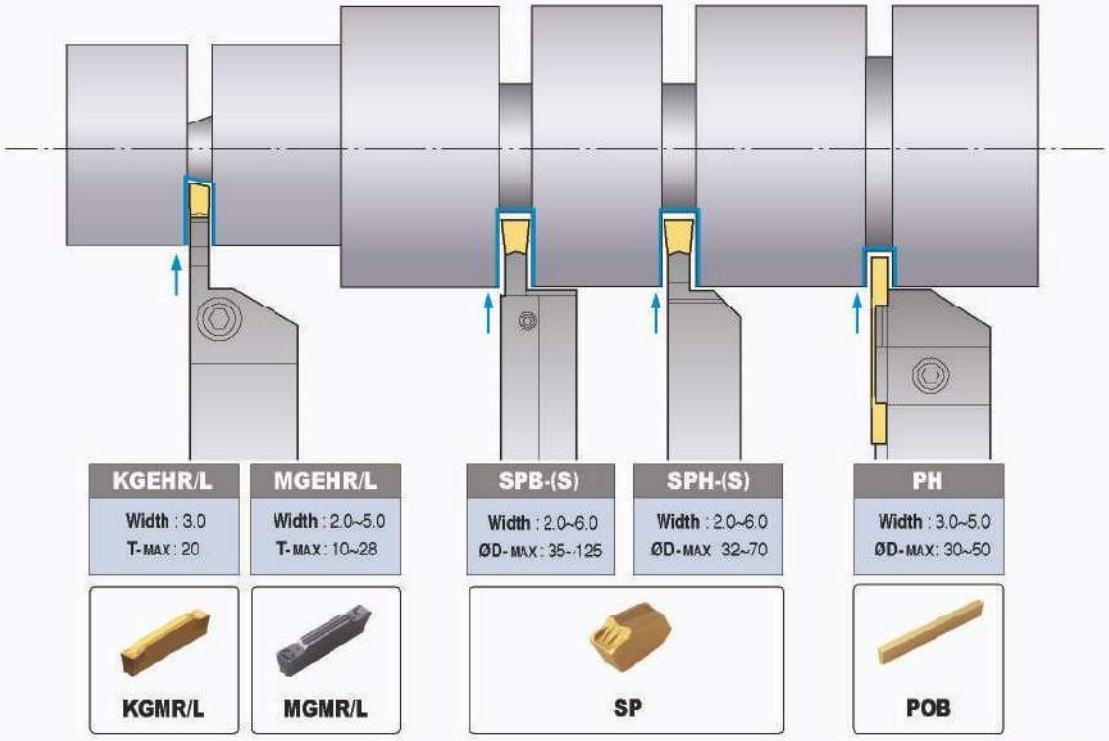


NFTIH	GFIK	GFIP	IGH	KGIVR/L	MGIVR/L	KGIUR/L	MGIUR/L
Width : 0.75~4.02 T-MAX : 1.3~4.6	Width : 2.0~8.0 T-MAX : 2.0~8.0	Width : 1.1~8.0 T-MAX : 2.1~9.0	Width : 1.25~2.8 T-MAX : 1.5~2.3	Width : 2.0~4.0 T-MAX : 7.0~8.0	Width : 1.5~8.0 T-MAX : 4.0~10	Width : 3.0 T-MAX : 3.0	Width : 3.0~8.0 T-MAX : 3.5~6.5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

For face grooving



For parting off



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

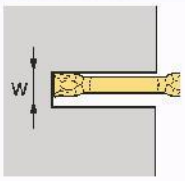
For Deep Grooving

- ▶ 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

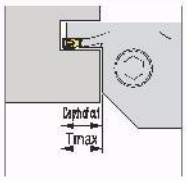
Selection System of Holder

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



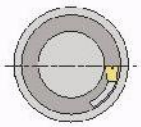
Insert and holder

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



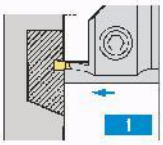
Machining Dia.

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

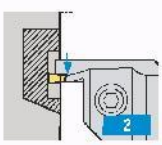
Notice : To minimize chattering use the shortest holder according to Tmax.

Optimization of Face Grooving

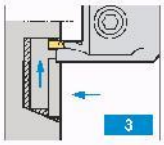
Roughing : When face grooving deareases the cutting speed 40% below a normal face turning operation



• Grooving at the initial diameter

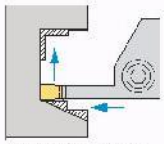


• Face turning away from center

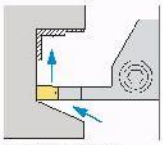


• Face turning to center

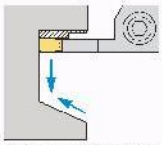
Finishing : When face grooving deareases the cutting speed 40% below a normal face turning operation



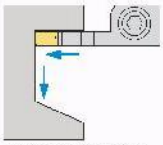
• Grooving at the initial diameter to the final cutting depth and face turning away from center



• Radius operation toward final dimension at the bottom



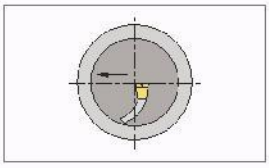
• Face turning to center



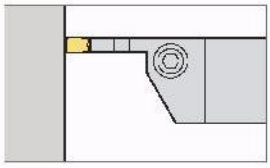
• Grooving for the right dimension you want

Notice for Face Grooving

▶ Before machining, check and adjust the following holder position



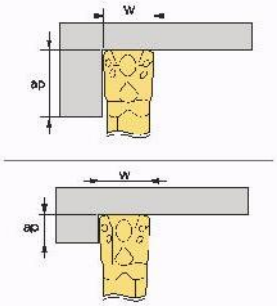
- Check the cutting edge height at the center of the workpiece
- Machine towards the center and check for burrs



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

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

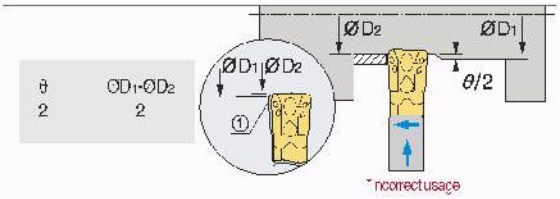
Notice for turning

▶ 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

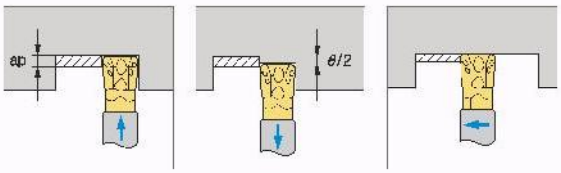
Notice for Finishing (offset need final quality)

▶ 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

$$\frac{\theta}{2} \quad \frac{OD_1 - OD_2}{2}$$

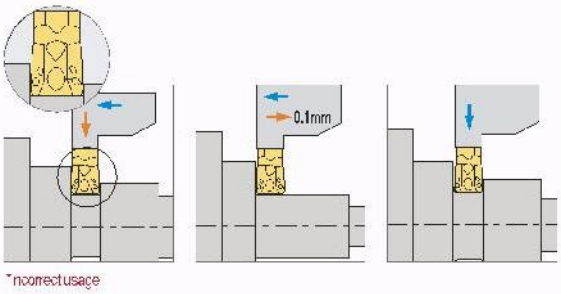


▶ To eliminate the difference in the machined diameter by utilizing the clearance angle (which is commonly generated during the final turning operation) follow the directions above when machining
To obtain a good surface roughness without offsetting in an application follows the directions below
1) Groove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

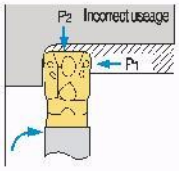


Notice for MGT turning applications

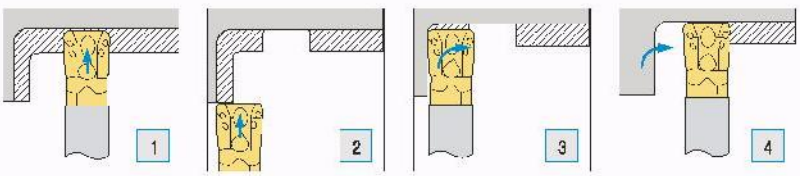
▶ KGT/MGT tools are available for grooving and turning as a multifunctional tool. When using a M.G.T tool keep in mind that the tool imitates a standard ISO turning application. The application uses a positive clearance angle where a tool's cutting force and depth of cut are all applied in an application.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

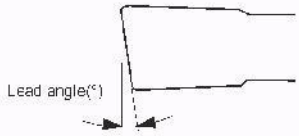


Stabilize your tool pressure. KGT/MGT tools create a cutting load when machining a workpiece with a radius larger than the corner radius of insert (shown in the picture). The unequal cutting force might initially break the insert or holder



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 diretion during parting off • Availble 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 - □□ - PS/PT, KGMR/L - □□ - LP/RP
(Lead angle) (Lead angle)

Selection of Insert

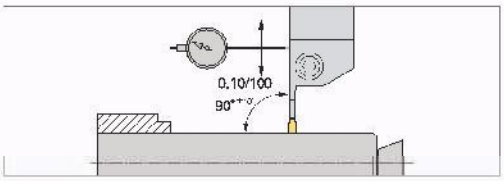
▶ To properly match the insert and cutting condition, the following factors should be considered
- Width of insert • Chip breaker • Grade and nose R

▶ 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 deareases tool life.
  In the case where burrs are acceptable, we recommend using a neutral type insert

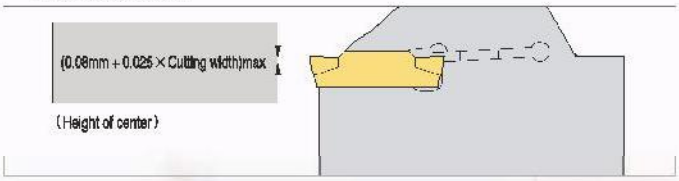
Setting of Holders

▶ 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 amourts 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
▶ Deareases 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

Multi-functional machining with strong clamping system and new technology

KGT Series

- Double-sided inserts of KGT series 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 series 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.

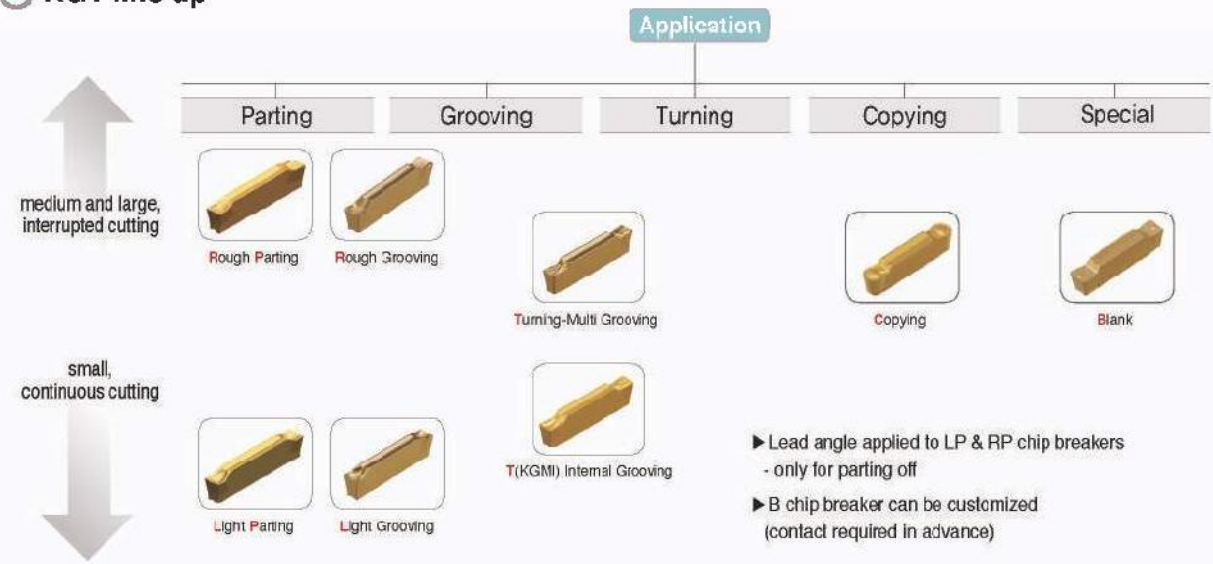
Insert Code System

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

Holder Code System

KG	E	H	R/L	2525	-	3	T20
KG SYSTEM (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 2.0~8.0mm	Maximum Depth 8~36mm

KGT line up



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

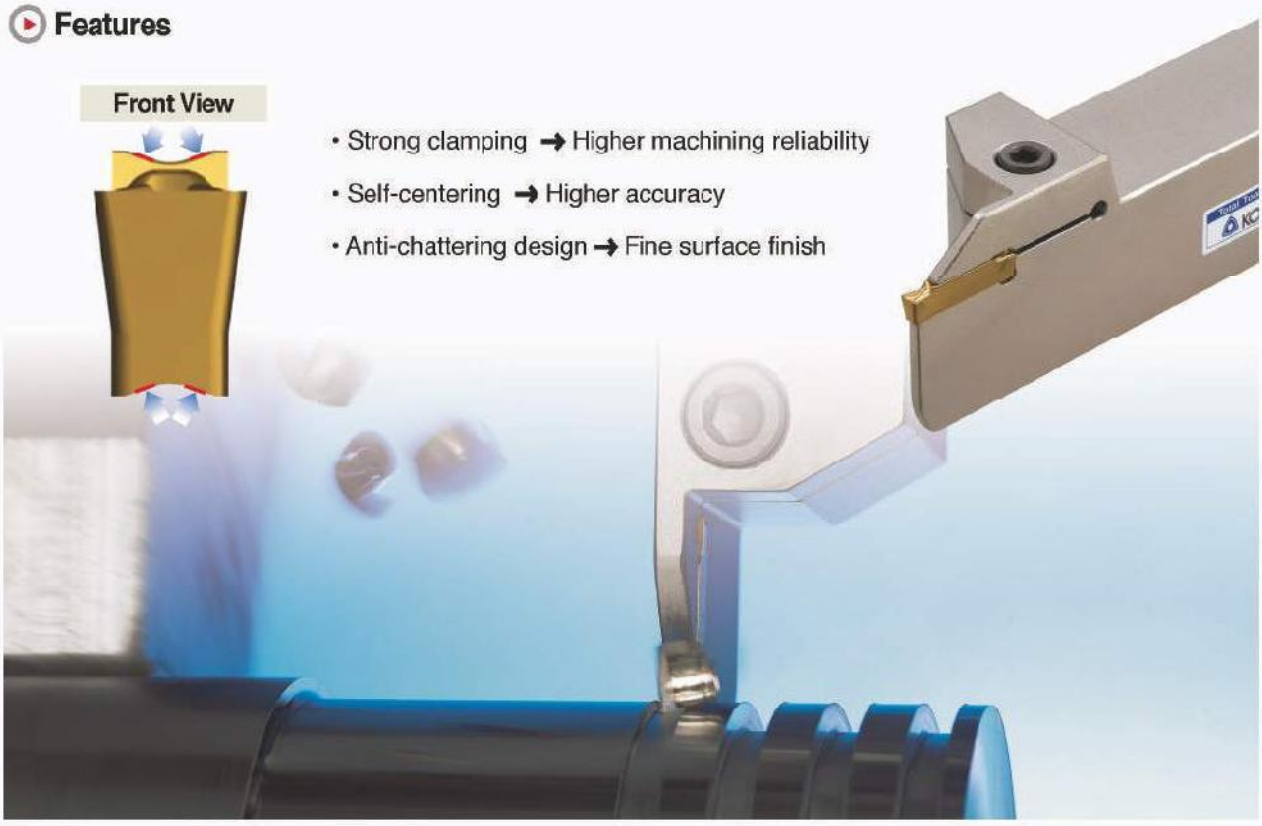
▶ B chip breaker can be customized (contact required in advance)

Recommended Insert

Designation	Geometry	Picture	Designation									
			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		○	◎		○						
	H Rough Grooving		○	◎		○						
	T Turning-Multi Grooving		○	◎	◎	◎	◎					
KGMI	T Internal Grooving							◎	◎			
KRMN	C Copying									◎	◎	
KGMR/L	LP Light Parting		◎									
	RP Rough Parting		◎									
KGGN	B Blank			○								◎

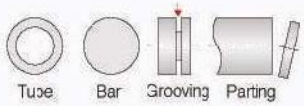
◎ First choice, ○ Second choice

Features



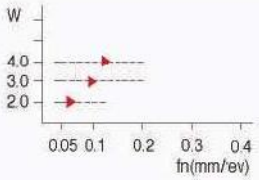
C/B guide

L For Light Grooving

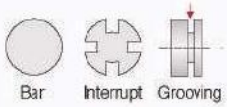


- Sharp cutting edge
- Low feed machining
- Small diameter component

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

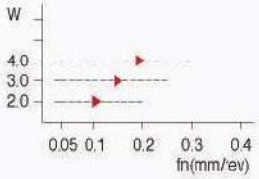


R For Rough Grooving

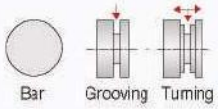


- Strong cutting edge
- High feed machining
- Interrupted cutting

- Carbon steel
- Alloy steel
- Stainless
- Cast iron

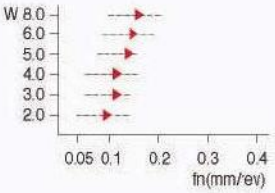


T For Turning and Multi Grooving

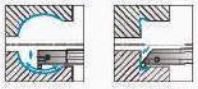


- Sharp cutting edge
- Improved chip control
- Turning & grooving machining

- Carbon steel
- Alloy steel
- Stainless
- Cast iron

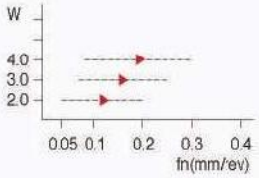


C For Copying and Relief

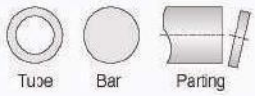


- Improved chip control
- Copying
- Relief

- Carbon steel
- Alloy steel
- Stainless
- Cast iron

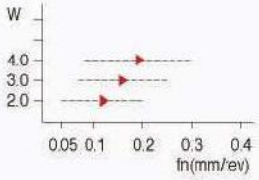


LP For Light Parting

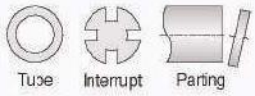


- Sharp cutting edge
- Low feed machining
- Small diameter component
- Right/left handed

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

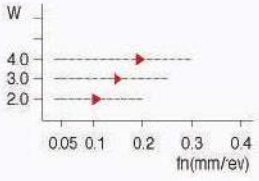


RP For Rought Parting

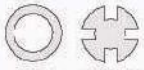


- Strong cutting edge
- High feed machining
- Interrupted cutting
- Right/left handed

- Carbon steel
- Alloy steel
- Cast iron

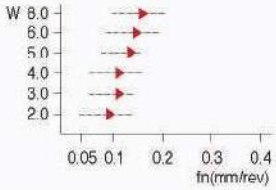


B For Precision Grooving

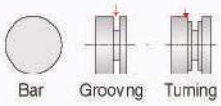


- Ground insert
- Precise tolerance
- Various cutting edge length, Nose R
- Improved chip control

- Carbon steel
- Alloy steel
- Stainless
- Cast iron

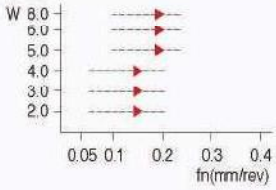


A For Aluminium Grooving



- Sharp cutting edge
- Precise tolerance

- Aluminium alloy
- Copper alloy



Grades for recommended application range

Workpiece		Grade	Order of recommended grade	Recommended cutting speed(m/min) 50 100 150 200 250
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
S	HRSA	PC5300	1	20 – 35

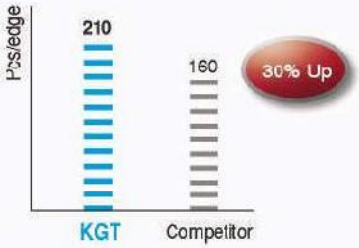
Cutting Performance

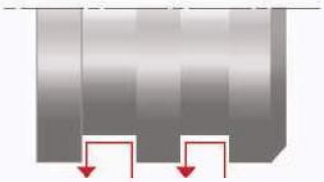
Multi-function machining

Turning + Grooving repetition

Optimized geometry for turning + grooving - High efficiency.

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



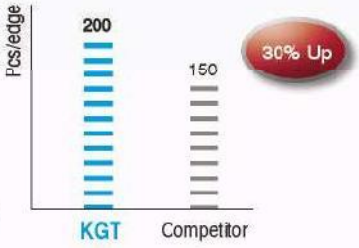


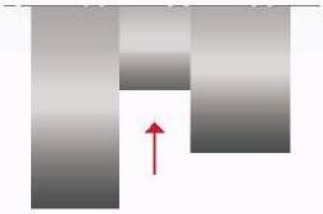
Grooving

Shoulder Grooving

Tough geometry for interrupted and deep grooving.

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



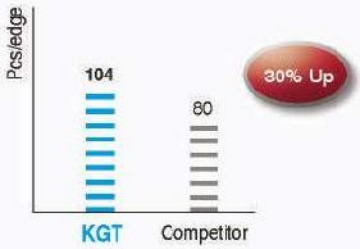


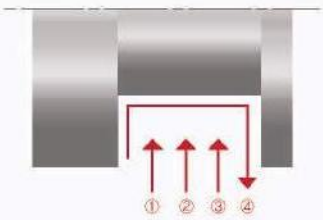
Shaft machining

Grooving(Roughing)&Turning(Finishing)

Excellent chip control for higher efficiency.

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



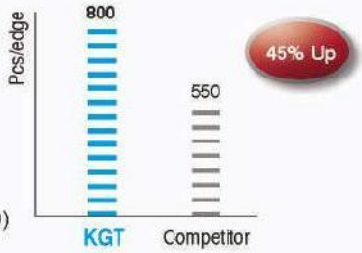


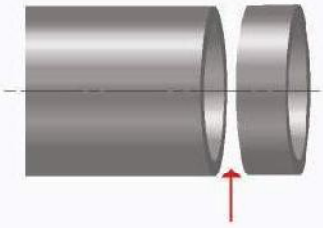
Parting off

Pipe Parting-off

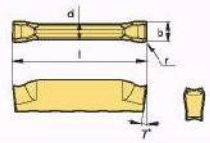
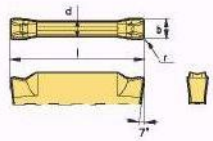
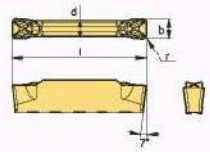
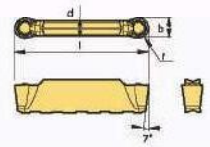
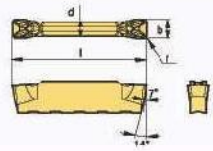
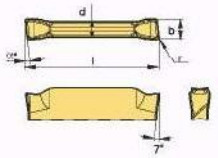
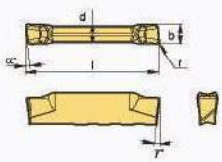
Exclusive parting-off chip breaker for longer tool life. / Sharp geometry for less burr.

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





Insert

Application	Picture	Designation		Coated					Dimensions (mm)					Picture	Page
				NC3220	NC3225	NC5330	PC5300	PC9030	b	r	l	d	α°		
Grooving	KGMN-L	KGMN	200-02-L	●	●	●	●	●	2.0	0.2	20	1.7	-		C14~19 C21
			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	-		C14~19 C21
			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			C14~19 C21
			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-C	KRMN	200-C		●	●	●		2.0	1.0	20	1.7	-		C14~20
			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	-		C21
			300-04-T				●		3.0	0.4	20	2.3	-		
			400-04-T				●		4.0	0.4	20	3.3	-		
Parting off (Left 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	0.2	20	3.3	4		
			400-15D-LP			●	●		4.0	0.2	20	3.3	15		
			500-4D-LP						5.0	0.2	25	4.1	4		
Parting off (Right hanced)	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	0.2	20	3.3	4		
			400-15D-RP			●	●		4.0	0.2	20	3.3	15		
			500-4D-RP						5.0	0.2	25	4.1	4		

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

● : Stock Item

Insert

Application	Picture	Designation		Coated					Dimensions (mm)					Picture	Page
				NC3220	NC5330	PC5300	PC9030	H01	b	r	l	d	α°		
Parting off (Left handed)	KGML-LP (New)	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 (Right handed)	KGML-RP (New)	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 (New)	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	KGGN-R (New)	KGGN	200-02-R						2.0	0.2	20	1.7	-		C14~19
			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	-		
Aluminum Grooving	KGGN-A (New)	KGGN	200-02-A					●	2.0	0.2	20	1.7	-		C14~19
			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-A (New)	KRGN	300-A					●	3.0	1.5	20	2.3	-		C14~18
			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	-		

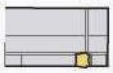
• Chip breaker 'B' : User self-grind type.

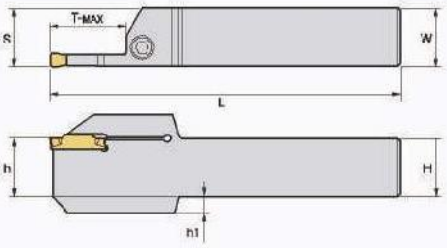
● : Stock item

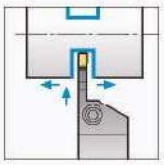
KGEHR/L

For Grooving, Turning, Parting off, Reliefing machining

KGGN KGMN
KGMR/L KRMN
KRGN







R type insert

(mm)

Designation		Stock R	Stock L	H=(h)	W	L	S	h1	T-MAX	Inserts	Screw	Wrench
KGEHR/L	1616-1.5-T14			16	16	100	16.2	-	14	KGVN150 □ □	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	KGVN200-□-□ KGVR/L200-□-□ KRMN200C-C KGGN200C-□-□	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	KGVN250-□-□	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	KGVN300-□-□ KGVR/L300-□-□ KRMN300C-C KGGN300C-□-□ 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	KGVN400-□-□ KGVR/L400-□-□ KRMN400C-C KGGN400C-□-□ 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			

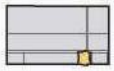
Applicable inserts C12~C13

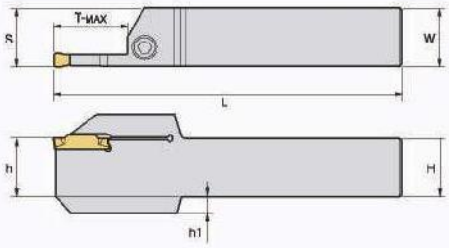
● : Stock item

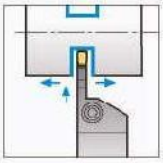
KGEHR/L

For Grooving, Turning, Parting off, Relieving machining

KGGN KGMN
KGMR/L KRMN
KRGN







R type insert

(mm)

Designation		Stock		H=(h)	W	L	S	h1	T-MAX	Inserts	Screw	Wrench
		R	L									
KGEHR/L	2020-5-T12	●	●	20	20	125	20.5	-	12	KGMN5C0-□H-□ 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	KGMN6C0-□H-□ 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	KGMN8C0-□H-□ KRMN800-C KGGN800-□-□ KRGN800-□	BHA0616	HW50L
	3232-8-T16		●	32	32	170	33.05	-	16			
	2525-8-T25	●	●	25	25	150	26	-	25		BHA0620	HW50L
	3232-8-T25	●		32	32	170	33	-	25			
	2525-8-T36	●		25	25	150	26	7	36			
	3232-8-T36	●		32	32	170	33	-	36			

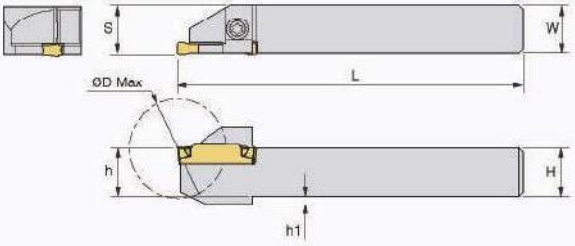
Applicable inserts C12~C13

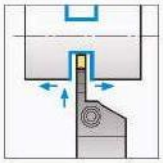
● : Stock item

KGEHR/L-D00A (AUTO-TOOL)

For Grooving, Turning, Parting off machining

KGGN KGMN
KGMR/L KRMN
KRGN





R type insert

(mm)

Designation		Stock R	Stock L	H=(h)	W	L	S	h1	ØD Max	Inserts	Screw	Wrench
KGEHR/L	1010-2-D20A	●		10	10	125	10.2	2	20	KGVN200-□-□ KGVR/L200-□-□ KRMN20C-□ KGGN20C-□-□	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	KGVN300-□-□ KGVR/L300-□-□ KRMN30C-□ KGGN30C-□-□ KRGN300-□		
	1616-3-D32A	●		16	16	125	16.4	-	32			

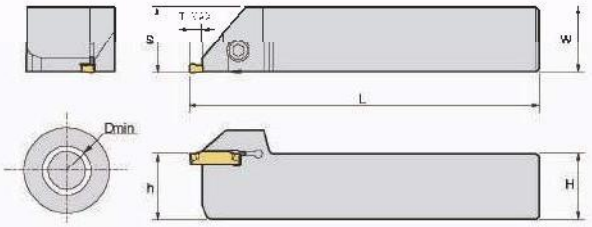
Apolicable inserts C12~C13

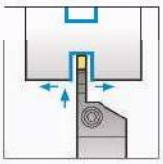
● : Stock item

KGEHR/L-T00

For Grooving, Turning, Face grooving machining

KGMN KRMN
KGGN KRGN





R type insert

(mm)

Designation		Stock R	Stock L	H=(h)	W	L	S	ØD Max	T-MAX	Inserts	Screw	Wrench
KGEHR/L	1616-3-T00			16	16	100	16.4	8C	4.6	KGVN300-□-□ KRMN30C-□ KGGN30C-□-□ KRGN300-□	MHA0512	HW40L
	2020-3-T00			20	20	125	20.4	8C	4.8			
	2525-3-T00	●	●	25	25	150	25.4	8C	4.8			
	1616-4-T00	●		16	16	100	16.4	8C	4.6	KGVN400-□-□ KRMN40C-□ KGGN40C-□-□ KRGN400-□	BHA0616	HW50L
	2020-4-T00	●		20	20	125	20.4	8C	4.8			
	2525-4-T00	●	●	25	25	150	25.4	8C	4.8			
	2020-6-T00	●		20	20	125	20.5	8C	5.0	KGVN600-□-□ KRMN60C-□ KGGN60C-□-□ KRGN600-□	BHA0616	HW50L
	2525-6-T00	●		25	25	150	25.5	8C	5.0			

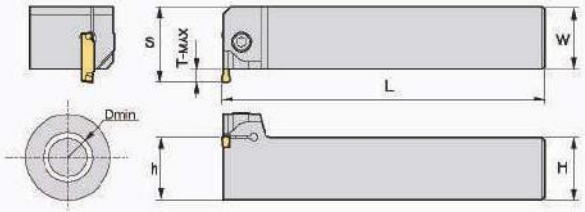
Apolicable inserts C12~C13

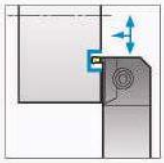
● : Stock item

KGEVR/L-T00

For Grooving, Turning, Face grooving machining

KGMN KRMN
KGGN KRGN
KRGN





R type insert

(mm)

Designation		Stock R	Stock L	H=(h)	W	L	S	ØD Max	T-MAX	Inserts	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	HW40I
	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-□	B-HA0616	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-□	B-HA0616	HW50L
	2525-5 -T00			25	25	150	31.5	60	6			
	3232-5 -T00			32	32	170	36.5	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			
	3232-8 -T00			32	32	170	38.5	50	8			

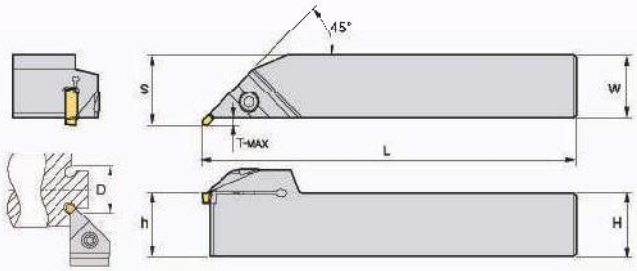
Aopl cable inserts C12~C13

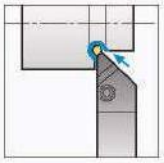
● : Stock item

KGEUR/L

For Reliefing machining

KRMN
KRGN





R type insert

(mm)

Designation		Stock R	Stock L	H=(h)	W	L	S	ØD Max	T-MAX	Inserts	Screw	Wrench
KGEUR/L	1616-3	●		16	16	100	19	40	2.6	KRMN30C-□ KRGN300-□	MHA0512	HW40L
	2020-3	●		20	20	125	23	40	2.6			
	2525-3	●		25	25	150	28	40	2.6			
	3232-3			32	32	170	35	40	2.6			
	1616-4	●		16	16	100	19	40	2.6	KRMN40C- KRGN400-□	BHA0616	HW50L
	2020-4	●		20	20	125	23	40	2.6			
	2525-4	●		25	25	150	28	40	2.6			
	3232-4			32	32	170	35	40	2.6			
	2020-5			20	20	125	23.5	50	3.3	KRMN50C-□ KRGN500-□□	BHA0616	HW50L
	3232-5			32	32	170	35.5	50	3.3			
	2020-6			20	20	125	23.5	50	3.3	KRMN60C-□ KRGN600-□	BHA0616	HW50L
	2525-6	●		25	25	150	28.5	50	3.3			
	2525-8			25	25	150	28.5	65	3.3	KRMN80C-□ KRGN800 □	BHA0616	HW50L
	3232-8			32	32	170	35.5	65	3.3			

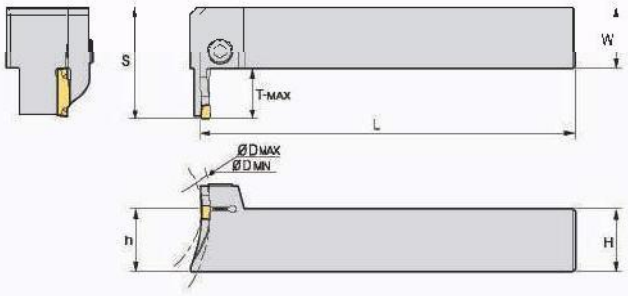
Apolicable inserts C12~C13

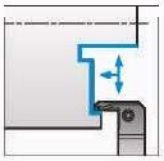
● : Stock item

KGFVR/L

For Face grooving machining

KGMN KRMN
KGGN KRGN





R type insert

(mm)

Designation		Stock R	Stock L	H=(h)	W	L	S	T-MAX	ØD Min	ØD Max	Inserts	Screw	Wrench
KGFVR/L	425-44/70-T20	●		25	25	150	45.5	20	44	70	KGVN400-□□□ KRMN40C-□ KGGN40C-□□□ 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			

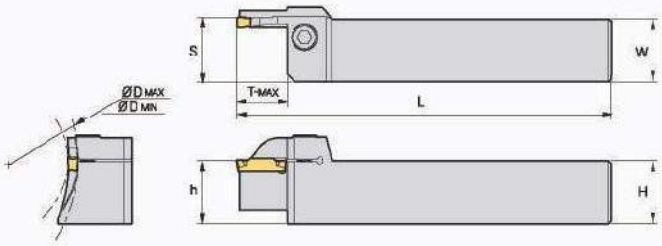
Apolicable inserts C12~C13

● : Stock item

KGFHR/L

For Face grooving machining

KGMN KRMN
KGGN KRGN



R type insert

(mm)

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

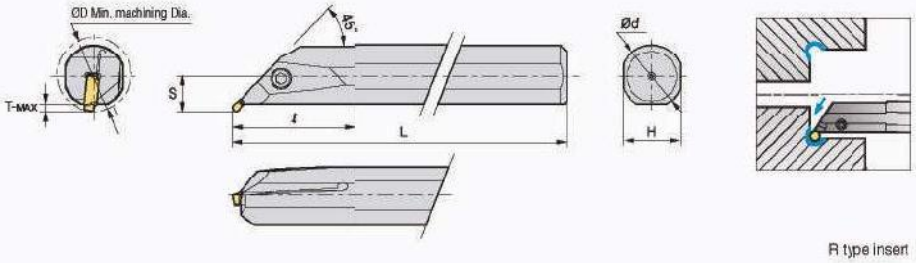
Applicable inserts C12~C13

• : Stock item

KGIUR/L

For Reliefing machining

KRMN
KRGN



R type insert

(mm)

Designation		Stock		ØD	Ød	L	ℓ	T-MAX	H	S	Inserts	Screw	Wrench
		R	L										
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			

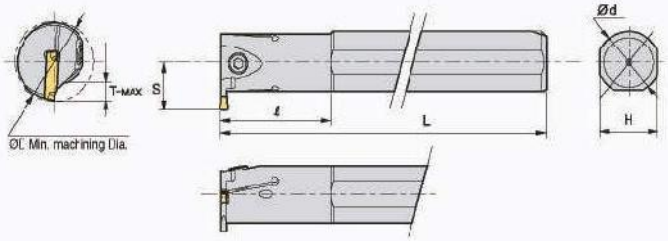
Applicable inserts C12~C13

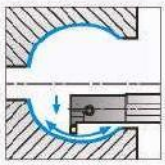
• : Stock item

KGIVR/L

For Grooving, Turning, Profiling machining

KGMI
KGMN





R type insert

(mm)

Designation		Stock R	Stock L	ØD	Ød	L	ℓ	T-MAX	H	S	Inserts	Screw	Wrench
KGIVR/L	2016-1.5			20	16	125	35	4	15	12		MHB041C	HW20L
	2520-1.5			25	20	150	45	6	18	15.5	KGMN150-L-L	MHB041C	HW20L
	3225-1.5			32	25	200	45	7	23	19		MHA0512	HW40L
	2516-2			25	16	125	35	6.5	15	14		MHB041C	HW20L
	2520-2			25	20	150	45	6.5	18	15.5	KGMI200-_-_	MHA0512	HW30L
	3225-2			32	25	200	45	7	23	19		MHB041C	HW40L
	2516-2.5			25	16	125	35	6.5	15	14		MHB041C	HW20L
	2520-2.5			25	20	150	45	6.5	18	15.5	KGMN250-L-L		
	3225-2.5			32	25	200	45	7	23	19		MHA0512	HW40L
	2520-3			25	20	150	45	6.5	18	15.5		MHB041C	HW30L
	3225-3			32	25	200	45	7	23	19	KGMN300-□-□	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		MHB041C	HW30L
	3225-4			32	25	200	45	7	23	19	KGMN400-□-□	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		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		BHA0616	HW50L
	4540-8			45	40	300	70	8.5	37	26.5		BHA0616	HW50L

Applicable Inserts C12~C13

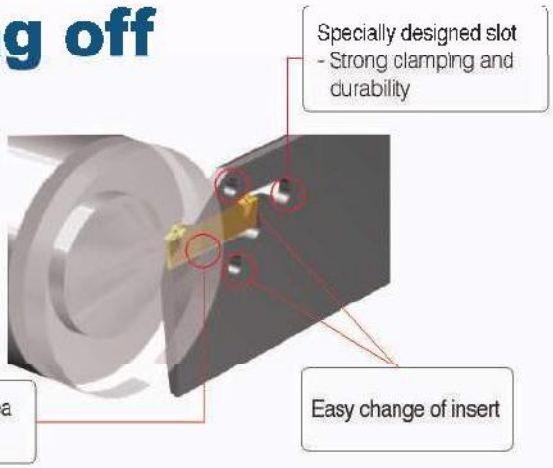
• External insert : Min. machining Dia(ØD) is over 50mm.

● : Stock item

KGT Blade for Parting off

Features

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



Code system

KGTB 30 32

- KGTB : KGTB system
- 30 : Cutting width
- 32 : Height of shank

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

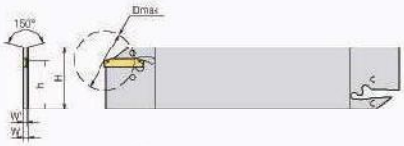


Fig. 1

Fig. 2

① ⇒ ② Rotation : Release
② ⇒ ① Rotation : Conclusion

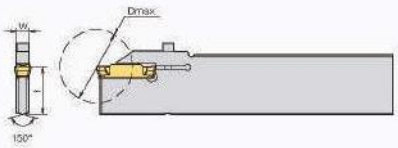


Fig. 3

(mm)

Designation		Stock	H	W	W'	L	h	Dmax	Inserts	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	39	KG□□200-□-□		
	3032	●	32	2.4	-	150	25	39	KG□□300-□-□		2
	4032	●	32	3.2	-	150	25	39	KG□□400-□-□		
	5032	●	32	4.0	-	150	25	49	KG□□500-□-□		
	6032	●	32	5.2	-	150	25	49	KG□□600-□-□		
	8032(1)	●	32	6.2	-	150	25	59	KG□□800-□-□	HW30L	3

Applicable inserts C14~C15

(1)Screw clamping ● : Stock item

Inserts are offered with two edges, for better economical machining

MGT Series

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

Geometry of chip breaker

MGM(G)N-M

- Specially desgned 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

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 chipwidth & smooth chip control by dot designed on the top corner

MGGN-A

- Smooth chip flow
- Reduced build up on cutting edge

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	NC500H	PC230	PC8110	PC5300	PC3500	PC6510	A30	2	3	4	5	6
SM□□C	80~180			80~180		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			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	50~140				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

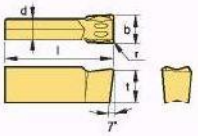
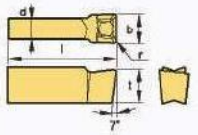
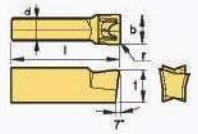
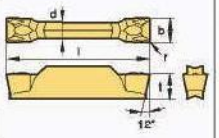
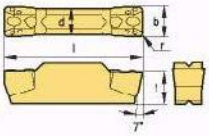
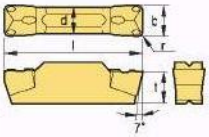
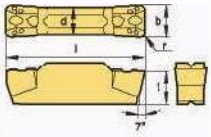
Facing (FGD / FGM / FMM / MFMN / MGMN)

Workpiece	Cutting Speed(vc=m/min)								Feed(fn=mm/rev)		
	CVD				PVD			Uncoated	Cutting width (mm)		
	NC6110	NC3030	NC5330	NC3120	PC3500	PC215K	PC8110 / PC5300	H01	3	4	5
SM□□C			100~160	100~160					0.05~0.1	0.05~0.12	0.05~0.15
SCM		90~130	90~130	90~130	90~130			200~300	0.05~0.1	0.05~0.12	0.05~0.15
GC/GCD	120~150		120~150			120~150			0.05~0.1	0.05~0.12	0.05~0.15
STS			60~150				60~150		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)					
	NC3010	NC3120	NC3030	NC5330	PC215K	PC5300	PC230	PC3500	CN20	CT10	A30	ST20E	0.5~1.0	1.0~2.0	2~3	3~4	4~5	6~8
SM□□C	80~200	80~200		80~200		80~180	80~200		80~120	80~120		80~120	0.03~0.09	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	80~180	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	80~100						60~100		0.03~0.09	0.04~0.09	0.05~0.10	0.05~0.12	0.05~0.12	0.05~0.15
Non-ferrous metal(Al, Copper)					150~300						150~400		0.05~0.12	0.05~0.15	0.05~0.15	0.08~0.15	0.08~0.15	0.10~0.20

Insert

Application	Picture	Designation		Cermet	Coated										Uncoated	Dimensions (mm)					Picture	Page
				CN20	NC3010	NC3030	NC3120	NC3220	NC5330	NC6210	NC9025	PC215K	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		C32 C33
			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		C32 C33
			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		C32 C33
			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		C31 C36
Grooving · Turning	 MGGN-M	MGGN	300-02-M	●													3.0	0.2	21.0	2.35	4.8		C26 C28 C30 C36
			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		C26 C28 C30 C36
			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	0.4	21.0	2.35	4.8		
			400-G			●	●						●		●		4.0	0.4	21.0	3.3	4.8		
			500-G														5.0	0.8	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	1.2	3.5		C26 C28 C30 C36
			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

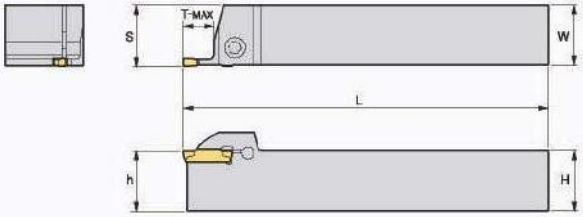
Application	Picture	Designation		Coated									Uncoated		Dimensions (mm)						Picture	Page
				NC3030	NC3120	NC3220	PC8110	PC9030	PC3525	PC5300	PC6510	PC230	NC5330	H01	G10E	b	r	l	d	t	α°		
Grooving	MGMN-L	MGMN	200-02-L												2.0	0.2	16	1.60	3.5	-		C26
			300-02-L							●					3.0	0.2	21	2.35	4.8	-		C28
			400-02-L							●					4.0	0.2	21	3.3	4.8	-		C30
			200-04-L												2.0	0.4	20	1.7	3.5	-		C31
			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	-		C26
			300-02-R	●						●					3.0	0.2	21	2.35	4.8	-		C28
			400-02-R	●						●					4.0	0.2	21	3.3	4.8	-		C30
			200-04-R												2.0	0.4	20	1.7	3.5	-		C31
			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	-		C26
			300-T	●						●					3.0	0.4	21	2.35	4.8	-		C28
			400-T	●						●					4.0	0.4	21	3.3	4.8	-		C30
			500-T	●						●					5.0	0.8	26	4.1	5.8	-		C31
Grooving	MGGN-A	MGGN	300-02-A												3.0	0.2	21	2.35	4.8	-		C26
			300-04-A												3.0	0.4	21	2.35	4.8	-		C28
			300-08-A												3.0	0.8	21	2.35	4.8	-		C30
			400-02-A												4.0	0.2	21	3.3	4.8	-		C36
			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		C26
			300-8D-PS												3.0	0.2	21	2.35	4.8	8		C28
			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		C20
			300-6D-PT										●		3.0	0.2	21	2.35	4.8	6		C28
			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	-		C26
			500-A												5.0	2.5	26.0	4.1	5.8	-		C27
																						C29
																						C30
	MRGN-A	MRGN	600-A											●	6.0	3.0	26.0	5.0	5.8	-		C26
			800-A											●	8.0	4.0	31.0	6.0	6.5	-		C27
																						C29
																						C30
Reliefing Profiling	MRMN-M	MRMN	200-M	●	●	●									2.0	1.0	16.0	1.50	3.5	-		C26
			300-M	●	●	●		●		●			●		3.0	1.5	21.0	2.35	4.8	-		~30
			400-M	●	●	●					●		●		4.0	2.0	21.0	3.3	4.0	-		C36
			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	-		

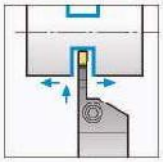
● : Stock item

MGEHR/L

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

MGMN MGMR
MGGN MRMN
MRGN





R type insert

(mm)

Designation		Stock		H=(h)	W	L	S	T-MAX	Inserts	Screw	Wrench
		R	L								
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	HW10L
	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-□□-V 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-□□-V 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-□□-V 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-□□-V 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			

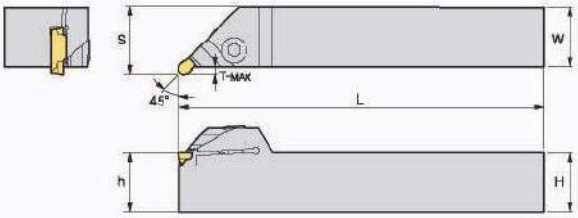
Aplicable inserts C24~C25

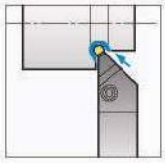
● : Stock item

MGEUR/L

For Reliefing, Profiling machining

MRMN
MRGN





R type insert

(mm)

Designation		Stock		H=(h)	W	L	S	T-MAX	Inserts	Screw	Wrench
		R	L								
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	MRGN6CC-A		
	3232-6A			32	32	170	36	4			
	2525-8A			25	25	150	30	5	MRGN8CC-A		
	3232-8A			32	32	170	37	5			

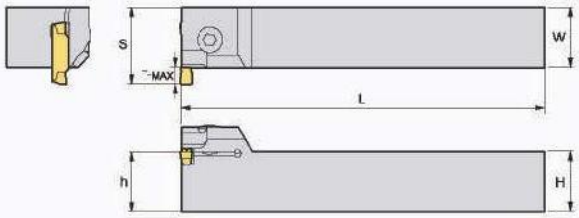
Appl cable inserts C24~C25

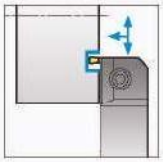
● : Stock item

MGEVR/L

For Grooving, Turning, Profiling machining

MGMN MGGN
MRMN MRGN





R type insert

(mm)

Designation		Stock R	Stock L	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	LI X0514	IW20L
	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	35	4	65			
	2020-3	●	●	20	20	125	25.5	5	75	MGMN300-M/T MGGN300-_L_-V MRMN300-M MGMN300-_L_-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-_L_-V MRMN400-M MGMN400-_L_-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- _ _ I-V MRMN500-M MGMN500- _ _ I-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			

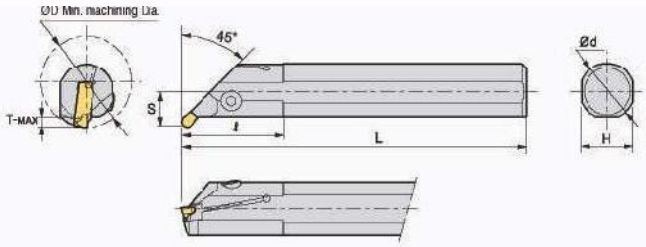
Applicable inserts C24~C25

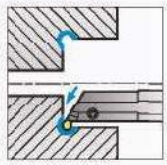
● : Stock item

MGIUR/L

For Reliefing, Profiling machining

MRMN
MRGN





R type insert

(mm)

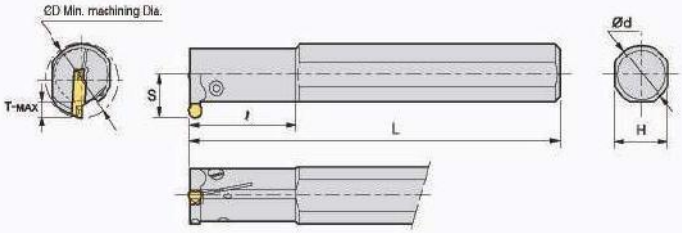
Designation		Stock R	Stock L	ØD	Ød	L	ℓ	T-MAX	H	S	Inserts	Screw	Wrench
MGIUR/L	3520-3			35	20	150	45	3.5	18	13	MRMN300-M	MHA0512	HW40L
	4025-3	●		40	25	200	45	3.5	23	15.5			
	5032-3			50	32	250	55	3.5	30	19			
	3520-4			35	20	150	45	3.5	18	13	MRMN400-M		
	4025-4	●		40	25	200	45	3.5	23	15.5			
	5032-4	●		50	32	250	55	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	55	3.5	30	19			
	4025-6			40	25	200	45	3.5	23	19	MRMN600-M	BHA0616 BHA0620	
	5032-6	●		50	32	250	55	3.5	30	19			
	4025-8			40	25	200	45	6.5	23	15.5	MRMN800-M	BHA0616 BHA0620	
	5032-8	●		50	32	250	55	6.5	30	19			
	4025-6A			40	25	200	45	3.5	23	15.5	MRGN600-A	BHA0616 BHA0620	
	5032-6A			50	32	250	55	3.5	30	19			
	4025-8A			40	25	200	45	5.0	23	16.5	MRGN600-A	BHA0616 BHA0620	
	5032-8A			50	32	250	55	6.5	30	22			

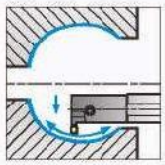
Applicable inserts C24~C25

● : Stock item

MGIVR/L

For Grooving, Turning, Profiling machining





MGMN MRMN
MGGN MRGN

R type insert

(mm)

Designation		Stock		ØD	Ød	L	ℓ	T-MAX	H	S	Inserts	Screw	Wrench
		R	L										
MGIVR/L	2016-1.5			20	16	125	35	3.5	15	11.3	MGMN150-G	MHB0310	HW25I
	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 MGMN200-M MRMN200-M	MHB0310	HW25L
	2520-2	●	●	25	20	150	45	4.5	18	14.0		MHA0512	HW40L
	2925-2	●	●	29	25	200	45	4.5	23	17.2			
	2016-2.5	●		20	16	125	35	4.5	15	12.5	MGMN250-G MGMN250-M	MHB0310	HW25L
	2520-2.5			25	20	150	45	4.5	18	15.1		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	I W50L
	3732-5	●		37	32	250	65	8	30	21.5		BHA0620	
	3125-6	●	●	31	25	200	45	8	23	19.4	MGMN600-MG MGGN600-□□-M MRMN600-M	BHA0616	
	3732-6	●		37	32	250	65	8	30	21.5		BHA0620	
	3732-8	●		37	32	250	65	10	30	23.4	MRMN800-M MGMN800-M		
	4540-8	●		45	40	300	70	10	37	27.2			
	3125-6A			31	25	200	45	8	23	19.4	MRGN600-A	BHA0616	
	3732-6A			37	32	250	65	8	30	21.5		BHA0620	
	3732-8A			37	32	250	65	10	30	23.4	MRGN800-A		
	4540-8A			45	40	300	70	10	37	27.2			

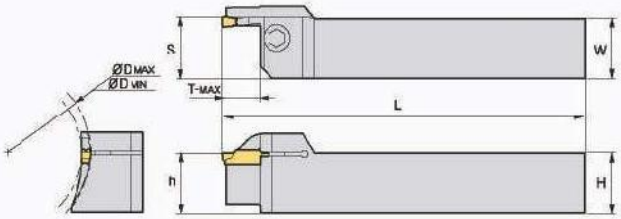
Applicable Inserts C24~C25

● : Stock item

MGFHR/L

For Face Grooving machining

MFMN
MGMN



R type insert

(mm)

Designation		Stock R	Stock L	H=(h)	W	L	S	T-MAX	ØD Min	ØD Max	Inserts	Screw	Wrench
MGFHR/L	325-24/35-T10	●		25	25	150	25.6	10	24	35	MFMN300	BHA0616	HW50L
	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			
	425-62/120-T15			25	25	150	25.6	15	62	120	MGVN400-M/T MGMN400-□□-L/R		
	425-112/200-T15	●		25	25	150	25.6	15	112	200			

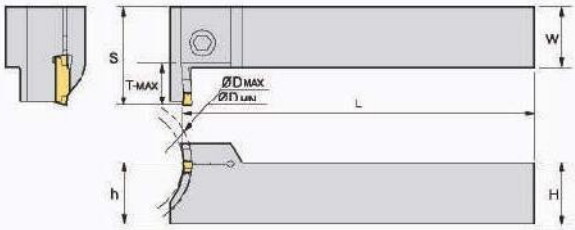
Applicable inserts C24~C25

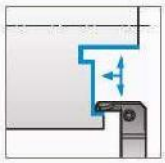
● : Stock item

MGFVR/L

For Face Grooving machining

MFMN
MGMN





R type insert

(mm)

Designation		Stock R	Stock L	H=(h)	W	L	S	T-MAX	ØD Min	ØD Max	Inserts	Screw	Wrench
MGFVR/L	325-24/35-T10	●		25	25	150	36	10	24	35	MFMN300	MHA0512	HW40L
	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	MGVN400-M/T MGMN400-□□-L/R	BHA0616	HW50L
	425-60/120-T15	●		25	25	150	41	15	60	120			
	425-112/200-T15	●		25	25	150	41	15	112	200			

Applicable inserts C24~C25

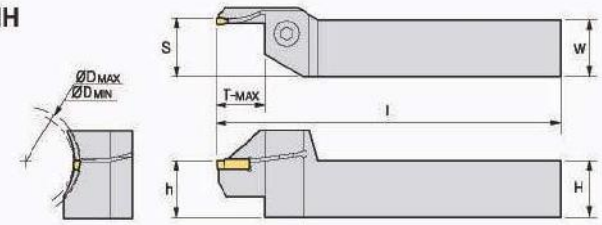
● : Stock item

FGHH

For Face Grooving, Turning machining

FGD FGM FMM

• FGHH



R type insert

(mm)

Designation		Stock		H=(h)	W	L	S	T-MAX	ØD		Inserts	Screw	Wrench
		R	L						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-C3 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-C3 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-C4 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-C4 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-C4 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 C4 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			

Apolicable inserts C24~C25

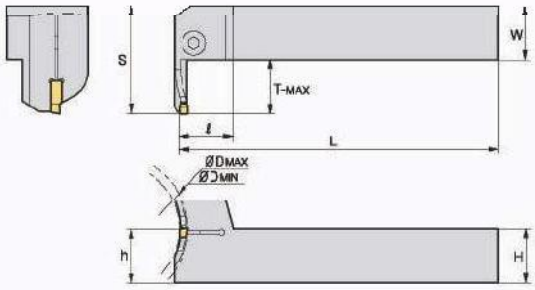
• : Stock item

FGVH

For Face Grooving, Turning machining

FGD FGM FMM

· FGVH



R type insert

(mm)

Designation		Stock		H=(h)	W	L	S	T-MAX	ØD		Inserts	Screw	Wrench
		R	L						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 C24~C25

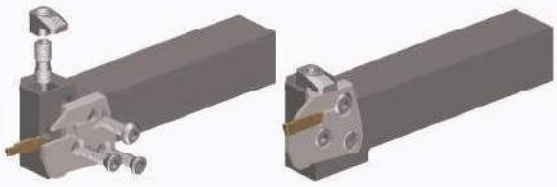
● : Stock item

MGT Cartridge

System Figure

- ▶ 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)

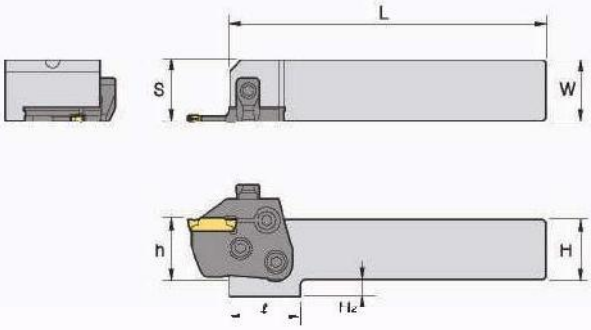
Cartridge

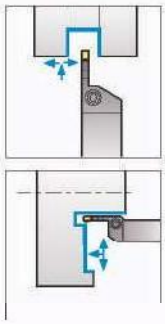
External Process		Facing Process	
			
MCER	MCEL	MCFR	MCFL

MCHR/L
(Holder)

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

MCER/L
MCFR/L





R type insert

(mm)

Designation		Stock R	Stock L	H=(h)	W	L	S	ℓ	H2	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	FW40L
	2525	●	●	25	25	133	25.7	30	7						
	3232	●	●	32	32	153	32.7	-	-						

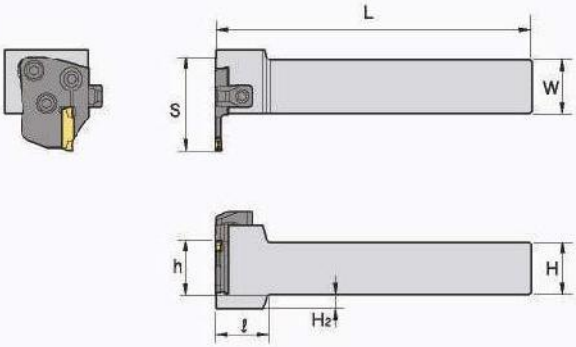
Applicable inserts C36

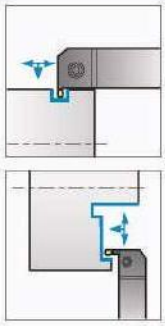
● : Stock item

MCVR/L
(Holder)

For Face Grooving, Turning machining

MCER/L
MCFR/L





R type insert

(mm)

Designation		Stock R	Stock L	H=(h)	W	L	S	ℓ	H2	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	FW40L
	2525	●	●	25	25	150	43	30	7						
	3232	●	●	32	32	170	50	-	-						

Applicable inserts C36

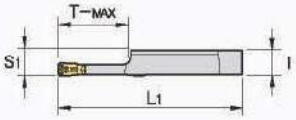
● : Stock item

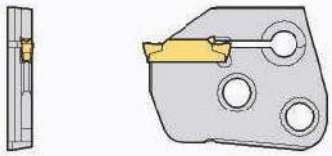
MCER/L

(Cartridge)

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

MGMN MGMR
MGGN MRMN





R type insert

(mm)

Designation		Stock		T	L1	S1	T-MAX	Inserts		Holder
		R	L					Width	Designation	
MCER/L	**3-T16**	●	●	6.00	44.5	6.35	16	3	MGMN	MCVR/L MCHR/L
	4-T16	●	●	5.97	44.5	6.35	16	4	MGMH/L	
	5-T20	●	●	5.87	48.5	6.35	20	5	MGGN	
	6-T20			5.82	48.5	6.35	20	6	MRMN	

Applicable inserts C24, C25

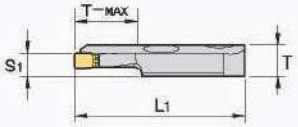
● : Stock item

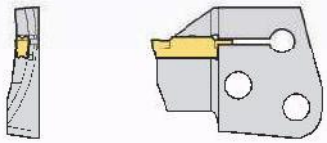
MCFR/L

(Cartridge)

For Face Grooving, Turning machining

MFNM
MGMN





R type insert

(mm)

Designation		Stock		T	L1	S1	T-MAX	Inserts		Holder
		R	L					Width	Designation	
MCFR/L	**3-24/35-T16**			8.00	44.5	6.35	16	3	MFMN3C0	MCVR/L MCHR/L
	3-29/40-T16			8.00	44.5	6.35	16	3		
	3-34/50-T16			8.00	44.5	6.35	16	3		
	3-44/70-T16			8.00	44.5	6.35	16	3		
	3-64/99-T16			8.00	44.5	6.35	16	3		
	4-44/60-T16			7.97	44.5	6.35	16	4	MGMN40C	
	4-60/120-T16			7.97	44.5	6.35	16	4		
	4-112/200-T16			7.97	44.5	6.35	16	4		

Applicable inserts C24, C25

● : Stock item

MGT - Machining Al Wheels

Features

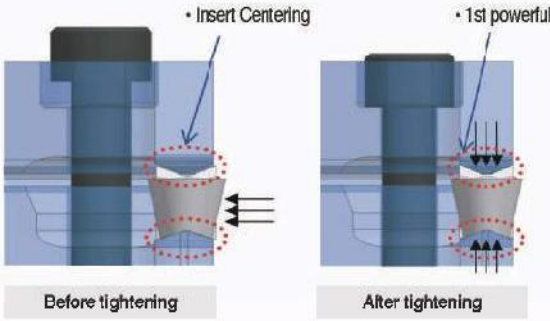
- ▶ Optimally designed inserts for aluminum wheel machining
- ▶ Longer tool life when matched with the best grade for application
- ▶ Unique clamping mechanism places a strong clamp over the insert
- ▶ A variety of insert types for multi application functions

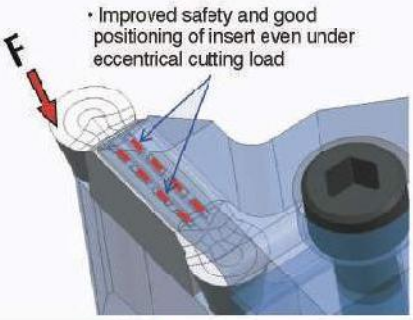
Various insert types

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	Hgh rake and relief angle

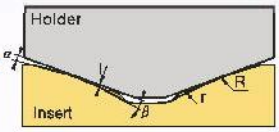
New clamping system

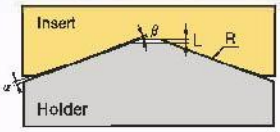




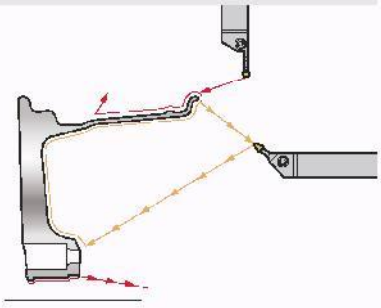
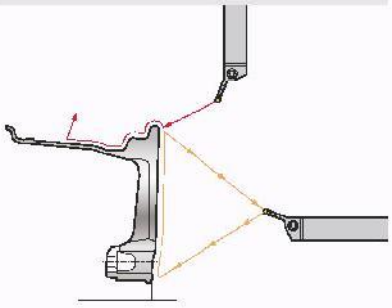
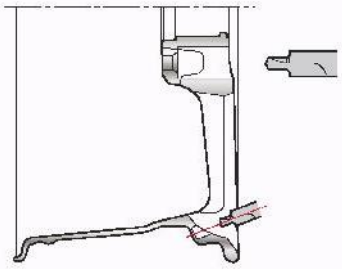
•Reinforcing the clamping force due to radius designed on the top & bottom side of insert and convex"DOT"on the top of insert

PATENT





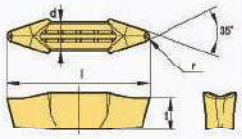
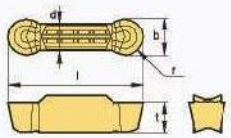
Application of Al Wheels

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

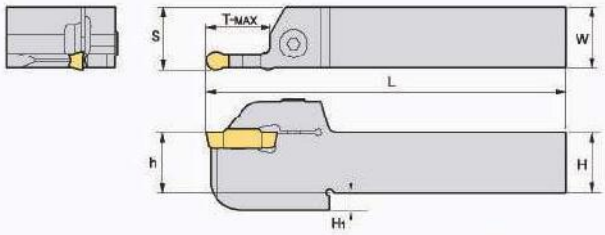
Inserts

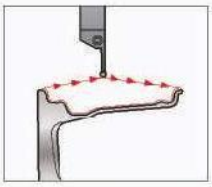
Application	Picture	Designation		Coated DP150	Uncoated G10E	Dimensions (mm) b	r	l	d	t	Configuration	Page
For Aluminum Wheel	MVGN 	MVGN	8N-A-R1.2		●	-	1.2	30.0	6.0	6.9		C40
			8N-A-R1.6			-	1.6	30.0	6.0	6.9		
	MRGN-A 	MRGN	6N-A		●	6.0	3.0	26.0	5.0	5.9		C39 C40
			6N-AM			6.0	3.0	26.0	5.0	5.9		
			6N-AP			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)

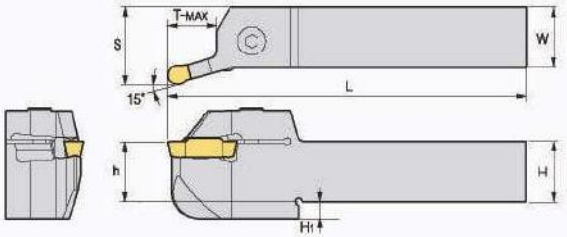
Designation		Stock R	Stock L	H=(h)	H1	W	L	S	T-MAX	Inserts	Screw	Wrench
MGEHR/L	25N-6A	●		25	7	25	150	25.55	23.5	MRGN6N-A MRGN6N-AP MRGN6N-AM	BHA0620	HW50L
	32N-6A			32	8	32	150	32.55	27			
	25N-6A5	●		25	7	25	150	25.55	23.5	MRGN6N-A5		
	32N-6A5			32	8	32	150	32.55	27			
	25N-8A	●		25	7	25	150	25.55	23.5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

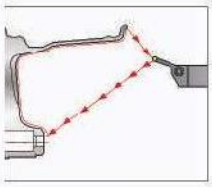
Applicable inserts C38

● : Stock item

MGEHR/L-15

MRGN





R type insert

(mm)

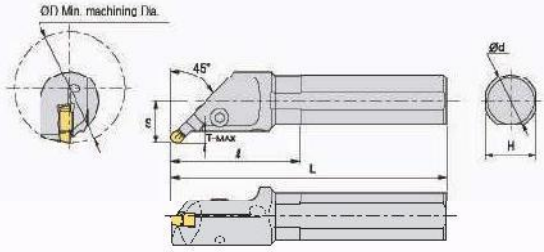
Designation		Stock R	Stock L	H=(h)	H1	W	L	S	T-MAX	Inserts	Screw	Wrench
MGEHR/L	25N-6A-15	●		25	7	25	150	32.2	20	MRGN6N-A MRGN6N-AP MRGN6N-AM	BHA0620	HW50L
	32N-6A-15			32	8	32	150	39.2	25			
	25N-6A5-15	●		25	7	25	150	32.2	20	MRGN6N-A5		
	32N-6A5-15			32	8	32	150	39.2	25			
	25N-8A-15			25	7	25	150	32.2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

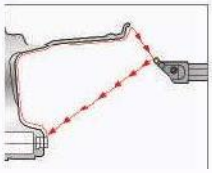
Applicable inserts C38

● : Stock item

MGIUR/L-MR

MRGN





R type insert

(mm)

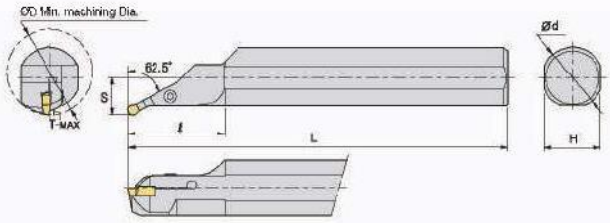
Designation		Stock R	Stock L	ØD	Ød	L	ℓ	T-MAX	H	S	Inserts	Screw	Wrench
MGIUR/L	6832-8A-MR	●		68	32	170	65	7	30	26	MRGN8N-A/AM/AP MRGN8N-A5	BHA0620	HW50L
	6832-8A5-MR	●		68	32	170	65	7	30	26			

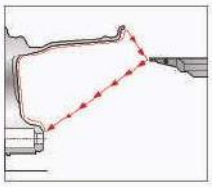
Applicable inserts C38

● : Stock item

MGIXR/L-MR

MRGN





R type insert

(mm)

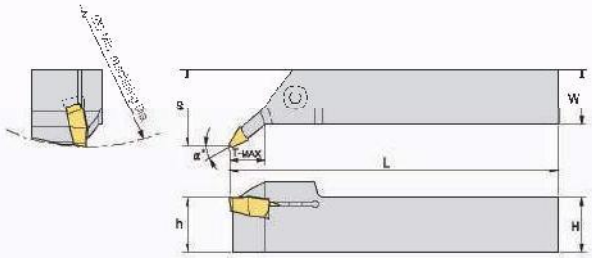
Designation		Stock R	Stock L	ØD	Ød	L	ℓ	T-MAX	H	S	Inserts	Screw	Wrench
MGIXR/L	7050-8A-MR	●		70	50	350	80	5.5	45	30.2	MRGN8N-A/AM/AP MRGN8N-A5	BHA0620	HW50L
	7050-8A5-MR			70	50	350	80	5.5	45	30.2			

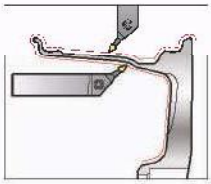
Applicable inserts C38

● : Stock item

MGEXR/L

MVGN





R type insert

(mm)

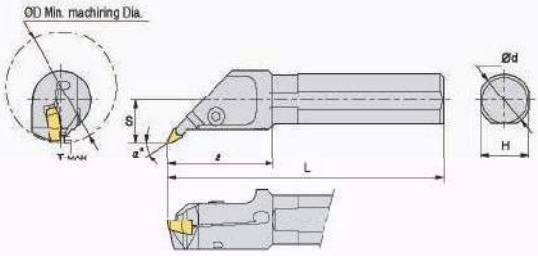
Designation		Stock R	Stock L	H=(h)	W	L	S	T-MAX	α°	Inserts	Screw	Wrench
MGEXR/L	25N-8A-5V	●		25	25	150	29	23.5	5	MVGN8N-A-R1.2 MVGN8N-A-R1.6	BHA0620	HW50L
	25N-8A-22.5V	●		25	25	150	35	27	22.5			

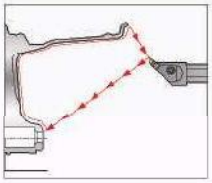
Applicable inserts C38

● : Stock item

MGIUR/L-MV

MVGN





R type insert

(mm)

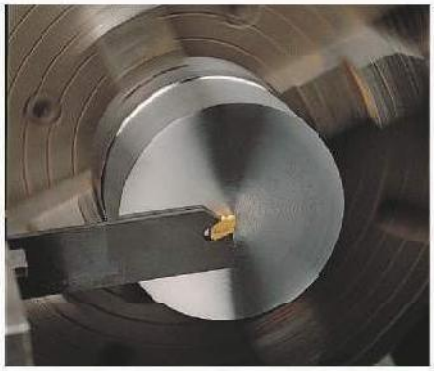
Designation		Stock R	Stock L	ØD	Ød	L	ℓ	T-MAX	H	S	α°	Inserts	Screw	Wrench
MGIUR/L	6832-8A-MV			68	32	170	65	4.5	30	26	27.5	MVGN8N-A-R1.2 MVGN8N-A-R1.6	BHA0620	HW50L

Applicable inserts C38

● : Stock item

For deep hole grooving/parting off

Saw-man

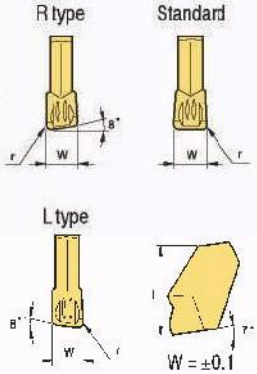


Features of parting insert

- 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	NC500H	PC230	PC8110	PC5300	PC3500	PC6510	A30	2	3	4	5	6
SML_LIC	80~180			80~180		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			70~150			0.02~0.15	0.03~0.2	0.08~0.3	0.10~0.4	0.12~0.5
QC/QCD				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				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

Inserts

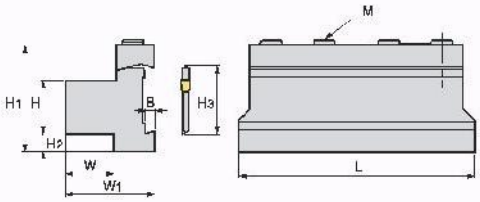
Application	Picture	Designation		Coated											Carbide	Dimensions (mm)			Configuration
				NC3120	NC3220	NC3030	NCM325	NC5330	NC9020	PC3500	NC500H	PC8110	PC5300	PC9030	PC6510	A30	W	l	r	
Parting tools		SP	160														1.6	7.8	0.16	
			180														1.8	9.3	0.16	
			200		●	●	●	●				●	●	●			2.2	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		Stock	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 C41

● : Stock item

SPB/SPB-S

(Blades)

SP

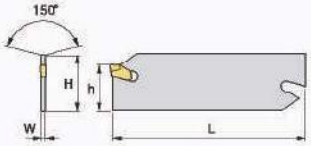


Fig. 1

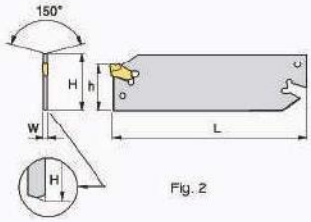
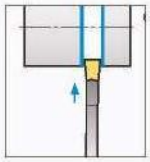


Fig. 2



(mm)

Designation		Stock	H	W	L	h	Inserts	Wrench		Fig.
SPB	226	●	26	1.6	110	21	SP200, 200R/L	SW50L	-	-
	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	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 C41

● : Stock item

SPH/SPH-S

(Holder)

SP

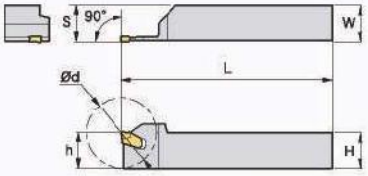


Fig. 1

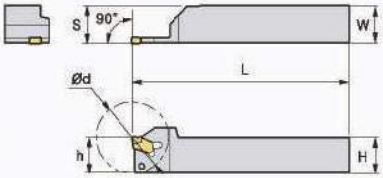
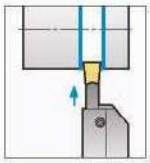


Fig. 2



R type insert

(mm)

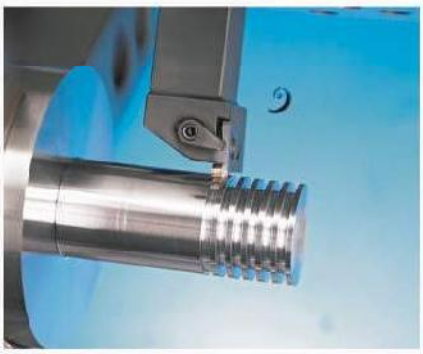
Designation		Stock		H=(h)	W	L	Ød	S	Inserts	Wrench		Fig.
		R	L									
SPH	**316R/L**			16	16	100	32	16.3	SP300, 300R/L	SW50L	-	1
	320R/L	●	●	20	20	120	40	20.3	SP300, 300R/L			
	420R/L			20	20	120	50	20.4	SP400, 400R/L			
	520R/L			20	20	120	60	20.5	SP500, 500R/L			
	325R/L	●		25	25	150	50	25.3	SP300,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

Appl cable inserts C41

● : Stock item

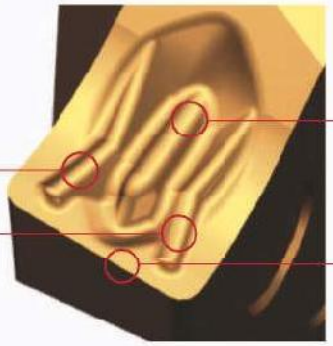
Economical 3-corner insert for high precision grooving

TB-M/TB



- 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

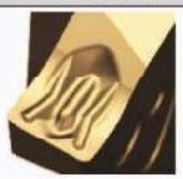
Features of TB-M chip breaker



- Smooth chip evacuation due to narrow chip curls
- Excellent chip control for turning and chamfering
- Stable chip flow at high feed

- Stable chip curl control at high feed

- Sharp cutting edge for better cutting action
- Excellent chipping resistance due to stronger cutting edges
- Improved surface roughness of workpieces

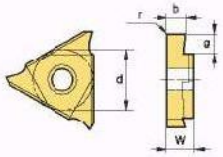
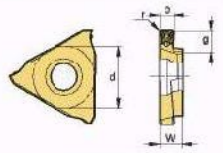
Chip breaker types per size			
TB4150R-M ~ TB4185R-M	TB4200R-M ~ TB4228R-M	TB4300R-M ~ TB4350R-M	TB4400R-M ~ TB4450R-M
			
Cutting edge width b 1.5 ~ 1.85mm	Cutting edge width b 2.0 ~ 2.8mm	Cutting edge width b 3.0 ~ 3.5mm	Cutting edge width b 4.0 ~ 4.5mm

Recommended cutting conditions

(mm)

ISO	Grade	Cutting speed, vc (m/min)		Feed, fn (mm/rev)	
		CN2000	PC5300	CN2000	PC5300
P	SMOOC	150(100~220)	130(80~180)	0.05~0.20	0.05~0.20
	SCM	150(100~200)	130(80~180)	0.05~0.20	0.05~0.20
M	STS	-	80(40~150)	-	0.05~0.12
K	GC, GCD	-	130(80~180)	-	0.05~0.15

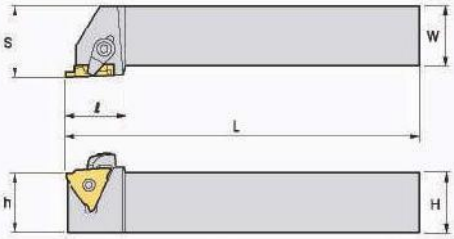
Inserts

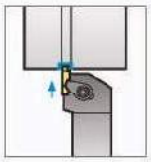
Application	Picture	Designation		Cermet CN2000	Cermet CN20	Coated NC3010	Coated NC3120	Coated NC3220	Coated PC8110	Coated PC5300	Uncoated ST20E	Dimensions (mm) b	g	W	r	d	Configuration
Narrow grooving	TB 	TB	3125R/L									1.25	1.5	4.76	0.2	9.525	
			3145R/L									1.45	1.5	4.76	0.2	9.525	
			3175R/L									1.75	2.5	4.76	0.2	9.525	
			3185R/L									1.85	2.5	4.76	0.2	9.525	
			3200R/L									2.00	2.5	4.76	0.2	9.525	
			3230R/L									2.30	3.5	4.76	0.3	9.525	
			3280R/L									2.80	3.5	4.76	0.3	9.525	
			3330R/L									3.30	3.5	4.76	0.3	9.525	
			3430R/L									4.30	3.5	4.76	0.4	9.525	
			4125R/L	●	●							1.25	2.0	4.76	0.2	12.7	
			4145R/L	●	●							1.45	2.0	4.76	0.2	12.7	
			4150R/L	●	●							1.50	3.5	4.76	0.2	12.7	
			4175R/L	●	●							1.75	3.5	4.76	0.2	12.7	
			4185R/L	●	●							1.85	3.5	4.76	0.2	12.7	
			4200R/L	●	●							2.00	3.5	4.76	0.2	12.7	
			4215R/L									2.15	3.5	4.76	0.2	12.7	
			4230R/L	●	●							2.30	3.5	4.76	0.2	12.7	
			4250R/L	●	●							2.50	4.0	4.76	0.3	12.7	
			4265R/L									2.65	4.0	4.76	0.3	12.7	
			4280R/L		●							2.80	4.0	4.76	0.3	12.7	
			4300R/L	●	●							3.00	4.0	4.76	0.3	12.7	
			4330R/L	●	●							3.30	4.0	4.76	0.3	12.7	
			4350R/L									3.50	5.0	4.76	0.3	12.7	**Feature of TB-M**
			4400R/L									4.00	5.0	4.76	0.4	12.7	• Suitable for automated line with Chip breaker
			4430R/L	●								4.30	5.0	4.76	0.4	12.7	• Superior surface
			4450R/L									4.50	5.0	4.76	0.4	12.7	
	TB-M 	TB	4150R-M						●			1.50	3.5	4.76	0.2	12.7	
			4175R-M						●			1.75	3.5	4.76	0.2	12.7	
			4185R-M									1.85	3.5	4.76	0.2	12.7	
			4200R-M						●			2.00	3.5	4.76	0.2	12.7	
			4215R-M						●			2.15	3.5	4.76	0.2	12.7	
			4230R-M						●			2.30	3.5	4.76	0.2	12.7	
			4250R-M						●			2.50	4.0	4.76	0.3	12.7	
			4265R-M						●			2.65	4.0	4.76	0.3	12.7	
			4280R-M									2.80	4.0	4.76	0.3	12.7	
			4300R-M						●			3.00	4.0	4.76	0.3	12.7	
			4330R-M									3.30	4.0	4.76	0.3	12.7	
			4350R-M						●			3.50	5.0	4.76	0.3	12.7	
			4400R-M									4.00	5.0	4.76	0.4	12.7	
			4430R-M									4.30	5.0	4.76	0.4	12.7	
			4450R-M									4.50	5.0	4.76	0.4	12.7	

● : Stock item

TBH For Narrow grooving

TB





R type insert

(mm)

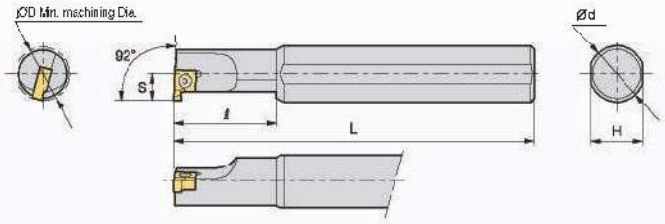
Designation		Stock R	Stock L	H=(h)	W	L	ℓ	S	Inserts	Clamp	Clamp Screw	Wrench
TBH	320R/L-23			20	20	125	25.5	25	TB3125-3230	CS3R1	DHAC617	HW30L
	320R/L-33			20	20	125	25.5	25	TB3280-3330			
	320R/L-43			20	20	125	25.5	25	TB3430			
	325R/L-23	●		25	25	150	25.5	30	TB3125-3230			
	325R/L-33			25	25	150	25.5	30	TB3260-3330			
	325R/L-43			25	25	150	25.5	30	TB3430			
	420R/L-23	●		20	20	125	25.5	25	TB4125-4230			
	420R/L-33	●		20	20	125	25.5	25	TB4250-4330			
	420R/L-45	●		20	20	125	25.5	25	TB4350-4450			
	425R/L-23	●		25	25	150	25.5	30	TB4125-4230			
	425R/L-33	●		25	25	150	25.5	30	TB4250-4330			
	425R/L-45	●		25	25	150	25.5	30	TB4350-4450			

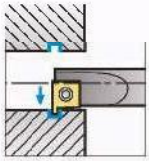
Appl cable inserts C45

● : Stock item

IGH For Internal grooving

IG





R type insert

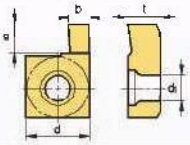
(mm)

Designation		Stock R	Stock L	ØD	Ød	H	L	ℓ	S	Inserts	Screw	Wrench
IGH	214R/L	●		14	16	15	150	25	6.6	IG125~280	FTKAC2565	TW07P
	216R/L	●		16	16	15	150	30	7.6			
	220R/L	●		20	20	18	200	40	9.6			

Applicable Inserts C46

● : Stock item

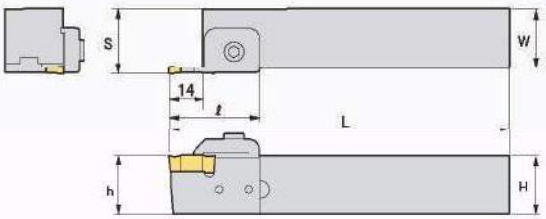
Inserts

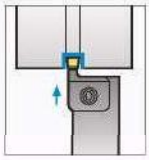
Application	Picture	Designation		Coated NC3010	Coated NC3120	Coated NC3225	Uncoated H01	Uncoated G10E	Uncoated A30	Dimensions (mm) b	g	t	d	d1	Configuration
Internal grooving		IG	125						●	1.25	1.5	3.18	6.35	2.8	
			145						●	1.45	1.5	3.18	6.35	2.8	
			175						●	1.75	1.5	3.18	6.35	2.8	
			200						●	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 inser

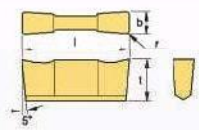
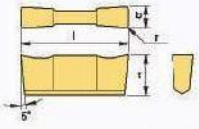
(mm)

Designation		Stock R	Stock L	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	MHA05*2	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	MHA05*2	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 C46

● : Stock item

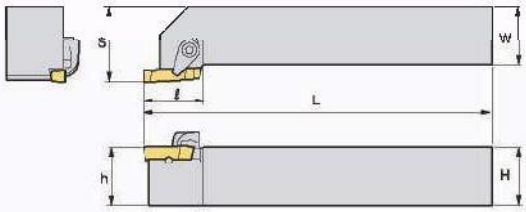
Inserts

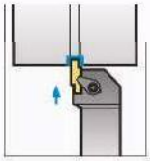
Application	Picture	Designation		Cermet CN20	Coated NC3010	Coated NC3120	Coated NC3225	Uncoated H01	Uncoated G10E	Dimensions (mm) b	l	t	r	Configuration
Grooving		DB	300	●						3.0	20	7.5	0.2	
			400	●						4.0	20	7.5	0.2	
			500	●						5.0	20	7.5	0.2	
			600							6.0	20	7.5	0.2	
			700							7.0	20	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)

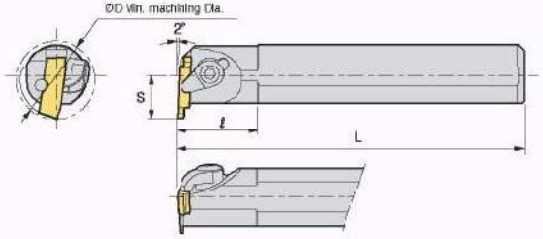
Designation		Stock R	Stock L	H=(h)	W	L	ℓ	S	Inserts	Clamp	Screw	Pin	Wrench
GFT	320R/L	●		20	20	125	23.5	25	GW110~300R/L.BF3	CS5R1	DHAC514	PN0310	HW25L
	325R/L	●	●	25	25	150	23.5	32					
	525R/L	●		25	25	150	25.5	32	GW315~500R/L.BF5	CS6R1	DHAC617	PN0310	HW30L
	825R/L	●		25	25	150	28.5	32	GW600~800R/L.BF8	CS8R1	DHAC820	PN0314	HW40L

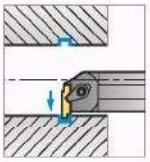
Applicable inserts C47 · Use right-hand insert for left-hand holder

● : Stock item

GFIP For Internal grooving

BF GW





R type insert

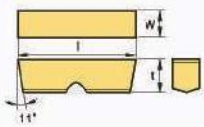
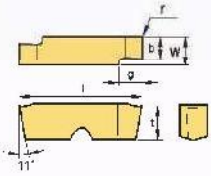
(mm)

Designation		Stock R	Stock L	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	-	DHAC820	PN0314	HW40L

Applicable inserts C47 · Use right-hand insert for left-hand holder

● : Stock item

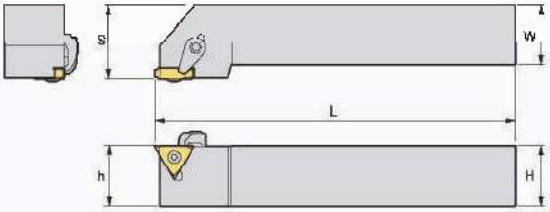
Inserts

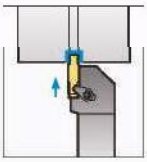
Application	Picture	Designation		Uncoated A30 R	Uncoated A30 L	b	g	W	l	t	r	Configuration
Blank		BF	-3	●				3.1	16.4	5.26	-	
			-5					5.1	22.4	6.26	-	
			-8					8.1	27.4	7.26	-	
Grooving		GW	110R/L	●	●	1.1	2.1	3.1	16	5.0	0.2	
			130R/L	●	●	1.3	2.3	3.1	16	5.0	0.2	
			160R/L	●	●	1.6	2.6	3.1	16	5.0	0.2	
			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	6.1	27	7.0	0.3	
			800R/L			8.0	9.0	6.1	27	7.0	0.3	

● : Stock item

GH For O-ring grooving Snap-ring grooving

GO GS





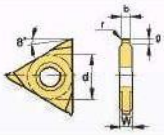
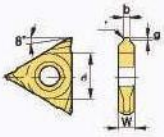
R type insert

(mm)

Designation		Stock R	Stock L	H=(h)	W	L	S	Inserts	Clamp	Clamp Screw	Screw	Wrench
GH	2020R/L-3	●		20	20	125	22	GS125~280	CS6R1	DHA0617	PTMA03508	TWS3P-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 C48 ● : Stock item

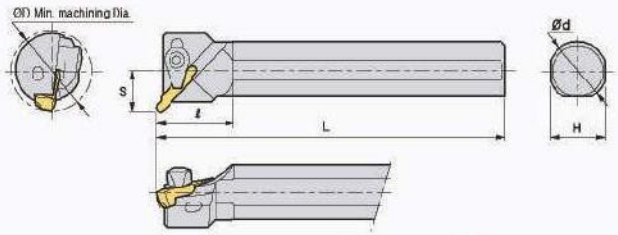
Inserts

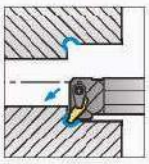
Application	Picture	Designation		Coated NC3010	Coated NC3120	Coated NC3225	Uncoated H01	Uncoated ST20E	Uncoated A30	Dimensions (mm) b	g	W	r	d	Configuration
Grooving(Narrow · O-ring · Snap-ring)		GO	250							2.5	1.5	3.3	0.35	9.525	
			320							3.2	2.0	3.8	0.35	9.525	
			410							4.1	2.5	4.5	0.65	9.525	
		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





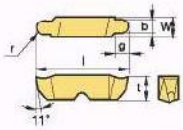
R type insert

(mm)

Designation		Stock R	Stock L	ØD	Ød	H	L	ℓ	S	Inserts	Clamp	C-ring	Screw	Pin	Wrench
GFIK	316R/L			22	16	15	150	21.5	17	GR3□□	CH5R2	CR04	CHX0513	PNC310	HW25L
	325R/L			32	25	23	200	21.5	17		CH5R2	CR01	CHX0513	PNC310	HW25L
	340R/L			50	40	37	300	35.4	27		CS5R1	-	DHA0514	PNC310	HW25L
	525R/L			32	25	23	200	27.5	17	GR5□□	CS6R1		DHA0617	PNC314	HW30L
	540R/L			50	40	37	300	39.5	27						
	840R/L			50	40	37	300	47.8	27	GR8□□	CS8R1	-	DHA0820	PNC314	HW40L

Applicable inserts C48 ● : Stock item

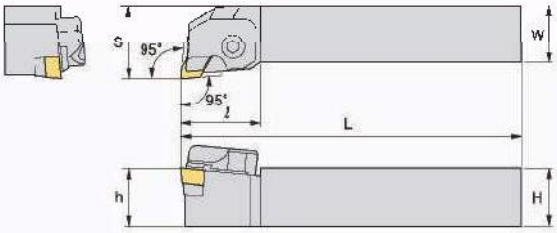
Inserts

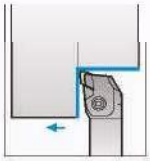
Application	Picture	Designation		Coated NC3010	Coated NC3120	Coated NC3225	Uncoated H01	Uncoated ST20E	Uncoated A30	Dimensions (mm) b	g	W	l	t	r	Configuration
Reliefing		GR	310R							2.0	2.0	3.1	15.9	5.0	1.0	
			315R							3.0	2.9	3.1	15.9	5.0	1.5	
			520R							4.0	4.0	5.1	21.9	6.0	2.0	
			525R							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

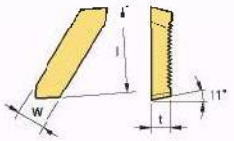
(mm)

Designation		Stock R	Stock L	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 C49

● : Stock Item

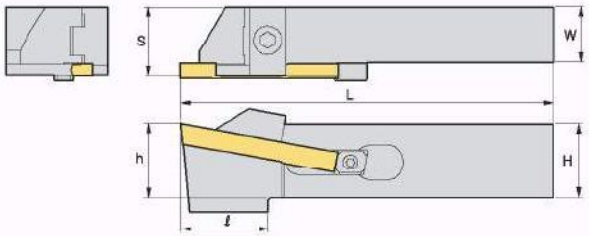
Inserts

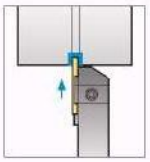
Application	Picture	Designation	Uncoated ST10P	Uncoated ST20E	Dimensions (mm) W	l	t	Configuration
General Machining		ESB 34			9.525	30.0	6.35	

● : Stock item

PH For Parting off Deep grooving

POB





R type insert

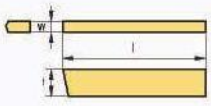
(mm)

Designation		Stock R	Stock L	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 C49

● : Stock item

Inserts

Application	Picture	Designation	Uncoated ST10P	Uncoated ST20E	Dimensions (mm) W	l	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

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

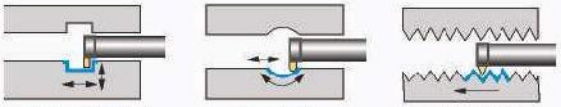
New Fine Tools

- 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 Ø8mm~Ø16mm

Features



(Grooving, Turning) (Forming) (Threading)

Application examples

NFTIH 08 3 12 - S

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

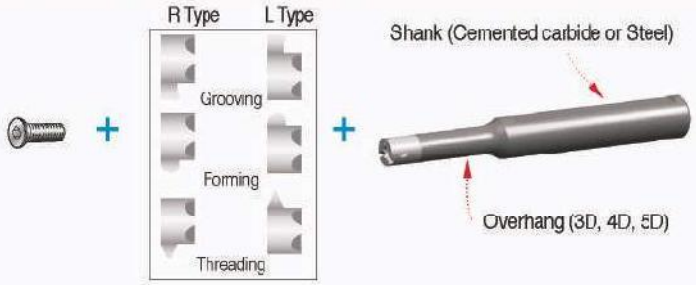
Recommended cutting condition

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(mm/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(mm/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(mm/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(mm/rev)	0.02~0.06	0.02~0.06	0.02~0.06	0.02~0.06

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

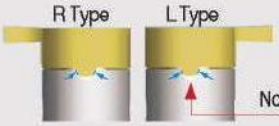
Clamping system

Screw	Insert	Holder



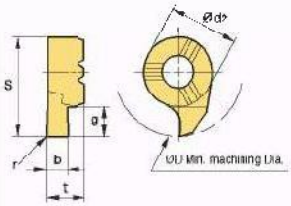
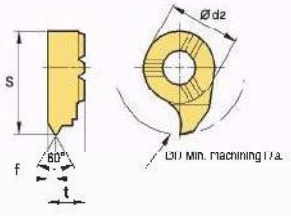
• Available R/L type insert with one holder

Stable clamping according to the tripod structure



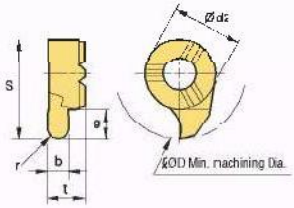
No-Spin-System design for strong clamping

Inserts

Application	Picture	Designation		Coated PC130 R	Coated PC130 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-02/L	●		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	1.6	

● : Stock item

Inserts

Application	Picture	Designation		Coated PC130 R	Coated PC130 L	Dimensions (mm) ØD	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

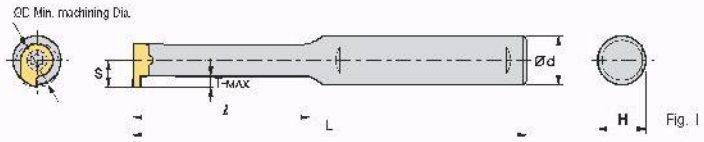


Fig. 1

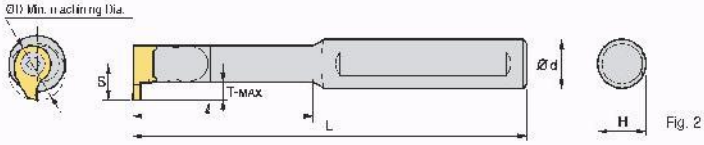


Fig. 2

• For NFTIH14~, R type insert

(mm)

Designation		Stock	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	PTKA04512	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	46	4.3	11	10.2	NFTG16□□□R/L NFTT16□□□R/L NFTF16□□□R/L	PTKA0512	TW20P	2
	16312S	●	16	12	130	46	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	46	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 C51, C52

● : Stock Item

Multi Turn

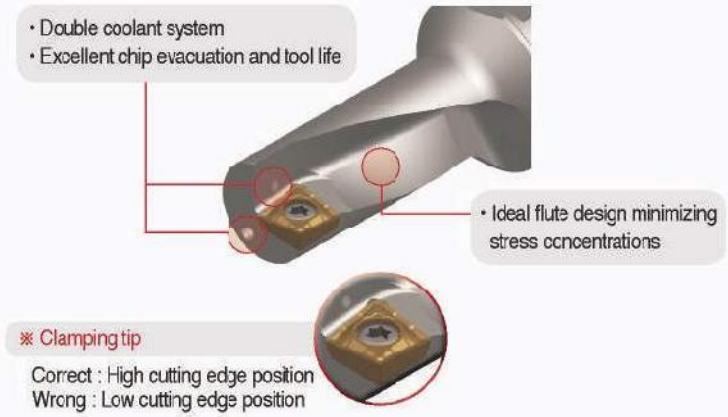
Holder code system

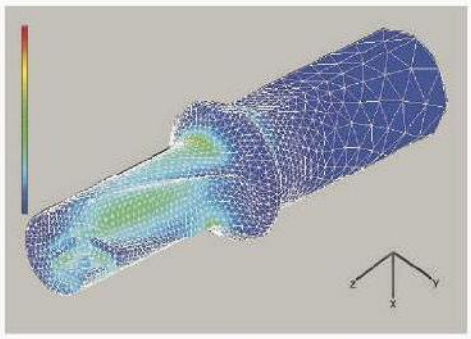
MT	20	R	-	2.25D
Brand Name	Tool Dia.	Hand		Aspect ratio

Insert code system

Q	C	M	T	08	03	04	-	CM
Insert shape	Relief angle	Tolerance	Cross Section Type	Cutting Edge Length	Height of Cutting Edge	Nose Radius		Chip Breaker

Tool design by FEM analysis

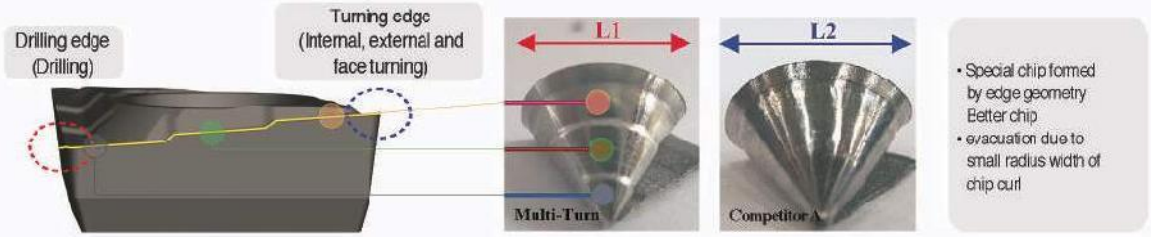




• Minimized stress during cutting, prevented damage from vibration and longer tool life

Optimized design

Creative stepping cutting edge



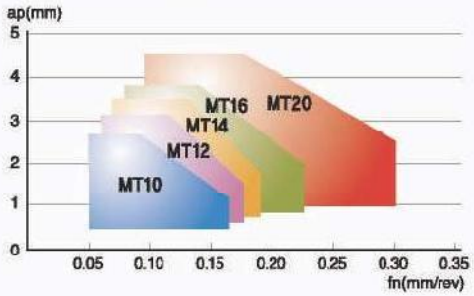
• Special chip formed by edge geometry Better chip
• evacuation due to small radius width of chip curl

Comparison	Multi turn	Competitor A	Competitor B
Feed fn(mm/rev) = 0.08			
Feed fn(mm/rev) = 0.10			
Chip width (rate)	80%	100%	120%

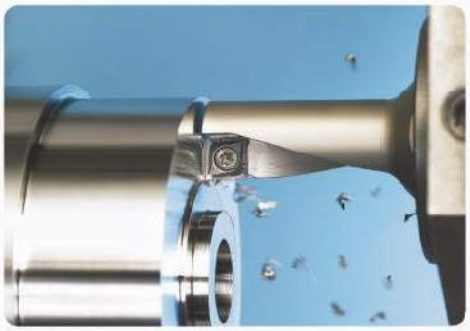
User's guide

External / Internal turning

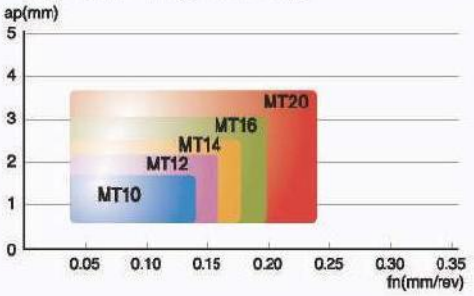
● Application range



Facing

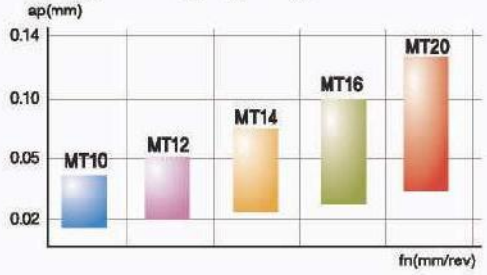


● Appication ranges of facing



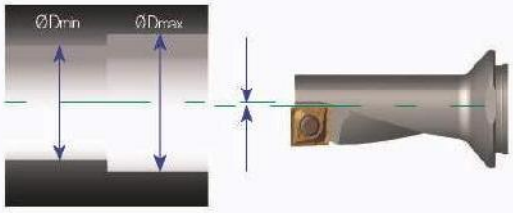
Drilling

● Drilling feed range by designation



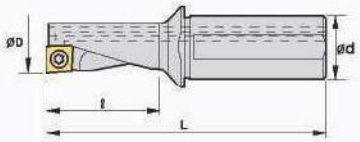
Offset (Diameter compensation)

Disignation	Machined diameter(mm)	ØDmin(mm)	ØDmax(mm)
MT10R/L-2.25D	10	9.85	10.35
MT12R/L-2.25D	12	11.85	12.35
MT14R/L-2.25D	14	13.85	14.35
MT16R/L-2.25D	16	15.85	16.35
MT20R/L-2.25D	20	19.85	20.35
MT25R/L-2.25D	25	24.85	25.35
MT32R/L-2.25D	32	31.85	32.35



Drill diameter is adjustable by the offset compensation

MT (Multi-Turn)



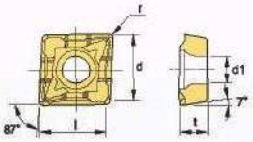
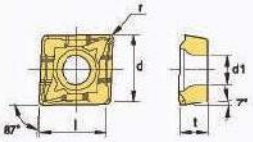
(mm)

Designation	Stock		ØD	Ød	ℓ	L	Inserts	Screw	Wrench
	R	L							
MT10R/L-2.25D	●		10	12	22.5	69.5	QC□T050204	FTNA0204S	TW06P
MT12R/L-2.25D	●	●	12	16	27.0	78.0	QC□T060204	FTNA022CES	TW06P
MT14R/L-2.25D	●		14	16	31.5	83.5	QC□T070304	FTKA02555	TW07P
MT16R/L-2.25D	●		16	20	36.0	94.0	QC□T080304	FTNA0306	TW09P
MT20R/L-2.25D	●	●	20	25	45.0	111.0	QC□T10T304	FTNA03508	TW15P
MT25R/L-2.25D	●		25	32	56.5	130.0	QC□T130408	FTNC04509	TW20S
MT32R/L-2.25D	●		32	40	72.0	160.0	QC□T170508	FTNCC4511	TW20S

Applicable inserts C55

● : Stock item

Inserts

Picture	Designation		Cermet	Coated		Uncoated		Dimensions (mm)					Configuration
			PC6300	NC3120	NC3220	NC6210	H01	l	d	t	r	Ød1	
	**QCMT**	**050204-CM**	●		●			5.0	5.4	2.10	0.4	2.3	
		060204-CM	●		●			6.0	6.4	2.38	0.4	2.5	
		070304-CM	●		●	●		7.0	7.4	3.18	0.4	2.8	
		080304-CM	●		●	●		8.0	8.4	3.18	0.4	3.4	
		10T304-CM	●		●	●		10.0	10.4	3.97	0.4	4.0	
		130408-CM	●		●	●		12.7	13.5	4.76	0.8	5.5	
		170508-CM	●		●	●		16.7	17.5	5.56	0.8	5.5	
	**QCGT**	**050204-CA**						5.0	5.4	2.10	0.8	2.3	
		060204-CA					●	6.0	6.4	2.38	0.4	2.5	
		070304-CA					●	7.0	7.4	3.18	0.4	2.8	
		080304-CA					●	8.0	8.4	3.18	0.4	3.4	
		10T304-CA					●	10.0	10.4	3.97	0.4	4.0	
		130408-CA					●	12.7	13.5	4.76	0.8	5.5	
		170508-CA					●	16.7	17.5	5.56	0.8	5.5	

● : Stock item

Bearing Solution

Holder Code System

Clamping Method	Holder Style	Hand	Width of Shank	Length of Holder	Application	Insert shape	Relief Angle	Height of Shank	Additional information of holder (B:Bearing)	Length of cutting edge	Minimum diameter for machining
S	R	C	P	R	B	25	25	B	M	16	B	D32

Hand: R : Right L : Left

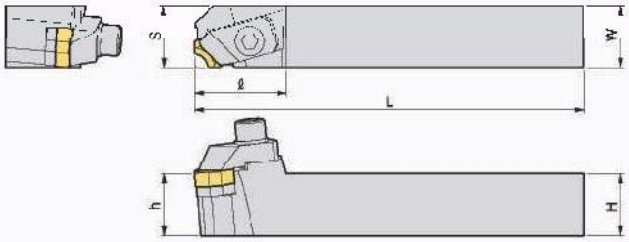
Application:
- B : Internal machining
- E : External machining
- F : Face machining
- RW : Raceway
- BS : Bearing Shield

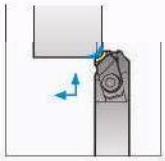
Insert Code System for race way and bearing shield machining

Manufacture of Bearing	Designation of Bearing	Machining type of insert	Customer
ABC	EC6000AHL	BS	USER

CMSN...F Type

MC12□□ MC12□□-BR
MC15□□





R type insert

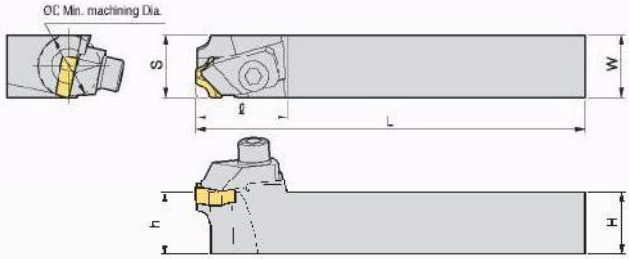
(mm)

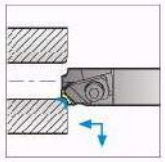
Designation		Stock R	Stock L	H	W	L	S	h	ℓ	Inserts	Clamp	Clamp Screw	Shim	Shim Screw	Wrench
CMSNR/L	2020B-L12F			20	20	140	21	20	33	MC12□□ MC12□□-BR	CH6R/L1B	BHA0520	SX42CB	SS0308	HW50L
	2023B-L12F			20	23	140	24	20	33						
	2525B-L15F			25	25	140	26	25	35	MC15□□	CH6R/L1B	BHA0520	SX52CB	SS0408	HW50L

● : Stock item

CMSN...B Type

MC12□□ MC12□□-BR





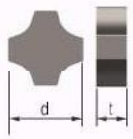
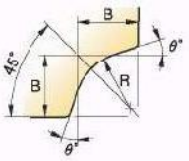
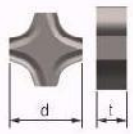
R type insert

(mm)

Designation		Stock R	Stock L	ØD	H	W	L	S	h	ℓ	Inserts	Clamp	Clamp Screw	Shim	Shim Screw	Wrench
CMSNR/L	2020B-L12B-D28			28	20	20	140	21	20	33	MC12□□ MC12□□-BR	CH6R/L1B	BHA0620	SX42CB	SS0308	HW50L
	2525B-L12B-D28			28	25	25	140	26	25	33		CH6R/L1B	BHA0620	SX42CB	SS0308	HW50L
	1620B-L12B-D20			20	16	20	140	18	16	32		CH6R/L1B	BHA0620	-	-	HW50L
	2023B-L12B-D28			28	20	23	140	24	20	33		CH6R/L1B	BHA0620	SX42CB	SS0308	HW50L

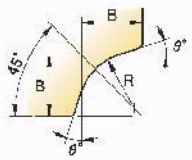
● : Stock item

Inserts

Application	Picture	Designation	Cermet CN20	Cermet CN2000	Dimensions (mm) R	θ°	B	d	t	Configuration
R-Chamfering		MC0906			0.6	12	1.8	9.525	3.18	
		MC0910			1.0	12	2.4	9.525	3.18	
		MC1206			0.6	18	1.8	12.7	4.76	
		MC1210			1.0	18	2.4	12.7	4.76	
		MC1212			1.2	18	2.2	12.7	4.76	
		MC1215			1.5	18	3.0	12.7	4.76	
		MC1220			2.0	18	3.8	12.7	4.76	
		MC1225			2.5	18	2.8	12.7	4.76	
		MC1525			2.5	18	4.0	15.875	5.56	
		MC1530			3.0	18	4.7	15.875	5.56	
		MC1540			4.0	20	4.7	15.875	5.56	
		MC1206-BR			0.6	18	1.8	12.7	4.76	
		MC1210-BR			1.0	18	2.4	12.7	4.76	
		MC1212-BR			1.2	18	2.2	12.7	4.76	
		MC1215-BR			1.5	18	3.0	12.7	4.76	
		MC1220-BR			2.0	18	3.2	12.7	4.76	
		MC1230-BR			3.0	18	3.7	12.7	4.76	
		MC1235-BR			3.5	18	3.9	12.7	4.76	

● : Stock item

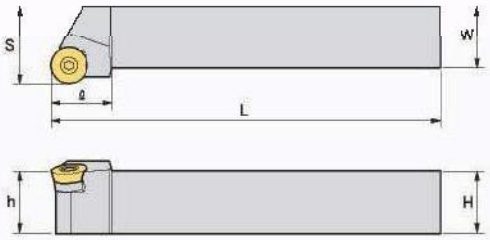
Special order-form

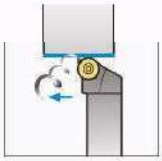


Designation	CN20	CN2000	R	θ°	B	d	t	Configuration
MC...								

SRGP...E Type

RPGT1203M0
RPGT1604M0
RPGT2004M0





R type insert

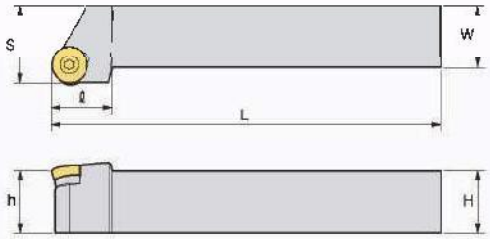
(mm)

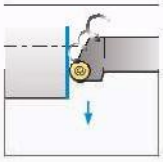
Designation		Stock R	Stock L	H	W	L	S	h	ℓ	Inserts	Screw	Shim	Shim Screw	Wrench
SRGPR/L	2020B-L12E			20	20	140	25	20	20	RPGT1203M0	FTKA0410	SR1203S	SHXN0609F	TW15P
	2020B-L16E			20	20	140	25	20	20	RPGT1604M0	FTNA0513	SP16T3S	SHXN0712F	TW20P
	2525B-L20E			25	25	140	32	25	30	RPGT2004M0	FTNA0513	SP2CT3S	SHXN0712F	TW20P

● : Stock item

SRGP...F Type

RPGT1203M0
RPGT1604M0
RPGT2004M0





R type insert

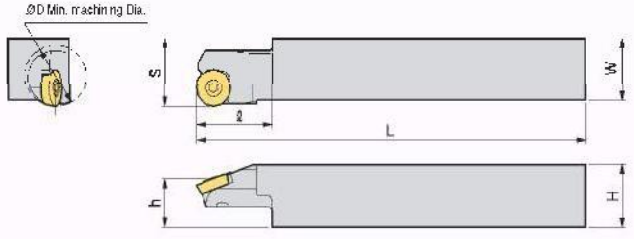
(mm)

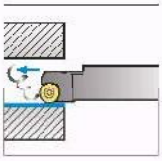
Designation		Stock R	Stock L	H	W	L	S	h	ℓ	Inserts	Screw	Shim	Shim Screw	Wrench
SRGPR/L	2020B-L12F			20	20	140	25	20	20	RPGT1203M0	FTKA0410	SR1203S	SHXN0609F	TW15P
	2020B-L16F			20	20	140	25	20	20	RPGT1604M0	FTNA0513	SP16T3S	SHXN0712F	TW20P
	2525B-L20F			25	25	140	32	25	30	RPGT2004M0	FTNA0513	SP2CT3S	SHXN0712F	TW20P

● : Stock item

SRCP...B Type

RPGT0802M0
RPGT1203M0
RPGT1604M0





R type inser

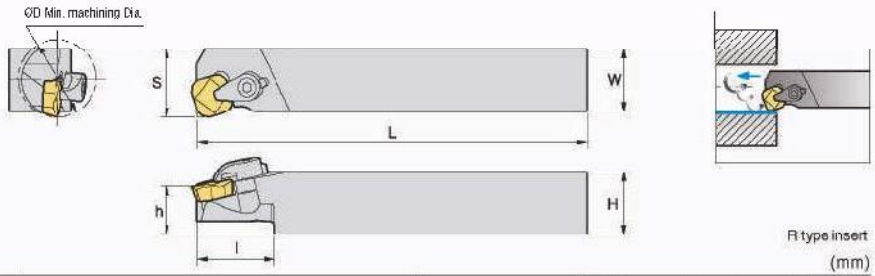
(mm)

Designation		Stock R	Stock L	ØD	H	W	L	S	h	ℓ	Inserts	Screw	Wrench
SRCPR/L	2020B-L08B-D12			12	20	20	140	21.5	15.5	25	RPGT0802M0	FTKA0305	TW09P
	1919B-L12B-D15			15	19	19	140	21	16	25	RPGT1203M0	FTNA0408	TW15P
	2020B-L12B-D20			20	20	20	140	22	15.5	25	RPGT1203M0	FTNA0408	TW15P
	2525B-L16B-D32			32	25	25	140	27	20	30	RPGT1604M0	FTKA0510	TW20P

● : Stock item

CSKP...B Type

SPGR120440L



R type insert

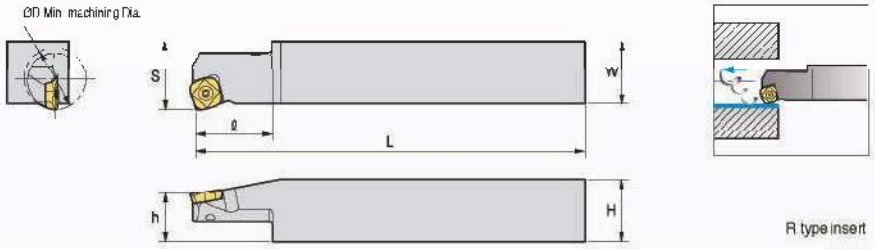
(mm)

Designation		Stock		ØD	H	W	L	S	h	ℓ	Inserts	Clamp	Clamp Screw	Wrench
		R	L											
CSKPR/L	**2022B-L12B-D30**			30	20	22	140	27	20	37	SPGR120440R/L	CH5R1	CHX0510	HW30L

● : Stock item

SSKP...B Type

SPGH090330L



R type insert

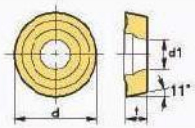
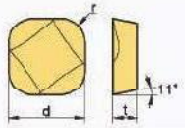
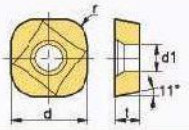
(mm)

Designation		Stock		ØD	H	W	L	S	h	ℓ	Inserts	Screw	Wrench
		R	L										
SSKPR/L	**2020B-L09B-D12**			12	20	20	140	21.7	19	20	SPGH090330R/L	FTNA0307	TW09P
	2020B-L09B-D13			13	20	20	140	21.7	19	20			
	2020B-L09B-D20			20	20	20	140	21.7	19	20			

Appl cable inserts C59

● : Stock item

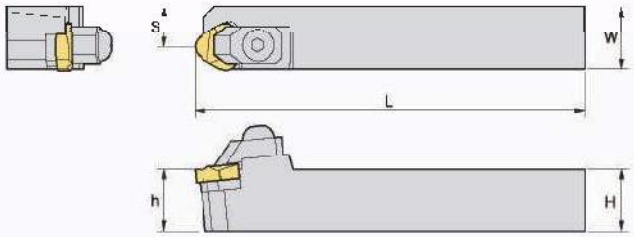
Inserts

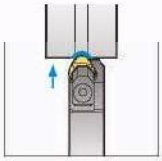
Application	Picture	Designation	Cermet		Dimensions (mm)				Configuration
			CN20	CN2000	r	d	d_1	t	
Internal turning		**RPGT0802M0**			-	8	3.4	2.38	
		RPGT1203M0	●		-	12	4.4	3.18	
		RPGT1604M0			-	16	5.5	4.76	
		RPGT2004M0			-	20	5.5	4.76	
		**SPGR120440L**			4.0	12.7	-	4.76	
		**SPGH090330L**	●		0.0	9.525	0.4	0.10	

● : Stock item

CKFN...RW Type

KORIC





R type insert

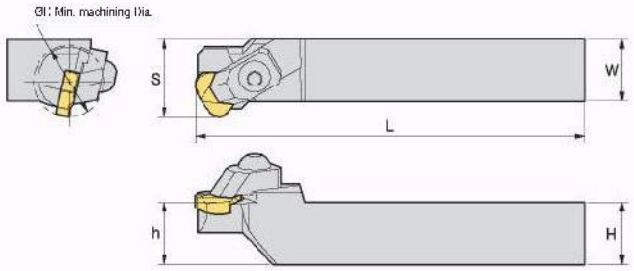
(mm)

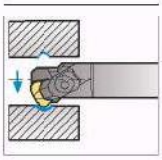
Designation		Stock R	Stock L	H	W	L	S	h	Inserts	Clamp	Clamp Screw	Shim	Shim Screw	Wrench
CKFNR/L	2020B-L22RW			20	20	140	12.5	20	KORIC2204R/L	CH6N1B	BHA0620	ST42CB	SS0408	HW5CL
	2022B-L27RW			20	22	140	13	20	KORIC2704R/L	CH8R/L-B	BHA0820	ST52CB	SS0408	HW6CL
	2025B-L33RW			20	25	140	16	20	KORIC3306R/L	CH8R/L-B	BHA0820	ST62CB	SS0408	HW6CL
	2533B-L44RW			25	33	140	21	25	KORIC4408R/L	CH8R/L-B	BHA0820	ST82CB	SS0408	HW6CL

● : Stock item

CKGN...RW Type

KORIC





R type insert

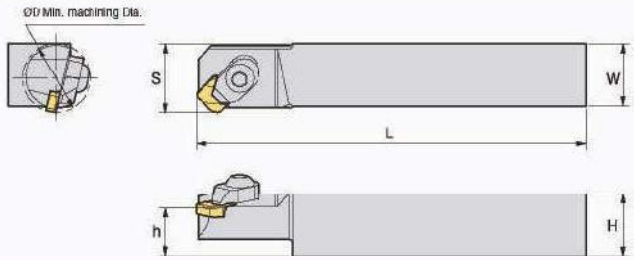
(mm)

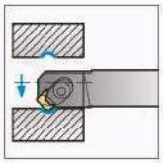
Designation		Stock	ØD	H	W	L	S	h	Inserts	Clamp	Clamp Screw	Shim	Shim Screw	Wrench
CKGNR	2022B-L22RW-D23		23	20	22	140	30	20	KORIC2204R/L	CH6R/L3B	BHA0620	ST42CB	SS0408	HW5CL
	2022B-L27RW-D29		29	20	22	140	34	20	KORIC2704R/L	CH6R/L7B	BHA0620	ST52CB	SS0408	HW5CL
	2025B-L33RW-D38		38	20	25	140	33	20	KORIC3306R/L	CH6R/L5B	BHA0620	ST62CB	SS0408	HW5CL
	2528B-L38RW-D50		50	25	28	140	46	25	KORIC3806R/L	CH8R/L2B	BHA0820	ST72CB	SS0408	HW6CL
	2528B-L44RW-D52		52	25	28	140	50	25	KORIC4408R/L	CH8R/L2B	BHA0820	ST82CB	SS0408	HW6CL

● : Stock item

CSGN...RW Type

SNGN





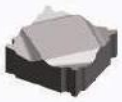
R type insert

(mm)

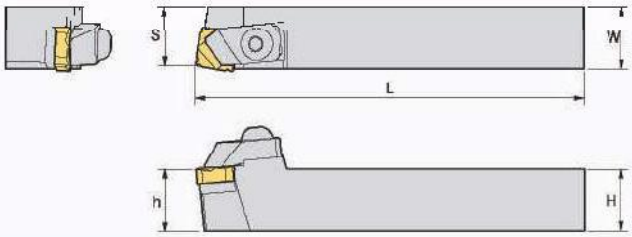
Designation		Stock R	Stock L	ØD	H	W	L	S	h	Inserts	Clamp	Clamp Screw	Wrench
CSGNR/L	2020B-L09RW-D17			17	20	20	140	22	20	SNGN0903WR/L	C-5R1	CHX05-0	HW30_
	2020B-L09RW-D22			22	20	20	140	22	20	SNGN0903WR/L	C-5R1	CHX05-0	HW30_

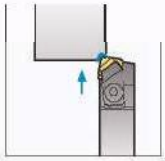
● : Stock item

CSBN...BS Type



SNGN





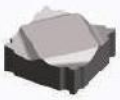
R type insert

(mm)

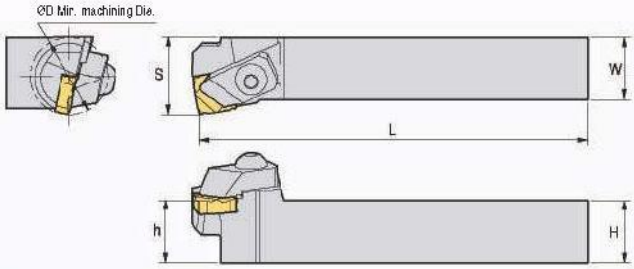
Designation		Stock R	Stock L	H	W	L	S	h	Inserts	Clamp	Clamp Screw	Shim	Shim Screw	Wrench
CSBNR/L	2023B-L12BS			20	23	140	21	20	SNGN1204SR/L	CH6N1B	BHA0620	SS42CB	SS0308	HW50L
	2525B-L15BS			25	25	140	23	25	SNGN1504SR/L	CH6N1B	BHA0620	SS52CB	SS0408	HW50L

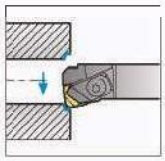
● : Stock Item

CSKN...BS Type



SNGN





R type insert

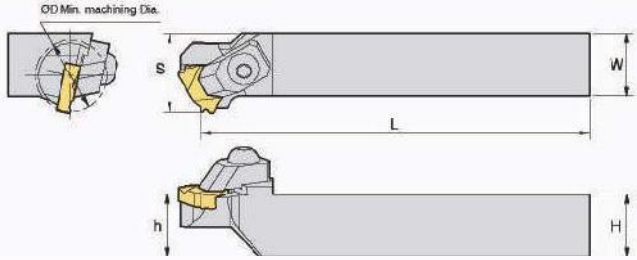
(mm)

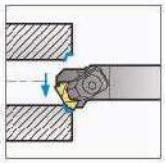
Designation		Stock R	Stock L	ØD	H	W	L	S	h	Inserts	Clamp	Clamp Screw	Shim	Shim Screw	Wrench
CSKNR/L	1622B-L09BS-D14			14	16	22	140	16	16	SNGN0903SR/L	CH6R/L2B	BHA0620	-	-	HW50L
	2022B-L12BS-D26			26	20	22	140	27	20	SNGN1204SR/L	CH6R/L1B	BHA0620	SS42CB	SS0308	HW50L
	2525B-L15BS-D35			35	25	25	140	31	25	SNGN1504SR/L	CH6R/L3B	BHA0620	SS52CB	SS0408	HW50L

● : Stock Item

CTGN...BS Type

TNGN





R type insert

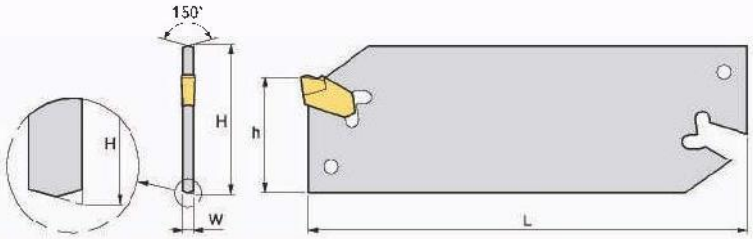
(mm)

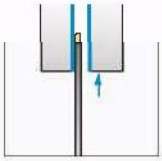
Designation		Stock R	Stock L	ØD	H	W	L	S	h	Inserts	Clamp	Clamp Screw	Shim	Shim Screw	Wrench
CTGNR/L	2021B-K22BS-D25			25	20	21	140	30	20	TNGN2204SR/L	CH6R/L7B	BHA0620	ST42CB	SS0408	HW50L

● : Stock Item

SPB-S Type

SP



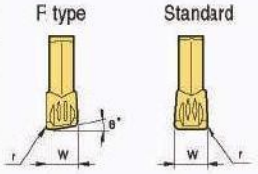


(mm)

Designation		Stock	H	W	L	h	Inserts	Wrench
SPB	1626-S		25	1.3	150	21	SP160	SW15S
	1826-S		25	1.5	150	21	SP180	
	226-S	●	25	1.6	150	21	SP200, SP200RL	
	326-S	●	25	2.4	150	21	SP300, SP300RL	
	426-S	●	25	3.2	150	21	SP400, SP400RL	
	526-S		25	4.0	150	21	SP500, SP500RL	
	626-S		25	5.2	150	21	SP600, SP600RL	
	1632-S		32	1.3	150	25	SP160	
	1832-S		32	1.5	150	25	SP180	
	232-S	●	32	1.6	150	25	SP200, SP200RL	
	332-S	●	32	2.4	150	25	SP300, SP300RL	
	432-S	●	32	3.2	150	25	SP400, SP400RL	
	532-S	●	32	4.0	150	25	SP500, SP500RL	
	632-S	●	32	5.2	150	25	SP600, SP600RL	

● : Stock item

Inserts

Application	Picture	Designation		Coated											Uncoated	Dimensions (mm)			Configuration
				NC3120	NC3220	NC3030	NCM325	NC5330	NC9020	PC3500	NC500H	PC8110	PC5300	PC9030	PC8510	A30	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	

F type

Standard

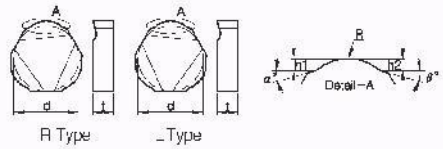
L type

W = ±0.1

● : Stock item

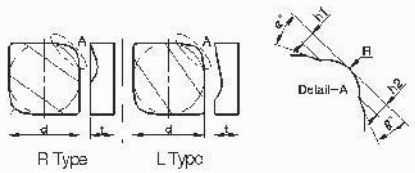
Machining Race-way

KORIC... R/L Type



		d	t	R	h1	h2	α°	β°
KORIC	2204R/L	12.7	4.76					
	2704R/L	15.875	4.76					
	3306R/L	19.05	6.0					
	3806R/L	22.225	6.0					
	4408R/L	25.4	8.0					

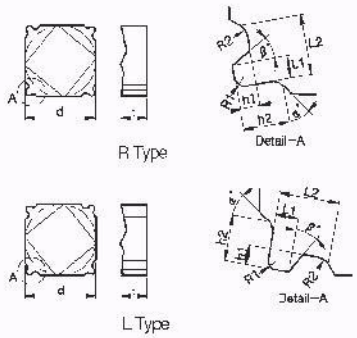
SNGN... WR/L Type



		d	t	R	h1	h2	α°	β°
SNGN	0903WR/L	9.525	3.18					
	1504WR/L	15.875	4.76					
	1905WR/L	19.05	5.56					

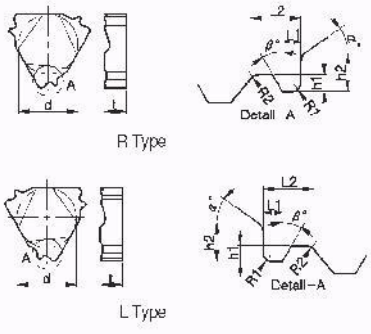
Machining for Bearing shield

SNGN...SR/L Type

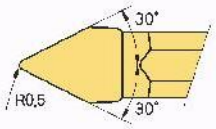
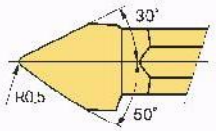
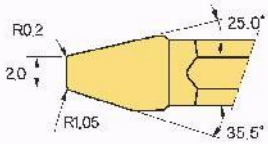
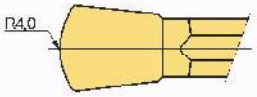
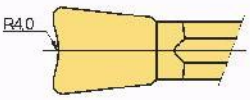
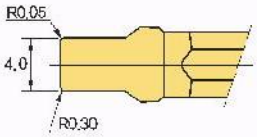
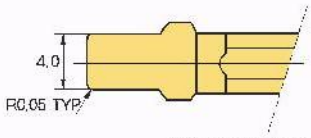
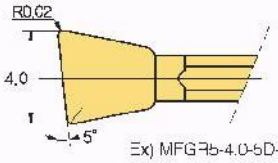
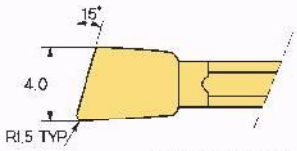
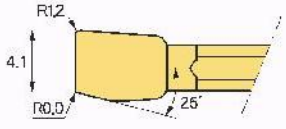


		d	t	L1	L2	h1	h2	R1	R2	α°	β°
SNGN	0903SR/L	9.525	3.18								
	1204SR/L	12.7	4.76								
	1504SR/L	15.875	4.76								

TNGN...SR/L Type



		d	t	L1	L2	h1	h2	R1	R2	α°	β°
TNGN	02204SR/L	12.7	4.76								

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

Code system

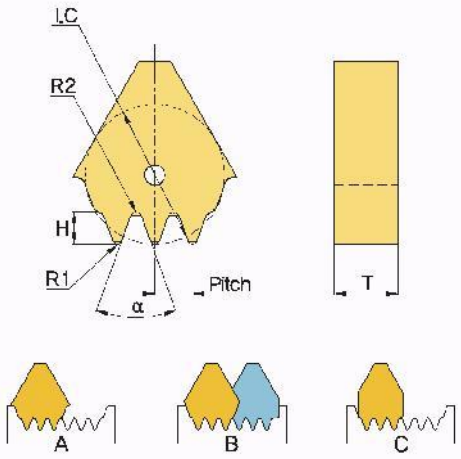
KP	27	064	-	R0.425	N3
KORLOY PULLEY	ØD	W		R1	No. of flutes

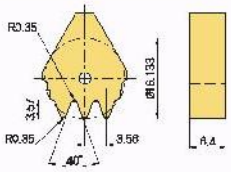
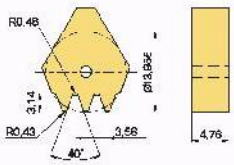
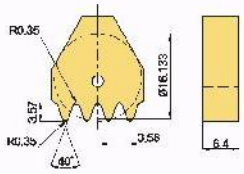
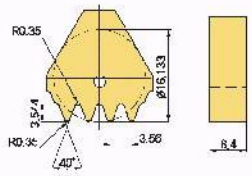
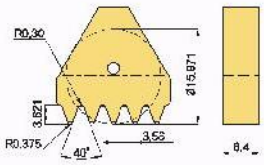
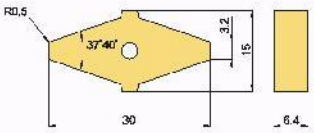
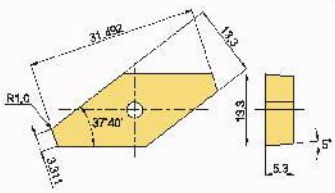
■ Ex)

I.C	T	R	Z
Ø 12.7	6.4	0.425	3

▶ Special types are available for quotation

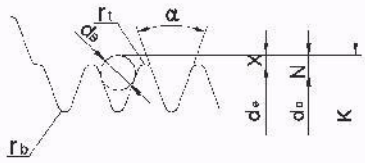
Insert for machining of pulley



Standard designation	Specifications
KP27064-R0.35-N3 (DF356-3B)	
KP27064-R0.43-N3 (DF356-3SR)	
KP27064-R0.35-N4 (DF356-4B)	
KP27064-R0.35-N4-A (DF356-4X)	
KP27064-R0.375-N5 (DF356-5B)	
UF320	
VF13M522	

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

Diameter



- d_e : Effective diameter
- d_p : Outer diameter
- K : Diameter of ball or rod
- d_s : 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 groove		1.3±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°
r1	Min.	0.15	0.2	0.25	0.4	0.75
rb	Max.	0.3	0.4	0.5	0.4	0.75
dB	±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