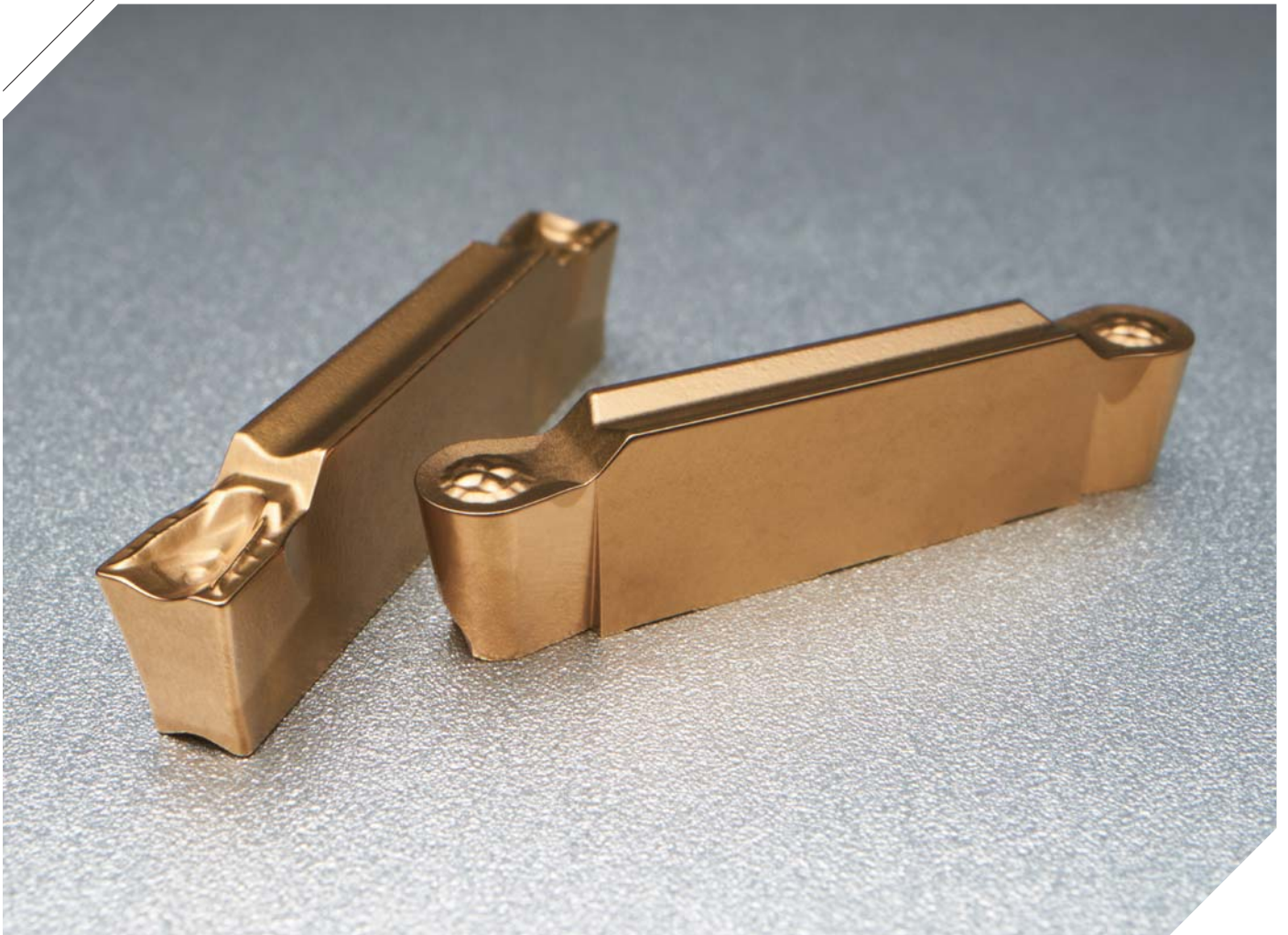


# KGT

**Multi-functional Grooving and Parting tool for high precision and high quality cutting**

- Chip breaker with good chip control and cutting performance
- Providing customers with the optimal cutting solutions they need



## Multi-functional Grooving and Parting tool for high precision and high quality cutting

# KGT

Grooving and cutting processes are used in various machining and cutting applications, and recently, there is a need for tools ensuring stable performance even in high-speed, high-precision machining to enhance productivity.

In addition, slim and long Grooving and cutting tools are vulnerable to wear, chipping, and breakage due to vibrations generated during high-speed, high-precision machining.

**KTG Inserts** are applied reinforced edge design and high-quality edge treatment to protect the cutting edge and to realize stable performance in various machining conditions. As a result, they achieve excellent surface finish with dimensional precision and provide superior performance in high-speed and high-precision machining.

**KTG Holders** provide high machining stability and long tool life by effectively suppressing vibrations generated during machining through a clamping system.

The KGT offers a wide range of inserts and holders suitable for Grooving, Cutting, Turning, Profiling, and relief machining and provides customers with the optimal machining solutions they need.

.....

» **Good chip control**

- Various chip breakers for excellent chip evacuation

» **High cutting performance**

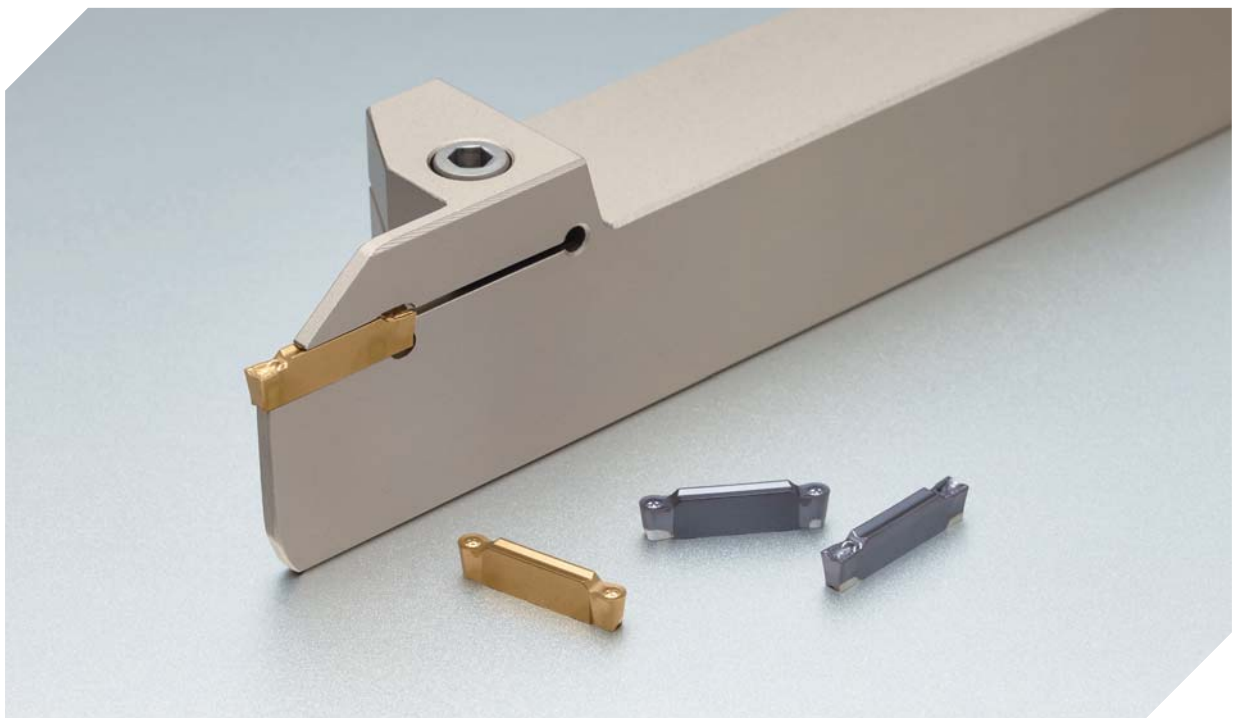
- High surface finish and high precision

» **Stable clamping system**

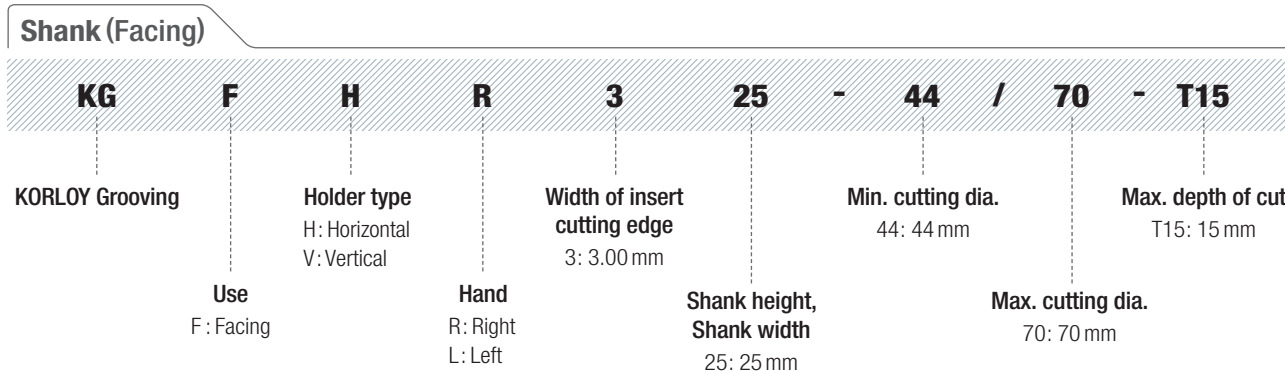
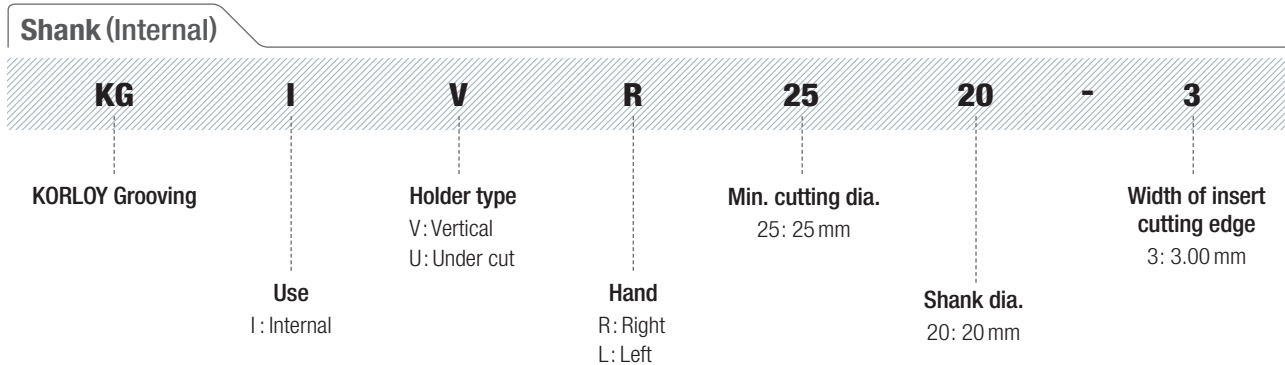
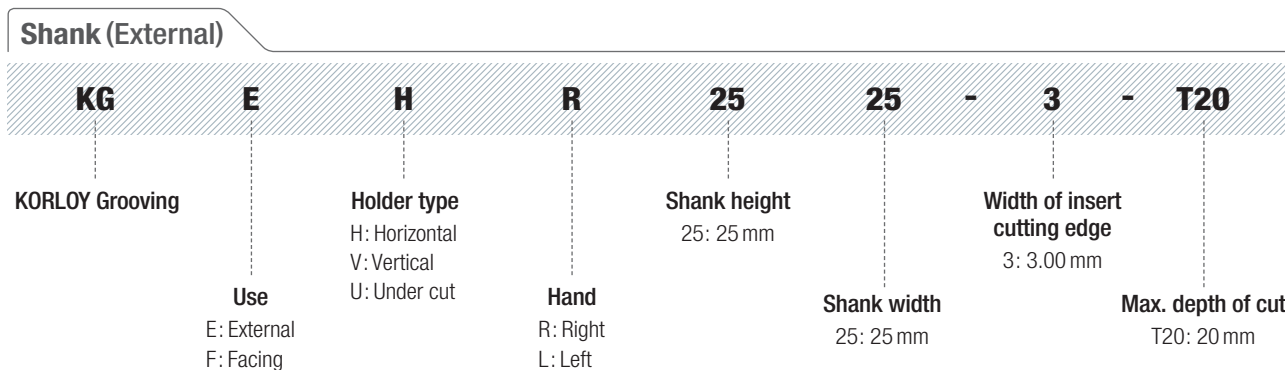
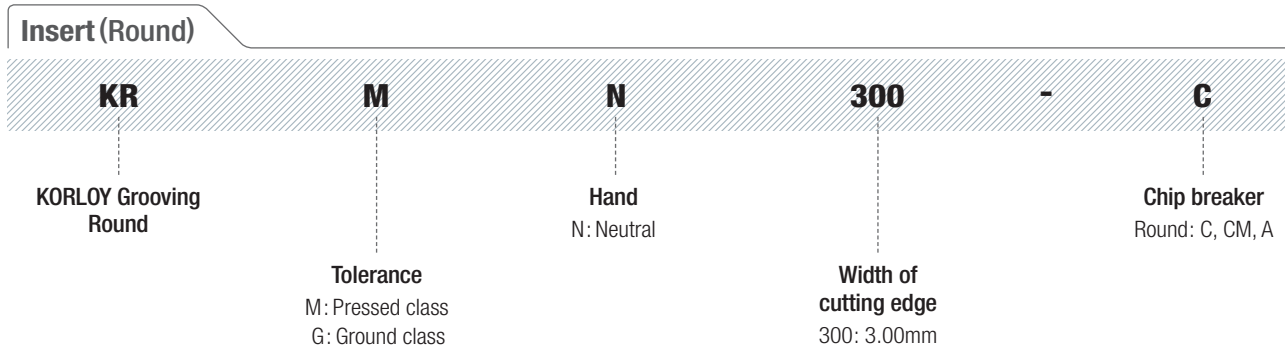
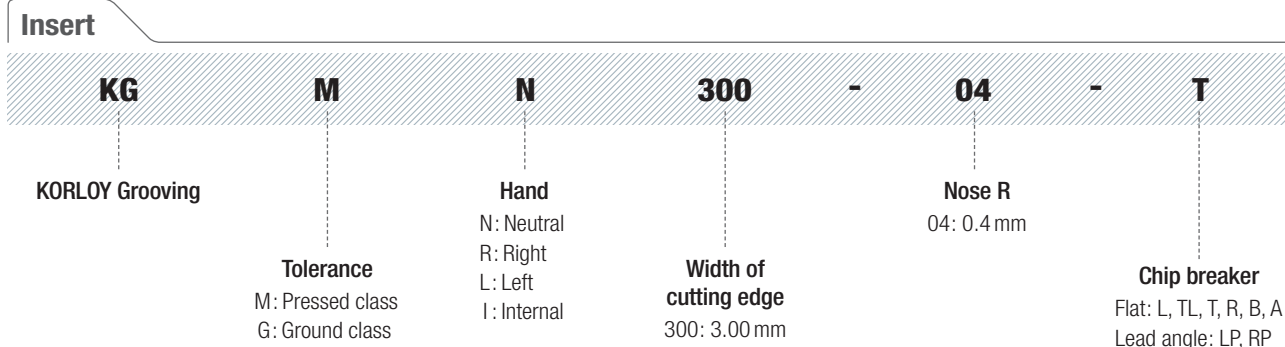
- Minimized chattering in cutting through clamp clamping

» **Optimal machining solutions**

- Providing the optimal cutting solution in various cutting conditions

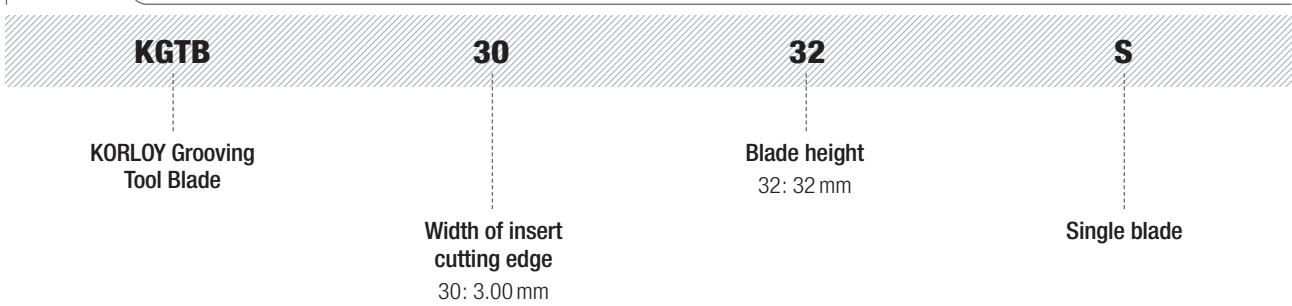


## Code system

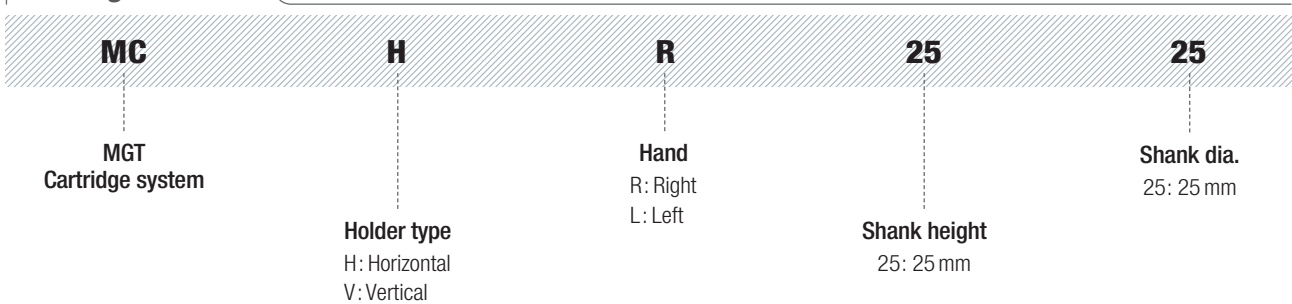


## Code system

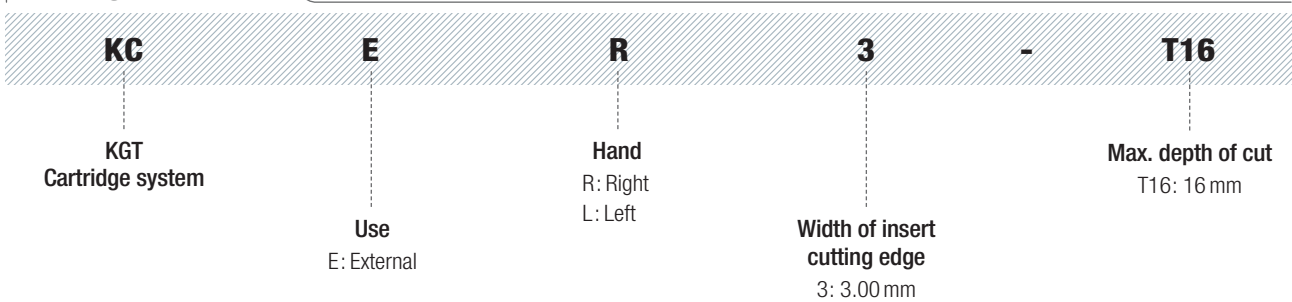
### Blade



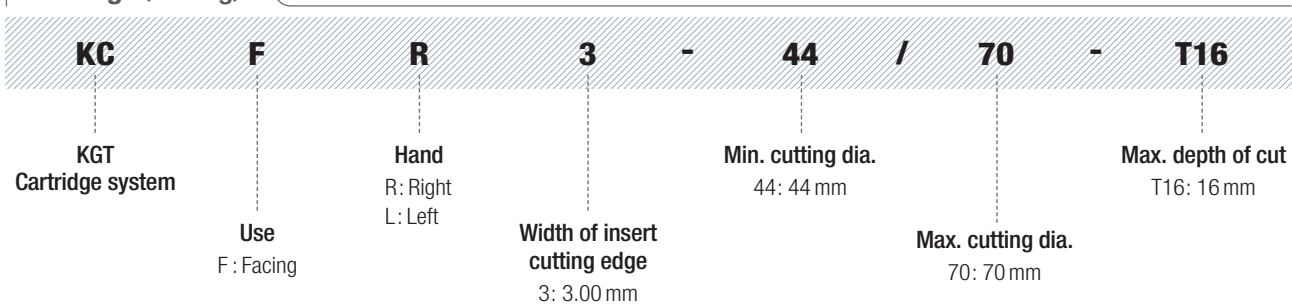
### Cartridge (Holder)



### Cartridge (External)



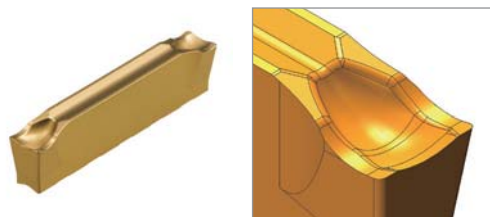
### Cartridge (Facing)



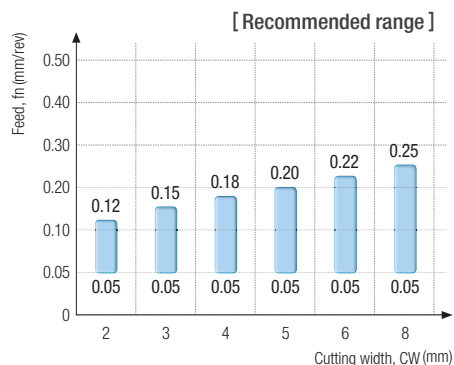
# Features of Chip breaker

⊙: 1<sup>st</sup> recommendation ○: 2<sup>nd</sup> recommendation

## L : Light grooving



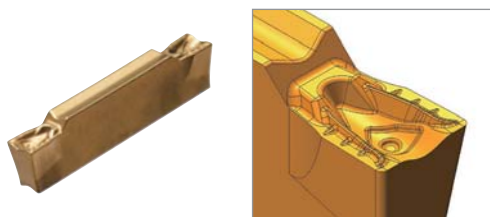
- For Grooving and Parting
- Concave cutting edge
- Concave rake surface
- Low hardness workpiece
- Small diameter part cutting



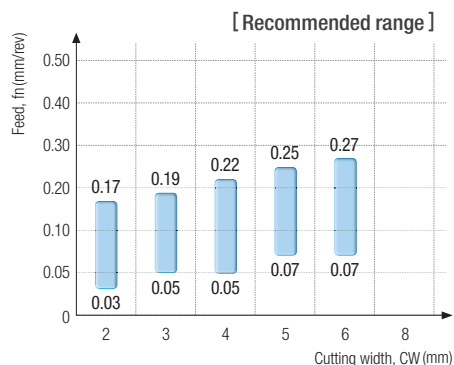
Recommended cutting											
External					Internal				Facing		Special
Grooving	Parting	Turning	Copying	Relief	Grooving	Turning	Copying	Relief	Grooving	Turning	
⊙	○					○				○	

Recommended workpiece				
P	M	K	N	S
⊙	○			

## TL : Turning and grooving in Low feed New



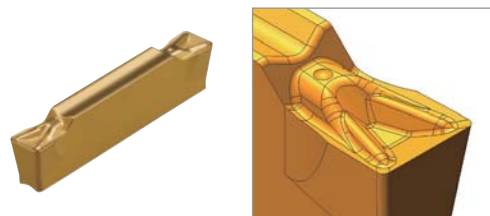
- For Grooving, Cutting and Parting
- Concave cutting edge
- Concave bump
- For HRSA cutting
- Good chip control



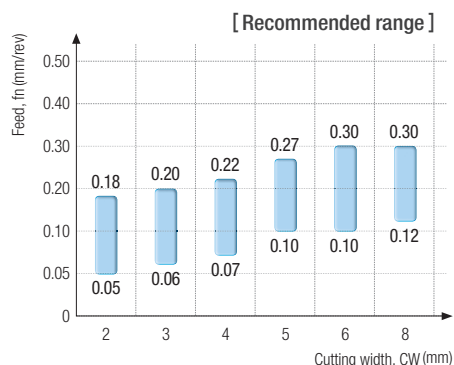
Recommended cutting											
External					Internal				Facing		Special
Grooving	Parting	Turning	Copying	Relief	Grooving	Turning	Copying	Relief	Grooving	Turning	
⊙	○	○				○	○			⊙	○

Recommended workpiece				
P	M	K	N	S
○	○			⊙

## T : Turning and grooving



- For Grooving, Cutting and Parting
- Straight cutting edge
- Concave bump
- For various workpiece cutting
- Good chip control



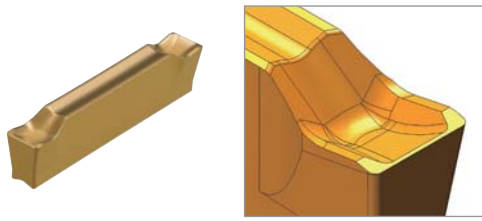
Recommended cutting											
External					Internal				Facing		Special
Grooving	Parting	Turning	Copying	Relief	Grooving	Turning	Copying	Relief	Grooving	Turning	
⊙	○	⊙				○	○			⊙	⊙

Recommended workpiece				
P	M	K	N	S
⊙	○	○		

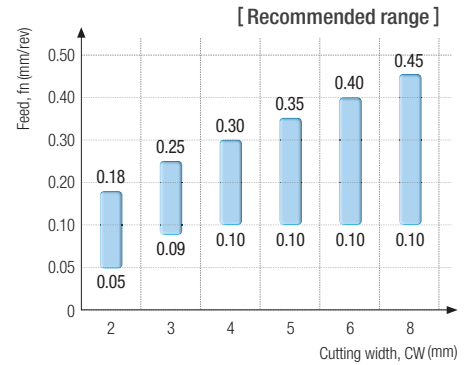
# Features of Chip breaker

⊙: 1<sup>st</sup> recommendation ○: 2<sup>nd</sup> recommendation

## R : Rough grooving



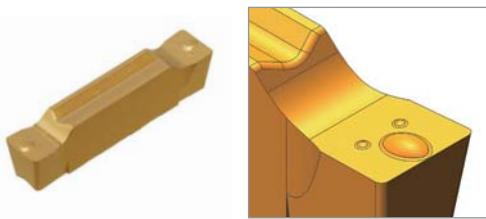
- For Grooving and Parting
- Straight cutting edge
- Hard cutting edge
- High hardness workpiece
- For high feed cutting



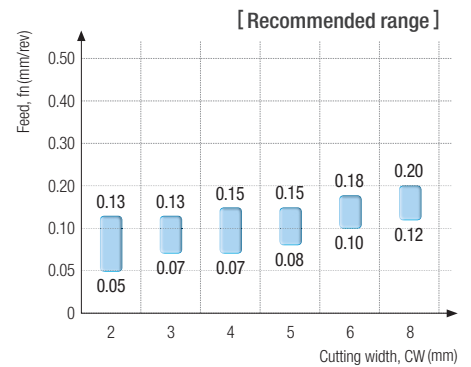
Recommended cutting											
External					Internal				Facing		Special
Grooving	Parting	Turning	Copying	Relief	Grooving	Turning	Copying	Relief	Grooving	Turning	
⊙	○					○				○	

Recommended workpiece				
P	M	K	N	S
⊙	○	⊙		

## B : Blank for precision grooving



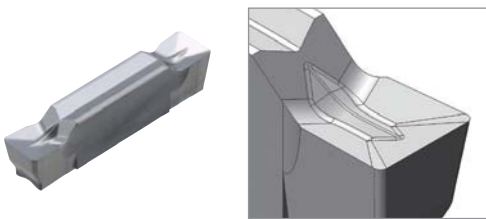
- For Grooving
- Straight cutting edge
- Special shape
- Good surface finish of workpiece



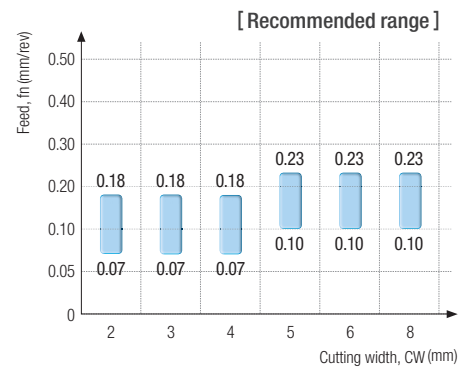
Recommended cutting											
External					Internal				Facing		Special
Grooving	Parting	Turning	Copying	Relief	Grooving	Turning	Copying	Relief	Grooving	Turning	
⊙											⊙

Recommended workpiece				
P	M	K	N	S
⊙		○		

## A : Aluminum grooving



- For Grooving, Parting and Turning
- Straight cutting edge
- Aluminum workpiece
- Good surface finish of workpiece



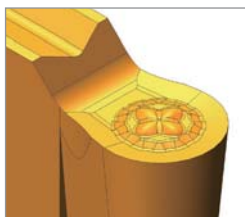
Recommended cutting											
External					Internal				Facing		Special
Grooving	Parting	Turning	Copying	Relief	Grooving	Turning	Copying	Relief	Grooving	Turning	
⊙	○	○				○					

Recommended workpiece				
P	M	K	N	S
			⊙	

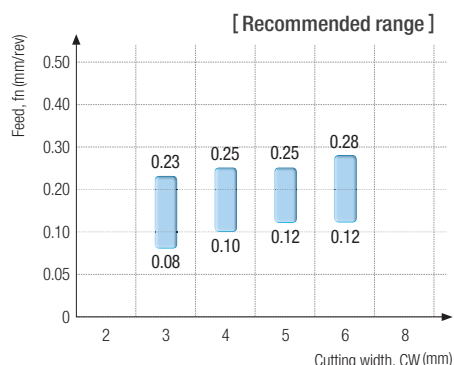
## Features of Chip breaker

### CM : Copying and relief in Medium feed New

⊙: 1<sup>st</sup> recommendation ○: 2<sup>nd</sup> recommendation



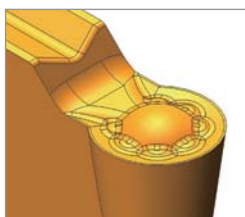
- For Copying and Relief
- Round cutting edge
- Bump on rake surface
- For HRSA cutting
- Good surface finish of workpiece



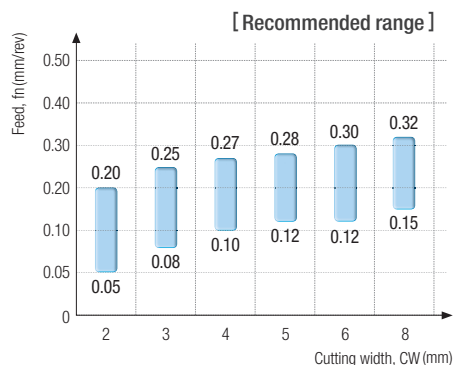
Recommended cutting											
External					Internal				Facing		Special
Grooving	Parting	Turning	Copying	Relief	Grooving	Turning	Copying	Relief	Grooving	Turning	
			⊙	⊙			○	○			

Recommended workpiece				
P	M	K	N	S
○	○			⊙

### C : Copying and relief



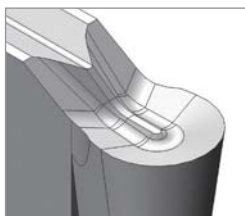
- For Copying and Relief
- Round cutting edge
- Bump on rake surface
- Good surface finish of workpiece



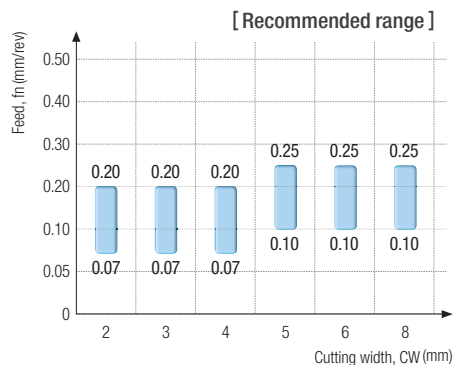
Recommended cutting											
External					Internal				Facing		Special
Grooving	Parting	Turning	Copying	Relief	Grooving	Turning	Copying	Relief	Grooving	Turning	
			⊙	⊙			○	○			

Recommended workpiece				
P	M	K	N	S
⊙	○	○		

### A : Aluminum grooving



- For Copying and Relief
- Round cutting edge
- Aluminum workpiece
- Good surface finish of workpiece



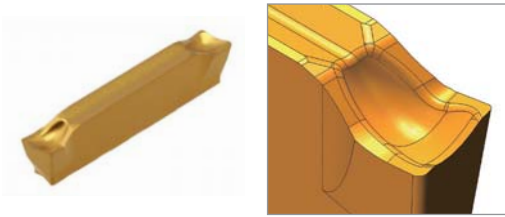
Recommended cutting											
External					Internal				Facing		Special
Grooving	Parting	Turning	Copying	Relief	Grooving	Turning	Copying	Relief	Grooving	Turning	
			⊙	⊙			○	○			

Recommended workpiece				
P	M	K	N	S
			⊙	

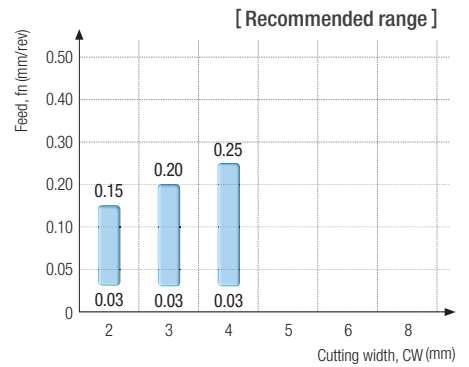
# Features of Chip breaker

⊙: 1<sup>st</sup> recommendation ○: 2<sup>nd</sup> recommendation

## LP : Light Parting



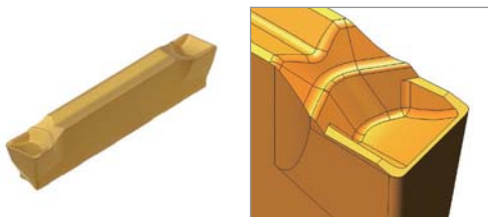
- For Parting
- Lead angle cutting edge
- Concave rake surface
- Low hardness workpiece
- Small diameter part cutting



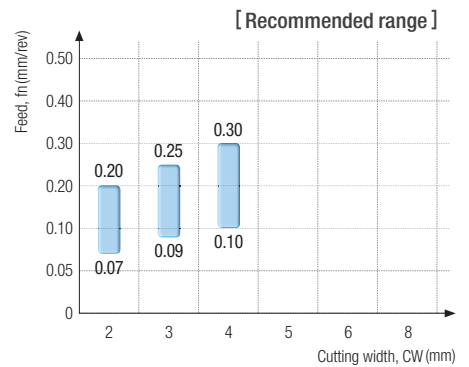
Recommended cutting											
External					Internal				Facing		Special
Grooving	Parting	Turning	Copying	Relief	Grooving	Turning	Copying	Relief	Grooving	Turning	
	⊙										

Recommended workpiece				
P	M	K	N	S
⊙	○			

## RP : Rough Parting



- For Parting
- Lead angle cutting edge
- Hard cutting edge
- High hardness workpiece
- Good for high feed cutting































Recommended cutting											
External					Internal				Facing		Special
Grooving	Parting	Turning	Copying	Relief	Grooving	Turning	Copying	Relief	Grooving	Turning	
	⊙										

Recommended workpiece				
P	M	K	N	S
⊙		○		



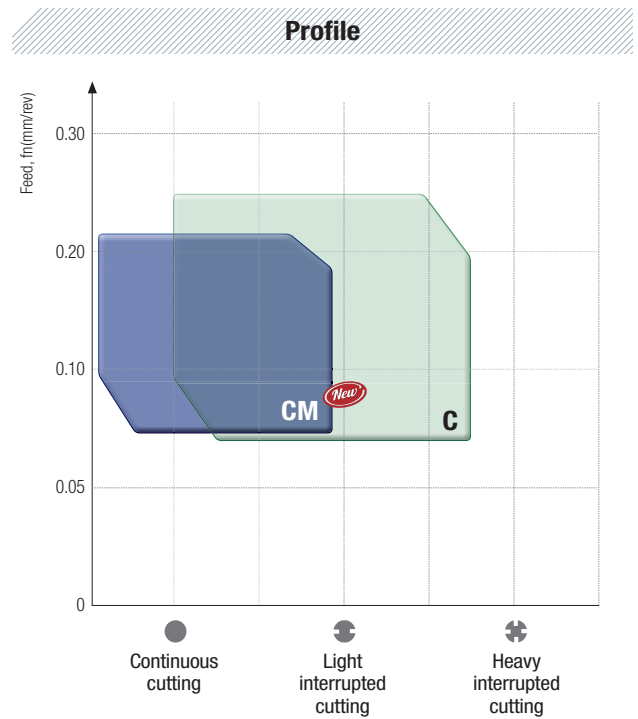
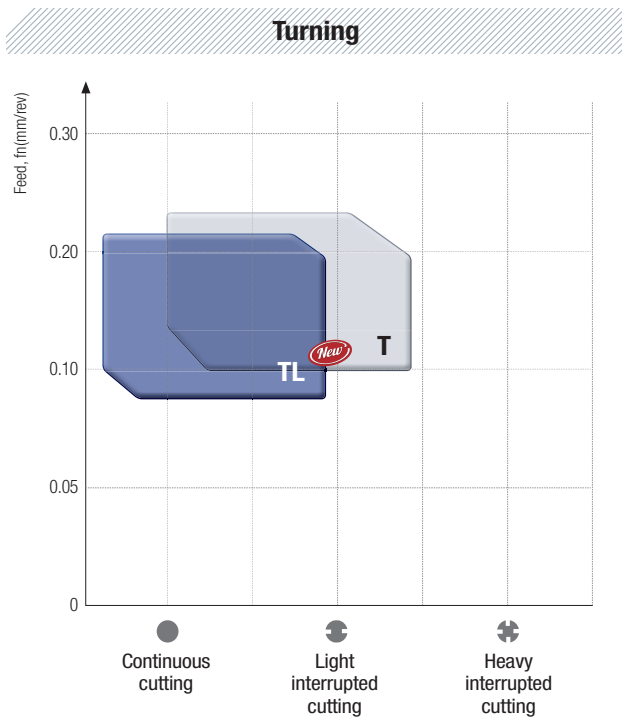
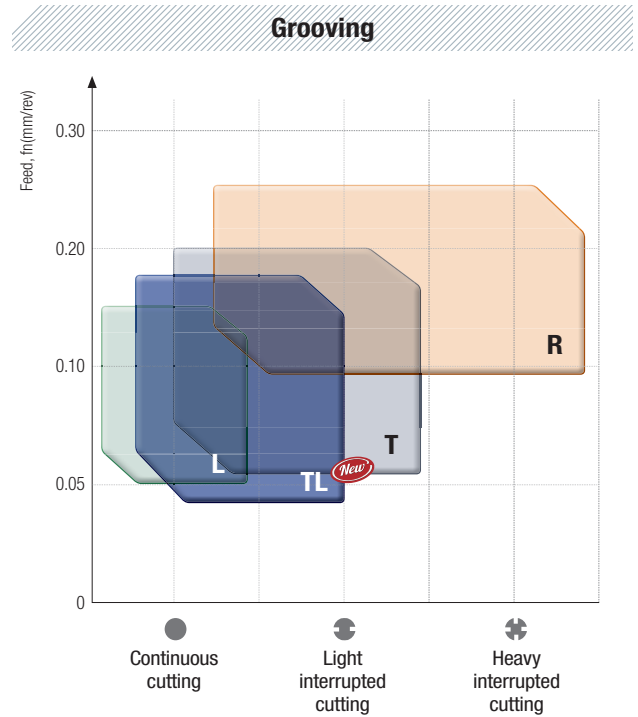
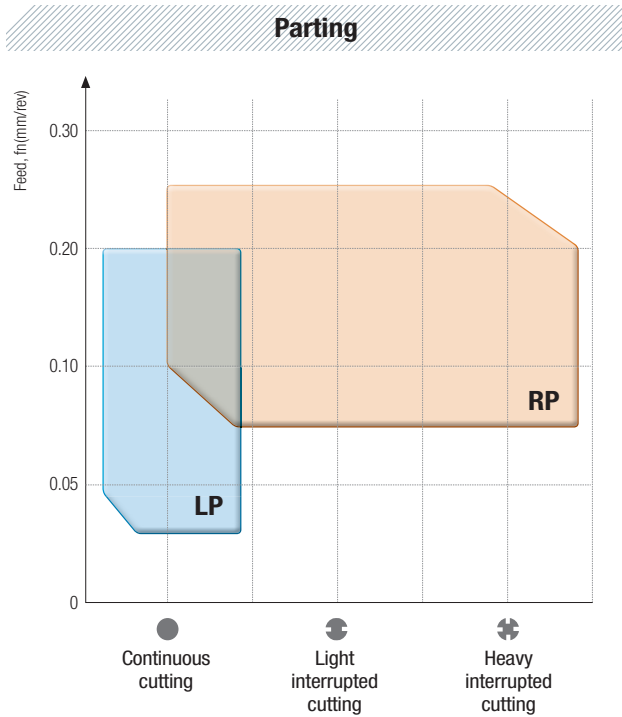
 Recommended insert for use

⊙: 1<sup>st</sup> recommendation ○: 2<sup>nd</sup> recommendation

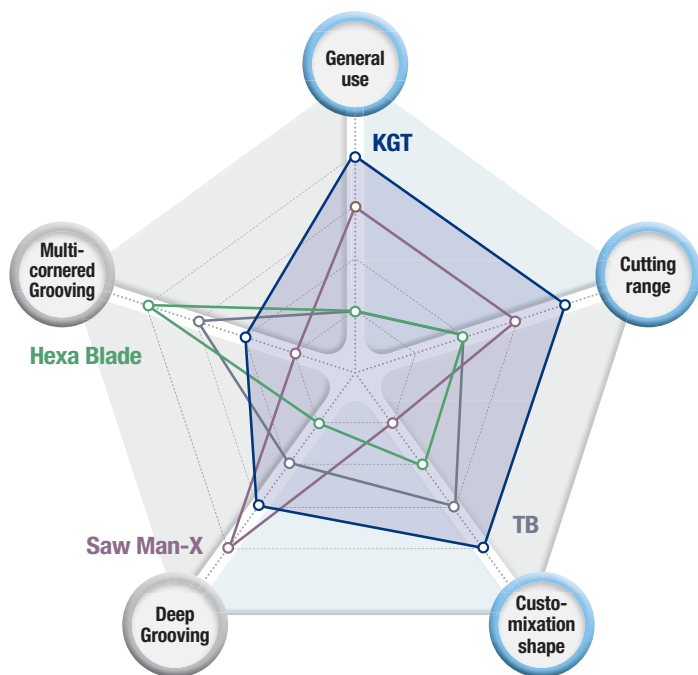
Type	Chip breaker	Cross section type	Recommended workpiece					Recommended cutting															
			P	M	K	N	S	External					Internal				Facing		Special				
								Grooving	Parting	Turning	Copying	Relief	Grooving	Turning	Copying	Relief	Grooving	Turning					
KGMN	L 		⊙	○				⊙	○							○					○		
	TL 		○	○			⊙	⊙	○	○					○	○				⊙	○		
	T 		⊙	○	○			⊙	○	⊙					○	○				⊙	⊙		
	R 		⊙	○	⊙			⊙	○						○					○			
KGGN	B 		⊙		○			⊙														⊙	
	A 					⊙		⊙	○	○				○									
	R 		⊙	○	⊙			⊙	○						○					○			
KGMI	T 		⊙	○	○										⊙	⊙							
KGMN/L	LP 		⊙	○					⊙														
	RP 		⊙		○				⊙														
KRMN	C 		⊙	○	○							⊙	⊙			○	○						
KRGN	A 					⊙						⊙	⊙			○	○						
	CM 		○	○			⊙					⊙	⊙			○	○						
KRMI	C 		⊙	○	○											⊙	⊙						

# ✓ Cutting range

Cutting width (mm) = Based on 3

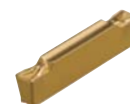


## Tool selection guide



### KGT

- 2 cornered insert
- Various applications
- For general use



### Saw Man-X

- 1 cornered insert
- Optimal for interrupted and high feed Parting
- Deep Grooving



### TB

- Precision typed and 3 cornered insert
- Optimal for automatic cutting
- Precision Grooving



### Hexa Blade

- Precision typed and 6 cornered insert
- High cost efficiency
- Precision Grooving and multi-cornered Grooving



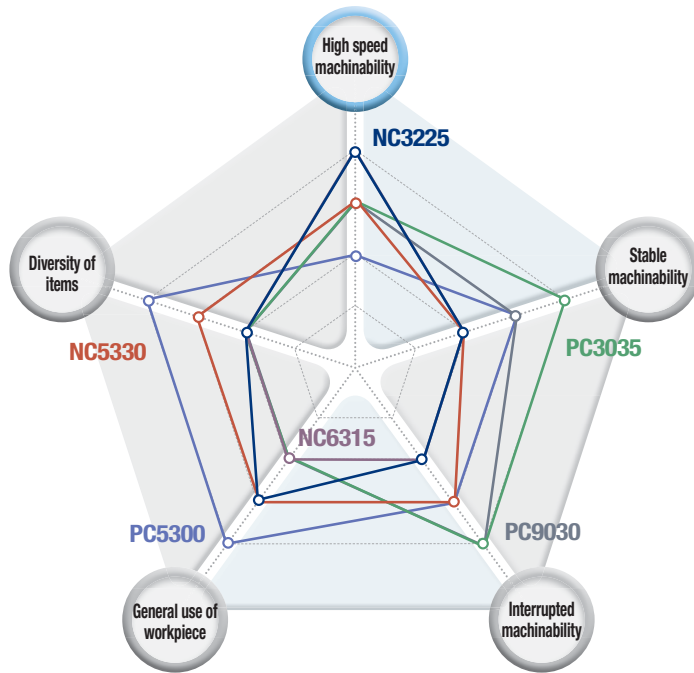
Tool	General use	Cutting range	Customisation shape	Deep Grooving	Multi-cornered Grooving
KGT	★★★★★	★★★★★	★★★★★	★★★	★★
Saw Man-X	★★★	★★★	★	★★★★★	★
TB	★	★★	★★★★	★★	★★★★
Hexa Blade	★	★★	★★	★	★★★★★

## Cutting width and cutting depth by tools

⊙: 1<sup>st</sup> recommendation ○: 2<sup>nd</sup> recommendation

Tool	Cutting width (mm)				No. of edge	Machining				Features
	2	4	6	8		External	Internal	Facing	Parting	
	Cutting depth maximum (mm)									
KGT	1.5	8	28	8	2	⊙	○	○	⊙	<ul style="list-style-type: none"> <li>• For various kinds of cutting</li> <li>• For general cutting range</li> </ul>
Saw Man-X	2	6	60	60	1	○			⊙	<ul style="list-style-type: none"> <li>• Various lead angles</li> <li>• Minimizing burr</li> </ul>
TB	1.25	6	6.5	6	3	⊙			○	<ul style="list-style-type: none"> <li>• Precision type</li> <li>• Optimal for automated machining</li> </ul>
Hexa Blade	1.78	4	5	4	6	⊙			○	<ul style="list-style-type: none"> <li>• Precision type</li> <li>• High cost efficient cutting</li> </ul>

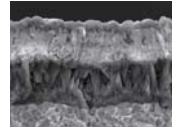
## Grade selection guide



### NC3225

P M K N S

- CVD coating, general Steel and forged Steel
- High speed wear resistance



### NC6315

P M K N S

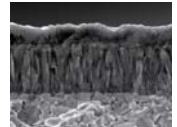
- CVD coating, Gray cast iron and Ductile cast iron general machining
- Rake surface wear, excessive flank wear, burr and chipping suppression



### NC5330

P M K N S

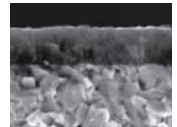
- CVD coating, universal grade
- Good high speed stability



### PC3035

P M K N S

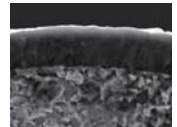
- PVD coating, exclusive Steel Cutting and Grooving
- Good wear resistance and cutting stability



### PC9030

P M K N S

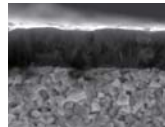
- PVD coating, medium to roughing interrupted cutting for Stainless steel
- Good chipping resistance and welding resistance



### PC5300

P M K N S

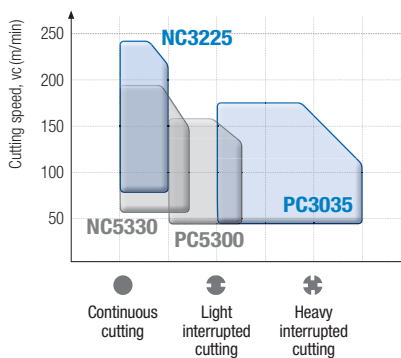
- PVD coating, universal grade
- Good interrupted- efficiency machining and wear resistance



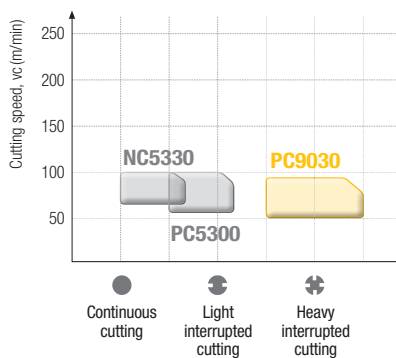
Type	High speed machinability	Stable machinability	Interrupted machinability	General use of workpiece	Diversity of items
NC3225	★★★★★	★★	★★	★★★★	★★
NC6315	★★★★★	★★	★★	★★	★★
NC5330	★★★	★★	★★★★	★★★★	★★★★
PC3035	★★★	★★★★★	★★★★★	★★	★★
PC9030	★★★	★★★	★★★★★	★★	★★
PC5300	★★	★★★	★★★	★★★★★	★★★★★

## Grade application range

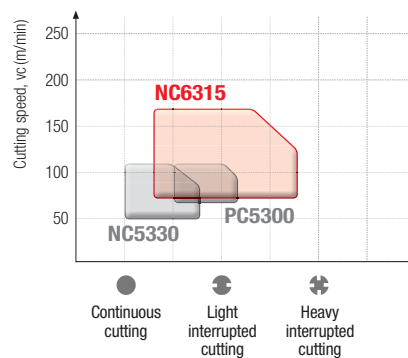
### P Steel



### M Stainless steel



### K Cast iron



# Recommended cutting conditions

Cutting width (mm) = Based on 3

Workpiece						Grade						Chip breaker									
						CVD			PVD			Grooving					Turning				
ISO	Workpiece material	ISO	AISI	Brinell hardness (HB)	NC3225	NC5330	NC6315	PC3035	PC5300	PC9030	L	TL	T	R	C	CM	TL	T	C	CM	
					vc (m/min)						fn (mm/rev)					fn (mm/rev)					
P	Carbon steel	C = 0.10 ~0.25%	C25	1025	125	210	160	-	100	110	-	0.15	0.12	0.15	0.25	0.20	0.16	0.19	0.20	0.25	0.23
						<b>230</b>	<b>170</b>	-	<b>140</b>	<b>140</b>	-	<b>0.10</b>	<b>0.10</b>	<b>0.11</b>	<b>0.17</b>	<b>0.15</b>	<b>0.13</b>	<b>0.17</b>	<b>0.16</b>	<b>0.20</b>	<b>0.18</b>
						240	190	-	180	170	-	0.05	0.08	0.07	0.09	0.10	0.10	0.15	0.12	0.15	0.13
		C = 0.25 ~0.55%	C35	1035	160	200	140	-	95	100	-	0.15	0.12	0.15	0.25	0.20	0.16	0.19	0.20	0.25	0.23
						<b>210</b>	<b>160</b>	-	<b>130</b>	<b>130</b>	-	<b>0.10</b>	<b>0.10</b>	<b>0.11</b>	<b>0.17</b>	<b>0.15</b>	<b>0.13</b>	<b>0.17</b>	<b>0.16</b>	<b>0.20</b>	<b>0.18</b>
						220	170	-	180	160	-	0.05	0.08	0.07	0.09	0.10	0.10	0.15	0.12	0.15	0.13
	C = 0.55 ~0.80%	C55	1055	229	180	130	-	90	90	-	0.15	0.12	0.15	0.25	0.20	0.16	0.19	0.2	0.25	0.23	
					<b>200</b>	<b>150</b>	-	<b>130</b>	<b>120</b>	-	<b>0.10</b>	<b>0.10</b>	<b>0.11</b>	<b>0.17</b>	<b>0.15</b>	<b>0.13</b>	<b>0.17</b>	<b>0.16</b>	<b>0.20</b>	<b>0.18</b>	
					210	160	-	170	150	-	0.05	0.08	0.07	0.09	0.10	0.10	0.15	0.12	0.15	0.13	
	Low alloy steel ≤ 5%	Non-hardened	42CrMo4	4140	180	150	110	-	60	70	-	0.13	0.11	0.13	0.21	0.18	0.14	0.17	0.18	0.23	0.20
						<b>160</b>	<b>120</b>	-	<b>100</b>	<b>100</b>	-	<b>0.09</b>	<b>0.09</b>	<b>0.10</b>	<b>0.15</b>	<b>0.13</b>	<b>0.11</b>	<b>0.15</b>	<b>0.14</b>	<b>0.18</b>	<b>0.15</b>
		Hardened and tempered	-	4145	350	85	60	-	40	50	-	0.13	0.11	0.13	0.21	0.18	0.14	0.17	0.18	0.23	0.20
<b>90</b>						<b>70</b>	-	<b>65</b>	<b>60</b>	-	<b>0.09</b>	<b>0.09</b>	<b>0.10</b>	<b>0.15</b>	<b>0.13</b>	<b>0.11</b>	<b>0.15</b>	<b>0.14</b>	<b>0.18</b>	<b>0.15</b>	
High alloy steel > 5%	Annealed	-	D2	200	110	80	-	50	55	-	0.13	0.11	0.13	0.21	0.18	0.14	0.17	0.18	0.23	0.20	
					<b>120</b>	<b>90</b>	-	<b>80</b>	<b>75</b>	-	<b>0.09</b>	<b>0.09</b>	<b>0.10</b>	<b>0.15</b>	<b>0.13</b>	<b>0.11</b>	<b>0.15</b>	<b>0.14</b>	<b>0.18</b>	<b>0.15</b>	
	Hardened tool steel	X40CrMoV5-1	H13	352	130	100	-	120	95	-	0.05	0.07	0.07	0.09	0.08	0.08	0.13	0.10	0.13	0.10	
					90	65	-	40	40	-	0.13	0.11	0.13	0.21	0.18	0.14	0.17	0.18	0.23	0.20	
					<b>100</b>	<b>70</b>	-	<b>65</b>	<b>60</b>	-	<b>0.09</b>	<b>0.09</b>	<b>0.10</b>	<b>0.15</b>	<b>0.13</b>	<b>0.11</b>	<b>0.15</b>	<b>0.14</b>	<b>0.18</b>	<b>0.15</b>	
					110	80	-	90	80	-	0.05	0.07	0.07	0.09	0.08	0.08	0.13	0.10	0.13	0.10	
M	Austenite series	X5CrNi18-9	304	160~180	-	85	-	-	60	50	0.13	0.11	0.13	0.21	0.18	0.14	0.17	0.18	0.23	0.20	
					-	<b>90</b>	-	-	<b>80</b>	<b>70</b>	<b>0.09</b>	<b>0.09</b>	<b>0.10</b>	<b>0.15</b>	<b>0.13</b>	<b>0.11</b>	<b>0.15</b>	<b>0.14</b>	<b>0.18</b>	<b>0.15</b>	
					-	100	-	-	100	90	0.05	0.07	0.07	0.09	0.08	0.08	0.13	0.10	0.13	0.10	
		X5CrNiMo17-12-2	316	160~180	-	85	-	-	60	50	0.13	0.11	0.13	0.21	0.18	0.14	0.17	0.18	0.23	0.20	
					-	<b>90</b>	-	-	<b>80</b>	<b>70</b>	<b>0.09</b>	<b>0.09</b>	<b>0.10</b>	<b>0.15</b>	<b>0.13</b>	<b>0.11</b>	<b>0.15</b>	<b>0.14</b>	<b>0.18</b>	<b>0.15</b>	
					-	100	-	-	100	90	0.05	0.07	0.07	0.09	0.08	0.08	0.13	0.10	0.13	0.10	
K	Gray cast iron	Low tensile strength	150	No25B	≤ 212	-	105	150	-	80	-	-	-	0.13	0.21	0.18	-	0.17	0.18	0.23	0.20
						-	<b>110</b>	<b>160</b>	-	<b>100</b>	-	-	-	<b>0.10</b>	<b>0.15</b>	<b>0.13</b>	-	<b>0.15</b>	<b>0.14</b>	<b>0.18</b>	<b>0.15</b>
						-	120	170	-	120	-	-	-	0.07	0.09	0.08	-	0.13	0.10	0.13	0.10
	High tensile strength	250 350	No35B No50B	≤ 248 ≤ 277	-	85	120	-	80	-	-	-	0.13	0.21	0.18	-	0.17	0.18	0.23	0.20	
					-	<b>90</b>	<b>130</b>	-	<b>100</b>	-	-	-	<b>0.10</b>	<b>0.15</b>	<b>0.13</b>	-	<b>0.15</b>	<b>0.14</b>	<b>0.18</b>	<b>0.15</b>	
					-	100	140	-	120	-	-	-	0.07	0.09	0.08	-	0.13	0.10	0.13	0.10	
	Ductile cast iron	Ferritic	500-7	65-45-12	170~241	-	65	95	-	70	-	-	-	0.15	0.25	0.20	-	0.19	0.20	0.25	0.23
						-	<b>70</b>	<b>100</b>	-	<b>85</b>	-	-	-	<b>0.11</b>	<b>0.17</b>	<b>0.15</b>	-	<b>0.17</b>	<b>0.16</b>	<b>0.20</b>	<b>0.18</b>
						-	80	110	-	100	-	-	-	0.07	0.09	0.10	-	0.15	0.12	0.15	0.13
		Pearlitic	600-3	80-55-06	192~269	-	55	85	-	70	-	-	-	0.15	0.25	0.20	-	0.19	0.20	0.25	0.23
						-	<b>60</b>	<b>90</b>	-	<b>85</b>	-	-	-	<b>0.11</b>	<b>0.17</b>	<b>0.15</b>	-	<b>0.17</b>	<b>0.16</b>	<b>0.20</b>	<b>0.18</b>
						-	70	100	-	100	-	-	-	0.07	0.09	0.10	-	0.15	0.12	0.15	0.13
martensitic	700-2	100-70-03	229~302	-	55	85	-	70	-	-	-	0.15	0.25	0.20	-	0.19	0.20	0.25	0.23		
				-	<b>60</b>	<b>90</b>	-	<b>85</b>	-	-	-	<b>0.11</b>	<b>0.17</b>	<b>0.15</b>	-	<b>0.17</b>	<b>0.16</b>	<b>0.20</b>	<b>0.18</b>		
				-	70	100	-	100	-	-	-	0.07	0.09	0.10	-	0.15	0.12	0.15	0.13		
S	Inconel	-	-	200	-	-	-	-	30	-	-	0.09	0.10	-	0.12	0.10	0.15	0.13	0.16	0.14	
					-	-	-	-	<b>40</b>	-	-	<b>0.07</b>	<b>0.08</b>	-	<b>0.10</b>	<b>0.08</b>	<b>0.13</b>	<b>0.11</b>	<b>0.14</b>	<b>0.12</b>	
					-	-	-	-	50	-	-	0.05	0.06	-	0.08	0.06	0.11	0.09	0.12	0.10	
		-	-	350	-	-	-	-	20	-	-	0.09	0.10	-	0.12	0.10	0.15	0.13	0.16	0.14	
					-	-	-	-	<b>30</b>	-	-	<b>0.07</b>	<b>0.08</b>	-	<b>0.10</b>	<b>0.08</b>	<b>0.13</b>	<b>0.11</b>	<b>0.14</b>	<b>0.12</b>	
					-	-	-	-	40	-	-	0.05	0.06	-	0.08	0.06	0.11	0.09	0.12	0.10	
	Titanium alloy	-	-	3400	-	-	-	-	40	-	-	0.11	0.13	-	0.18	0.14	0.17	0.18	0.20	0.20	
					-	-	-	-	<b>50</b>	-	-	<b>0.09</b>	<b>0.10</b>	-	<b>0.13</b>	<b>0.11</b>	<b>0.15</b>	<b>0.14</b>	<b>0.18</b>	<b>0.15</b>	
					-	-	-	-	60	-	-	0.07	0.07	-	0.08	0.08	0.13	0.10	0.16	0.10	
		-	-	950	-	-	-	-	40	-	-	0.11	0.13	-	0.18	0.14	0.17	0.18	0.20	0.20	
					-	-	-	-	<b>50</b>	-	-	<b>0.09</b>	<b>0.10</b>	-	<b>0.13</b>	<b>0.11</b>	<b>0.15</b>	<b>0.14</b>	<b>0.18</b>	<b>0.15</b>	
					-	-	-	-	60	-	-	0.07	0.07	-	0.08	0.08	0.13	0.10	0.16	0.10	

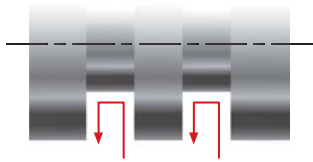
## Performance evaluation

### Multi-functional cutting

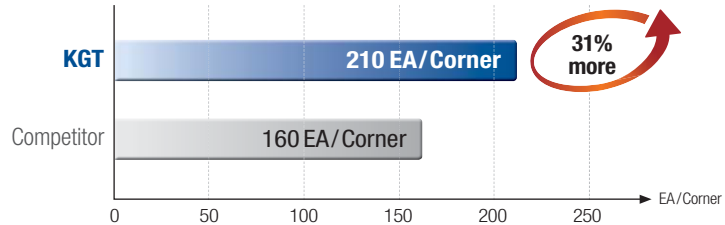
**Workpiece** Carbon steel (C45)

**Cutting condition**  $vc(m/min) = 170$ ,  $fn(mm/rev) = 0.15$ ,  $ap(mm) = 2.0$ , wet

**Tool** **Insert** KGMN300-04-T (PC5300) **Holder** KGEHR2525-3-T13



[Repeated Grooving after Turning]

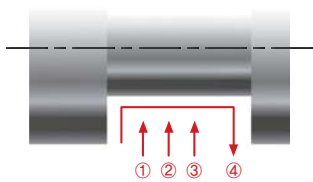


### Shaft cutting

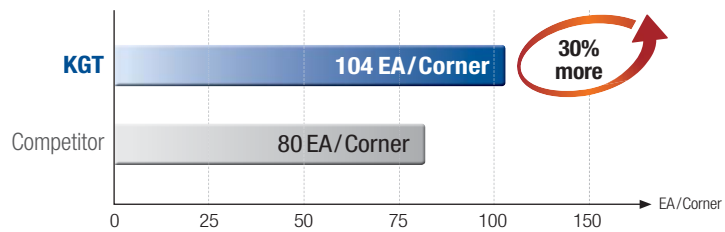
**Workpiece** Alloy steel (42CrMo4)

**Cutting condition**  $vc(m/min) = 150$ ,  $fn(mm/rev) = 0.15$ ,  $ap(mm) = 5.0$ , wet

**Tool** **Insert** KGMN300-04-T (PC5300) **Holder** KGEHR2525-3-T12



[Turning finishing after Grooving]

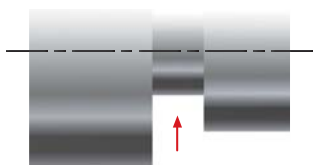


### Shaft cutting

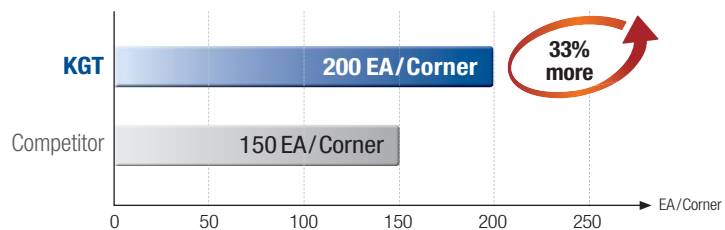
**Workpiece** Stainless steel (X5CrNi18-9)

**Cutting condition**  $vc(m/min) = 120$ ,  $fn(mm/rev) = 0.12$ ,  $ap(mm) = 5.0$ , wet

**Tool** **Insert** KGMN400-03-R (PC5300) **Holder** KGEHR2525-4-T15



[Shoulder Grooving]

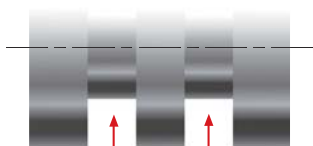


### Turbine case cutting

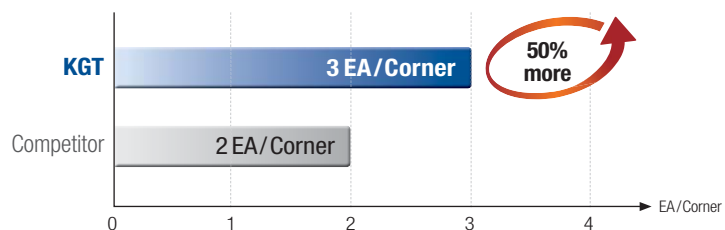
**Workpiece** HRSA (Inconel718)

**Cutting condition**  $vc(m/min) = 30$ ,  $fn(mm/rev) = 0.04$ ,  $ap(mm) = 8.5$ , wet

**Tool** **Insert** KGMN500-08-TL (UPC810) **Holder** KGEHR3232-5-T20



[Grooving]





※ AN = 7°

Picture	Designation	Coated								Uncoated		Dimension (mm)						Geometry
		NC3225	NC5330	NC6315	PC3035	PC5300	PC9030	UNC805	UPC810	H01	H05	CW	RE	INSL	BW	PSIRR	PSIRL	
	<b>KGMN</b> 200-02-L	●	●		●	●	●					2.00	0.20	20.0	1.70	-	-	
	300-02-L	●	●		●	●	●					3.00	0.20	20.0	2.30	-	-	
	400-02-L	●	●		●	●	●					4.00	0.20	20.0	3.30	-	-	
	500-03-L	●	●		●	●						5.00	0.30	25.0	4.10	-	-	
	600-03-L				●							6.00	0.30	25.0	5.10	-	-	
	<b>KGMN</b> 200-02-TL											2.00	0.20	20.0	1.70	-	-	
	200-03-TL											2.00	0.30	20.0	1.70	-	-	
	300-02-TL					●		●	●			3.00	0.20	20.0	2.30	-	-	
	300-03-TL											3.00	0.30	20.0	2.30	-	-	
	300-04-TL					●						3.00	0.40	20.0	2.30	-	-	
	400-02-TL											4.00	0.20	20.0	3.30	-	-	
	400-04-TL					●		●	●			4.00	0.40	20.0	3.30	-	-	
	400-08-TL											4.00	0.80	20.0	3.30	-	-	
	500-04-TL							●	●	●		5.00	0.40	25.0	4.10	-	-	
	500-08-TL							●	●	●		5.00	0.80	25.0	4.10	-	-	
	600-04-TL								●	●		6.00	0.40	25.0	5.10	-	-	
	600-08-TL							●	●	●		6.00	0.80	25.0	5.10	-	-	
	800-08-TL											8.00	0.80	30.0	6.10	-	-	
	<b>KGMN</b> 150-015-T	●	●			●						1.50	0.15	16.0	1.20	-	-	
	200-02-T	●	●	●	●	●	●					2.00	0.20	20.0	1.70	-	-	
	250-02-T	●	●			●						2.50	0.20	20.0	2.00	-	-	
	300-02-T	●	●	●	●	●	●					3.00	0.20	20.0	2.30	-	-	
	300-04-T	●	●	●	●	●	●	●	●			3.00	0.40	20.0	2.30	-	-	
	400-04-T	●	●	●	●	●	●	●	●	●		4.00	0.40	20.0	3.30	-	-	
	400-08-T	●	●	●	●	●	●	●	●	●		4.00	0.80	20.0	3.30	-	-	
	500-04-T	●	●	●	●	●	●	●	●	●		5.00	0.40	25.0	4.10	-	-	
	500-08-T	●	●	●	●	●	●	●	●	●		5.00	0.80	25.0	4.10	-	-	
	600-04-T	●	●	●	●	●	●	●	●	●		6.00	0.40	25.0	5.10	-	-	
	600-08-T	●	●	●	●	●	●	●	●	●		6.00	0.80	25.0	5.10	-	-	
800-08-T	●	●	●	●	●	●	●	●	●		8.00	0.80	30.0	6.10	-	-		
	<b>KGMN</b> 150-015-R	●	●			●						1.50	0.15	16.0	1.20	-	-	
	200-02-R	●	●		●	●	●					2.00	0.20	20.0	1.70	-	-	
	300-02-R	●	●		●	●	●					3.00	0.20	20.0	2.30	-	-	
	400-03-R	●	●		●	●	●					4.00	0.30	20.0	3.30	-	-	
	500-03-R		●			●						5.00	0.30	25.0	4.10	-	-	
	600-03-R		●			●						6.00	0.30	25.0	5.10	-	-	
	800-04-R		●			●						8.00	0.40	30.0	6.10	-	-	
	<b>KGGN</b> 200S-02-A											2.00	0.20	20.0	1.70	-	-	
	300S-02-A											3.00	0.20	20.0	2.30	-	-	
	400S-04-A											4.00	0.40	20.0	3.30	-	-	
	500S-04-A											5.00	0.40	25.0	4.10	-	-	
	600S-04-A											6.00	0.40	25.0	5.10	-	-	
	<b>KGGN</b> 200S-02-R											2.00	0.20	19.9	1.70	-	-	
	300S-02-R					●						3.00	0.20	19.9	2.30	-	-	
	400S-02-R					●						4.00	0.20	19.9	3.30	-	-	
	500S-02-R					●						5.00	0.20	24.9	4.10	-	-	
	600S-02-R					●						6.00	0.20	24.9	5.10	-	-	
	800S-04-R					●						8.00	0.40	24.9	6.10	-	-	

● : Stock item

Picture	Designation	Coated								Uncoated		Dimension (mm)						Geometry
		NC3225	NC5330	NC6315	PC3035	PC5300	PC9030	UNC805	UPC810	H01	H05	CW	RE	INSL	BW	PSIRR	PSIRL	
	<b>KGGN</b> 200-02-A									●	2.00	0.20	20.0	1.70	-	-		
	300-02-A									●	3.00	0.20	20.0	2.30	-	-		
	400-04-A									●	4.00	0.40	20.0	3.30	-	-		
	500-04-A									●	5.00	0.40	25.0	4.10	-	-		
	600-04-A									●	6.00	0.40	25.0	5.10	-	-		
	<b>KGGN</b> 265-015-B										2.65	0.15	20.0	2.30	-	-		
	300-020-B										3.00	0.20	20.0	2.30	-	-		
	300-040-B										3.00	0.40	20.0	2.30	-	-		
	315-015-B										3.15	0.15	20.0	2.30	-	-		
	400-040-B										4.00	0.40	20.0	3.30	-	-		
	400-080-B										4.00	0.80	20.0	3.30	-	-		
	415-015-B										4.15	0.15	20.0	3.30	-	-		
	478-055-B										4.78	0.55	25.0	4.10	-	-		
	500-080-B										5.00	0.80	25.0	4.10	-	-		
	515-015-B										5.15	0.15	25.0	4.10	-	-		
	600-080-B										6.00	0.80	25.0	5.10	-	-		
	600-120-B										6.00	1.20	25.0	5.10	-	-		
	800-080-B										8.00	0.80	30.0	6.10	-	-		
800-120-B										8.00	1.20	30.0	6.10	-	-			
	<b>KGGN</b> 200-02-R										2.00	0.20	20.0	1.70	-	-		
	300-02-R										3.00	0.20	20.0	2.30	-	-		
	400-03-R										4.00	0.30	20.0	3.30	-	-		
	500-03-R										5.00	0.30	25.0	4.10	-	-		
	600-03-R										6.00	0.30	25.0	5.10	-	-		
	800-04-R										8.00	0.40	30.0	6.10	-	-		
	<b>KGMI</b> 200-02-T				●						2.00	0.20	20.0	1.70	-	-		
	300-04-T				●						3.00	0.40	20.0	2.30	-	-		
	400-04-T				●						4.00	0.40	20.0	3.30	-	-		
	<b>KGMR</b> 200-6D-LP	●			●						2.00	0.20	20.0	1.70	6.0	-		
	200-8D-LP										2.00	0.20	20.0	1.70	8.0	-		
	200-15D-LP	●			●						2.00	0.20	20.0	1.70	15.0	-		
	300-6D-LP	●			●						3.00	0.20	20.0	2.30	6.0	-		
	300-15D-LP	●			●						3.00	0.20	20.0	2.30	15.0	-		
	400-4D-LP	●			●						4.00	0.30	20.0	3.30	4.0	-		
	400-15D-LP										4.00	0.30	20.0	3.30	15.0	-		
	500-4D-LP										5.00	0.30	25.0	4.10	4.0	-		
	<b>KGMR</b> 200-6D-RP	●			●						2.00	0.20	20.0	1.70	6.0	-		
	200-8D-RP										2.00	0.20	20.0	1.70	8.0	-		
	200-15D-RP	●			●						2.00	0.20	20.0	1.70	15.0	-		
	300-6D-RP	●			●						3.00	0.20	20.0	2.30	6.0	-		
	300-15D-RP	●			●						3.00	0.20	20.0	2.30	15.0	-		
	400-4D-RP	●			●						4.00	0.30	20.0	3.30	4.0	-		
	400-15D-RP	●			●						4.00	0.30	20.0	3.30	15.0	-		
	500-4D-RP										5.00	0.30	25.0	4.10	4.0	-		

● : Stock item





※ AN = 7°

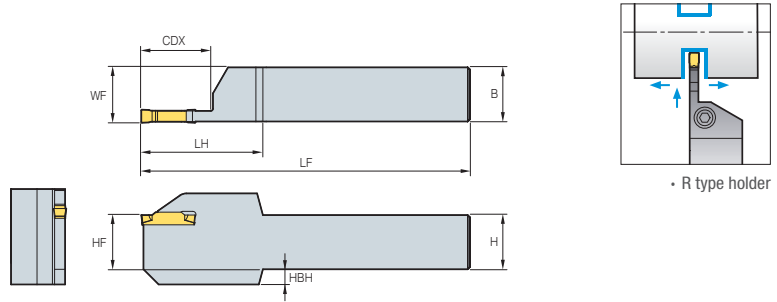
Picture	Designation	Coated								Uncoated		Dimension (mm)						Geometry
		NC3225	NC5330	NC6315	PC3035	PC5300	PC9030	UNC805	UPC810	H01	H05	CW	RE	INSL	BW	PSIRR	PSIRL	
	<b>KGML</b> 200-6D-LP											2.00	0.20	20.0	1.70	-	6.0	
	200-15D-LP											2.00	0.20	20.0	1.70	-	15.0	
	300-6D-LP											3.00	0.20	20.0	2.30	-	6.0	
	300-15D-LP											3.00	0.20	20.0	2.30	-	15.0	
	400-4D-LP											4.00	0.20	20.0	3.30	-	4.0	
	400-15D-LP											4.00	0.20	20.0	3.30	-	15.0	
	<b>KGML</b> 200-6D-RP											2.00	0.20	20.0	1.70	-	6.0	
	200-15D-RP											2.00	0.20	20.0	1.70	-	15.0	
	300-6D-RP											3.00	0.20	20.0	2.30	-	6.0	
	300-15D-RP											3.00	0.20	20.0	2.30	-	15.0	
	400-4D-RP											4.00	0.20	20.0	3.30	-	4.0	
	400-15D-RP											4.00	0.20	20.0	3.30	-	15.0	
	<b>KRMN</b> 200-C	●	●	●	●	●						2.00	1.00	20.0	1.70	-	-	
	300-C	●	●		●	●		●	●			3.00	1.50	20.0	2.20	-	-	
	400-C	●	●	●	●	●		●	●			4.00	2.00	20.0	3.20	-	-	
	500-C	●	●	●	●	●		●	●			5.00	2.50	25.0	4.00	-	-	
	600-C	●	●	●	●	●						6.00	3.00	25.0	5.00	-	-	
	800-C	●	●	●	●	●						8.00	4.00	30.0	6.00	-	-	
	<b>KRGN</b> 300-A									●		3.00	1.50	20.0	2.20	-	-	
	400-A									●		4.00	2.00	20.0	3.20	-	-	
	500-A									●		5.00	2.50	25.0	4.10	-	-	
	600-A									●		6.00	3.00	25.0	5.10	-	-	
	800-A											8.00	4.00	30.0	6.10	-	-	
	<b>KRGN</b> 300-CM					●		●	●			3.00	1.50	20.0	2.20	-	-	
	400-CM					●		●	●			4.00	2.00	20.0	3.20	-	-	
	500-CM					●		●	●			5.00	2.50	25.0	4.00	-	-	
	600-CM											6.00	3.00	25.0	5.00	-	-	
	<b>KRMI</b> 200-C											2.00	1.00	20.0	1.70	-	-	
	300-C											3.00	1.50	20.0	2.20	-	-	
	400-C											4.00	2.00	20.0	3.20	-	-	

●: Stock item

# KGEHR/L



KG MN    KG GN  
KR MN    KR GN    KG MR/L



(mm)

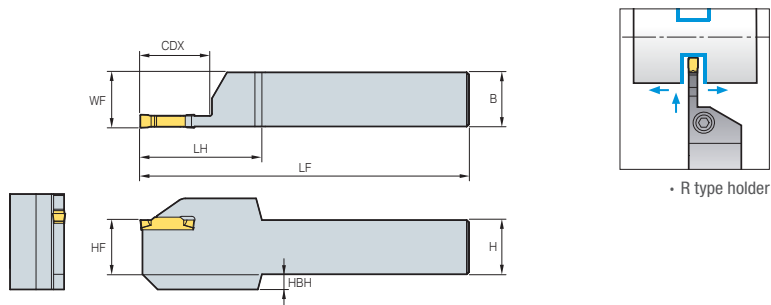
Designation	Stock		H=HF	B	CDX	WF	LH	LF	HBH	Applicable	Screw	Wrench
	R	L										
<b>KGEHR/L</b> 1616-1.5-T14	●		16	16	14	16.2	33	100	-	KG MN150-□-□	MHA0512	HW40L
2020-1.5-T14	●		20	20	14	20.2	33	125	-			
2525-1.5-T14	●		25	25	14	25.2	33	150	-			
1212-2-T08	●		12	12	8	12.2	33	100	-	KG MN200-□-□ KG GN200-□-□ KR MN200-C KG MR/L200-□-□	MHA0512	HW40L
1616-2-T08	●	●	16	16	8	16.2	33	100	-			
1616-2-T12	●	●	16	16	12	16.2	33	100	-			
1616-2-T17	●	●	16	16	17	16.2	38	100	-			
2020-2-T08	●	●	20	20	8	20.2	33	125	-			
2020-2-T12	●	●	20	20	12	20.2	33	125	-			
2020-2-T17	●	●	20	20	17	20.2	38	125	-			
2525-2-T08	●	●	25	25	8	25.2	33	150	-			
2525-2-T12	●	●	25	25	12	25.2	36	150	-			
2525-2-T17	●	●	25	25	17	25.2	38	150	-			
1616-2.5-T17	●		16	16	17	16.3	38	100	-			
2020-2.5-T17	●		20	20	17	20.3	38	125	-			
2525-2.5-T17	●		25	25	17	25.3	38	150	-			
1616-3-T10	●	●	16	16	10	16.4	33	100	-	KG MN300-□-□ KG GN300-□-□ KR MN300-C KR GN300-□ KG MR/L300-□-□	MHA0512	HW40L
1616-3-T13	●	●	16	16	13	16.4	33	100	-			
1616-3-T20	●	●	16	16	20	16.4	41	100	-			
2020-3-T10	●	●	20	20	10	20.4	33	125	-			
2020-3-T13	●	●	20	20	13	20.4	33	125	-			
2020-3-T20	●	●	20	20	20	20.4	41	125	-			
2525-3-T10	●	●	25	25	10	25.4	33	150	-			
2525-3-T13	●	●	25	25	13	25.4	33	150	-			
2525-3-T20	●	●	25	25	20	25.4	41	150	-			
2525-3-T25	●	●	25	25	25	25.4	46	150	-			
3232-3-T10	●		32	32	10	32.4	33	170	-			
3232-3-T20	●		32	32	20	32.4	41	170	-			
1616-4-T10	●	●	16	16	10	16.4	33	100	-	KG MN400-□-□ KG GN400-□-□ KR MN400-C KR GN400-□ KG MR/L400-□-□	BHA0616	HW50L
1616-4-T15	●	●	16	16	15	16.4	36	100	-			
1616-4-T20	●		16	16	20	16.4	41	100	-			
1616-4-T25	●	●	16	16	25	16.4	46	100	-			
2020-4-T10	●	●	20	20	10	20.4	33	125	-			
2020-4-T15	●	●	20	20	15	20.4	36	125	-			
2020-4-T20	●	●	20	20	20	20.4	41	125	-			
2020-4-T25	●	●	20	20	25	20.4	46	125	-			
2525-4-T10	●	●	25	25	10	25.4	33	150	-			
2525-4-T15	●	●	25	25	15	25.4	36	150	-			
2525-4-T20	●	●	25	25	20	25.4	41	150	-			
2525-4-T25	●	●	25	25	25	25.4	46	150	-			
3232-4-T10	●		32	32	10	32.4	33	170	-			
3232-4-T20	●	●	32	32	20	32.4	41	170	-			

● : Stock item

# KGEHR/L



KGMN KGGN  
KRMN KRGN KGMR/L



(mm)

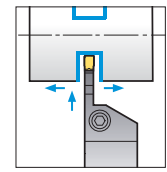
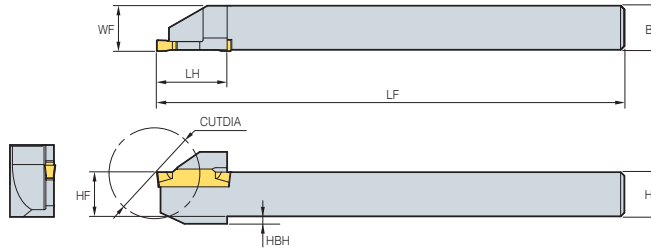
Designation	Stock		H=HF	B	CDX	WF	LH	LF	HBH	Applicable	Screw	Wrench
	R	L										
<b>KGEHR/L</b> 2020-5-T12	●	●	20	20	12	20.5	37	125	-	KGMN500-□-□ KGGN500-□-□ KRMN500-C KRGN500-□ KGMR-□-□	BHA0616	HW50L
2020-5-T15	●	●	20	20	15	20.55	40	125	-			
2020-5-T20	●		20	20	20	20.55	41	125	-			
2525-5-T12	●	●	25	25	12	25.55	37	150	-			
2525-5-T15	●		25	25	15	25.55	40	150	-			
2525-5-T20	●	●	25	25	20	25.55	41.2	150	-			
3232-5-T15	●		32	32	15	32.55	40	170	-			
2525-5-T32	●	●	25	25	32	32.55	46	170	7			
3232-5-T20	●	●	32	32	20	32.55	41	170	-			
2020-6-T12	●		20	20	12	20.55	37	125	-			
2020-6-T20	●	●	20	20	20	20.55	41	125	-	KGMN600-□-□ KGGN600-□-□ KRMN600-C KRGN600-□	BHA0616	HW50L
2525-6-T12	●	●	25	25	12	25.55	37	150	-			
2525-6-T15	●		25	25	15	25.55	40	150	-			
2525-6-T20	●	●	25	25	20	25.55	41	150	-			
2525-6-T32	●	●	25	25	32	25.55	53	150	7			
3232-6-T15	●		32	32	15	32.55	40	170	-			
3232-6-T20	●		32	32	20	32.55	41	170	-			
2525-8-T16	●	●	25	25	16	26.05	46	150	-			
2525-8-T25	●	●	25	25	25	26.05	46	150	-	KGMN800-□-□ KGGN800-□-□ KRMN800-C KRGN800-□	BHA0616	HW50L
3232-8-T16	●		32	32	16	33.05	40	170	-			
2525-8-T36	●		25	25	36	33.05	58	170	7			
3232-8-T25	●		32	32	25	33.05	46	170	-			
3232-8-T36	●	●	32	32	36	33.05	58	170	-			

● : Stock item

# KGEHR/L-D00A (Auto Tool)



KG MN    KG GN  
KR MN    KR GN    KG MR/L



• R type holder

(mm)

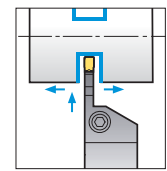
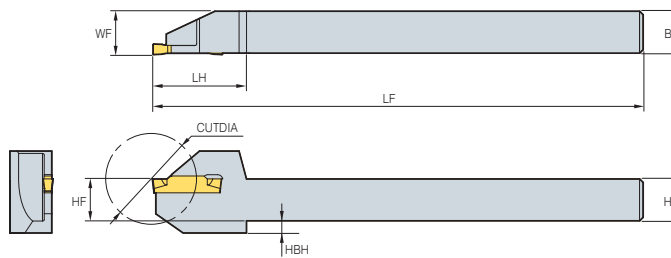
Designation	Stock		H=HF	B	CUTDIA	WF	LH	LF	HBH	Applicable	Screw	Wrench
	R	L										
<b>KGEHR/L</b>	<b>1010-2-D20A</b>	●	●	10	10	20	10.2	19	125	2	ETNA0412	TW15L
	<b>1212-2-D25A</b>	●	●	12	12	25	12.2	19	125	2		
	<b>1414-2-D25A</b>	●	●	14	14	25	14.2	19	125	-		
	<b>1616-2-D32A</b>	●	●	16	16	32	16.2	25	125	-		
	<b>1212-3-D25A</b>	●	●	12	12	25	12.4	19	125	2		
	<b>1616-3-D32A</b>	●	●	16	16	32	16.4	25	125	-		

●: Stock item

# KGEHR/L-D00B (Auto Tool)



KG MN    KG GN  
KR MN    KR GN    KG MR/L



• R type holder

(mm)

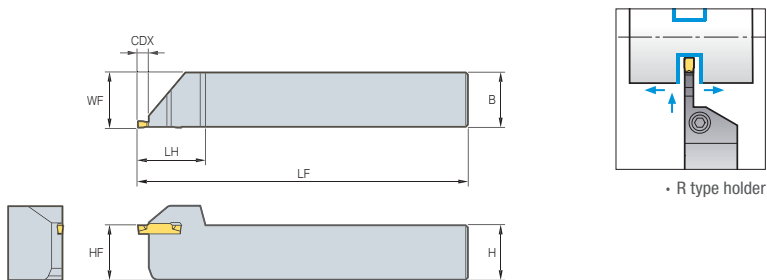
Designation	Stock		H=HF	B	CUTDIA	WF	LH	LF	HBH	Applicable	Screw	Wrench
	R	L										
<b>KGEHR/L</b>	<b>1010-2-D30B</b>	●	●	10	10	30	10.2	29.6	140	6.6	MHA0512	HW40L
	<b>1212-2-D25B</b>	●	●	12	12	25	12.2	27.1	140	3.5		
	<b>1212-2-D30B</b>	●	●	12	12	30	12.2	29.6	140	3.5		
	<b>1616-2-D25B</b>			16	16	25	16.2	27.1	140	-		
	<b>1616-2-D32B</b>	●		16	16	32	16.2	30.6	140	-		
	<b>1212-3-D25B</b>	●	●	12	12	25	12.4	27.1	140	3.5		
	<b>1212-3-D32B</b>	●	●	12	12	32	12.4	30.6	140	3.5		
	<b>1616-3-D25B</b>			16	16	25	16.4	26.96	140	-		
	<b>1616-3-D32B</b>	●	●	16	16	32	16.4	27.1	140	-		

●: Stock item



# KGEHR/L-T00



KGMN KGGN  
KRMN KRGN



(mm)

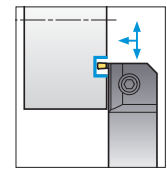
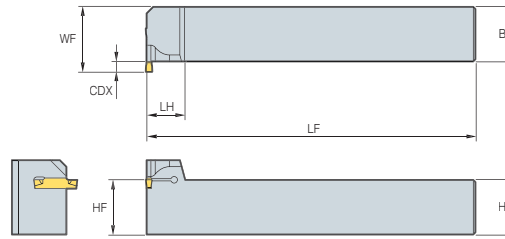
Designation	Stock		H=HF	B	CDX	WF	LH	LF	Applicable	Screw 	Wrench 
	R	L									
<b>KGEHR/L</b> 1616-3-T00			16	16	4.8	16.4	31	100	KGMN300-□-□ KGGN300-□-□ KRMN300-C KRGN300-□	MHA0512	HW40L
			20	20	4.8	20.4	31	125			
	●	●	25	25	4.8	25.4	31	150			
1616-4-T00	●		16	16	4.8	16.4	31	100	KGMN400-□-□ KGGN400-□-□ KRMN400-C KRGN400-□	BHA0616	HW50L
	●		20	20	4.8	20.4	31	125			
	●	●	25	25	4.8	25.4	31	150			
2020-6-T00	●		20	20	6	20.55	36	125	KGMN600-□-□ KGGN600-□-□ KRMN600-C KRGN600-□	BHA0616	HW50L
			25	25	6	25.55	36.5	150			

● : Stock item

# KGEVR/L-T00



KGMM KGGN  
KRMN KRGN



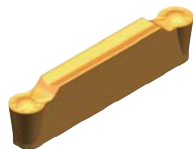
• R type holder

(mm)

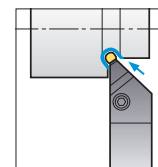
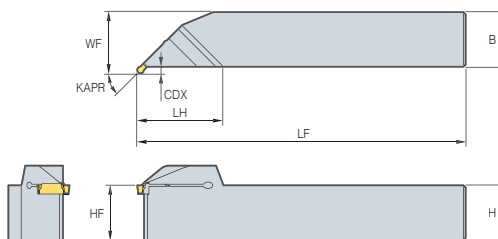
Designation	Stock		H=HF	B	CDX	WF	LH	LF	Applicable	Screw	Wrench
	R	L									
<b>KGEVR/L</b> 2020-1.5 -T00	●		20	20	3	24	18	125	KGMM150-□-□	MHA0512	HW40L
	●		25	25	3	29	18	150			
	●		32	32	3	36	22	170			
2525-1.5 -T00	●		20	20	3	24	17.75	125	KGMM200-□-□ KGGN200-□-□ KRMN200-C	MHA0512	HW40L
	●		25	25	3	29	17.75	150			
	●		32	32	3	36	21.75	170			
3232-1.5 -T00	●		20	20	4	25	18	125	KGMM250-□-□	MHA0512	HW40L
	●		25	25	4	30	18	150			
	●		32	32	4	37	21.75	170			
2020-2 -T00	●		20	20	4.8	25	18	125	KGMM300-□-□ KGGN300-□-□ KRMN300-C KRGN300-□	MHA0512	HW40L
	●		25	25	4.8	30	18	150			
	●		32	32	4.8	37	22	170			
2525-2 -T00	●		20	20	4.8	25	19.6	125	KGMM400-□-□ KGGN400-□-□ KRMN400-C KRGN400-□	BHA0616	HW50L
	●		25	25	4.8	30	19.6	150			
	●		32	32	4.8	37	22	170			
3232-2 -T00	●		20	20	6	29.5	20	125	KGMM500-□-□ KGGN500-□-□ KRMN500-C KRGN500-□	BHA0616	HW50L
	●		25	25	6	31.5	20	150			
	●		32	32	6	38.5	24	170			
2020-2.5 -T00	●		20	20	6	26.5	22	125	KGMM600-□-□ KGGN600-□-□ KRMN600-C KRGN600-□	BHA0616	HW50L
	●		25	25	6	31.5	22	150			
	●		32	32	6	38.5	22	170			
2525-2.5 -T00	●		20	20	8	33.5	24	150	KGMM800-□-□ KGGN800-□-□ KRMN800-C KRGN800-□	BHA0616	HW50L
	●		25	25	8	33.5	24	150			
	●		32	32	8	40.5	24	170			
3232-2.5 -T00	●		20	20	8	33.5	24	150	KGMM800-□-□ KGGN800-□-□ KRMN800-C KRGN800-□	BHA0616	HW50L
	●		25	25	8	33.5	24	150			
	●		32	32	8	40.5	24	170			

● : Stock item

# KGEUR/L



KRMN KRGN



• R type holder

(mm)

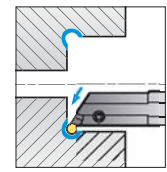
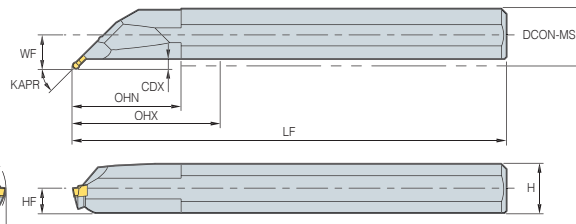
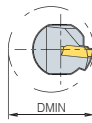
Designation	Stock		H=HF	B	CDX	WF	LH	LF	Applicable	Screw	Wrench
	R	L									
<b>KGEUR/L 1616-3</b>			16	16	2.8	19	39.43	100	KRMN300-C KRGN300-□	MHA0512	HW40L
<b>2020-3</b>	●		20	20	2.8	23	39.43	125			
<b>2525-3</b>	●		25	25	2.8	28	39.43	150			
<b>3232-3</b>	●		32	32	2.8	35	46.5	170			
<b>1616-4</b>			16	16	2.8	19	42.25	100	KRMN400-C KRGN400-□	BHA0616	HW50L
<b>2020-4</b>			20	20	2.8	23	42.25	125			
<b>2525-4</b>	●		25	25	2.8	28	42.25	150			
<b>3232-4</b>	●		32	32	2.8	35	46.5	170			
<b>2020-5</b>			20	20	3.3	23.5	47.41	125	KRMN500-C KRGN500-□	BHA0616	HW50L
<b>2525-5</b>	●		25	25	3.3	28.5	48.83	150			
<b>3232-5</b>			32	32	3.3	35.5	53.07	170			
<b>2020-6</b>	●		20	20	3.3	23.5	47.41	125	KRMN600-C KRGN600-□	BHA0616	HW50L
<b>2525-6</b>	●		25	25	3.3	28.5	47.41	150			
<b>3232-6</b>	●		32	32	3.3	35.5	53.07	170			
<b>2525-8</b>	●		25	25	3.3	30	51.57	150	KRMN800-C KRGN800-□	BHA0616	HW50L
<b>3232-8</b>	●		32	32	3.3	37	51.57	170			

● : Stock item

# KGIUR/L



KRMN KRGN



• R type holder

(mm)

Designation	Stock		DMIN	DCON-MS	HF	H	CDX	WF	OHN	LF	Applicable	Screw	Wrench
	R	L											
<b>KGIUR/L 3520-3</b>			35	20	9	18	3.5	13	45	150	KRMN300-C KRGN300-□	MHA0512	HW40L
<b>4025-3</b>	●		40	25	11.5	23	3.5	15.5	50	200			
<b>5032-3</b>	●		50	32	15	30	3.5	19	65	250			
<b>3520-4</b>			35	20	9	18	3.5	13	45	150	KRMN400-C KRGN400-□	MHA0512	HW40L
<b>4025-4</b>			40	25	11.5	23	3.5	15.5	50	200			
<b>5032-4</b>	●		50	32	15	30	3.5	19	65	250			
<b>4025-5</b>	●		40	25	11.5	23	3.5	15.5	50	200	KRMN500-C KRGN500-□	MHA0512	HW40L
<b>5032-5</b>	●		50	32	15	30	3.5	19	65	250			
<b>4025-6</b>	●		40	25	11.5	23	3.5	15.5	50	200	KRMN600-C KRGN600-□	MHA0512	HW40L
<b>5032-6</b>			50	32	15	30	3.5	19	65	250			
<b>4025-8</b>			40	25	11.5	23	6.5	18.5	50	200	KRMN800-C KRGN800-□	MHA0512	HW40L
<b>5032-8</b>	●		50	32	15	30	6.5	22	65	250			

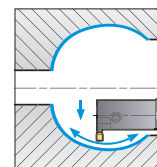
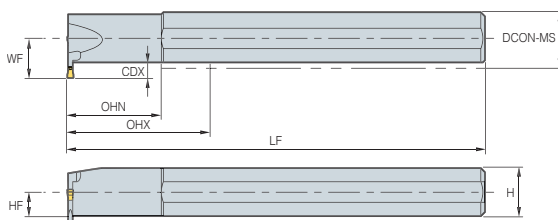
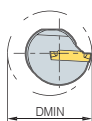
●: Stock item



# KGIVR/L



KGMN KGGN KRMN  
KRGV KGMI KRMI



• R type holder

(mm)

Designation	Stock		DMIN	DCON-MS	HF	H	CDX	WF	OHN	LF	Applicable	Screw	Wrench
	R	L											
KGIVR/L 2016-1.5	●		20	16	7.5	15	4	12	35	125	KGMN150-□-□	MHB0410	HW30L
		●	25	20	9.0	18	6	15.5	45	150		MHA0512	HW40L
2520-1.5	●		25	20	9.0	18	6	15.5	45	150	KGMN150-□-□	MHB0410	HW30L
3225-1.5	●		32	25	11.5	23	7	19	45	200		MHA0512	HW40L
2516-2	●		25	16	7.5	15	6.5	14	35	125	KGMN200-□-□ KRMI200-C	MHB0410	HW30L
2520-2	●		25	20	9.0	18	6.5	15	45	150		MHA0512	HW40L
3225-2	●		32	25	11.5	23	7	19	45	200	KGMN250-□-□	MHB0410	HW30L
2516-2.5	●		25	16	11.25	15	6.5	14	35	125		MHA0512	HW40L
2520-2.5	●		25	20	9.0	18	6.5	15.5	45	150	KGMN250-□-□	MHB0410	HW30L
3225-2.5	●		32	25	11.5	23	7	19	45	200		MHA0512	HW40L
2520-3	●		25	20	9.0	18	6.5	15.5	45	150	KGMN300-□-□ KRMI300-C	MHB0410	HW30L
3225-3	●		32	25	11.5	23	6.5	19	45	200		MHA0512	HW40L
4032-3	●		40	32	15.0	30	7	22.5	55	250	KGMN300-□-□ KRMI300-C	BHA0616	HW50L
2520-4	●		25	20	9.0	18	6.5	15.5	45	150		KGMN400-□-□ KRMI400-C	MHB0410
3225-4	●		32	25	11.5	23	7	19	45	200	MHA0512		HW40L
4032-4	●		40	32	15.0	30	7.5	22.5	55	250	KGMN400-□-□ KRMI400-C	BHA0616	HW50L
3225-5	●		32	25	11.5	23	7.5	19.5	45	200		KGMN500-□-□ KGGN500-□-□ KRMN500-C KRGV500-□	MHA0512
4032-5	●		40	32	15.0	30	8.5	23.5	55	250	BHA0616		HW50L
3225-6	●		32	25	11.5	23	19.5	19.5	45	200	KGMN600-□-□ KGGN600-□-□ KRMN600-C KRGV600-□	MHA0512	HW40L
4032-6	●		40	32	15.0	30	23.5	23.5	55	250		BHA0616	HW50L
4032-8	●		40	32	15.0	30	23.5	23.5	55	250	KGMN800-□-□ KGGN800-□-□ KRMN800-C KRGV800-□-R	BHA0616	HW50L
4540-8	●		45	40	18.5	37	26.5	26.5	70	300		BHA0820	HW50L

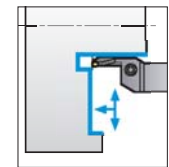
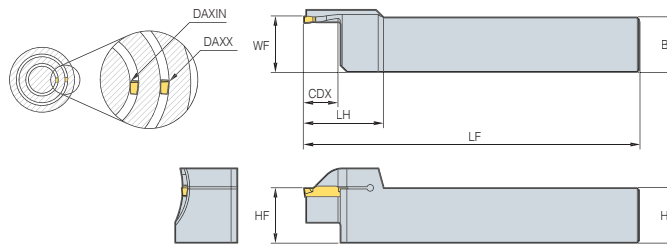
※ In case of using external insert instead of internal insert, please check the available insert for each item.

● : Stock item

# KGFR/L



KGMN KGGN  
KRMN KRGN



• R type holder

(mm)

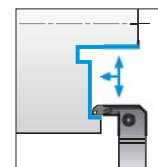
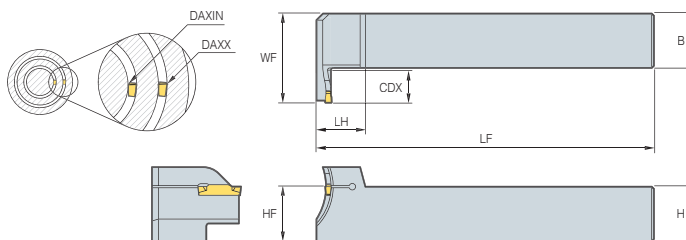
Designation	Stock		H=HF	B	CDX	WF	LH	LF	DAXIN	DAXX	Applicable	Screw	Wrench
	R	L											
<b>KGFR/L</b> 320-34/50-T10	●		20	20	10	20.5	33	150	34	50	KGMN300-□-□ KGGN300-□-□ KRMN300-C KRGN300-□	MHA0512	HW40L
320-44/70-T15	●		20	20	15	20.5	36	150	44	70			
320-64/100-T15	●		20	20	15	20.5	36	150	64	100			
325-34/50-T10	●		25	25	10	25.6	33	150	34	50			
325-44/70-T15	●		25	25	15	25.6	36	150	44	70			
325-64/100-T15	●		25	25	15	25.6	36	150	64	100			
420-34/50-T16	●		20	20	16	20.5	40	150	34	50	KGMN400-□-□ KGGN400-□-□ KRMN400-C KRGN400-□	BHA0616	HW50L
420-42/70-T16	●		20	20	16	20.5	40	150	42	70			
420-62/120-T16	●		20	20	16	20.5	40	150	62	120			
420-112/200-T16	●		20	20	16	20.5	40	150	112	200			
425-34/50-T20	●		25	25	20	25.6	41	150	34	50			
425-40/60-T10	●		25	25	10	25.6	33	150	40	60			
425-44/70-T20	●		25	25	20	25.6	39	150	44	70			
425-60/120-T20	●	●	25	25	15	25.6	39	150	60	120			
425-84/92-T20	●		25	25	20	25.6	39	150	84	92			
425-112/200-T20	●	●	25	25	20	25.6	39	150	112	200			
425-200-T20	●		25	25	20	25.6	41	150	200	-			
525-50/80-T15	●		25	25	15	25.6	38	150	50	80	KGMN500-□-□ KGGN500-□-□ KRMN500-C KRGN500-□	BHA0616	HW50L
525-50/80-T25	●		25	25	25	25.6	44	150	50	80			
525-70/110-T15	●		25	25	15	25.6	38	150	70	110			
525-70/110-T25	●		25	25	25	25.6	44	150	70	110			
525-100/150-T25	●		25	25	25	25.6	44	150	100	150			
525-140/200-T25	●		25	25	25	25.6	44	150	140	200			
525-190/220-T10	●		25	25	10	25.6	37	150	190	220			
525-200-T25	●		25	25	25	25.6	44	150	200	-			
625-170/190-T10	●		25	25	10	25.6	37	150	170	190	KGMN600-□-□ KGGN600-□-□ KRMN600-C KRGN600-□	BHA0616	HW50L
625-190/220-T10	●		25	25	10	25.6	37	150	190	220			

● : Stock item

# KGFR/L



KGMN KGGN  
KRMN KRGN



• R type holder

(mm)

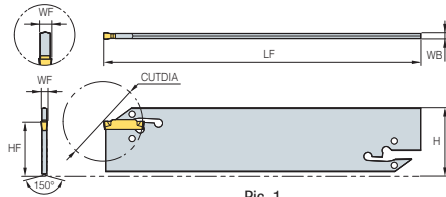
Designation	Stock		H=HF	B	CDX	WF	LH	LF	DAXIN	DAXX	Applicable	Screw	Wrench
	R	L											
<b>KGFR/L</b> 325-34/50-T10	●		25	25	10	36	18.5	150	34	50	KGMN300-□-□ KGGN300-□-□ KRMN300-C KRGN300-□	MHA0512	HW40L
	●		25	25	15	41	18.5	150	44	60			
325-44/60-T15	●		25	25	15	41	18.5	150	54	85	KGMN400-□-□ KGGN400-□-□ KRMN400-C KRGN400-□	BHA0616	HW50L
325-54/85-T15	●		25	25	15	41	18.5	150	44	60			
425-32/50-T15	●		25	25	15	41	18.5	150	32	50	KGMN500-□-□ KGGN500-□-□ KRMN500-C KRGN500-□	BHA0616	HW50L
425-42/60-T15	●		25	25	15	41	18.5	150	42	60			
425-44/70-T20	●		25	25	20	46	18.5	150	44	70	KGMN600-□-□ KGGN600-□-□ KRMN600-C KRGN600-□	BHA0616	HW50L
425-52/85-T15	●		25	25	10	35.5	18.5	150	52	85			
425-60/120-T20	●		25	25	20	46	18.5	150	60	120	KGMN500-□-□ KGGN500-□-□ KRMN500-C KRGN500-□	BHA0616	HW50L
425-112/200-T20	●		25	25	20	46	18.5	150	112	200			
525-50/80-T20	●		25	25	20	46	22	150	50	80	KGMN500-□-□ KGGN500-□-□ KRMN500-C KRGN500-□	BHA0616	HW50L
525-70/110-T20	●		25	25	20	46	22	150	70	110			
525-100/150-T20	●		25	25	20	46	22	150	100	150	KGMN600-□-□ KGGN600-□-□ KRMN600-C KRGN600-□	BHA0616	HW50L
525-140/200-T20	●		25	25	20	46	22	150	140	200			
525-200-T20	●		25	25	20	46	22	150	200	-	KGMN600-□-□ KGGN600-□-□ KRMN600-C KRGN600-□	BHA0616	HW50L
625-48/85-T20			25	25	20	46	22	150	48	85			
625-73/150-T20	●		25	25	20	46	22	150	73	150	KGMN600-□-□ KGGN600-□-□ KRMN600-C KRGN600-□	BHA0616	HW50L
625-138/250-T20	●		25	25	20	46	22	150	138	250			
625-250-T20	●		25	25	20	46	22	150	250	-			

● : Stock item

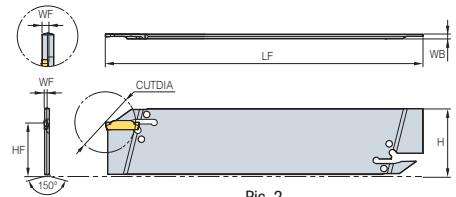
# KGTB (Blade)



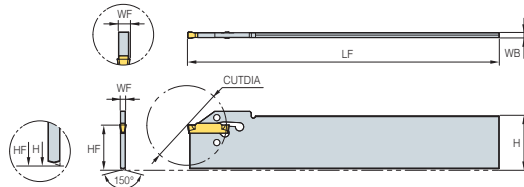
KG MN KG GN



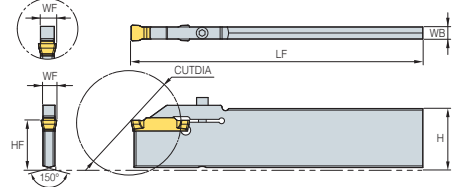
Pic. 1



Pic. 2



Pic. 3



Pic. 4

(mm)

Designation	Stock	HF	H	WB	CUT DIA <sup>(2)</sup>	CUT DIA <sup>(3)</sup>	WF	LF	Applicable	Wrench	Pic.
<b>KG TB</b> 1526S		21	26	2.4	-	26	1.3	151	KG□□150-□-□	EW1203 (Separately ordered)	4
1532	●	25	32	2.4	-	26	1.3	151			1
2026S		21	26	2.4	50	39	1.9	151	KG□□200-□-□		4
2032	●	25	32	2.4	50	39	1.9	151	KG□□200S-□-R <sup>(4)</sup>		1
3026S	●	21	26	2.4	100	39	2.7	151	KG□□300-□-□		4
3032	●	25	32	2.4	100	39	2.7	151	KG□□300S-□-R <sup>(4)</sup>		2
4026S		21	26	3.2	100	39	3.6	151	KG□□400-□-□		4
4032	●	25	32	3.2	100	39	3.6	151	KG□□400S-□-R <sup>(4)</sup>		2
5032	●	25	32	4	120	49	4.5	151	KG□□500-□-□ KG□□500S-□-R <sup>(4)</sup>		2
6032	●	25	32	5.2	120	49	5.6	151	KG□□600-□-□ KG□□600S-□-R <sup>(4)</sup>		2
8032S <sup>(1)</sup>	●	25	32	6.5	80	59	7.1	151.5	KG□□800-□-□ KG□□800S-□-R <sup>(4)</sup>	HW30L	3

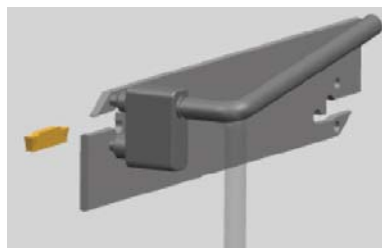
(1) Screw clamping (2) 1 corner use (3) 2 corner use (4) 1 corner insert

● : Stock item

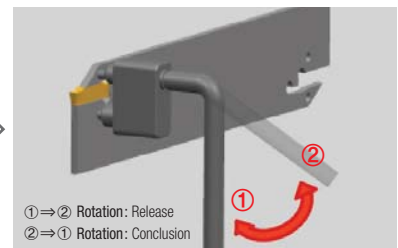
## How to clamp insert



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.



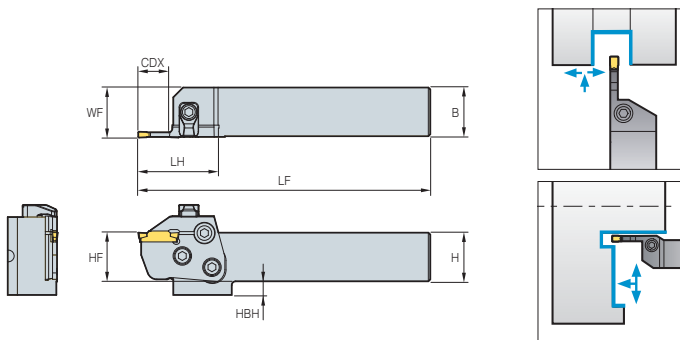
① ⇒ ② Rotation: Release  
② ⇒ ① Rotation: Conclusion

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

# MCHR/L (Cartridge)



KCER/L KCFR/L



• R type holder

(mm)

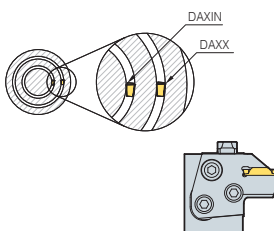
Designation	Stock		H = HF	B	WF	LH	LF	HBH	Applicable cartridge	Clamp	Clamp screw	Hinge screw	Clamping Screw	Wrench
	R	L												
MCHR/L	2020	● ●	20	20	20.7	30	133	12	KCER/L KCFR/L					
	2525	● ●	25	25	25.7	30	133	7						
	3232	● ●	32	32	32.7	-	153	-						

●: Stock item

# MCVR/L (Cartridge)



KCER/L KCFR/L



• R type holder

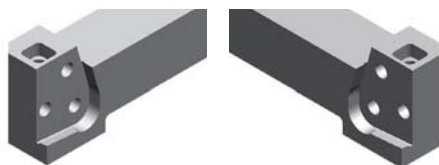
(mm)

Designation	Stock		H = HF	B	WF	LH	LF	HBH	Applicable cartridge	Clamp	Clamp screw	Hinge screw	Clamping Screw	Wrench
	R	L												
MCVR/L	2020	● ●	20	20	38	30	150	12	KCER/L KCFR/L					
	2525	● ●	25	25	43	30	150	7						
	3232	● ●	32	32	50	-	170	-						

●: Stock item

## Cartridge selection guide

### Horizontal type



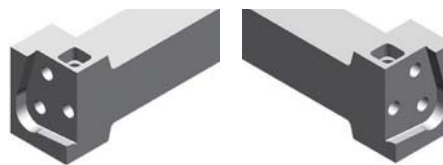
**MCHR**

- External: KCER
- Facing: KCFL

**MCHL**

- External: KCEL
- Facing: KCFR

### Vertical type



**MCVR**

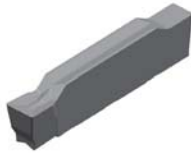
- External: KCEL
- Facing: KCFR

**MCVL**

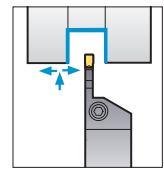
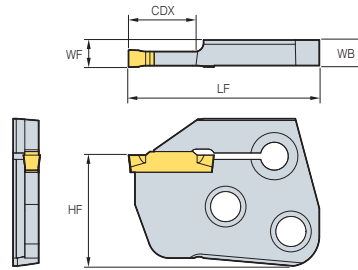
- External: KCER
- Facing: KCFL

Applicable cartridge

# KCER/L (Cartridge)



KGMN KGGN  
KRMN KRGN KGMR/L



- R type holder

(mm)

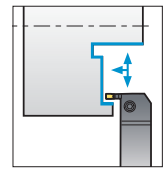
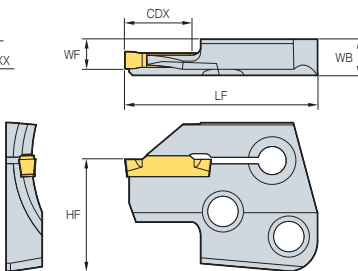
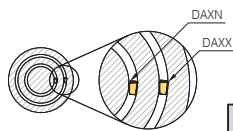
Designation	Stock		HF	CDX	WF	WB	LF	CW	Applicable	Applicable holder
	R	L								
<b>KCER/L</b>	<b>3-T16</b>	● ●	25.83	16	6.35	5.97	44.5	3	KGMN KGGN KRMN KRGN KGMR/L	MCHR/L MCVR/L
	<b>4-T16</b>	● ●	25.83	16	6.35	5.97	44.5	4		
	<b>5-T20</b>	● ●	25.83	20	6.35	5.87	48.5	5		
	<b>6-T20</b>	● ●	25.83	20	6.35	5.82	48.5	6		

●: Stock item

# KCFR/L (Cartridge)



KGMN KGGN  
KRMN KRGN



- R type holder

(mm)

Designation	Stock		HF	CDX	WF	WB	LF	DAXN	DAXX	Applicable	Applicable holder
	R	L									
<b>KCFR/L</b>	<b>3-34/50-T16</b>	● ●	25.83	16	6.35	8.35	44.5	34	50	KGMN300-□-□ KGGN300-□-□ KRMN300-C KRGN300-CM	MCHR/L MCVR/L
	<b>3-44/70-T16</b>	● ●	25.83	16	6.35	8.35	44.5	44	70		
	<b>3-64/99-T16</b>	● ●	25.83	16	6.35	8.35	44.5	64	99		
	<b>4-44/60-T16</b>	● ●	25.83	16	6.35	8.35	44.5	44	60	KGMN400-□-□ KGGN400-□-□ KRMN400-C KRGN400-□	
	<b>4-60/120-T16</b>	● ●	25.83	16	6.35	8.35	44.5	60	120		
	<b>4-112/200-T16</b>	● ●	25.83	16	6.35	8.35	44.5	112	200		

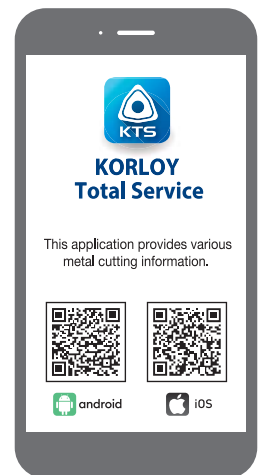
●: Stock item

### ⚠ For the safe metacutting

- Use safety supplies such as protective gloves to prevent possible injury while touching the edge of tools.
- Use safety glasses or safety cover to hedge possible dangers. Inappropriate usage or excessive cutting condition may lead tool's breakage or even the fragment's scattering.
- Clamp the workpiece tightly enough to prevent its movement while its machining.
- Properly manage the tool change phase because the inordinately used tool can be easily broken under the excessive cutting load or severe wear, and it may threat the operator's safety.
- Use safety cover because chips evacuated during cutting are hot and sharp and may cause burns and cuts. To remove chips safely, stop machining, put on protective gloves, and use a hook or other tools.
- Prepare for fire prevention measures as the use of the non-water soluble cutting oil may cause fire.
- Use safety cover and other safety supplies because the spare parts or the inserts can be pulled out due to centrifugal force while high speed machining.



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