

Multifunctional Tools

CDBP multifunctional tool can be used in different applications, such as parting, grooving, turning, end face and profiling machining.

Unique installation and chip-breaker can ensure excellent performance and production efficiency.



Technical data of parting, grooving and turning

● Insert Selection Guide

1. Feeding rate

- The maximum feeding rate is determined by insert specification and machine performance

- The maximum feeding rate can't exceed the insert radius R.

- In grooving application, the chip evacuation problem can be solved by using small cutting depth distribution

2. Cutting depth

- The minimum cutting depth shall not be less than the insert radius R

- The maximum cutting depth depends on the cutting load of the machine tool

- Different shape inserts application can improve the deviation and gap angle of the workpiece.



3. To make the insert match cutting conditions properly, following factors should be considered:

- Insert width

- Insert chip breaker

- Insert material

- Insert radius R



4. The relation between cutting depth and cutting width

- Nondirectional inserts guide angle is 0 °, which is most suitable for processing fields with large cutting depth

- Ordinary alloy steel, maximum cutting depth = cutting width X 0.8

5. With guide angle insert

- To reduce the burr, the guide angle insert is recommended

- Large guide angle insert can reduce burr, but it will also reduce the tool life

- If the burr is acceptable, nondirectional insert is recommended



● Parting and grooving tools middle height instruction

• Whatever cutting tool you choose only when the insert and workpiece centerline are installed at 90 degrees can obtain the reasonable processing position and reduce vibration.

• To introduce the tool life, reduce the cutting force and burrs, particularly for pipe parting and small diameter workpiece grooving, the tolerance between the cutting edge and workpiece middle height should be +0.1mm.

● Notes:

- Parting: When insert approaches the workpiece center, the feed speed should be reduced by 30%, It is good for improving the insert tool life and surface roughness quality trying to decrease the overhang value of tool holder can improve the tool stability.
- Grooving: The angular radius of workpiece shall be less than the insert radius; If the workpiece angle bigger than the insert radius; With stable shear resistance, the tool produces a synthetic load with unbalanced radial and axial depth, may damage the inserts and holder.
- Ensure cutting speed and feed are consistent
- Use cutting fluid appropriately for better cutting performance
- Clean the insert and locator before installation of insert
- Exchange the insert immediately while the insert worn out to avoid the damage of workpiece
- Exchange the tool holder while it's broken to maintain stable clamping
- Never grind the insert locator seat

PVD coating material characteristics

Coating grade	ISO	Characterstic
BP2220	M15~M30 S15-S30	<ul style="list-style-type: none"> A new PVD coating Excellent anti-adhesion features High working temperature, high red-hardness Optimize and integrate coating structure and performance, Enhance insert cutting edge toughness Suitable for titanium alloy, nickel alloy, stainless steel and iron-based superalloy processing
BPG20B	P20-P30 K20-K30 M20-M30	<ul style="list-style-type: none"> General material for parting and grooving processing A nanocomposite coating of a AlTiSi base High temperature stability, good hardness Small friction coefficient, reducing the adhesion between workpiece and insert cutting edge

Uncoating material characteristics

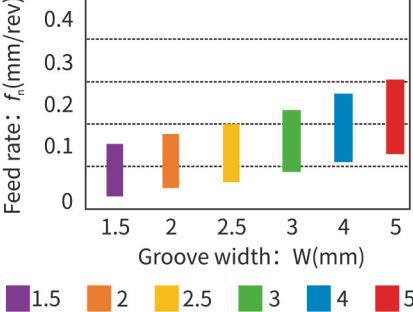
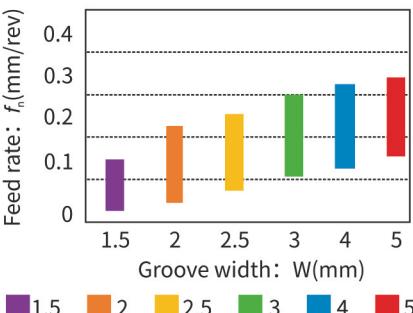
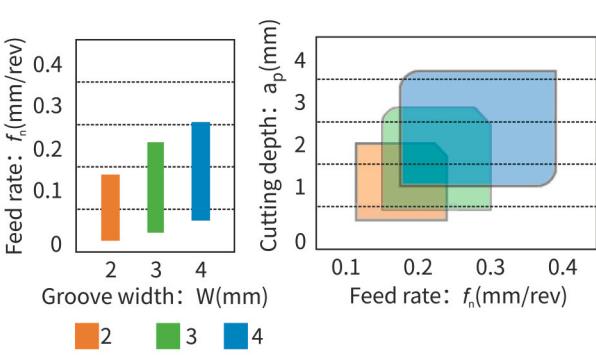
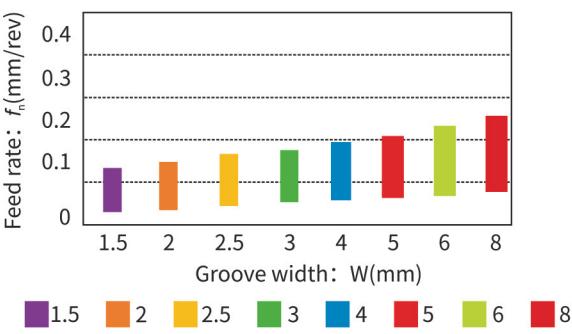
Grade	ISO	Characterstic
BU810	N01-N10	<ul style="list-style-type: none"> Subfine grain material ensures wear resistance and anti-crack of insert Special surface treatment to reduce the built-up edge Suitable for non-ferrous metals such as aluminum, copper and magnesium

Material and processing range

Workpiece material	Grade	Recommended cutting speed V _c (m/min)				
		50	100	150	200	600
P	Mild steel	BP2220		80	220	
	Carbon steel alloy steel	BPG20B		80	220	
	Pre-hard steel	BP2220		80	180	
M	Stainless steel	BP2220		60	200	
		BPG20B		80	200	
K	Cast iron	BPG20B		80	220	
N	Nonferrous metal	BU810			400	800
S	Heat-resistant alloy	BP2220	20	50		

Chip breaker characteristics

Parting, grooving and turning applications data

MGMN..-L	<ul style="list-style-type: none"> Soft material parting processing is preferred Sharp cutting edge, low cutting force Low and medium-speed feed processing Pipe fittings, thin-wall parts and small parts processing Suitable for stainless steel, carbon steel and heat-resistant steel processing 	 <table border="1"> <thead> <tr> <th>Groove width (W/mm)</th> <th>Feed rate (f_n mm/rev)</th> </tr> </thead> <tbody> <tr><td>1.5</td><td>~0.10</td></tr> <tr><td>2</td><td>~0.12</td></tr> <tr><td>2.5</td><td>~0.15</td></tr> <tr><td>3</td><td>~0.18</td></tr> <tr><td>4</td><td>~0.22</td></tr> <tr><td>5</td><td>~0.25</td></tr> </tbody> </table>	Groove width (W/mm)	Feed rate (f_n mm/rev)	1.5	~0.10	2	~0.12	2.5	~0.15	3	~0.18	4	~0.22	5	~0.25				
Groove width (W/mm)	Feed rate (f_n mm/rev)																			
1.5	~0.10																			
2	~0.12																			
2.5	~0.15																			
3	~0.18																			
4	~0.22																			
5	~0.25																			
MGMN..-H	<ul style="list-style-type: none"> External deep groove processing is preferred High-strength cutting edge, suitable for interrupted cutting Medium and high-speed feed processing Suitable for carbon steel, alloy steel and cast iron processing Suitable for hard material processing 	 <table border="1"> <thead> <tr> <th>Groove width (W/mm)</th> <th>Feed rate (f_n mm/rev)</th> </tr> </thead> <tbody> <tr><td>1.5</td><td>~0.10</td></tr> <tr><td>2</td><td>~0.18</td></tr> <tr><td>2.5</td><td>~0.22</td></tr> <tr><td>3</td><td>~0.25</td></tr> <tr><td>4</td><td>~0.28</td></tr> <tr><td>5</td><td>~0.30</td></tr> </tbody> </table>	Groove width (W/mm)	Feed rate (f_n mm/rev)	1.5	~0.10	2	~0.18	2.5	~0.22	3	~0.25	4	~0.28	5	~0.30				
Groove width (W/mm)	Feed rate (f_n mm/rev)																			
1.5	~0.10																			
2	~0.18																			
2.5	~0.22																			
3	~0.25																			
4	~0.28																			
5	~0.30																			
MGMN..-T	<ul style="list-style-type: none"> General grooving is preferred Application for external, internal grooving and turning processing Special chip-breaker design can realize low cutting resistance Low and medium-speed feed processing Suitable for hard material processing Suitable for carbon steel, alloy steel and cast iron processing 	 <p>Left Chart Data:</p> <table border="1"> <thead> <tr> <th>Groove width (W/mm)</th> <th>Feed rate (f_n mm/rev)</th> </tr> </thead> <tbody> <tr><td>2</td><td>~0.12</td></tr> <tr><td>3</td><td>~0.20</td></tr> <tr><td>4</td><td>~0.25</td></tr> </tbody> </table> <p>Right Chart Data:</p> <table border="1"> <thead> <tr> <th>Feed rate (f_n mm/rev)</th> <th>Cutting depth (a_p) mm</th> </tr> </thead> <tbody> <tr><td>0.1</td><td>~0.8</td></tr> <tr><td>0.2</td><td>~2.2</td></tr> <tr><td>0.3</td><td>~3.5</td></tr> <tr><td>0.4</td><td>~3.8</td></tr> </tbody> </table>	Groove width (W/mm)	Feed rate (f_n mm/rev)	2	~0.12	3	~0.20	4	~0.25	Feed rate (f_n mm/rev)	Cutting depth (a_p) mm	0.1	~0.8	0.2	~2.2	0.3	~3.5	0.4	~3.8
Groove width (W/mm)	Feed rate (f_n mm/rev)																			
2	~0.12																			
3	~0.20																			
4	~0.25																			
Feed rate (f_n mm/rev)	Cutting depth (a_p) mm																			
0.1	~0.8																			
0.2	~2.2																			
0.3	~3.5																			
0.4	~3.8																			
MGGN..-LH	<ul style="list-style-type: none"> Large rake angle, sharp cutting edge For soft materials, elongated parts and universal parting and grooving 	 <table border="1"> <thead> <tr> <th>Groove width (W/mm)</th> <th>Feed rate (f_n mm/rev)</th> </tr> </thead> <tbody> <tr><td>1.5</td><td>~0.08</td></tr> <tr><td>2</td><td>~0.10</td></tr> <tr><td>2.5</td><td>~0.12</td></tr> <tr><td>3</td><td>~0.15</td></tr> <tr><td>4</td><td>~0.18</td></tr> <tr><td>5</td><td>~0.20</td></tr> <tr><td>6</td><td>~0.22</td></tr> <tr><td>8</td><td>~0.25</td></tr> </tbody> </table>	Groove width (W/mm)	Feed rate (f_n mm/rev)	1.5	~0.08	2	~0.10	2.5	~0.12	3	~0.15	4	~0.18	5	~0.20	6	~0.22	8	~0.25
Groove width (W/mm)	Feed rate (f_n mm/rev)																			
1.5	~0.08																			
2	~0.10																			
2.5	~0.12																			
3	~0.15																			
4	~0.18																			
5	~0.20																			
6	~0.22																			
8	~0.25																			

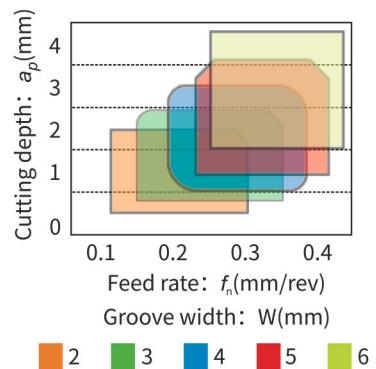
Chip breaker Characteristics

Profiling undercut application date

MRMN..

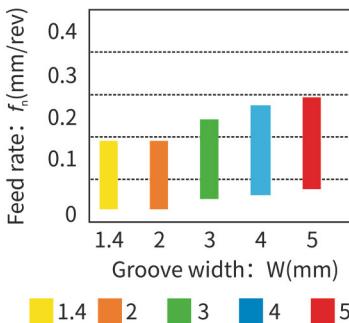
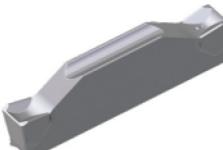
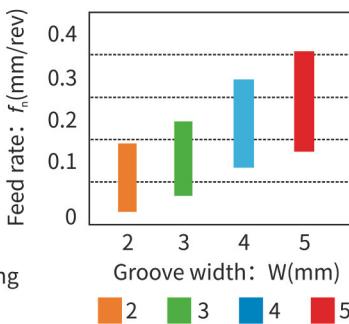
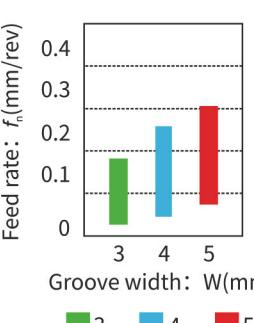
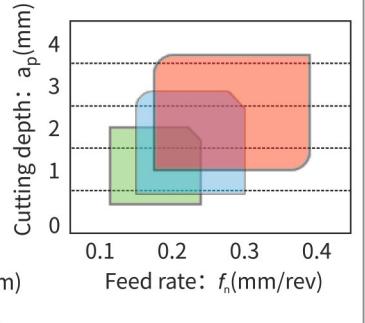
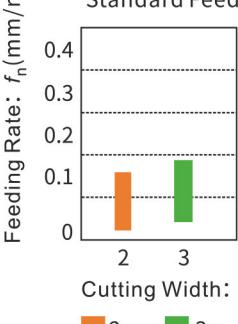
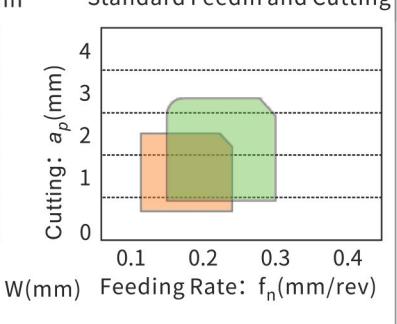


- Improved chip control for better chip evacuation
- High feeding rate and low cutting depth
- Suitable for steel, stainless steel and cast iron processing



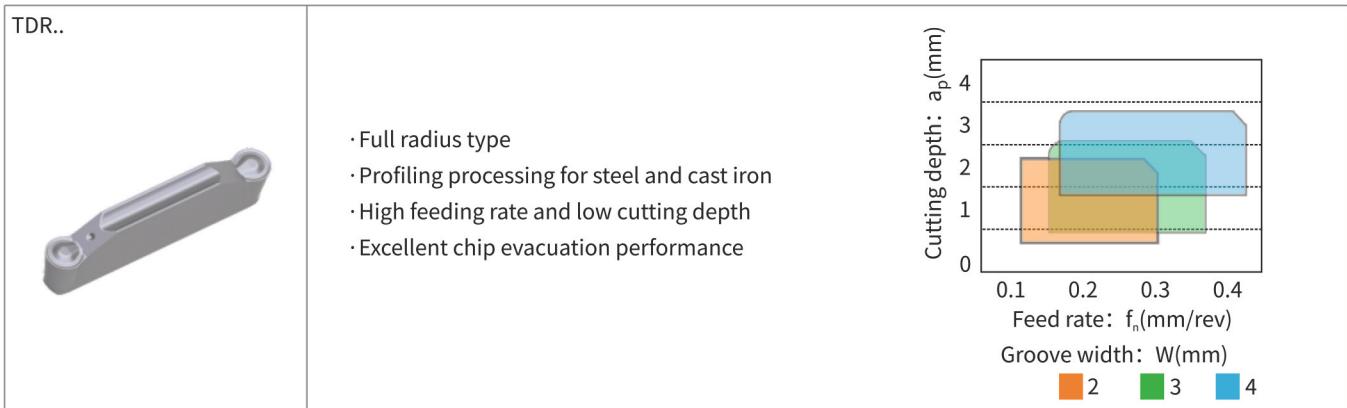
Chip breaker characteristics

Parting, grooving and turning applications data

 <p>TDJ..</p>	<ul style="list-style-type: none"> Positive-rake angle insert, with sharp cutting edge, low cutting resistance Priority for pipe cutting, soft metal materials and small diameter thin wall parts Low and medium-speed feed processing For CNC, multi-spindle 	 <table border="1"> <thead> <tr> <th>Groove width: W(mm)</th> <th>Feed rate: f_n (mm/rev)</th> </tr> </thead> <tbody> <tr><td>1.4</td><td>~0.15</td></tr> <tr><td>2</td><td>~0.14</td></tr> <tr><td>3</td><td>~0.19</td></tr> <tr><td>4</td><td>~0.22</td></tr> <tr><td>5</td><td>~0.25</td></tr> </tbody> </table>	Groove width: W(mm)	Feed rate: f_n (mm/rev)	1.4	~0.15	2	~0.14	3	~0.19	4	~0.22	5	~0.25
Groove width: W(mm)	Feed rate: f_n (mm/rev)													
1.4	~0.15													
2	~0.14													
3	~0.19													
4	~0.22													
5	~0.25													
 <p>TDC..</p>	<ul style="list-style-type: none"> Positive-rake angle insert, circular arc chip breaker on insert rake face; The design of minor cutting edge and the reinforcement on both cutting edge sides ensures that the insert has sufficient cutting edge strength Priority for parting off rod material, hard material and tough material processing Medium and high-speed feed processing Suitable for harsh working conditions or interrupted cutting 	 <table border="1"> <thead> <tr> <th>Groove width: W(mm)</th> <th>Feed rate: f_n (mm/rev)</th> </tr> </thead> <tbody> <tr><td>2</td><td>~0.12</td></tr> <tr><td>3</td><td>~0.18</td></tr> <tr><td>4</td><td>~0.28</td></tr> <tr><td>5</td><td>~0.35</td></tr> </tbody> </table>	Groove width: W(mm)	Feed rate: f_n (mm/rev)	2	~0.12	3	~0.18	4	~0.28	5	~0.35		
Groove width: W(mm)	Feed rate: f_n (mm/rev)													
2	~0.12													
3	~0.18													
4	~0.28													
5	~0.35													
 <p>TDT..</p>	<ul style="list-style-type: none"> Priority insert for turning application Application for external, internal grooving and turning processing Special chip-breaker design obtains low cutting force and excellent chip control High feeding rate Suitable for steel, stainless steel and cast iron processing 	  <table border="1"> <thead> <tr> <th>Groove width: W(mm)</th> <th>Feed rate: f_n (mm/rev)</th> <th>Cutting depth: a_p (mm)</th> </tr> </thead> <tbody> <tr><td>3</td><td>0.15</td><td>~1.8</td></tr> <tr><td>4</td><td>0.25</td><td>~3.5</td></tr> <tr><td>5</td><td>0.35</td><td>~3.8</td></tr> </tbody> </table>	Groove width: W(mm)	Feed rate: f_n (mm/rev)	Cutting depth: a_p (mm)	3	0.15	~1.8	4	0.25	~3.5	5	0.35	~3.8
Groove width: W(mm)	Feed rate: f_n (mm/rev)	Cutting depth: a_p (mm)												
3	0.15	~1.8												
4	0.25	~3.5												
5	0.35	~3.8												
 <p>TDF..</p>	<ul style="list-style-type: none"> Big positive rake angle design, suitable for pipe cutting, thin wall parts and small diameter parts processing Excellent performance in bearing steel and stainless steel processing Excellent performance in low, medium feeding processing Sharp cutting edge can reduce cutting cutting force 	  <table border="1"> <thead> <tr> <th>Cutting Width: W(mm)</th> <th>Feeding Rate: f_n (mm/rev)</th> <th>Cutting: a_p (mm)</th> </tr> </thead> <tbody> <tr><td>2</td><td>0.15</td><td>~1.8</td></tr> <tr><td>3</td><td>0.25</td><td>~3.5</td></tr> </tbody> </table>	Cutting Width: W(mm)	Feeding Rate: f_n (mm/rev)	Cutting: a_p (mm)	2	0.15	~1.8	3	0.25	~3.5			
Cutting Width: W(mm)	Feeding Rate: f_n (mm/rev)	Cutting: a_p (mm)												
2	0.15	~1.8												
3	0.25	~3.5												

Chip breaker Characteristics

Profiling undercut application data



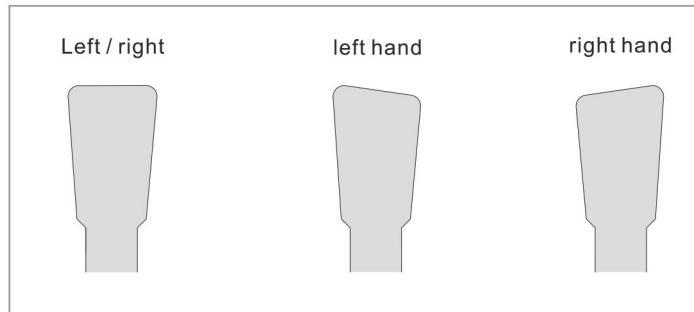
Chip breaker characteristics

● Parting application data

When parting, the insert cutting edge angle(K) can control the size of burr remaining on the workpiece.

Increasing the cutting edge angle can reduce the burr on workpiece surface, but squeeze the tool feed and the tool life.

So Bangpu Tools is recommended to machine the workpiece with burr remained on its end surface.



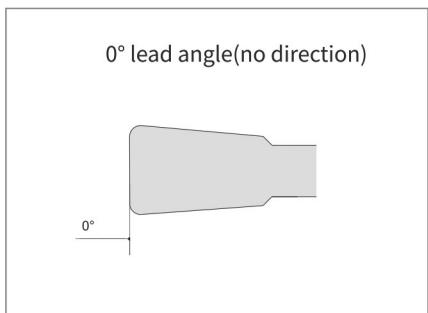
● Applications with different lead-angle

0° -Parting, grooving

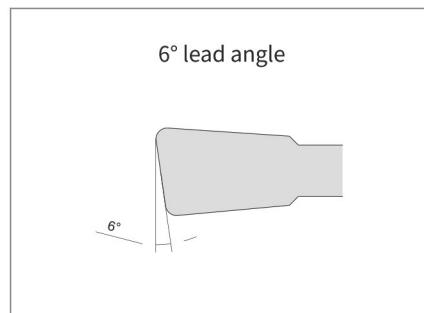
6° -Pipe material and hollow rod

8° -Solid rod

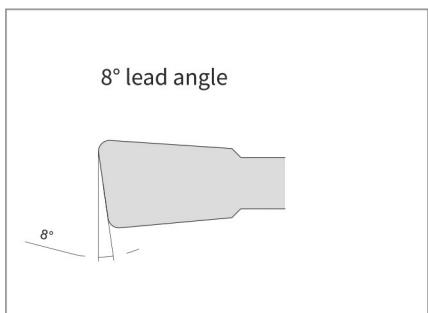
15° -Small diameter and free-cutting solid rod



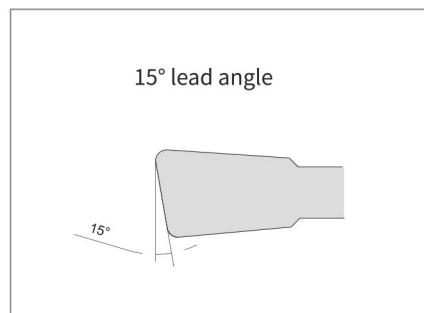
- Parting processing for solid rod
- Residue in the center after parting
- Prevent deviation from workpiece when parting
- Suitable for large diameter parting



- With reduced remainings in the center when solid rod parting
- With reduced burr when pipe and hollow rod parting



- With reduced remainings in the center when solid rod parting
- Suitable for the workpiece with small diameter



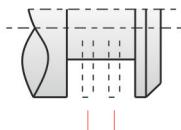
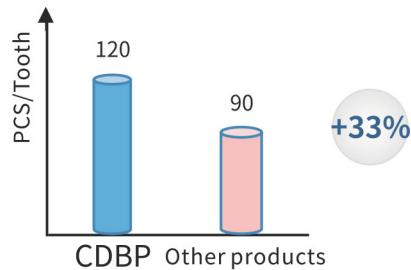
- Small diameter hollow rod parting
- With reduced remainings in the center when solid rod parting

Application case

Multifunctional processing

Perfect chip breaker design for turning and grooving, save procedure and improve efficiency in processing

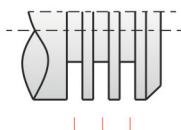
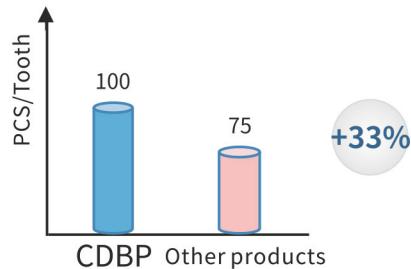
Workpiece material	45#
Cutting condition	$V_c=160(\text{m/min})$
	$f_n=0.15(\text{mm/rev})$
	$a_p=1.80(\text{mm})$
	$W=3(\text{mm})$
Item code	TDT3(BPG20B)



Grooving processing

Enhanced chip breaker to ensure stability in large feed and deep groove processing

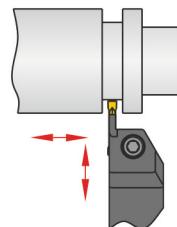
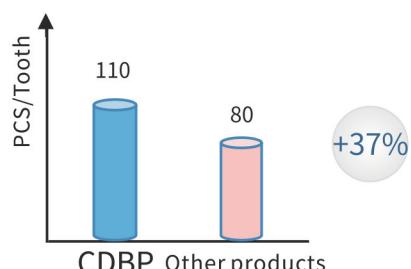
Workpiece material	S.S.304
Cutting condition	$V_c=120(\text{m/min})$
	$f_n=0.12(\text{mm/rev})$
	$a_p=4(\text{mm})$
Item code	TDC3 (BPG20B)



Axis processing

With improved chip breaking performance and high working efficiency

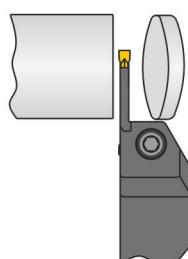
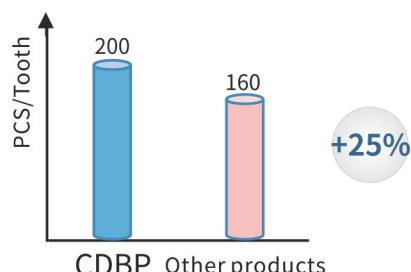
Workpiece material	42CrMn
Cutting condition	$V_c=140(\text{m/min})$
	$f_n=0.13(\text{mm/rev})$
	$a_p=3(\text{mm})$
	$W=4(\text{mm})$
Item code	MGMN400-T (BPG20B)



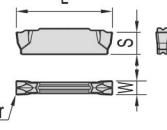
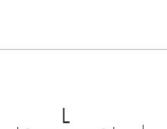
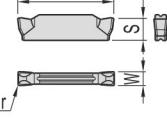
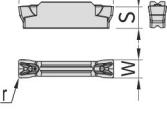
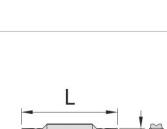
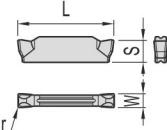
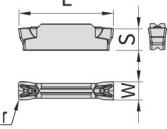
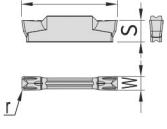
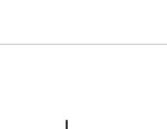
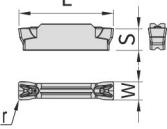
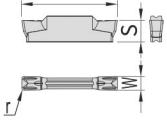
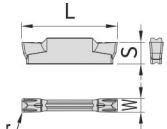
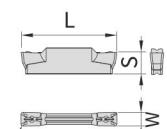
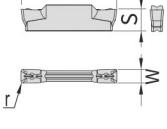
Parting processing

Special designed chip breaker with sharp cutting edge to improve tool life and avoid burr

Workpiece material	S.S.304
Cutting condition	$V_c=150(\text{m/min})$
	$f_n=0.15(\text{mm/rev})$
	$W=3(\text{mm})$
Item code	TDJ3 (BP2220)

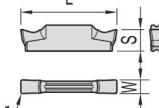
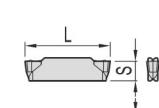
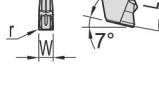
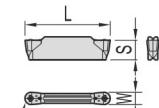
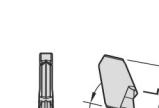
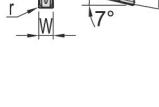
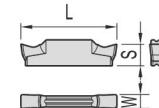
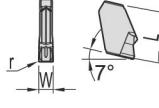
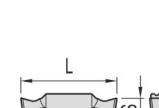
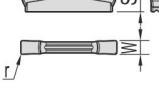
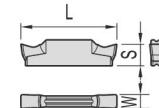
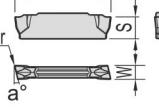
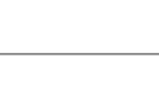
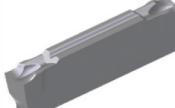
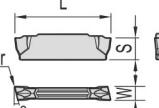


Grooving inserts

Application	Insert	Specification	Coating			Dimension (mm)					Insert structure
			BP2220	BP20B	BP6225A	W	L	r	S	a°	
Grooving.Parting		MGNM	150-L	▲	▲	1.50	16.00	0.20	3.50	-	
			200-L	▲	▲	2.00	16.00	0.20	3.50	-	
			250-L	▲	▲	2.50	18.50	0.20	3.80	-	
			300-L	▲	▲	3.00	21.00	0.20	4.80	-	
			400-L	▲	▲	4.00	21.00	0.30	4.80	-	
			500-L	▲	▲	5.00	26.00	0.30	5.80	-	
Grooving		MGNM	150-H	▲	▲	1.50	16.00	0.20	3.60	-	
			200-H	▲	▲	2.00	16.00	0.20	3.50	-	
			250-H	▲	▲	2.50	18.50	0.20	3.95	-	
			300-H	▲	▲	3.00	21.00	0.40	4.90	-	
			400-H	▲	▲	4.00	21.00	0.40	4.90	-	
			500-H	▲	▲	5.00	26.00	0.30	5.90	-	
Grooving.Turning		MGNM	200-T		▲	2.00	16.00	0.20	3.50	-	
			300-T		▲	3.00	21.00	0.40	4.80	-	
			400-T		▲	4.00	21.00	0.40	4.80	-	
Grooving		MGNM	150-G		▲	1.50	16.00	0.15	3.50	-	
			200-G		▲	2.00	16.00	0.20	3.50	-	
			250-G		▲	2.50	18.35	0.40	3.85	-	
			300-G		▲	3.00	21.00	0.40	4.80	-	
			400-G		▲	4.00	21.00	0.40	4.80	-	
Grooving.Turning		MGNM	200-M		▲	2.00	16.00	0.20	3.50	-	
			250-M		▲	2.50	18.50	0.20	3.85	-	
			300-M		▲	3.00	21.00	0.40	4.80	-	
			400-M		▲	4.00	21.00	0.40	4.80	-	
			500-M		▲	5.00	26.00	0.80	5.80	-	
			600-M		▲	6.00	26.00	0.80	5.80	-	
			800-M		▲	8.00	31.00	0.80	6.50	-	

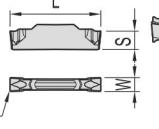
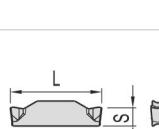
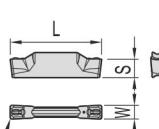
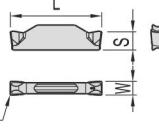
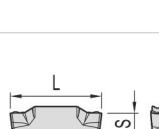
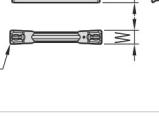
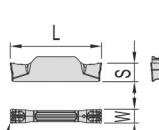
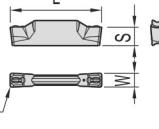
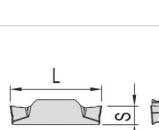
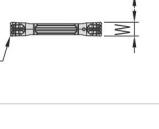
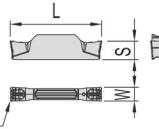
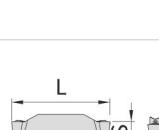
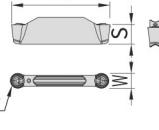
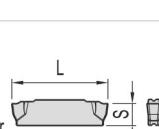
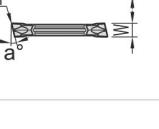
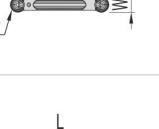
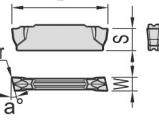
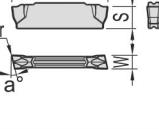
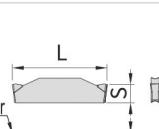
Recommended: ▲

Grooving inserts

Application	Insert	Specification	Coating				Uncoating	Dimension (mm)					Insert structure
			BP2220	BPG05B	BPG20B	BP6225A		W	L	r	S	a°	
Grooving		MGGN	150E-LH	▲	▲			1.50	16.00	0.10	3.60	-	
			200E-LH	▲	▲			2.00	16.00	0.20	3.50	-	
			250E-LH	▲	▲			2.50	18.40	0.20	3.95	-	
			300E-LH	▲	▲			3.00	21.00	0.40	4.90	-	
			400E-LH	▲	▲			4.00	21.00	0.40	4.90	-	
			500E-LH	▲	▲			5.00	26.00	0.80	5.80	-	
Profiling		MRMN	200-M		▲	▲		2.00	16.00	1.00	3.50	-	
			300-M		▲	▲		3.00	21.00	1.50	4.80	-	
			400-M		▲	▲		4.00	21.00	2.00	4.80	-	
			500-M		▲	▲		5.00	25.85	2.50	5.80	-	
			600-M		▲	▲		6.00	26.00	3.00	5.80	-	
													
Single head grooving		BP	200		▲	▲		2.18	8.90	0.20	-	-	
			300		▲	▲		3.14	11.00	0.20	-	-	
			400		▲	▲		4.14	11.00	0.25	-	-	
			500		▲	▲		5.12	11.04	0.30	-	-	
Aul.grooving.Parting		MGGN	150-LH			▲		1.50	16.00	0.10	3.50	-	
			200-LH			▲		2.00	16.00	0.20	3.50	-	
			250-LH			▲		2.50	18.50	0.20	3.80	-	
			300-LH			▲		3.00	21.00	0.40	4.80	-	
			400-LH			▲		4.00	21.00	0.40	4.80	-	
			500-LH			▲		5.00	26.00	0.80	5.80	-	
			600-LH			▲		6.00	26.00	0.80	5.80	-	
			800-LH			▲		8.00	31.00	0.80	6.53	-	
Parting		MGMR	1502-6D	▲	▲			1.50	16.00	0.20	3.50	-	
			2002-6D	▲	▲			2.00	16.00	0.20	3.50	-	
			3002-6D	▲	▲			3.00	21.00	0.20	4.80	-	

Recommended: ▲

Grooving inserts

Application	Insert	Specification		Coating		Dimension (mm)					Insert structure
				BP2220	BPG20B	W	L	r	S	a°	
Grooving, Parting		TDJ	1.4	▲	▲	1.40	16.00	0.16	4.42	-	
			2	▲	▲	2.00	20.00	0.20	3.90	-	
			3	▲	▲	3.00	20.00	0.20	4.00	-	
			4	▲	▲	4.00	20.00	0.30	4.05	-	
			5	▲	▲	5.00	25.00	0.30	4.95	-	
Grooving		TDC	2	▲	▲	2.00	20.00	0.20	4.00	-	
			3	▲	▲	3.00	20.00	0.20	4.10	-	
			4	▲	▲	4.00	20.00	0.30	4.15	-	
			5	▲	▲	5.00	25.00	0.30	5.05	-	
Grooving, Turning		TDT	3	▲	▲	3.00	20.00	0.40	4.00	-	
			4	▲	▲	4.00	20.00	0.40	4.05	-	
			5	▲	▲	5.00	25.00	0.40	4.95	-	
Grooving, Parting	 NEW	TDF	2	▲	▲	2.00	20.00	0.20	3.90	-	
			3	▲	▲	3.00	20.00	0.20	4.05	-	
Profiling		TDR	2	▲	▲	2.00	20.00	1.00	3.90	-	
			3	▲	▲	3.00	20.00	1.50	4.00	-	
			4	▲	▲	4.00	20.00	2.00	4.05	-	
Parting		TDJR	2002-6D	▲	▲	2.00	20.00	0.20	3.90	6	
			3002-8D	▲	▲	3.00	20.00	0.20	4.00	8	
Parting		TDCR	2002-6D	▲	▲	2.00	20.00	0.20	3.90	6	
			3002-8D	▲	▲	3.00	20.00	0.20	4.10	8	

Recommended: ▲

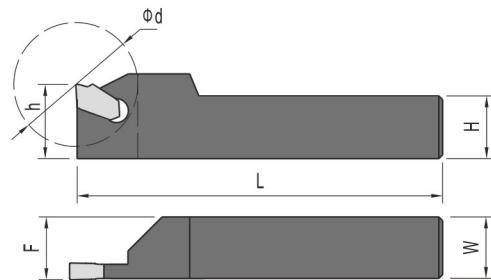
Recommended cutting parameter - grooving

Inserts	Grooving, Parting		Turning			
	Recommended Feed f_n =mm/rev		Recommended Cutting Depth a_p =mm		Recommended Feed f_n =mm/rev	
	Min.	Max.	Min.	Max.	Min.	Max.
MGMN200-L	0.04	0.12	-	-	-	-
MGMN250-L	0.04	0.14	-	-	-	-
MGMN300-L	0.04	0.16	-	-	-	-
MGMN400-L	0.05	0.18	-	-	-	-
MGMN500-L	0.05	0.20	-	-	-	-
MGMN200-H	0.05	0.18	-	-	-	-
MGMN250-H	0.06	0.22	-	-	-	-
MGMN300-H	0.07	0.25	-	-	-	-
MGMN400-H	0.08	0.30	-	-	-	-
MGMN500-H	0.09	0.35	-	-	-	-
MGGN200-LH	0.02	0.13	-	-	-	-
MGGN250-LH	0.03	0.15	-	-	-	-
MGGN300-LH	0.05	0.15	-	-	-	-
MGGN400-LH	0.08	0.18	-	-	-	-
MGGN500-LH	0.08	0.20	-	-	-	-
TDJ2	0.04	0.12	-	-	-	-
TDJ3	0.04	0.16	0.16	-	-	-
TDJ4	0.05	0.18	0.18	-	-	-
TDJ5	0.05	0.20	0.20	-	-	-
TDC2	0.05	0.18	0.18	-	-	-
TDC3	0.07	0.25	0.25	-	-	-
TDC4	0.08	0.30	0.30	-	-	-
TDC5	0.09	0.35	-	-	-	-
TDT3	0.07	0.15	0.50	1.80	0.15	0.22
TDT4	0.09	0.18	0.50	2.40	0.18	0.30
TDT5	0.11	0.20	0.50	3.00	0.20	0.35
TDR2	0.04	0.12	-	-	-	-
TDR3	0.04	0.16	-	-	-	-
TDJR2002-6D	0.05	0.18	-	-	-	-
TDJR3002-8D	0.05	0.20	-	-	-	-
TDCR2002-6D	0.04	0.12	-	-	-	-
TDCR3002-8D	0.04	0.16	-	-	-	-
MRMN200-M	0.05	0.15	0.10	1.00	0.10	0.25
MRMN300-M	0.08	0.18	0.10	1.50	0.15	0.28
MRMN400-M	0.10	0.2	0.10	2.00	0.18	0.35
MRMN500-M	0.12	0.23	0.10	2.50	0.20	0.42
MRMN600-M	0.15	0.27	0.10	3.00	0.25	0.54
BP200	0.02	0.15	-	-	-	-
BP300	0.03	0.20	-	-	-	-
BP400	0.08	0.30	-	-	-	-
BP500	0.10	0.40	-	-	-	-

Single head holder - SPH

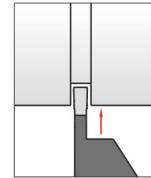


BP□□



R/L
R right hand
L left had

Right hand is shown in the picture

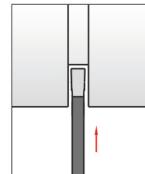


Holder Type		Insert available	Available condition					Wrench	
			External grooving、parting						
			H=(h)	W	L	φ d	F		
SPH	316R/L	BP300	16	16	100	32	16.30	SW15-L	
	320R/L		20	20	120	40	20.30		
	420R/L	BP400	20	20	120	50	20.40		
	520R/L		20	20	120	60	20.50		
	325R/L	BP300	25	25	150	50	25.30		
	425R/L	BP400	25	25	150	60	25.40		
	525R/L	BP500	25	25	150	70	25.50		

Single - head blade - SPB

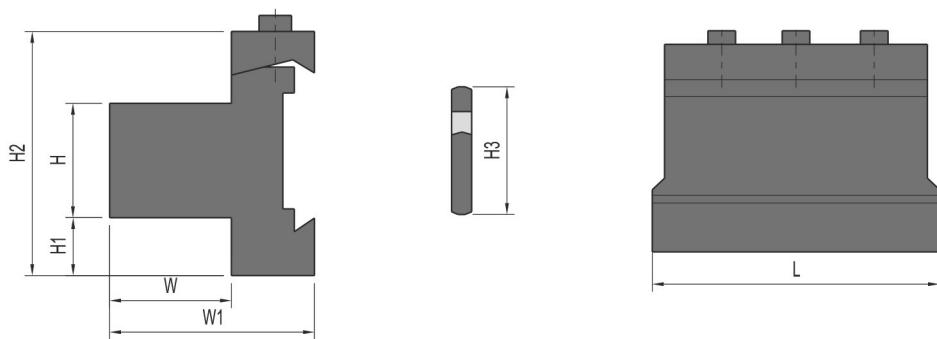


BP□□



Holder type		Insert available	Available condition				Wrench	
			External grooving、parting					
			H	W	L	h		
SPB	226-S	BP200	26	1.60	110	21	HW50-L	
	326-S	BP300	26	2.40	110	21		
	426-S	BP400	26	3.20	110	21		
	526-S	BP500	26	4.00	110	21		
	232-S	BP200	32	1.60	150	25		
	332-S	BP300	32	2.40	150	25		
	432-S	BP400	32	3.20	150	25		
	532-S	BP500	32	4.00	150	25		

Single - head locator-SMBB

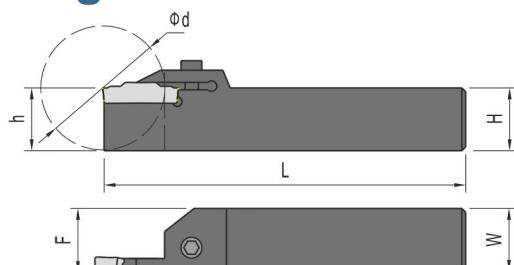


Holder Type		Insert available	Available condition							Wrench	
			External grooving、parting								
			H	W	W1	H1	H2	L	H3		
SMBB	1626	SPB*26	16	12	30	13	43	86	26	HW50-L	
	2026		20	19	38	9	43	86	26		
	2526		25	23	42	4	43	86	26		
	2032	SPB*32	20	19	38	13	50	100	32		
	2532		25	23	42	8	50	110	32		
	3232		32	30	48	5	54	110	32		

MGMN Series grooving holder

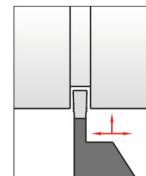


M□MN□-□



R/L
R right hand
L left hand

Right hand is shown in the picture

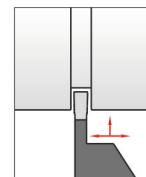
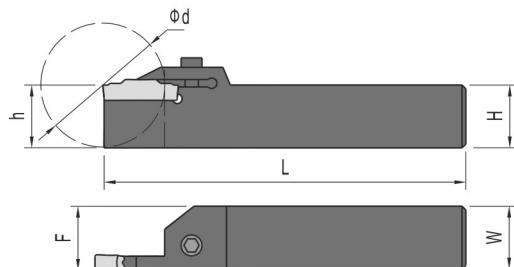


Holder Type	Insert available	Available condition					Screw	Wrench		
		External grooving, turning								
		H=(h)	W	L	F	T(max)				
MGEHR/L	MGMN150-G/M/L/H	16	16	100	16.25	14.5	LTX0512	L2.0		
		20	20	125	20.25	14.5				
	MGMN200-G	25	25	150	25.25	14.5	BHA0616	L5.0		
		12	12	100	14.25	14.5				
		16	16	100	16.25	14.5				
		20	20	125	20.25	14.5				
		25	25	150	25.25	14.5				
	MGMN250-G	16	16	100	16.30	16.5	MHA0512	L4.0		
		20	20	125	20.30	16.5				
		25	25	150	25.30	16.5				
		16	16	100	16.35	18.5				
		20	20	125	20.40	18				
	MGMN300-M	20	20	125	20.40	10	BHA0616	L5.0		
		25	25	150	25.40	18				
		25	25	150	25.40	10				
		32	32	170	32.40	18				
		32	32	170	32.40	10				
	MRMN300-M	20	20	125	20.40	18	MHA0512	L4.0		
		20	20	125	20.50	10				
		25	25	150	25.40	18				
		32	32	170	32.40	18				
		32	32	170	32.40	10				
	MGMN400-M	20	20	125	20.40	18	BHA0616	L5.0		
		20	20	125	20.50	10				
		25	25	150	25.40	18				
		25	25	150	25.40	10				
		32	32	170	32.40	18				
	MRMN400-M	32	32	170	32.40	10	MHA0512	L4.0		
		32	32	170	32.40	10				
		32	32	170	32.40	18				
		32	32	170	32.40	10				
		20	20	150	20.50	23				
	MGMN500-M	20	20	150	20.50	15	BHA0616	L5.0		
		25	25	150	25.50	23				
		25	25	170	25.50	15				
		32	32	170	32.50	23				
		32	32	170	32.50	15				
	MRMN500-M	32	32	170	32.50	15	MHA0512	L4.0		
		32	32	170	32.50	15				
		20	20	125	20.60	23				
		20	20	125	20.60	15				
		25	25	150	25.60	23				
	MGMN600-M	25	25	150	25.60	15	BHA0616	L5.0		
		32	32	170	32.60	23				
		32	32	170	32.60	15				
		25	25	150	26.10	28				
		25	25	150	26.10	15				
	MRMN600-M	32	32	170	33.10	28	MHA0512	L4.0		
		32	32	170	33.10	16				
	MRMN800-M	32	32	170	33.10	28	BHA0616	L5.0		
		32	32	170	33.10	16				
		32	32	170	33.10	28				

TD Series grooving holder



TD□□



R/L
R right hand
L left hand

Right hand is shown in the picture

Holder Type		Insert available	Available condition					Screw	Wrench		
			Grooving、 turning								
			L	H=h	F	W	Φd				
TTER/L	1616-2	TDJ2/TDC2/TDT2/TDF2/TDR2	110	16	16.10	16			BHA0616		
	2020-2		125	20	20.10	20	24				
	2525-2		150	25	25.10	25					
	1616-3		110	16	16.30	16					
	2020-3	TDJ3/TDC3/TDT3/TDF3/TDR3	125	20	20.30	20	24				
	2525-3		150	25	25.30	25					
	1616-4		110	16	16.50	16					
	2020-4		125	20	20.50	20	30				
	2525-4	TDJ4/TDC4/TDT4/TDR4	150	25	25.50	25					
	2020-5		125	20	20.60	20					
	2525-5		150	25	25.60	25	40				