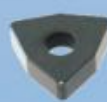
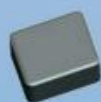




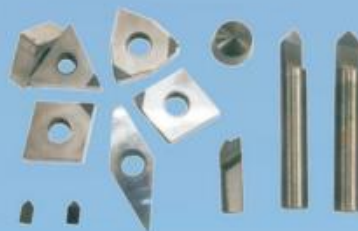
贝斯科超硬材料有限公司

Besco Superabrasives Co. , Ltd



PCBN刀具系列

PCD刀具系列



BESCO[®]
SUPERABRASIVES



Intertek



团结 务实 开拓 创新
TUANJIE WUSHI KAITUO CHUANGXIN



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FUTURE 未来

开拓以进，重于使命

2007

Kaifeng Besco Superabrasives Co., Ltd was established

2008

Resin diamond BRD series products have been successfully developed and put into production

Cubic boron nitride A series and B series products have been successfully developed and put into production

2009

2010

The company's resin diamond and cubic boron nitride products are certified by WWSA, a member of the north American diamond association

2011

CBN micro powder A80M was put into production
Single crystal diamond and micro powder are put into production
Besco new materials engineering and technology center was approved

2013

The company has obtained a total of 12 national technology patents

The company has been kaifeng city for eight consecutive years to earn ten best export enterprises

2017

2014

Purchase 20,000 square meters of land in the eighth street of kaifeng new district as the r&d and production base of the future super hard cutting tool project

2015

Solid PCBN inserts formally put into production



公司简介
COMPANY PROFILE

Besco Superabrasives Co.,Ltd is a leading and professional manufacturer of superabrasives in the world which was established in Kaifeng Economy & Technology Development Zone and international free trade zone in 2007 and includes R&D, manufacturing, sales and service. Besco's registered capital is 3 million US dollars and Besco factory covers an area of twenty thousand square meters. After many years development Besco has established four product lines including multinano-crystal diamond, single crystal diamond, CBN, CBN cutting tools and already masters all related core technology. And obtained 15 patents. Our goal is to do something professional with a focused mind.

Production and testing equipment



FUTURE 未来
开拓以进，重于使命



BESCO Precision Cutting Tool–SBN grade and application field

BESCO Precision Cutting Tool–SBN grade and application field

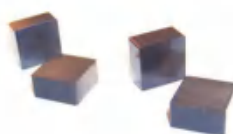
PCBN Grade	Characteristic	Area of application
SBN630B	80%–85%CBN, combination grain size, Al–Ni	Apply to the processing from rough to semi–finishing and discontinuous processing of gray cast iron, ductile cast iron, high hard alloy cast iron, high nickel chromium and high chromium cast iron, high manganese steel and other difficult processing materials.
SBN2080	High content, submicron structure metal phase binder, with excellent abrasive resistance and high thermal conductivity	Apply to the continuous and light intermittent processing of gray cast iron, powder metallurgy and partially hardened steel
SBN637	85%–90%CBN, 12 micron, excellent abrasive resistance and impact toughness, high chemical stability and thermal stability	Apply to cutting high chromium/nickel cast steel roll, and also suitable for high speed steel and quenched steel. Longer tool life during high speed and high efficiency cutting.
SBN630A	High content fine grain Al system cermet phase binder with excellent abrasive resistance, thermal stability, impact toughness and chemical stability	Apply to the finish and semi–processing of gray cast iron, hard cast iron, powder metallurgy, also suitable for the continuous and light intermittent processing of hardened steel.
SBN910	50% ~ 65% CBN, fine control CBN Particle and TiN ceramic phase structure distribution. Abrasion resistance, impact resistance and chemical inert equilibrium	High removal rate, good surface finish and long service life can be achieved during processing. Apply to continuous and medium intermittent turning applications of hardened steel.

Besco can provide integrated PCBN inserts of various specifications (customized ISO standard full series blades and non–standard blades)

Inserts shape	H, O, P, S, T, C, D, E, W, L, A, V, R
Inserts specifications	06, 07, 08, 09, 11, 12, 15, 16, 20, 22, 25等
Edge processing	F Sharp, E Passivation, T Chamfer, S Chamfer+Passivation; Wiper etc



Note: The company can provide PCBN blank and finished products of various brands and specifications according to customer requirements



SCB grade and application field

BESCO Precision Cutting Tool—SCB grade and application field

Grade	Features&Application
SCB630A	SCB630A series with Mixed grain size, 90% CBN contents, and a secondary aluminum ceramic binder phase providing high fracture toughness, excellent wear resistance and chemical stability. Which continues to be used extensively for turning and milling grey and hard cast irons, Ni-hardcast iron and powder metal alloys. The grade is also used for heavy turning of hardened steels, e. g. rough-turning of high chrome alloy steels.
SCB370	With 10 μ m grain size, 90% CBN contents, and Al-Ti ceramic binder. Our new PCBN product SCB370 has a unique combination of abrasive wear resistance and impact toughness, that application in high Cr and Ni iron alloys and turning steel rolls, hardened steels. With higher machining speeds and longer tool life.
SCB910	SCB910 Compacts consist of extremely tightly controlled 50% ~ 65% CBN grains in a TiN-based matrix. The combination of high abrasion resistance, good impact strength and chemical stability allows for harder steel turning, good surface finish and long tool life. Which delivers excellent results in continuous and moderately interrupted cuts.

Specification	Diameters/mm	Thickness/mm	CBN composite layer/mm	SCB630A	SCB370	SCB910
CB133	13. 2	1. 6～3. 2	0. 9～1. 1	●	●	●
CB1903	19. 04			●	●	●
CB303	30. 00		0. 8～1. 0	●	●	●
CB383	38. 00			●	●	●
CB503	50. 00			○	○	○
Note	① Thickness standard according to ISO standard or customer requirement, total thickness tolerance is ±0.05 ② The thickness tolerance of the composite layer is ±0.05 ● Available ○ Not available					

BESCO Precision Cutting Tool—SCD grade and application field

Grades	Grain	Application industries
SCD025	25 μm	High impact resistant and interrupted cutting High silico aluminum alloy, Carbon fibrem, Particle board construction material, Ceramics.
SCD010	10 μm	High speed and abrasive metal and wood working Si - Al alloy, Non - ferrous metal alloy, Reinforced laminated floor.
SCD005	5 μm	Fine finish metal and wood working fiber board, Plastics, Composite material, Copper alloys.

SCD series PCD inserts are as above:

Note: The thickness is available upon request.

Specifications	Diameters Φ (mm)	Thickness (mm)	SCD025	SCD010	SCD005
06	6.35	1.2-3.2	●	●	●
09	9.525	1.2-3.2	●	●	●
12	12.7	1.2-3.2	●	●	●
20	20.00	1.2-3.2	●	●	●
25	25.40	1.2-3.2	●	●	●
30	30.00	1.2-3.2	●	●	●
38	38.00	1.2-3.2	●	●	●
50	50.00	1.2-3.2	●	●	●

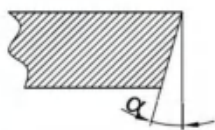


形状代码	刀片	刀片形状	角度
S		四方形	90
T		三角形	60
C		菱形 (宝石形)	80
D			55
E			75
F			50
M			86
V			35
W		凸三角形	80
H		六边形	120
O		八边形	135
P		五边形	108
L		长方形	90
A		平行四边形	85
B			82
N/K			55
R		圆形	-

1 刀片形状

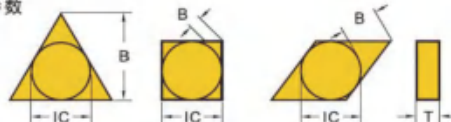
N	0°
A	3°
B	5°
C	7°
P	11°
D	15°
E	20°
F	25°
G	30°

2 刀片后角



公差：优先考虑的是刃口有预处理和涂层刀片

IC: 刀片内切圆直径
T: 刀片厚度
B: 见以下参数



公差等级	尺寸“IC”公差		尺寸“B”公差		尺寸“T”公差	
	英寸	mm	英寸	mm	英寸	mm
C	±.0010	±0.025	±.0005	±0.013	±.001	±0.025
H	±.0005	±0.013	±.0005	±0.013	±.001	±0.025
E	±.0010	±0.025	±.0010	±0.025	±.001	±0.025
G	±.0010	±0.025	±.0010	±0.025	±.005	±0.13
M	详见右边表格		详见右边表格		±.005	±0.13
U	详见右边表格		详见右边表格		±.005	±0.13

3 公差

英制	C	N	G	N
公制	C	N	G	N
位置	1	2	3	4

4 刀片类型					附加代码	
代号	孔	刀孔形状	断屑槽	刀片截面形状	形状代码	"D"小于1/4"
N	无	-	无		N	E
R			单面		R	
F			双面		F	
A	有	直孔	无		A	D
M,R,S			单面		M	
G,P,Z			双面		G	
W		部份直孔，带40-60°沉孔	无		A	
T		单面		M		
Q		部份直孔，双面带40-60°沉孔	无		A	
U			双面		G	
B		部份直孔，带70-90°沉孔	无		A	
H			单面		M	
C		部份直孔，双面带70-90°沉孔	无		A	
J			双面		G	
X	非标准				X	X

★ 只适用于英制单位

5 尺寸										
英寸	IC		公制切削刃长度							
	英寸	mm	C	D	R	S	T	V	W	
1.2(5)	5/32	3.97	S4	04	03	03	06	-	-	
1.5(6)	3/16	4.76	04	05	04	04	08	08	S3	
1.8(7)	7/32	5.56	05	06	05	05	09	09	03	
-	.236	6.00	-	-	06	-	-	-	-	
2	1/4	6.35	06	07	06	06	11	11	04	
2.5	5/16	7.94	08	09	07	07	13	13	05	
-	.315	8.00	-	-	08	-	-	-	-	
3	3/8	9.52	09	11	09	09	16	16	06	
-	.394	10.00	-	-	10	-	-	-	-	
3.5	7/16	11.11	11	13	11	11	19	19	07	
-	.472	12.00	-	-	12	-	-	-	-	
4	1/2	12.70	12	15	12	12	22	22	08	
4.5	9/16	14.29	14	17	14	14	24	24	09	
5	5/8	15.88	16	19	15	15	27	27	10	
-	.630	16.00	-	-	16	-	-	-	-	
5.5	11/16	17.46	17	21	17	17	30	30	11	
6	3/4	19.05	19	23	19	19	33	33	13	
-	.787	20.00	-	-	20	-	-	-	-	
7	7/8	22.22	22	27	22	22	38	38	15	
-	.984	25.00	-	-	25	-	-	-	-	
8	1	25.40	25	31	25	25	44	44	17	
10	1 1/4	31.75	32	38	31	31	54	54	21	
-	1.260	32.00	-	-	32	-	-	-	-	

注：代码中的圆括号内的英寸尺寸，用于D值E（小于1/4英寸“IC”）

IC		尺寸“IC”±公差							
		“M”等级公差						“U”等级公差	
		形状S,T,C,R&W		形状D		形状V		形状S,T&C	
英寸	mm	英寸	mm	英寸	mm	英寸	mm	英寸	mm
5/32	3,97	.002	0,05	-	-	-	-	-	-
3/16	4,76			-	-	-	-	-	-
7/32	5,56			.002	0,05	.002	0,05	.003	0,06
1/4	6,35								
5/16	7,94								
3/8	9,52								
7/16	11,11	.003	0,06	.003	0,06	.003	0,06	.005	0,13
1/2	12,70								
9/16	14,29								
5/8	15,88								
11/16	17,46								
3/4	19,05	.004	0,10	.004	0,10	.004	0,10	.007	0,18
7/8	22,22								
1	25,40								
11/4	31,75								
11/4	31,75	.005	0,13	.005	0,13	.005	0,13	.010	0,25
11/4	31,75								
11/4	31,75								
11/4	31,75								
11/4	31,75								

IC		尺寸“B”±公差							
		“M”等级公差						“U”等级公差	
		形状S,T,C,R&W		形状D		形状V		形状S,T&C	
英寸	mm	英寸	mm	英寸	mm	英寸	mm	英寸	mm
5/32	3,97	.003	0,06	-	-	-	-	-	-
3/16	4,76			-	-	-	-	-	-
7/32	5,56			.004	0,11	-	-	.005	0,13
1/4	6,35					-	-		
5/16	7,94					-	-		
3/8	9,52					.007	0,18		
7/16	11,11	.005	0,13	.006	0,15	-	-	-	-
1/2	12,70					.010	0,25	.008	0,20
9/16	14,29					-	-	-	-
5/8	15,88					-	-	-	-
11/16	17,46					-	-	.011	0,27
3/4	19,05	.006	0,15	.007	0,18	-	-	.015	0,38
7/8	22,22					-	-		
1	25,40					-	-		
11/4	31,75					-	-		
11/4	31,75					-	-		

4	3	2				
12	04	08		S	02020	W修光刃
5	6	7	8	9	10	11

代号 symbol	角度(°) Angle	代号 symbol	长度(mm) Length
B	5	E	0.2
C	10	F	0.4
D	15	H	0.6
X	特殊	K	0.8
		M	1.0
		X	特殊

注：修光刃直接以W加长度乘以角度表示

平面定位	平面定位不标注 例：RCMN120700S02020
V形面定位	1. 120°V形面定位可不标注120°，只标注V。 例：RCMX120700VS02020 2. 非120° V形面定位要标注其角度和V。 例：RCMX120700-135VS02020
圆锥面定位	1. 120°圆锥面定位可不标注120°，只标注Y。 例：RCMX120700YS02020 2. 非120° 圆锥面定位要标注其角度和Y。 例：RCMX120700-135YS02020

8 孔型刀

10 负倒棱参数

代号 symbol	宽度Br(mm) width	代号 symbol	角度Rb(°) Angle
010	0.10	05	5°
015	0.15	10	10°
020	0.20	15	15°
025	0.25	20	20°
030	0.30	25	25°
050	0.50	30	30°
100	1.00	45	45°
200	2.00		

9 切削刃口处理

E	钝化刃口
F	锋利刃口
T	负倒棱
S	负倒棱加钝化

P	钢
K	铸铁
M	不锈钢
N	有色金属
S	耐热合金/钛合金
H	淬硬材料
U	通用材料

6 刀片厚度			
代号		厚度	
英寸	mm	英寸	mm
.5(1)	-	1/32	0,79
.6	T0	.040	1,00
1(2)	01	1/16	1,59
1.2	T1	5,64	1,98
1.5(3)	02	3/32	2,38
2	03	1/8	3,18
2.5	T3	5/32	3,97
3	04	3/16	4,76
3.5	05	7/32	5,56
4	06	1/4	6,35
5	07	5/16	7,94
6	09	3/8	9,52
7	11	7/16	11,11
8	12	1/2	12,70

7 刀尖圆弧			
代码		刀尖圆弧	
英寸	mm	英寸	mm
X0	X0	.0015	.04
0	01	.004	0,1
.5	02	.008	0,2
1	04	1/64	0,4
2	08	1/32	0,8
3	12	3/64	1,2
4	16	1/16	1,6
5	20	5/64	2,0
6	24	3/32	2,4
7	28	7/64	2,8
8	32	1/8	3,2
-	00	圆刀片 (英寸)	
-	M0	圆刀片 (inch)	

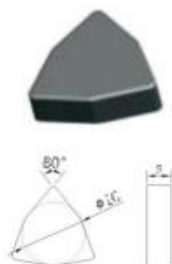
注意：代码中的圆括号内的英制尺寸，用于D或E（小于1/4英寸“IC”）



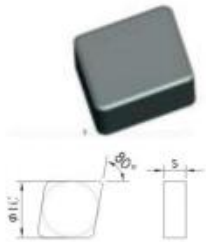
Grade	Inserts parameter			
ISO	L	ϕIC	S	R
RNGN250700	25.4	25.4	8	0
RNGN201000	20	20	10	0
RNGN200700	20	20	7.94	0
RNGN150700	15.875	15.875	7.94	0
RNGN120700	12.7	12.7	7.94	0
RNGN120400	12.7	12.7	4.76	0
RNGN090400	9.525	9.525	4.76	0



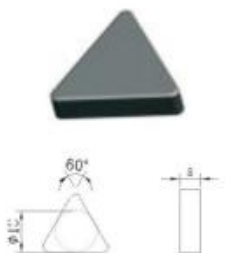
Grade	Inserts parameter			
ISO	L	ϕIC	S	R
SNGN250716	25.4	25.4	8	1.6
SNGN201012	20	20	10	1.2
SNGN200712	20	20	7.94	1.2
SNGN150716	15.875	15.875	7.94	1.6
SNGN120712	12.7	12.7	7.94	1.2
SNGN120408	12.7	12.7	4.76	0.8
SNGN090404	9.525	9.525	4.76	0.4



Grade	Inserts parameter			
ISO	L	ϕIC	S	R
WNGN080404	8.79	12.7	4.76	0.4
WNGN080408	8.79	12.7	4.76	0.8
WNGN080412	8.79	12.7	4.76	1.2



Grade	Inserts parameter			
ISO	L	øIC	S	R
CNGN120404	12.9	12.7	4.76	0.4
CNGN120408	12.9	12.7	4.76	0.8
CNGN120412	12.9	12.7	4.76	1.2



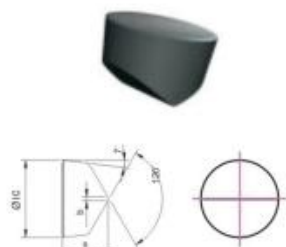
Grade	Inserts parameter			
ISO	L	øIC	S	R
TNGN110404	11	6.35	4.76	0.4
TNGN160404	16	9.525	4.76	0.4
TNGN160408	16	9.525	4.76	0.8
TNGN220408	22	12.7	4.76	0.8



Grade	Inserts parameter			
ISO	L	øIC	S	R
WNGA080404	8.79	12.7	4.76	0.4
WNGA080408	8.79	12.7	4.76	0.8
WNGA080412	8.79	12.7	4.76	1.2

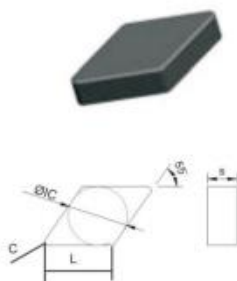
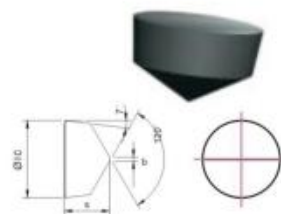


Grade	Inserts parameter			
ISO	L	øIC	S	R
OPHN0504S		12.7	4.76	
OPHN050418WS		12.7	4.76	

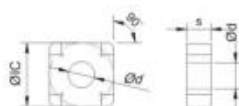


Grade	Size (mm)				Standard Edge
ISO	L	Ø I. C	S	b	
RCMX060400V	6. 35	6. 35	4. 76	0. 8	T01020
RCMX060600V	6. 35	6. 35	6. 35	0. 8	T01025
RCMX090700V	9. 525	9. 525	7. 94	1	T02020
RCMX120700V	12. 7	12. 7	7. 94	2	S01020
RCMX151000V	15. 875	15. 875	10. 0	2	S02020
RCMX191000V	19. 05	19. 05	10. 0	2	S05020
RCMX201200V	20. 0	20. 0	12. 0	2	S10020
RCMX251200V	25. 4	25. 4	12. 0	2	S20020

Grade	Size (mm)				Standard Edge
ISO	L	ØI. C	S	b	
RCMX060400Y	6. 35	6. 35	4. 76	0. 6	T01020 T01025
RCMX060500Y	6. 35	6. 35	5. 0	0. 6	T02020
RCMX060700Y	6. 35	6. 35	7. 94	0. 6	T02025 S01020
RCMX090700Y	9. 525	9. 525	7. 94	1	S05020
RCMX120700V	12. 7	12. 7	7. 94	1. 2	S10020 S20020

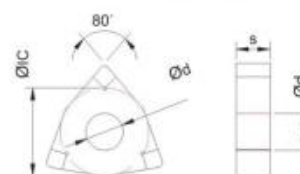


Grade	Size (mm)				Standard Edge
ISO	L	ØI. C	S	r	
DNUN110404	11.0	9.525	4.76	0.4	T01015 T01020 T01025 T02020 T02025 S01015 S01020 S02025
DNUN110408	11.0	9.525	4.76	0.8	
DNUN110412	11.0	9.525	4.76	1.2	
DNUN110604	11.0	9.525	6.35	0.4	
DNUN110608	11.0	9.525	6.35	0.8	
DNUN110612	11.0	9.525	6.35	1.2	
DNUN150604	15.5	12.7	6.35	0.4	
DNUN150608	15.5	12.7	6.35	0.8	
DNUN150612	15.5	12.7	6.35	1.2	

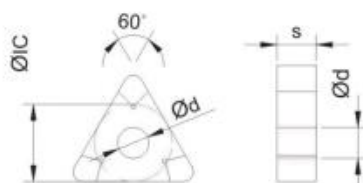


Grade	Size (mm)					Standard Edge
ISO	L	ØI. C	s	ød	r	
SNGA120404-8S	12.7	12.7	4.76	5.16	0.4	T01020 T02020 S01020 S02020
SNGA120408-8S	12.7	12.7	4.76	5.16	0.8	
SNGA120412-8S	12.7	12.7	4.76	5.16	1.2	

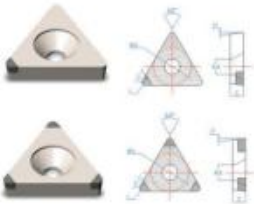
Grade	Size (mm)					Standard Edge
ISO	L	ØI. C	s	ød	r	
WNGA060404-6S	6.5	9.525	4.76	3.81	0.4	T01020
WNGA060408-6S	6.5	9.525	4.76	3.81	0.8	
WNGA060412-6S	6.5	9.525	4.76	3.81	1.2	T02020
WNGA080404-6S	8.79	12.7	4.76	5.16	0.4	S01020
WNGA080408-6S	8.79	12.7	4.76	5.16	0.8	S02020
WNGA080412-6S	8.79	12.7	4.76	5.16	1.2	




Grade	Size (mm)					Standard Edge
ISO	L	ØI. C	s	ød	r	
TNGA160404-6S	16.5	9.525	4.76	3.81	0.4	T01020
TNGA160408-6S	16.5	9.525	4.76	3.81	0.8	
TNGA160412-6S	16.5	9.525	4.76	3.81	1.2	T02020
TNGA220404-6S	22	12.7	4.76	5.16	0.4	S01020 S02020
TNGA220408-6S	22	12.7	4.76	5.16	0.8	
TNGA220412-6S	22	12.7	4.76	5.16	1.2	





Inserts sharp	Grade	Size				
	ISO	IC	S	d	r	la
	SCGW120404-2	12. 7	4. 76	5. 56	0. 4	2. 5
	SCGW120408-2	12. 7	4. 76	5. 56	0. 8	2. 3
	SCGW120412-2	12. 7	4. 76	5. 56	1. 2	2. 1
	SCGW120404-4	12. 7	4. 76	5. 56	0. 4	2. 5
	SCGW120408-4	12. 7	4. 76	5. 56	0. 8	2. 3
	SCGW120412-4	12. 7	4. 76	5. 56	1. 2	2. 1


Inserts sharp	Grade	Size				
	ISO	IC	S	d	r	la
	TCGW110204-1	6. 35	2. 38	2. 8	0. 4	2. 5
	TCGW110304-1	6. 35	3. 18	2. 8	0. 4	2. 5
	TCGW16T308-1	9. 525	3. 97	4. 4	0. 8	2. 2
	TCGW110204-3	6. 35	2. 38	2. 8	0. 4	2. 5
	TCGW110304-3	6. 35	3. 18	2. 8	0. 4	2. 5
	TCGW16T308-3	9. 525	3. 97	4. 4	0. 8	2. 2

Inserts sharp	Grade	Size				
	ISO	IC	S	d	r	la
	VBGW160404-1	9. 525	4. 76	4. 4	0. 4	2. 8
	VBGW160408-1	9. 525	4. 76	4. 4	0. 8	2. 5
	VBGW160404-2	9. 525	4. 76	4. 4	0. 4	2. 8
	VBGW160408-2	9. 525	4. 76	4. 4	0. 8	2. 5

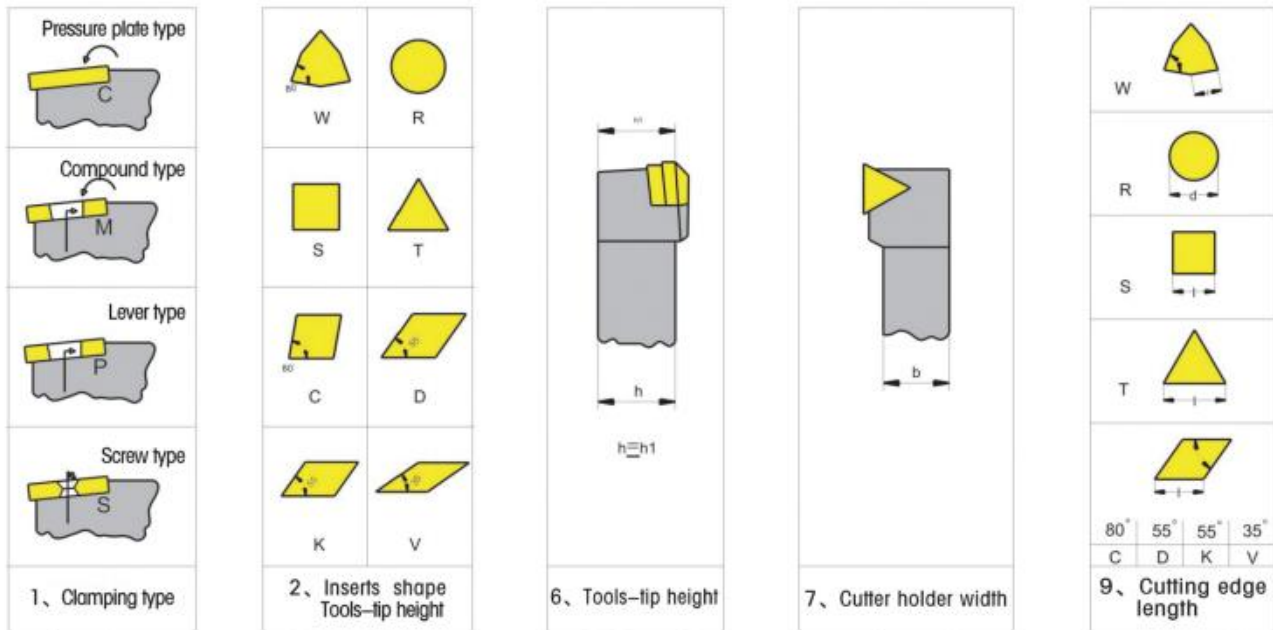
Inserts sharp	Grade	Size				
	ISO	ØIC	S	Ød	r	L
	CNGA120404	12.7	4.76	5.16	0.4	12.9
	CNGA120408	12.7	4.76	5.16	0.8	12.9
	CNGA120412	12.7	4.76	5.16	1.2	12.9

Inserts sharp	Grade	Size				
	ISO	ØIC	S	Ød	r	L
	DNGA110404	9.525	4.76	3.81	0.4	11.6
	DNGA110408	9.525	4.76	3.81	0.8	11.6
	DNGA150408	12.7	4.76	5.16	0.8	15.5
	DNGA150412	12.7	4.76	5.16	1.2	15.5
	DNGA150612	12.7	4.76	5.16	1.2	15.5

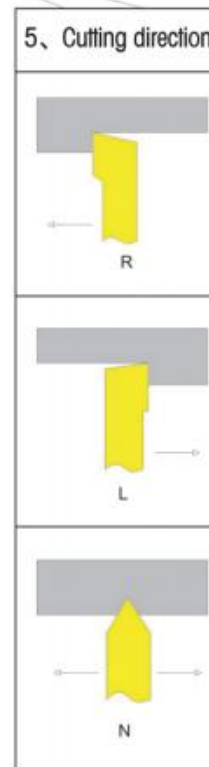
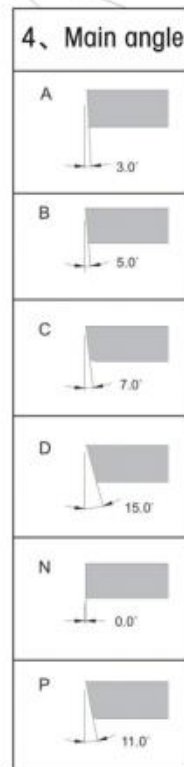
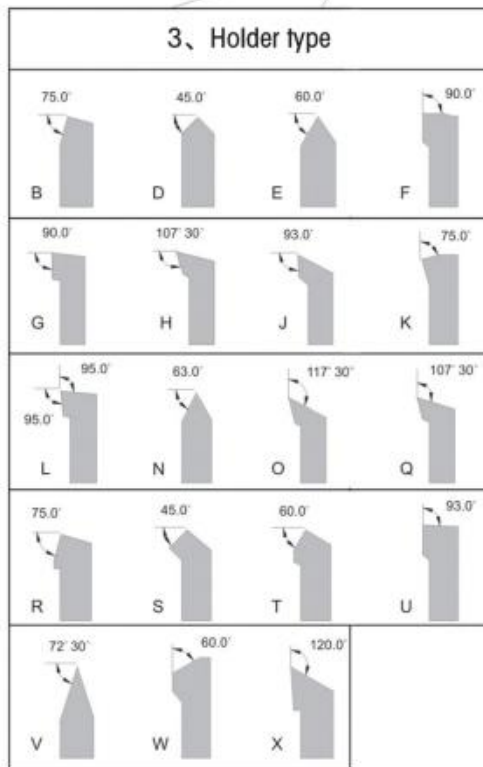
Inserts sharp	Grade	Size				
	ISO	ØIC	S	Ød	r	L
	TNGA110304	6.35	3.18	2.26	0.4	11
	TNGA160408	9.525	4.76	3.81	0.8	16.5
	TNGA160412	9.525	4.76	3.81	1.2	16.5

Inserts sharp	Grade	Size				
	ISO	ØIC	S	Ød	r	L
	VNGA160404	9.525	4.76	3.81	0.4	16.6
	VNGA160408	9.525	4.76	3.81	0.8	16.6
	VNGA160412	9.525	4.76	3.81	1.2	16.6

Inserts sharp	Grade	Size				
	ISO	ØIC	S	Ød	r	L
	CCGW060204	6.35	2.38	2.8	0.4	2.5
	CCGW060208	6.35	2.38	2.8	0.8	2.4
	CCGW09T304	9.525	3.97	4.4	0.4	2.5
	CCGW09T308	9.525	3.97	4.4	0.8	2.4
	CCGW120408	12.7	4.76	5.5	0.8	2.4
	DCGW070202	6.35	2.38	2.8	0.2	2.7
	DCGW070204	6.35	2.38	2.8	0.4	2.5
	DCGW11T304	9.525	3.97	4.4	0.4	2.5
	DCGW11T308	9.525	3.97	4.4	0.8	2.3
	SCGW120404	12.7	4.76	4.4	0.4	2.5
	SCGW120408	12.7	4.76	4.4	0.8	2.3
	SCGW120412	12.7	4.76	4.4	1.2	2.1
	TCGW110202	6.35	2.38	2.8	0.2	2.5
	TCGW110204	6.35	2.38	2.8	0.4	2.5
	TCGW110208	6.35	2.38	2.8	0.8	2.0
	TCGW110304	6.35	3.18	2.8	0.4	2.5
	TCGW16T304	9.525	3.97	4.4	0.4	2.5
	TCGW16T308	9.525	3.97	4.4	0.8	2.0
	VCGW160404	9.525	4.76	4.4	0.4	2.8
	VCGW160408	9.525	4.76	4.4	0.8	2.5
	VCGW160412	9.525	4.76	4.4	1.2	2.0



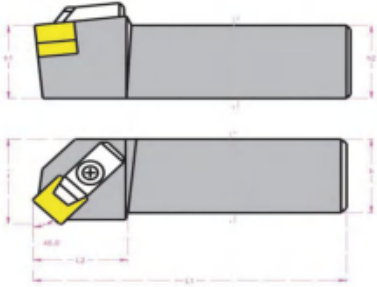
C	S	K	P	R	25	25	M	12
1	2	3	4	5	6	7	8	9



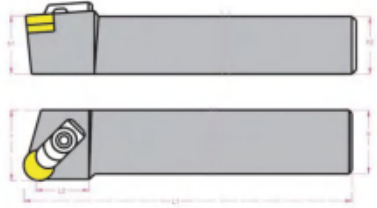
6、The length of the inserts

A	32
B	40
C	50
D	60
E	70
F	80
G	90
H	100
J	110
K	125
L	140
M	150
N	160
P	170
Q	180
R	200
S	250
T	300
U	350
V	400
W	450
Y	500
X	特殊长度

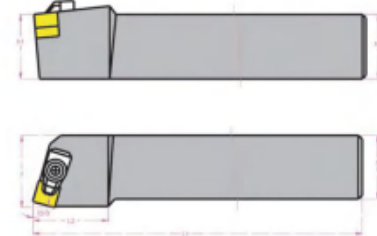
45° 刀具

	Specifications	h1=h2	b	L1	L2	f
	CSSNR/L2525P12	25	25	170	32	32
	CSSNR/L3232P12	32	32	200	35	36
	CSSNR/L3235R15	32	32	200	42	39.2
	CSSNR/L4040S12	40	40	250	40	44.3
	CSSNR/L4040S15	40	40	250	45	45
	CSSNR/L4040S20	40	40	250	48	46
	CSSNR/L5050T15	50	50	300	44	55
	CSSNR/L5050T20	50	50	300	50	58

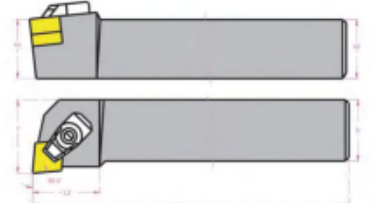
90° 圆弧刀具

	Specifications	h1=h2	b	L1	L2	f
	CRGNR/L3232P12	32	32	170	40	37
	CRGNR/L3232P15	32	32	170	40	37
	CRGNR/L4040S20	40	40	250	42	45
	CRGNR/L5050T20	50	50	300	42	55
	CRGNR/L5050T25	50	50	300	46	55

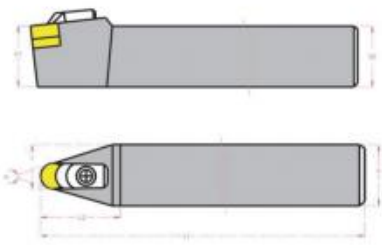
75° 刀具

	Specifications	h1=h2	b	L1	L2	f
	CSRNR/L3232P12	32	32	170	36	36
	CSRNR/L4040S15	40	40	250	45	45
	CSRNR/L5050T20	50	50	300	45	56

95° 刀具

	Specifications	h1=h2	b	L1	L2	f
	CCLNR/L3232P12	32	32	170	34	36
	CCLNR/L4040S16	40	40	250	40	45

Center arc cutter

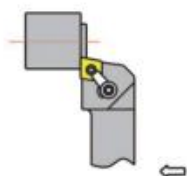
	Specifications	h1=h2	b	L1	L2	f	a
	CRDNN3232P12	32	32	170	64	22.35	20
	CRDNN4040S15	40	40	20	80	27.93	20
	CRDNN5050T20	50	50	300	99	35	20
	CRDNN3232P12	32	32	170	46	22.35	30
	CRDNN4040S15	40	40	250	57	27.93	30
	CRDNN5050T20	50	50	300	70	35	30



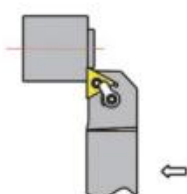
Cylindrical processing

90° , 93° , 75° Cutting edge angel

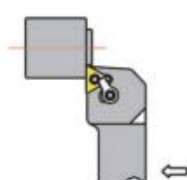
MCGNL/R



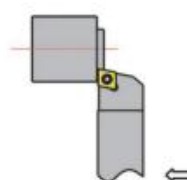
MTANL/R



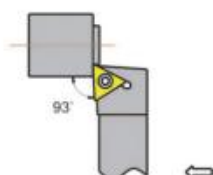
MTGNL/R



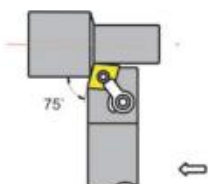
SCACL/R



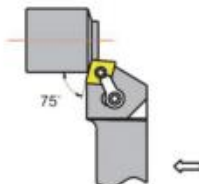
STJCL/R



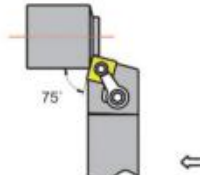
MCBNL/R



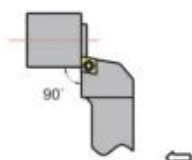
MCRNL/R



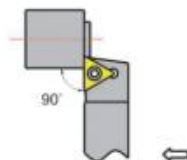
MSBNL/R



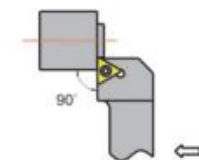
SCGCL/R



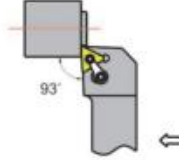
STACL/R



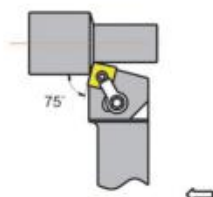
STGCL/R



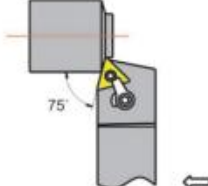
MTJNL/R



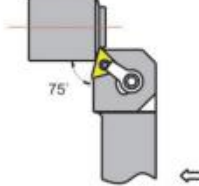
MSRNL/R



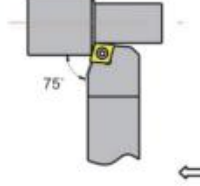
MTBNL/R



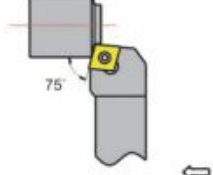
MTRNL/R



SCBCL/R



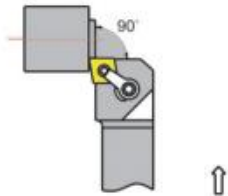
SCRCL/R



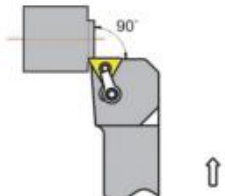
End face processing

90° , 75° Cutting edge angel

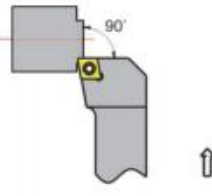
MCFNL/R



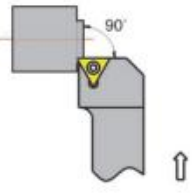
MTFNL/R



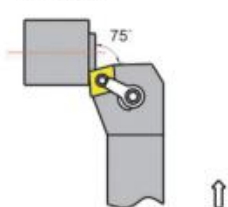
SCFCL/R



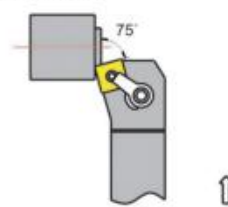
STFCL/R



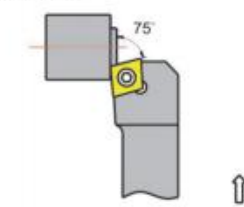
MCKNL/R



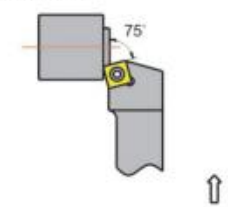
MSKNL/R



SCKCL/R



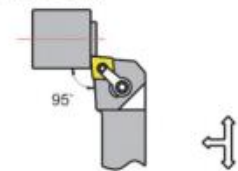
SSKCL/R



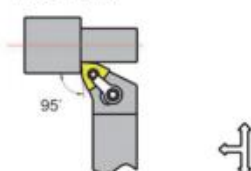
95° Cutting edge angel

End surface cylindrical processing

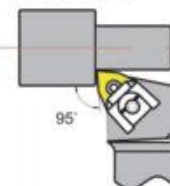
MCLNL/R



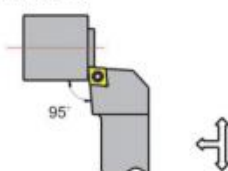
MWLN/R



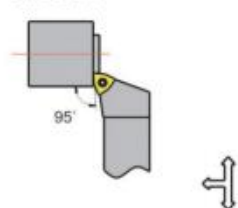
WWLNRL/R



SCLCL/R

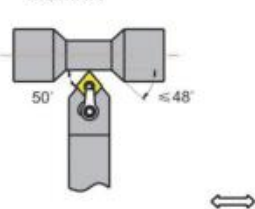


SWLCL/R

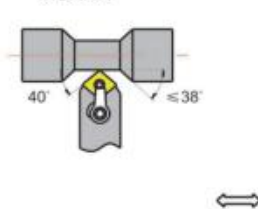


Contour processing

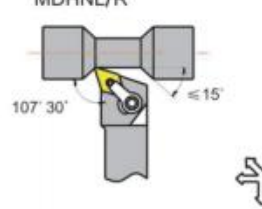
MCMNN



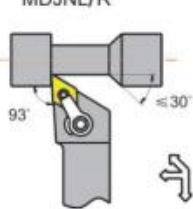
MCXNN



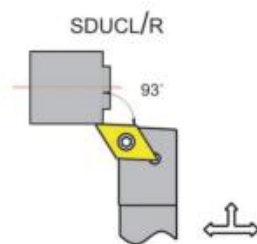
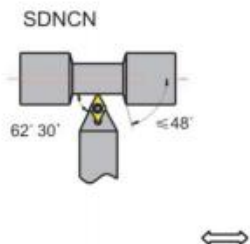
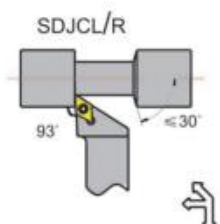
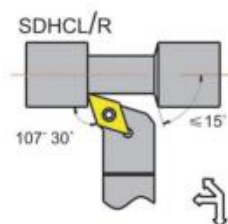
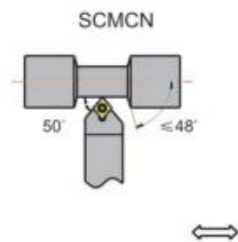
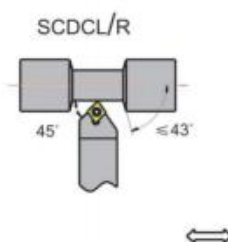
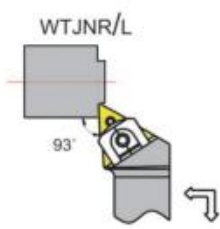
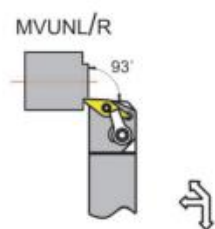
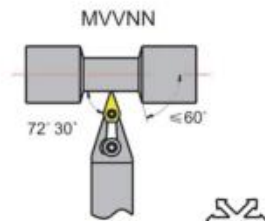
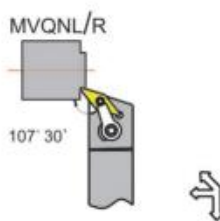
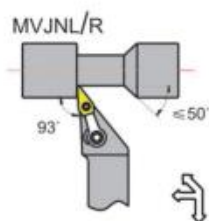
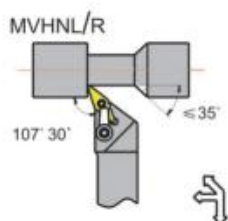
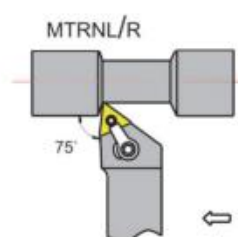
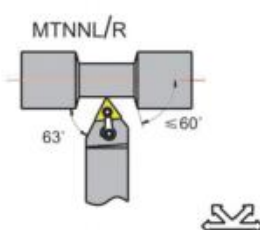
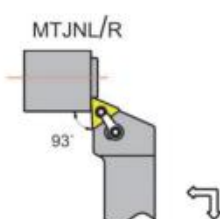
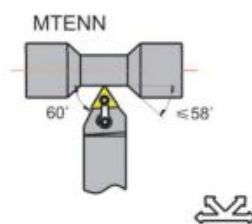
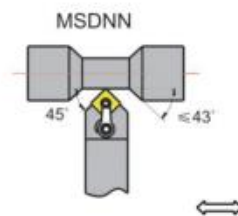
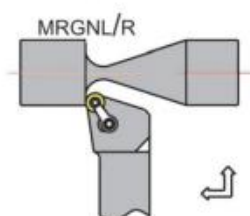
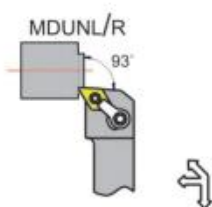
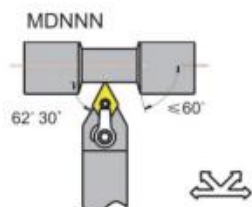
MDHNL/R



MDJNL/R

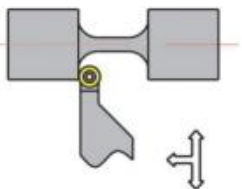


Contour processing

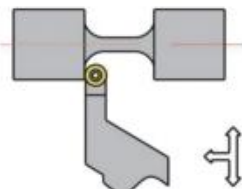


Contour processing

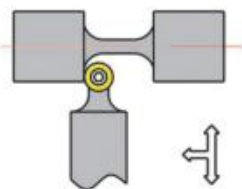
SRACL/R



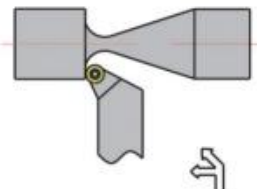
SRCCL/R



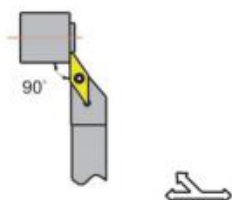
SRDCN



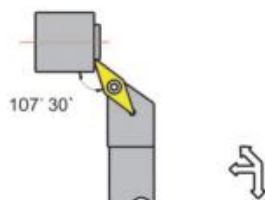
SRGCL/R



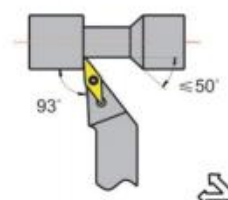
SVACL/R



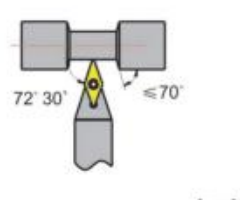
SVHCL/R



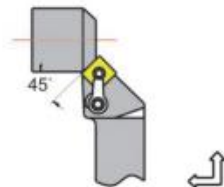
SVJCL/R



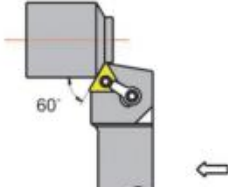
SVVCN



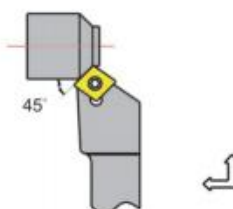
MSSNL/R



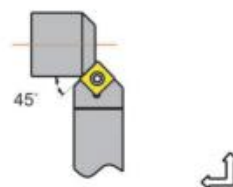
MTTNL/R



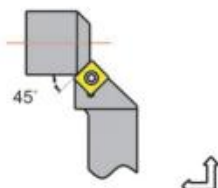
SCSCL



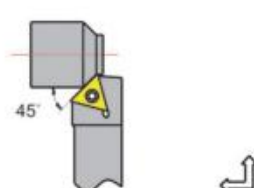
SSDCN



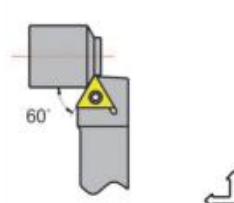
SSSCL/R



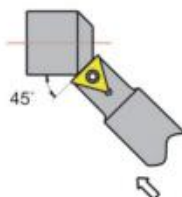
STDCL/R



STTCL/R



STCCN





S Chamfering+Passivation

Cutting edge treatment



T Chamfering



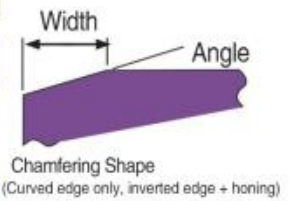
E Passivation



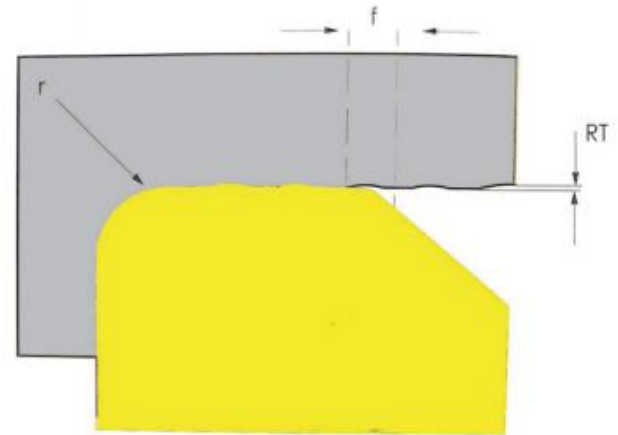
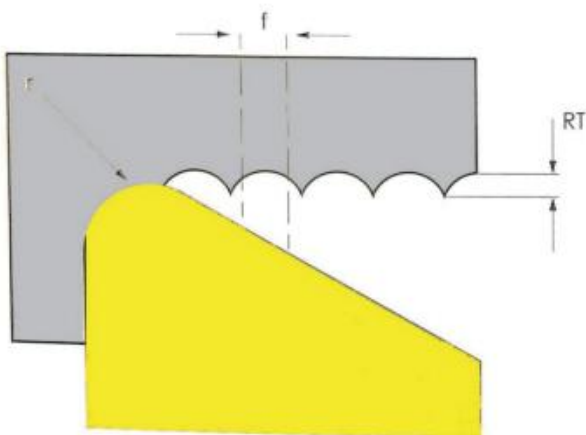
F Sharp Edge

Chamfering width · Angle
小 大

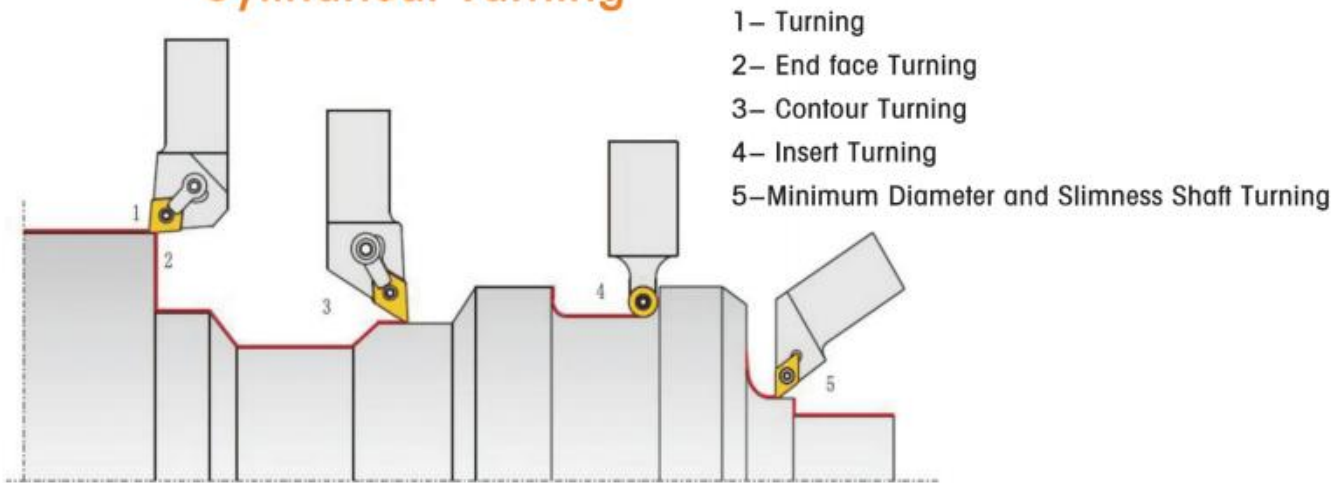
Cutting Resistance	O	↔	X
Anti-Resistance	X	↔	O
Anti-Collapse	O	↔	X
Application	Continuous Processing	↔	Interrupted Processing



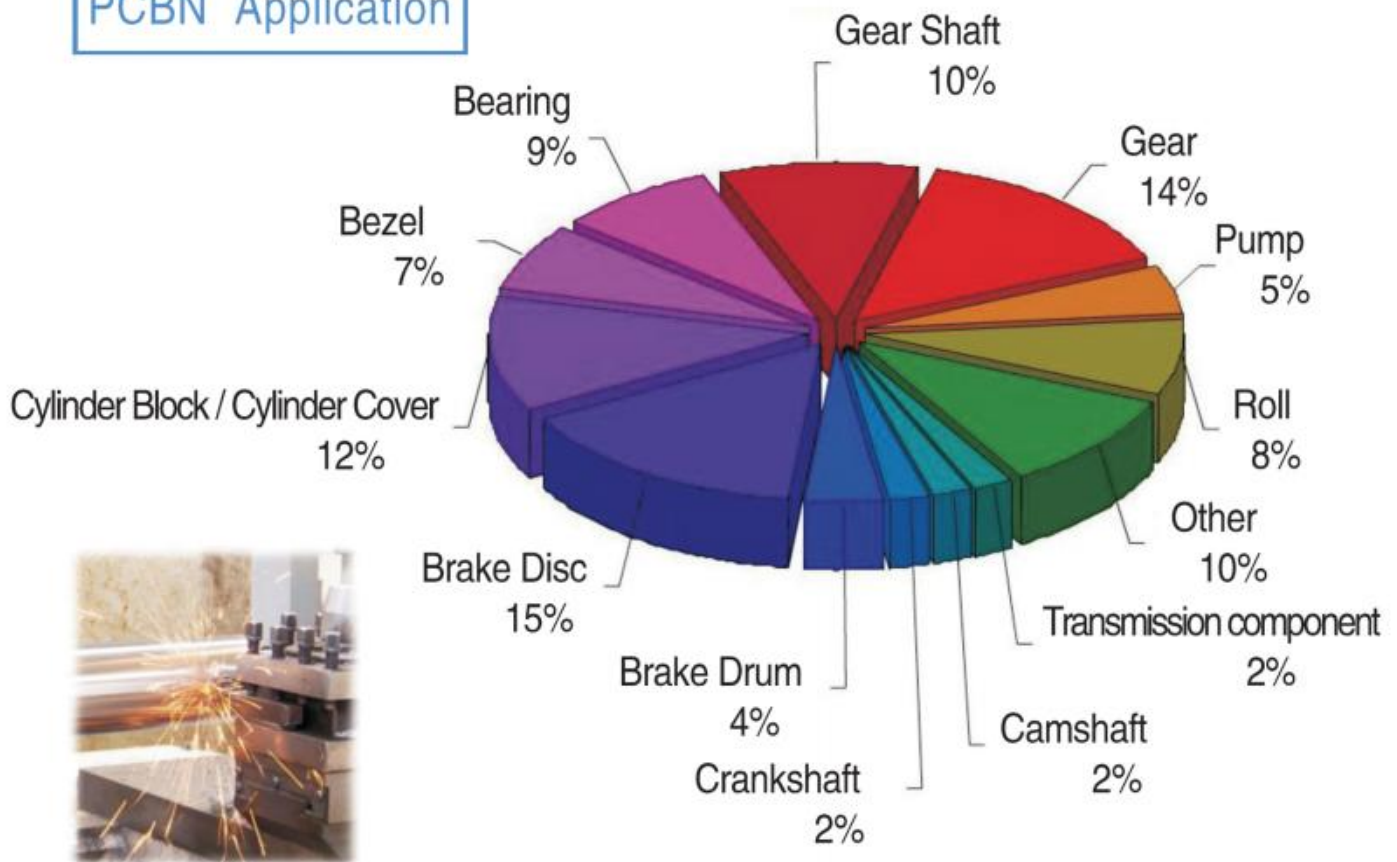
WIPER



Cylindrical Turning



PCBN Application



Cast Steel Roll

- Solid PCBN Inserts
- High nickel chromium cast steel roll external circle turning
- New developed type SBN637 has high wear resistance and impact resistance, Cutting Feed 5–16mm; Guaranteed production efficiency and working life improved 15%–30% compare to the others



Brake pads, Brake disc

- Solid PCBN Inserts
- Brake pads face, out circle, inner holes' processing
- Brake discs' inner holes' processing
- New type SBN637 and previous SBN200 can be applied to rough processing, half-finish processing
- High abrasive-resistance and extremely strong Ti
- Can handle large cutting operations in harsh conditions



Air-conditioning compressor

- Solid PCBN Inserts;
- Air-conditioning compressor cast iron component* face out, circles'rough or fine turning or boring processing;
- SBN2080, targeted, large depth of cut, stable economic;
- Compare with other similar inserts, the effective and the tool life can be separately improved more than 10% & 15%;



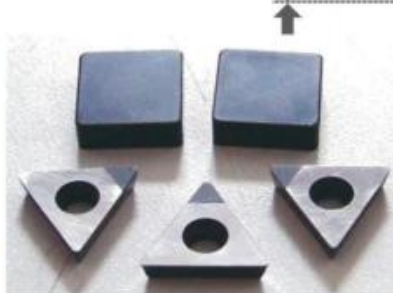
Boron cast iron cylinder liner



- SBN2080、SCB630A Professional Application

Gear、Slewing bearing

- Solid PCBN Inserts
- End face and outer circle of gear, bearing raceway
- Alloy steel, high speed steel, hardened steel
- SBN637, SBN910 professional application, high speed and high efficiency,excellent overall performance



- Surface roughness

$$R_z = \frac{f^2}{8 \times R}$$

Rz: Theory (Geometric) surface roughness

f: cutting feed (mm/rev)

R: Tool nose radius (mm)

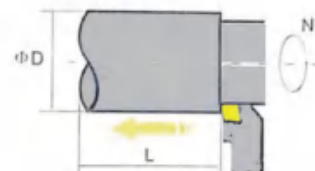
- Cutting speed

$$V = \frac{\pi \times D \times N}{1000}$$

V: cutting speed (m/min)

D: Components diameter (mm)

N: Spindle rotation (min⁻¹)



Common cutting parameters recommendation

Workpiece	Materials	Hardness	Angle Kr	Cutting speed (m/min)	Cutting depth (mm)	Cutting feed (mm/r)
Hardened steel	Gr15	HRC60	45~95°	70~200	0.50~3.00	0.10~0.30
Alloy cast iron	High chrome iron	HSD80	10~45°	15~200	0.50~10.00	0.30~3.00
Ductile iron	QT450	HB220	45~95°	80~500	0.50~5.00	0.30~1.50
Gray cast iron	HT200	HB180	45~95°	100~800	0.50~2.00	0.50~1.00
Hardened gear	40Cr	HRC58	45~95°	60~120	0.30~300	0.10~0.50
Ball screw	Gr15	HRC55	45~95°	80~120	0.50~8.00	0.10~0.30
Roller	High nickel chrome	HSD78	10~45°	15~50	1.00~10.00	0.50~1.5
Roller	High chrome iron	HSD75	10~45°	15~45	1.00~10.00	0.50~1.5
Roller	High chrome steel	HSD75	10~45°	20~60	1.00~10.00	0.50~1.5
Roller	High chrome steel	HSD88	10~45°	10~30	1.00~10.00	0.50~1.5
Roller	High carbon semi-steel	HSD70	10~45°	25~80	1.00~10.00	0.50~1.5
Chill roller	Chill cast iron	HSD67	10~45°	20~50	1.00~10.00	0.50~1.5
Slurry pump guard	High chrome steel	HRC58	45~95°	60~90	1.00~10.00	0.10~0.50
Slurry pump impeller	High chrome steel	HRC60	45~95°	50~90	0.50~4.00	0.10~0.50
Slurry pump housing	High chrome steel	HSD55	45~95°	60~90	0.50~4.00	0.10~0.50
Brake Hub	QT450	HB220	45~95°	80~200	0.50~4.00	0.30~1.50
Brake disc	HT200	HB190	45~95°	80~500	0.50~4.00	0.50~1.00
Reducer housing	HT250	HB200	45~95°	100~180	0.50~4.00	0.50~0.80
Horseshoe brake pads	HT250	HB200	45~95°	80~150	0.50~4.00	0.10~1.00
Bottom plate	HT200	HB200	45~95°	100~180	0.50~4.00	0.10~1.00

用专注的心 做专业的事

地址：中国 开封经济技术开发区宋城路西段1号
Add/No.1 Songcheng Road West Economy &
Technology Development Zone Kaifeng China
P.C./475000

Tel: +86 -371-2368 8312 2368 8300

Fax : +86-371-2368 8326

<http://www.bescosa.net>

E-mail:bescosuperabrasives@yahoo.com