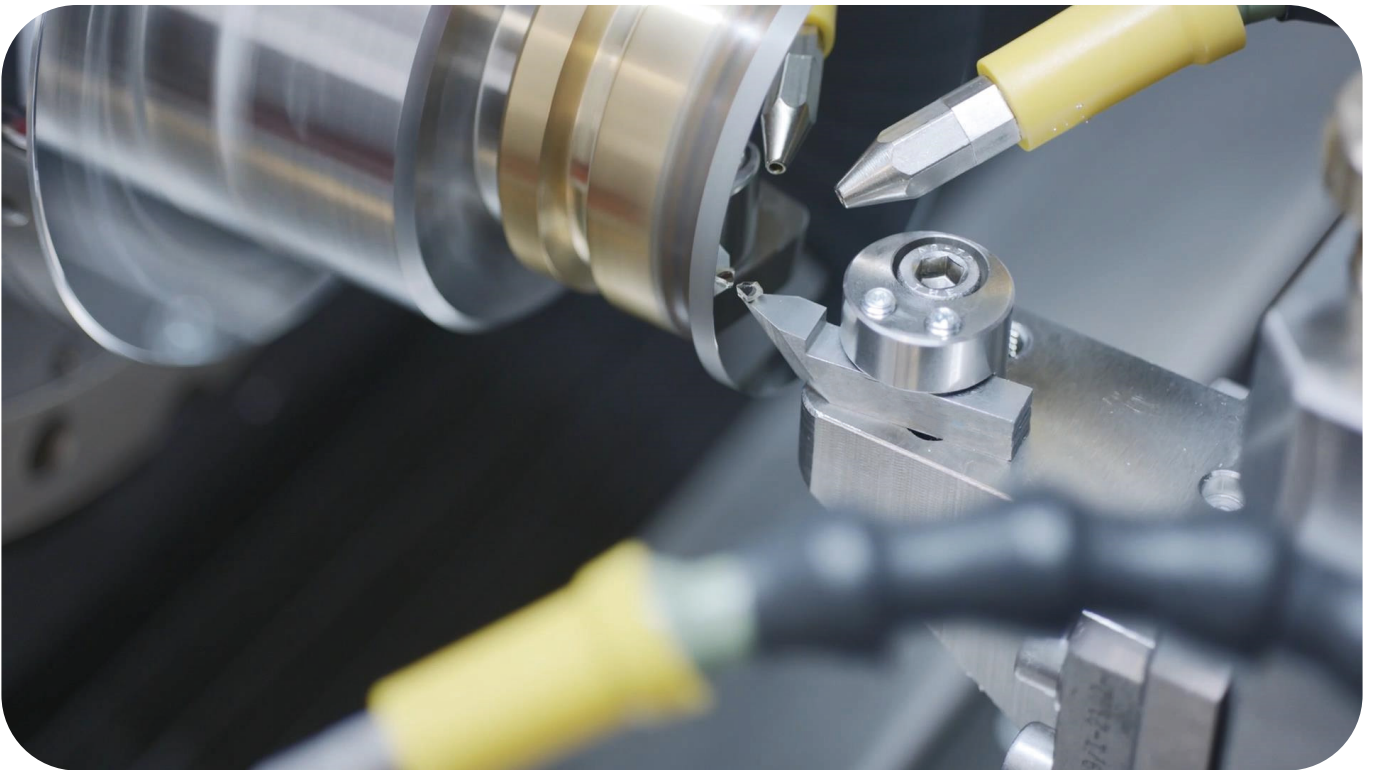


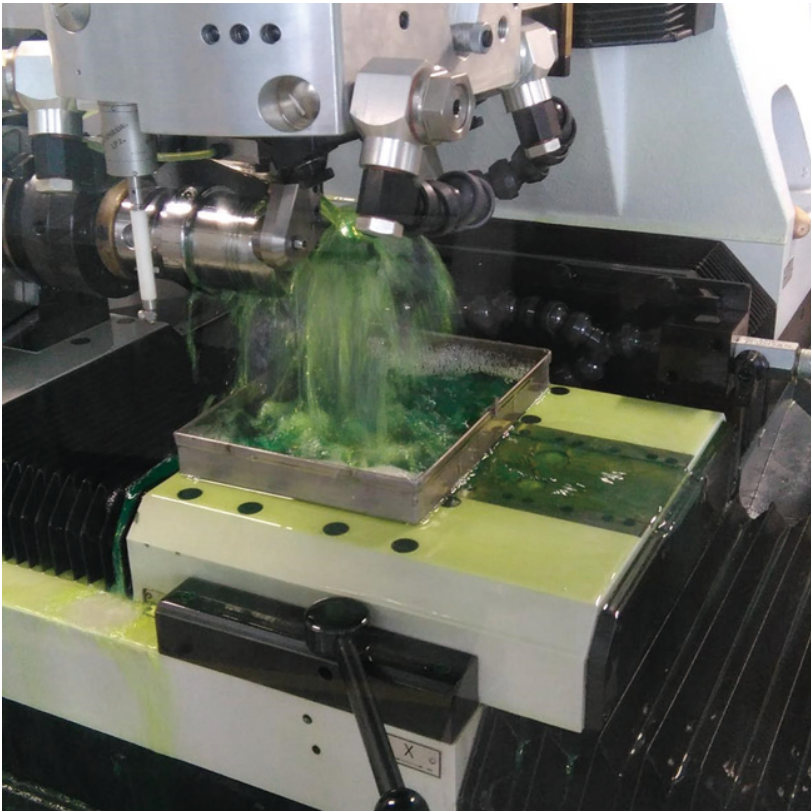
MORE SUPER HARD PRODUCTS CO., LTD

MORE CUTTING TOOLS





MORESUPERHARD adheres to the brand concept of "MORE THAN GRIDING", insists on a professional and serious attitude, becomes a leader company in the superhard tool solution industry, and is the first choice for customers from different countries!



MORESUPERHARD is fully developing the international market. We adhere to the service concept of creating value beyond the contract for customers with standardized, professional and "tailor-made" services.






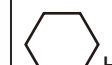



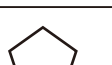







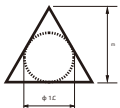

"MORE CUTTING TOOLS" is one project team under More Super Hard Products Co., Ltd. We manufacture and sell standard PCD (Polycrystalline Diamond)/CBN (Cubic Boron Nitride)/MCD/CVD cutting tools, PCD reamer, drilling tools, milling tools, tool arbor, involving aerospace, automotive, medical, electricity, energy, high-tech and other industries...



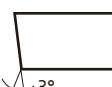
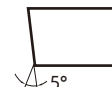
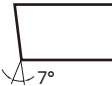
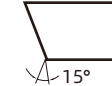
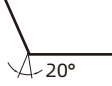
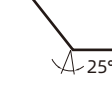
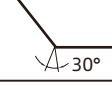
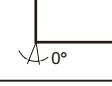

We are always by your side to help you meet and overcome every metal cutting challenge you encounter!

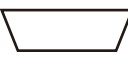


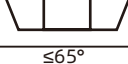


Nontation Diagram of Standard Cutting Insert

Insert shape		
 A	 B	 C
 D	 E	 H
 K	 L	 M
 P	 S	 T
 V	 W	 R

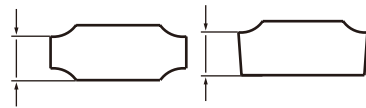
Precision							
							
Code	Tip height (mm)	phi.I.C (mm)	Thickness (mm)	Code	Tip height (mm)	phi.I.C (mm)	Thickness (mm)
A	±0.005	±0.025	±0.025	J	±0.005	±0.05-±0.13	±0.025
F	±0.005	±0.013	±0.025	K	±0.013	±0.05-±0.13	±0.025
C	±0.013	±0.025	±0.025	L	±0.025	±0.05-±0.13	±0.025
H	±0.013	±0.013	±0.025	M	±0.08-±0.18	±0.05-±0.13	±0.13
E	±0.025	±0.025	±0.025	N	±0.08-±0.18	±0.05-±0.13	±0.025
G	±0.025	±0.025	±0.13	U	±0.13-±0.38	±0.08-±0.25	±0.13

T N G A

Clearance angle			
Code	Clearance angle	Code	Clearance angle
A	 3°	B	 5°
C	 7°	D	 15°
E	 20°	F	 25°
G	 30°	N	 0°
P	 11°	O	Other

Chipbreaker & hole		
Code	hole	Shape
N	no	
B	yes	 > 65°
C	yes	 > 65°
A	yes	
W	yes	 ≤ 65°
Q	yes	 65°
X	---	Special

Cutting tip length						
ϕ .C	C	D	S	T	V	W
3.97				06		
5.0						
5.56				09		
6.0						
6.35	06	07		11	11	
8.0						
9.525	09	11	09	16	16	06
10.0						
12.0						
12.7	12	15	12	22	22	08
15.875	16		15	27		
16.0		19				
19.05	19		19	33		
20.0						
25.0	25	25				
25.4			25			
31.75						
32						

Thickness (mm)			
			
Code	Thickness (mm)	Code	Thickness (mm)
02	2.38	06	6.35
T2	2.58	T6	6.75
03	3.18	07	7.94
T3	3.97	09	9.52
04	4.76	T9	9.72
T4	4.96	11	11.11
05	5.56	12	12.70
T5	5.95		

Radius	
CCode	Cutting tip radius (mm)
00	-
02	0.2
04	0.4
08	0.8
12	1.2
16	1.6
20	2.0
24	2.4
32	3.2
X	Other

12

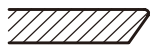

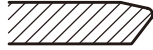
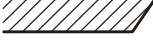
04

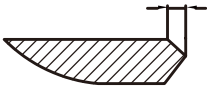
08


T

020

20

Cutting edge form		
Code	Cutting edge form	Drawing
E	Passivation	
T	Chamfering	
S	Passivation + Chamfering	
F	Sharp cutting edge	

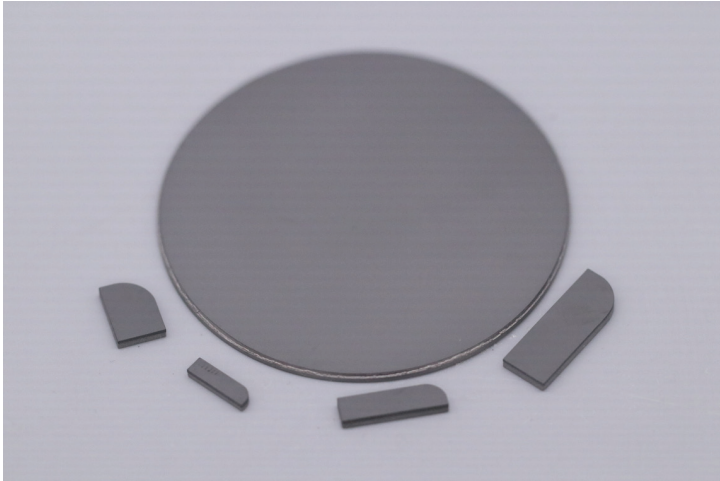
Chamfer width (mm)			
			
Code	Dimension	Code	Dimension
010	0.10	040	0.40
015	0.15	045	0.45
020	0.20	050	0.50
025	0.25	100	1.00
030	0.30	200	2.00
035	0.35		

Chamfer angle	
	
Code	Angle
05	5°
10	10°
15	15°
20	20°
25	25°
30	30°

PCD Tools

Using the best combination of diamond structure and directionality, grit size, binder, polycrystalline diamonds for different processed materials are made under high temperature and high pressure conditions, with high hardness.

High compressive strength, good thermal conductivity and wear resistance etc... Can obtain high machining accuracy and machining efficiency in high-speed cutting.



Features of PCD Tools

Polycrystalline diamond is sintered and pressed by diamonds of different particle sizes and binders. Because of its low affinity with non-ferrous metals and non-metallic materials, it is mainly used for cutting non-ferrous metals and non-metallic materials. According to their organization can be classified as follows:

PKD85 is sintered from ultra-fine diamond particles, with high wear resistance and medium impact strength.

PKD13 is sintered from fine diamond particles, has excellent wear resistance, and can obtain a better cutting edge, suitable for semi-finishing and finishing.

PKD10 is sintered with a high content of medium-fine diamond particles and has extremely high wear resistance.

PKD15 is sintered from larger diamond particles, which has extremely high wear resistance and strong impact resistance.

Advantages of PCD Tools

- Higher metal removal rates
- Faster cycle times
- Reduce waste
- Quality improvement
- Stricter size control
- Perfect surface finish
- Increase productivity
- Improve equipment utilization

Standard Cutting Condition of PCD Inserts

Work-piece material	Work procedure	Code	Speed m/min	Feed mm/rev	Cutting depth mm
Aluminum alloy					
4-8%si 9-13%si >13% si	Turning	PKD13	900-3500	0.1-0.4	0.1-0.4
	Milling	PKD41	1000-5000	0.1-0.3	0.1-0.3
	Turning	PKD10	600-2400	0.1-0.4	0.1-0.4
	Milling	PKD10	700-3000	0.1-0.3	0.1-0.3
	Turning	PKD41	300-700	0.1-0.4	0.1-0.4
	Milling	PKD15	400-900	0.1-0.3	0.1-0.3
	Milling	PKD20			
Metal synthetic materials					
A1/10-20%Si	Turning/ Milling	PKD25	300-600	0.1-0.4	0.2-15
Copper alloy					
Copper Zinc Brass	Turning/ Milling	PKD13/PKD10	400-1260	0.03-0.3	0.05-2.0
	Turning/ Milling	PKD18/PKD20	400-1200	0.05-0.3	0.05-2.0
<16%Co					
	Turning	PKD15/ PKD20/PKD25	20-40	0.1-0.25	0.1-1.0
Ceramic					
	Turning	PKD20	70-100	0.1-0.4	0.2-1.0
Wood					
	Turning/ Milling	PKD13/ PKD10/PKD41	1000/4000	0.1-0.4	0.1-4.0
Composite material					
Carbon fiber	Turning/ Milling	PKD20	200-2000	0.05-0.3	0.1-3.0

Cutting Data of PCD

Cutting Speed

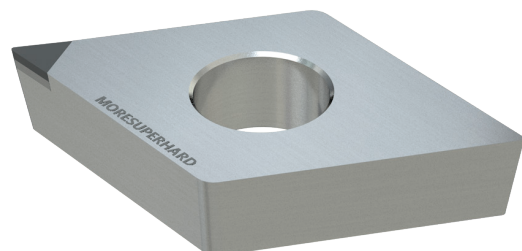
PCD tools can be cut at extremely high spindle speeds, but the impact of cutting speed changes on machining quality cannot be ignored. Although high-speed cutting can improve machining efficiency, under high-speed cutting, the increase of cutting temperature and cutting force can cause damage to the tip of the tool and cause vibration of the machine tool. When processing different workpiece materials, the reasonable cutting speed of PCD tools is also different. For example, the reasonable cutting speed of milling Al₂O₃ reinforced floor is 110~120m/min; 30~40m/min.

Feed Rate

If the feed rate of the PCD tool is too large, the residual geometric area on the workpiece will increase, resulting in an increase in surface roughness; if the feed rate is too small, it will be difficult to cut the workpiece into chips, which will increase the cutting temperature and reduce the cutting life.

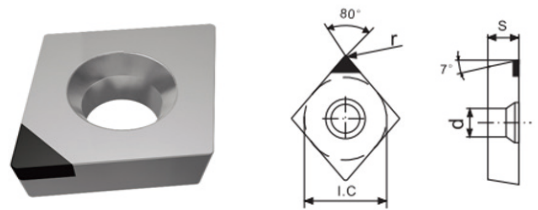
Depth of Cut

Increasing the cutting depth of the PCD tool will increase the cutting force and cutting temperature, which will intensify the tool wear and affect the tool life. In addition, the increase of cutting depth is easy to cause chipping of PCD tool. PCD tools with different grain sizes exhibit different cutting performance when processing different workpiece materials under different processing conditions, so the actual cutting parameters of PCD tools should be determined according to specific processing conditions.



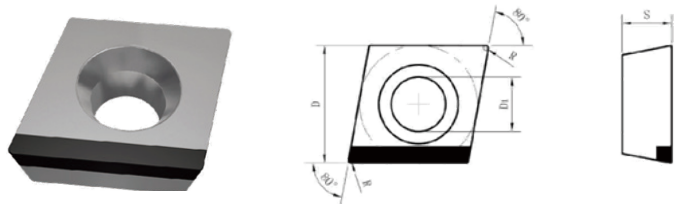
Specifications of PCD Inserts

CCGW



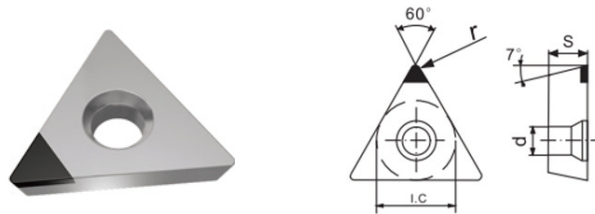
Type	Size					Grade
	D	S	R	D1	SL	
CCGW060202	6.35	2.38	0.2	2.8	3.0	PKD10 PKD13 PKD15 PKD18 PKD20 PKD41
CCGW060204	6.35	2.38	0.2	2.8	3.0	
CCGW09T304	9.525	3.97	0.4	4.4	3.0	
CCGW09T308	9.525	3.97	0.8	4.4	3.0	
CCGW120404	12.7	4.76	0.4	5.5	3.0	
CCGW120408	12.7	4.76	0.8	5.5	3.0	

CCGW



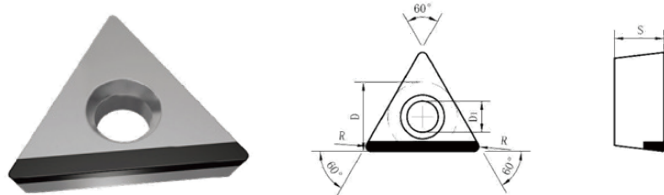
Type	Size					Grade
	D	S	R	D1	SL	
CCGW060202R-L	6.35	2.38	0.2	2.8		PKD10 PKD13 PKD15 PKD18 PKD20 PKD41
CCGW060204R-L	6.35	2.38	0.2	2.8		
CCGW09T304R-L	9.525	3.97	0.4	4.4		
CCGW09T308R-L	9.525	3.97	0.8	4.4		
CCGW120404R-L	12.7	4.76	0.4	5.5		
CCGW120408R-L	12.7	4.76	0.8	5.5		

TCGW



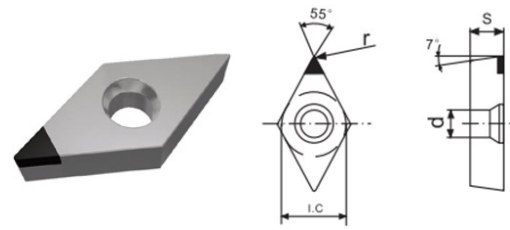
Type	Size					Grade
	D	S	R	D1	SL	
TCGW090202	5.56	2.38	0.2	2.5	3.0	PKD10 PKD13 PKD15 PKD18 PKD20 PKD41
TCGW090204	5.56	2.38	0.4	2.5	3.0	
TCGW110202	6.35	2.38	0.2	2.8	3.0	
TCGW110204	6.35	2.38	0.4	2.8	3.0	
TCGW110208	6.35	2.38	0.8	2.8	3.0	
TCGW110302	6.35	3.18	0.2	2.8	3.0	
TCGW110304	6.35	3.18	0.4	2.8	3.0	

TCGW



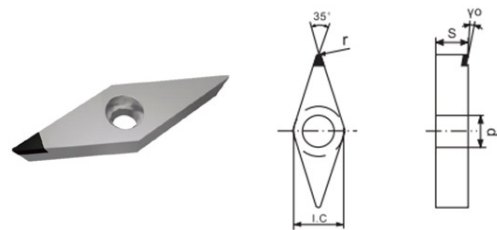
Type	Size					Grade
	D	S	R	D1	SL	
TCGW090202-L	5.56	2.38	0.2	2.5		PKD10 PKD13 PKD15 PKD18 PKD20 PKD41
TCGW090204-L	5.56	2.38	0.4	2.5		
TCGW110202-L	6.35	2.38	0.2	2.8		
TCGW110204-L	6.35	2.38	0.4	2.8		
TCGW110208-L	6.35	2.38	0.8	2.8		
TCGW110302-L	6.35	3.18	0.2	2.8		
TCGW110304-L	6.35	3.18	0.4	2.8		

DCGW



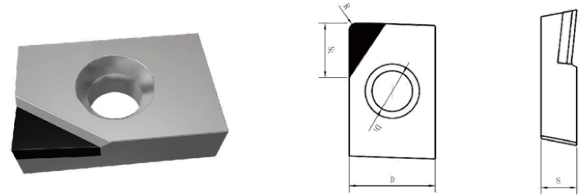
Type	Size					Grade
	D	S	R	D1	SL	
DCGW070202	6.35	2.38	0.2	2.8	3.0	PKD10 PKD13 PKD15 PKD18 PKD20 PKD41
DCGW070204	6.35	2.38	0.4	2.8	3.0	
DCGW070208	6.35	2.38	0.8	2.8	3.0	
DCGW110302	9.525	3.97	0.2	4.4	3.0	
DCGW110304	9.525	3.97	0.4	4.4	3.0	
DCGW110308	9.525	3.97	0.8	4.4	3.0	
DCGW11T302	9.525	3.97	0.2	4.4	3.0	
DCGW11T304	9.525	3.97	0.4	4.4	3.0	
DCGW11T308	9.525	3.97	0.8	4.4	3.0	
DCGW150404	12.7	4.76	0.4	5.5	3.0	
DCGW150408	12.7	4.76	0.8	5.5	3.0	

VCGW



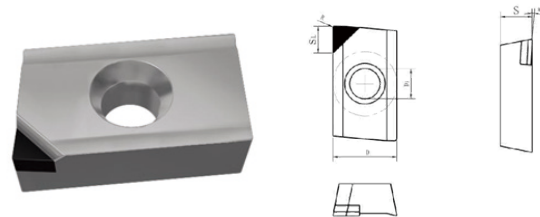
Type	Size					Grade
	D	S	R	D1	SL	
VCGW110302	6.35	3.97	0.2	2.8	3.0	PKD10 PKD13 PKD15 PKD18 PKD20 PKD41
VCGW110304	6.35	3.97	0.4	2.8	3.0	
VCGW160404	9.525	4.76	0.4	4.4	3.0	
VCGW160408	9.525	4.76	0.8	4.4	3.0	
VCGW160412	9.525	4.76	1.2	4.4	3.0	

LPGT



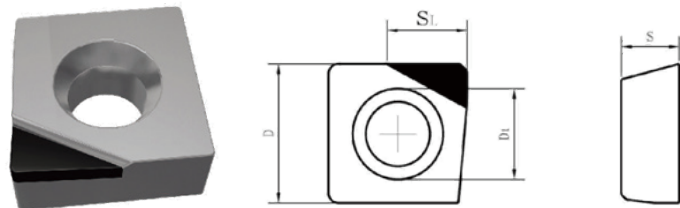
Type	Size					
	D	S	R	D1	SL	Grade
LPGT15T308	9.525	3.97	0.8	4.5	5.0	PKD10

APKT



Type	Size					
	D	S	R	D1	SL	Grade
APKT160404	9.525	4.76	0.4	4.4	4.0	PKD10

SNEW



Type	Size					
	D	S	R	D1	SL	Grade
SNEW09T3PDR	9.525	3.97		4.4	4.0	PKD10

PCBN Tools

PCBN tools are revolutionary leap technology in tools cutting. They represent the optimal material for efficient cutting of hardened steels >48 HRC, cast irons, powdered metals.

Integrating PCBN tools into your hard turning program will enable you to hold close tolerance, excellent surface finish, it increases your productivity a minimum of 200%.

PCBN inserts allow faster speeds and feeds compared to any other conventional cutting tool material—up to 300% faster cycle times.

PCBN inserts reduce scrap and improve workpiece quality with tight dimensional control and excellent surface finishes (8-12 RMS)

PCBN inserts optimize machine tool efficiency by increasing production capacity—reducing the need for new equipment. For example: a CNC lathe used in hard turning is about 1/3 the cost of a grinder.

PCBN inserts allow multiple machining operations in one chucking on a lathe as opposed to several set-ups with grinding.

PCBN cutting tools have a positive environmental impact by reducing or eliminating grinding swarf. These oil-based coolants are costly to dispose of. Most hard turning operations do not require coolant; therefore, the chips can be recycled.

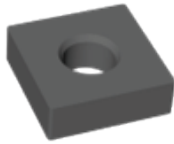
Features of PCBN Tools:

1. High chemical resistance stability
2. High hardness and abrasive resistance
3. Strong impact resistance
4. Good fracture resistance
5. High working efficiency
6. Dry cutting

Applications of PCBN Tools:

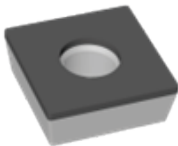
Idea for machining hard ferrous metals, such as hardened steels, gray cast iron. PCBN tools are widely used to machine brake discs, engine cylinder liners, engine blocks, break drumsticks, valve seats & guides, gears and mould, etc.

Standard PCBN Inserts



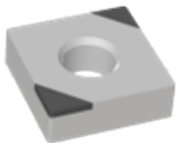
Solid Inserts

- Inserts are made only from PCBN.
- No material joint.
- Best heat absorption capacity.
- Can work at highest temperatures.



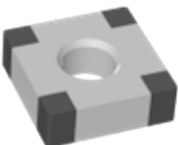
Full-Face Inserts

- Inserts are made from a presintered carbide/PCD or PCBN joint
- Elimination of the brazing joint. Less delamination
- Better heat absorption capacity
- Can work at higher temperatures than tipped tools
- Facilitate larger depth of cut compared to the same size tipped insert
- The blanks are available with "A" and "W" ISO-style pin-lock holes



Tipped Inserts


- Require a carrier and substrate for the insert
- The tips are brazed to the substrate. Various brazing methods are applied
- The substrate has to have a pocket that will accommodate and support the tip
- In these types of tools, the braze joint represents the weak link, so the brazing operation is very important and should be carefully controlled and executed
- The main advantage of tipped tools over full-faced inserts is the lower cost.



Strong Tipped Inserts

- High chemical resistance stability
- High hardness and abrasive resistance
- Strong impact resistance
- Good fracture resistance
- High working efficiency
- Dry cutting

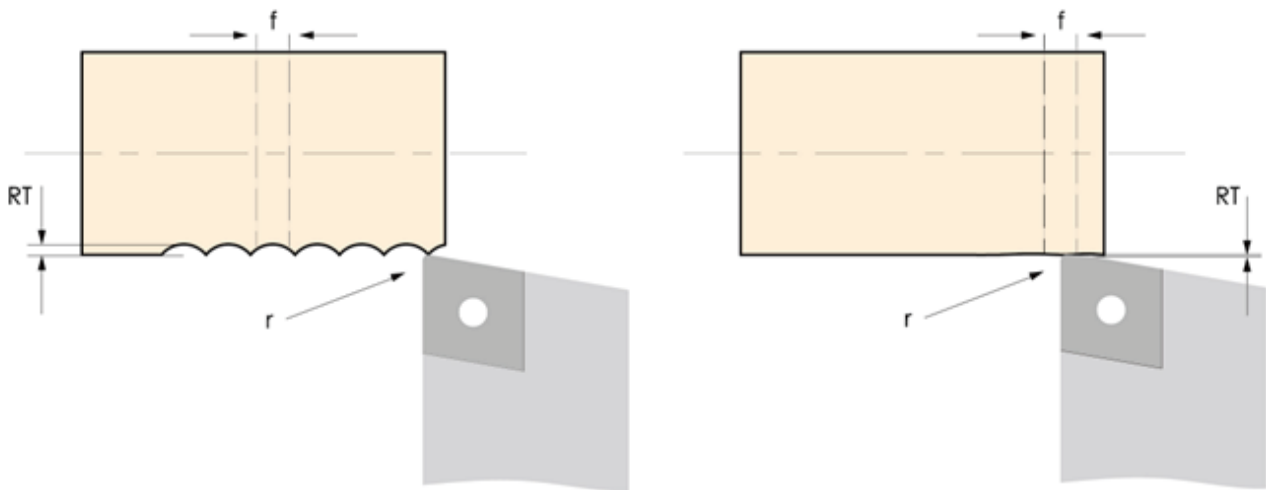
Comparison Table of PCBN Grade

Grade	Processing methods	Material being processed	Characteristic direction	Adapt to the industry
MBN7100	Heavy roughing	Excellent impact resistance and abrasion resistance Suitable for semi-finishing and finishing of high precision alloy cast iron, gray cast iron, ductile iron and other materials Suitable for high-quality alloy cast iron, high-nickel-chromium, high-chromium iron	 <p style="writing-mode: vertical-rl; transform: rotate(180deg);">Abrasion resistance Impact resistance</p>	Metallurgical rolling, air conditioning, compressors, water pumps, mining machinery, automobiles and other industries
MBN8100	Intermittent roughing Semi-finishing	Excellent impact resistance and abrasion resistance Suitable for rough machining and semi-finish machining of cast iron materials		Automobile, metallurgy, mining and other industries
MBN8000	Slightly intermittent Semi-finishing, finishing	Excellent impact resistance and wear resistance, good versatility Suitable for semi-finishing and finishing of high hardness alloy cast iron, high nickel chromium, high chromium iron and other materials Suitable for finishing and semi-finishing of cast iron materials Suitable for semi-finish machining of quenched steel, high temperature alloy and other materials		Automobiles, air-conditioning compressors, bearings, crankshafts, gears and other industries
MBN8200	Slightly intermittent Semi-finishing	Suitable for semi-finishing and finishing of alloy cast iron, high nickel chromium, high chromium iron and other materials		Automobile, construction machinery and other industries
MBN9800	Continuous finishing	Suitable for hardened steel workpieces: such as bearing steel, tool steel, mold steel, measuring tool steel, high-speed steel, etc.		Wind power, machine tools, gears, construction machinery and other industries
MBK8510	High strength, suitable for intermittent cutting and rough turning	Suitable for high wear-resistant pearlitic gray cast iron, tool steel, mold metal, fine turning nickel-based and cobalt-based superalloy metals, fine turning nickel-based and cobalt-based superalloys		Automobile, metallurgy, mining and other industries
MBK8520	Excellent impact strength, suitable for continuous or continuous cutting, suitable for continuous or severe interrupted cutting	Suitable for processing cast iron, iron-based powder metallurgy metals, milling quenched steel, tool steel. (Continuous cutting can use coolant or dry cutting, intermittent cutting must be dry cutting)		Automobile, mold, metallurgy, wind power and other industries
MBK8520	Excellent impact strength, suitable for continuous or continuous cutting, suitable for continuous or severe interrupted cutting	Suitable for processing cast iron, iron-based powder metallurgy metals, milling quenched steel, tool steel. (Continuous cutting can use coolant or dry cutting, intermittent cutting must be dry cutting)		Automobile, mold, metallurgy, wind power and other industries
MBK9510	Multi-purpose continuous or moderately discontinuous turning hardened steel	Alloy steel (intermittent cutting), tool steel, die steel		Bearings, gears, tools, molds and other industries

Cutting Conditions of PCBN Tools

Material	Cutting condition	Parameter v(m/min)	Feed rate f(mm/rev)	Cutting Depth ap(mm)	
H Carburized steel Tool steel	Finishing Cutting	100-200-400	0.05-0.20-0.3	0.05-0.20-0.3	
	Continuous cutting	100-170-300	0.05-0.16-0.3	0.05-0.20-0.3	
	light interrupted cutting	80-140-220	0.05-0.16-0.3	0.05-0.20-0.3	
	heavy interrupted cutting	80-120-160	0.05-0.14-0.3	0.05-0.20-0.3	
Carbide Same volume>25% Same volume<25% with CVD/PCD	Continuous/interrupted cutting	15-30-50	0.01-0.02-0.04	0.01-0.05-0.15	
	Continuous/interrupted cutting	15-30-50	0.01-0.03-0.05	0.01-0.05-0.20	
	heavy interrupted cutting	100-120-200	0.02-0.10-0.20	0.02-0.14-0.20	
K Gray cast iron GG20、GG25、 GG30 GG20、GG25、 GG30 Graphite cast iron pipe GGG40、GGG50、 GGG60 GGG with CBN or CVD GGG with CBN or CVD Chilled cast iron cast iron cast iron cast iron	Continuous cutting	400-800-1800	0.05-0.15-0.35	0.05-0.30-2.80	
	light interrupted cutting	400-800-1800	0.06-0.15-0.35	0.05-0.30-2.80	
	heavy interrupted cutting	400-800-1600	0.08-0.15-0.35	0.05-0.30-2.80	
	Continuous cutting	80-120-200	0.05-0.14-0.50	0.05-0.16-2.50	
	light interrupted cutting	400-800-1800	0.06-0.15-0.35	0.05-0.30-2.80	
	heavy interrupted cutting	400-800-1600	0.08-0.15-0.35	0.05-0.30-2.80	
	Continuous cutting	80-120-200	0.05-0.14-0.50	0.05-0.16-2.50	
	light interrupted cutting	80-120-200	0.06-0.15-0.35	0.05-0.14-0.50	
	heavy interrupted cutting	60-100-160	0.05-0.14-0.50	0.05-0.16-2.50	
	S Superalloy Chrome-nickel alloy Drill Nickel Alloy Titanium alloy tube Titanium alloy Titanium alloy Stellite hardened steel Nickel plating chrome, coating	Continuous cutting	120-180-260	0.05-0.10-0.20	0.05-0.15-0.50
		light interrupted cutting	120-160-220	0.05-0.10-0.20	0.05-0.15-0.50
		heavy interrupted cutting	100-140-220	0.05-0.10-0.20	0.05-0.15-0.50
Continuous/interrupted cutting		120-180-260	0.05-0.25-0.40	0.05-0.15-2.50	
Continuous/interrupted cutting		100-150-240	0.05-0.25-0.40	0.05-0.15-2.50	
Continuous/interrupted cutting		60-100-140	0.05-0.10-0.35	0.05-0.16-2.50	
Continuous/interrupted cutting		60-100-140	0.05-0.10-0.35	0.05-0.16-2.50	

PCBN Inserts with Wiper



Advantages of Wipers

A better surface finish can be obtained by using 2-4 times the same feed rate or 2-4 times higher feed rate can also obtain the same surface finish. If you want the geometry angle of the wiper edge to better enter the cutting position, please use the following turning toolholder entering angle.

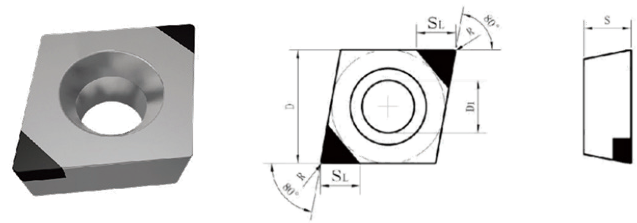
C & W Type=95°

D Type=93°

T Type=91°

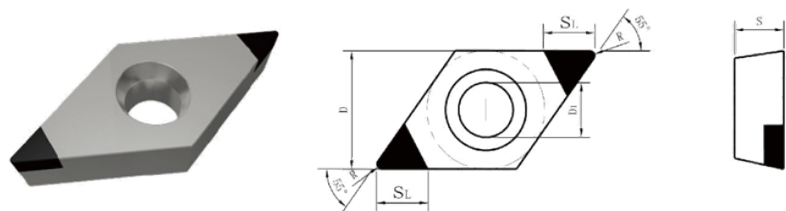
Specifications of PCBN Inserts

CCGW



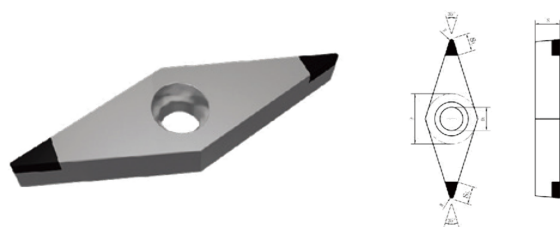
Type	Size						Number of edges
	D	S	R	D1	SL	Grade	
CCGW060202-2S	6.35	2.38	0.2	2.8	3.0	MBK MBN	2
CCGW060204-2S	6.35	2.38	0.2	2.8	3.0		2
CCGW09T304-2S	9.525	3.97	0.4	4.4	3.0		2
CCGW09T308-2S	9.525	3.97	0.8	4.4	3.0		2
CCGW120404-2S	12.7	4.76	0.4	5.5	3.0		2
CCGW120408-2S	12.7	4.76	0.8	5.5	3.0		2

DCGW



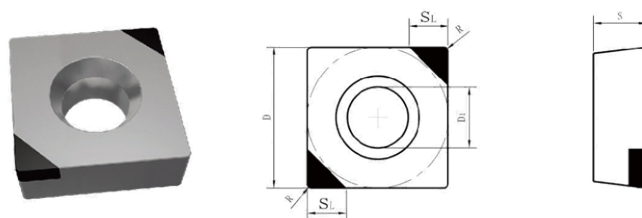
Type	Size						Number of edges
	D	S	R	D1	SL	Grade	
DCGW070202-2S	6.35	2.38	0.2	2.8	3.0	MBK MBN	2
DCGW070204-2S	6.35	2.38	0.4	2.8	3.0		2
DCGW070208-2S	6.35	2.38	0.8	2.8	3.0		2
DCGW11T302-2S	9.525	3.97	0.2	4.4	3.0		2
DCGW11T304-2S	9.525	3.97	0.4	4.4	3.0		2
DCGW11T308-2S	9.525	3.97	0.8	4.4	3.0		2

VCGW



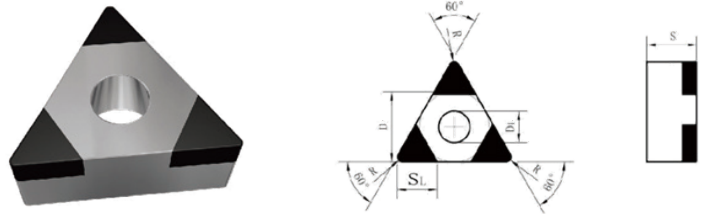
Type	Size						Number of edges
	D	S	R	D1	SL	Grade	
VCGW110302-2S	6.35	3.18	0.2	2.8	3.0	MBK MBN	2
VCGW110304-2S	6.35	3.18	0.4	2.8	3.0		2
VCGW110308-2S	6.35	3.18	0.8	2.8	3.0		2
VCGW160402-2S	9.525	4.76	0.2	4.4	3.0		2
VCGW160404-2S	9.525	4.76	0.4	4.4	3.0		2
VCGW160408-2S	9.525	4.76	0.8	4.4	3.0		2
VCGW160412-2S	9.525	4.76	1.2	4.4	3.0		2

SCGW



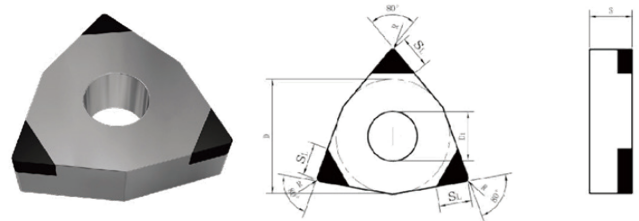
Type	Size						Number of edges
	D	S	R	D1	SL	Grade	
SCGW09T302-2S	9.525	2.38	0.2	2.8	3.0	MBK MBN	2
SCGW09T304-2S	9.525	2.38	0.4	2.8	3.0		2
SCGW09T308-2S	9.525	3.97	0.8	4.4	3.0		2
SCGW120402-2S	12.7	4.76	0.2	5.5	3.0		2
SCGW120404-2S	12.7	4.76	0.4	5.5	3.0		2
SCGW120408-2S	12.7	4.76	0.8	5.5	3.0		2
SCGW120412-2S	12.7	4.76	1.2	5.5	3.0		2

TNGA



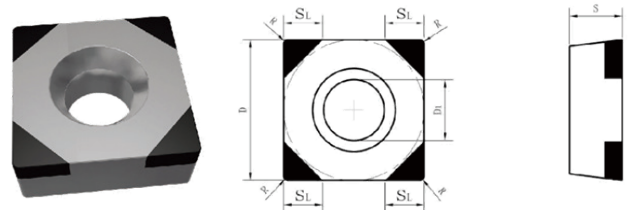
Type	Size						Number of edges
	D	S	R	D1	SL	Grade	
TNGA160402-3S	9.525	4.76	0.2	3.81	3.0	MBK MBN	3
TNGA160404-3S	9.525	4.76	0.4	3.81	3.0		3
TNGA160408-3S	9.525	4.76	0.8	3.81	3.0		3
TNGA160412-3S	9.525	4.76	1.2	3.81	3.0		3

WNGA



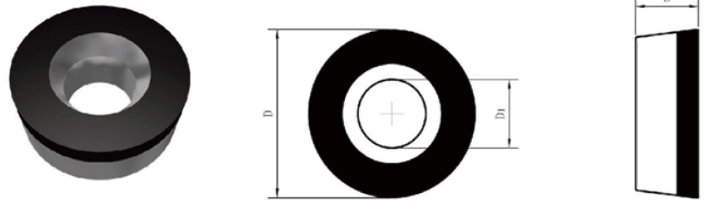
Type	Size						Number of edges
	D	S	R	D1	SL	Grade	
WNGA080404-3S	12.7	4.76	0.4	5.16	3.0	MBK MBN	3
WNGA080408-3S	12.7	4.76	0.8	5.16	3.0		3
WNGA080412-3S	12.7	4.76	1.2	5.16	3.0		3

SCGW



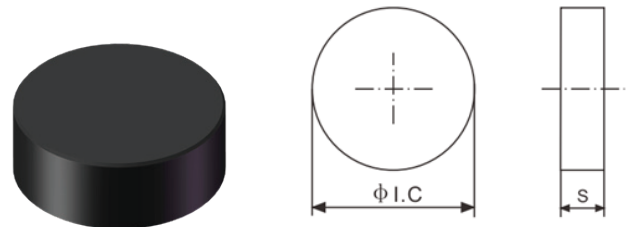
Type	Size						Number of edges
	D	S	R	D1	SL	Grade	
SCGW09T302-4S	9.525	2.38	0.2	2.8	3.0	MBK MBN	4
SCGW09T304-4S	9.525	2.38	0.4	2.8	3.0		4
SCGW09T308-4S	9.525	3.97	0.8	4.4	3.0		4
SCGW120402-4S	12.7	4.76	0.2	5.5	3.0		4
SCGW120404-4S	12.7	4.76	0.4	5.5	3.0		4
SCGW120408-4S	12.7	4.76	0.8	5.5	3.0		4
SCGW120412-4S	12.7	4.76	1.2	5.5	3.0		4

RCGW



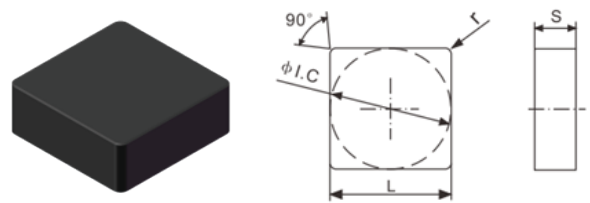
Type	Size						Number of edges
	D	S	R	D1	SL	Grade	
RCGW0602	6.0	2.38				MBK MBN	
RCGW0803	7.94	3.18					
RCGW1003	10	3.18					
RCGW10T3	10	3.97					
RCGW1204	12	4.76					

RNMN



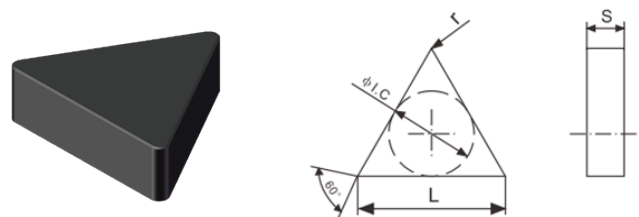
Insert Type	dimensions				Standard Cutting Edge
	L	ø i.c	S	r	
RNMN060400	6.35	6.35	4.76	0	T01020 T01025 T02020 T02030 S01020 S01025 S02020 S02030 S05020 S10020
RNMN090300	9.525	9.525	3.18		
RNMN090400	9.525	9.525	4.76		
RNMN120400	12.7	12.7	4.76		
RNMN120600	12.7	12.7	6.35		
RNMN120700	12.7	12.7	7.94		
RNMN190700	19.05	19.05	7.94		
RNMN201000	20	20	10		
RNMN251000	25.4	25.4	10		
RNMN251200	25.4	25.4	12		

SNMN



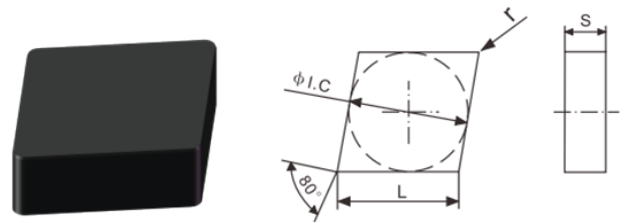
inserts type	dimensions				standard cutting edge
	L	φ i.c	S	r	
SNMN090302	9	9.525	3.18	0.2	S02020 S05020 S10020
SNMN090304	9	9.525	3.18	0.4	
SNMN090306	9	9.525	3.18	0.6	
SNMN090308	9	9.525	3.18	0.8	
SNMN090312	9	9.525	3.18	1.2	
SNMN090404	9	9.525	4.76	0.4	
SNMN090408	9	9.525	4.76	0.8	
SNMN090412	9	9.525	4.76	1.2	
SNMN120404	12	12.7	4.76	0.4	
SNMN120406	12	12.7	4.76	0.6	
SNMN120408	12	12.7	4.76	0.8	
SNMN120410	12	12.7	4.76	1.0	
SNMN120412	12	12.7	4.76	1.2	

TNGN



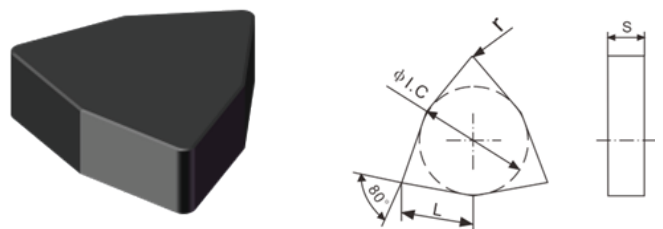
inserts type	dimensions				standard cutting edge
	L	φ i.c	S	r	
TNGN110304	11	6.35	3.18	0.4	S01020,S02020
TNGN110308	11	6.35	3.18	0.8	
TNGN110312	11	6.35	3.18	1.2	
TNGN160404	16	9.25	4.76	0.4	
TNGN160408	16	9.25	4.76	0.8	
TNGN160410	16	9.25	4.76	1.0	
TNGN160412	16	9.25	4.76	1.2	

CNMN



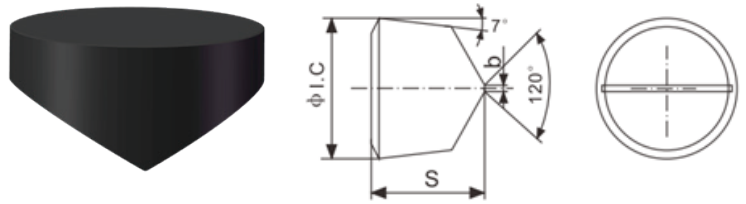
inserts type	dimensions				standard cutting edge
	L	ø i.c	S	r	
CNMN090404	9	9.525	4.76	0.4	S02020
CNMN090408	9	9.525	4.76	0.4	
CNMN090412	9	9.525	4.76	1.2	
CNMN120404	12	12.7	4.76	0.4	
CNMN120408	12	12.7	4.76	0.8	
CNMN120412	12	12.7	4.76	1.2	
CNMN120704	12	12.7	7.94	0.4	
CNMN120708	12	12.7	7.94	0.8	
CNMN120712	12	12.7	7.94	1.2	
CNMN120804	12	12.7	8.0	0.4	
CNMN120808	12	12.7	8.0	0.8	
CNMN120812	12	12.7	8.0	1.2	
CNMN160708	16	15.875	7.94	0.8	
CNMN160712	16	15.875	7.94	1.2	
CNMN160716	16	15.875	7.94	1.6	

RCMN



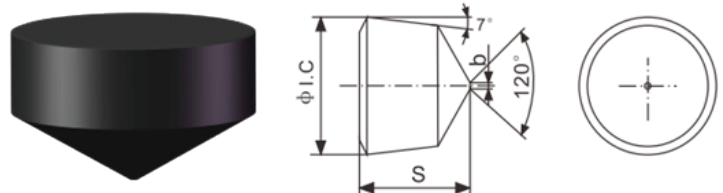
inserts type	dimensions				standard cutting edge
	L	ø i.c	S	r	
WNMN080404	8.7	12.1	4.76	0.4	T01020 T01025 T02020 T02030 S01020 S01025 S02020 S02030 S05020 S10020
WNMN080408	8.7	12.7	4.76	0.8	
WNMN080412	8.7	12.7	4.76	1.2	
WNMN080604	8.7	12.7	6.35	0.4	
WNMN080608	8.7	12.7	6.35	0.8	
WNMN080612	8.7	12.7	6.35	1.2	

RCMX



inserts type	dimensions				standard cutting edge
	L	$\phi i.c$	S	r	
RCMX060400V	6	6.35	4.76	0.8	S02020 S05020 S10020 S20020
RCMX060500V	6	6.35	5.00	0.8	
RCMX060600V	6	6.35	6.35	0.8	
RCMX090700V	9	9.525	7.94	1	
RCMX120700V	12	12.7	7.94	1	
RCMX151000V	15	15.875	10.0	2	
RCMX191000V	19	19.05	10.0	2	
RCMX201200V	20	20	12.0	2	
RCMX251200V	25	25.4	12.0	2	

RCMX

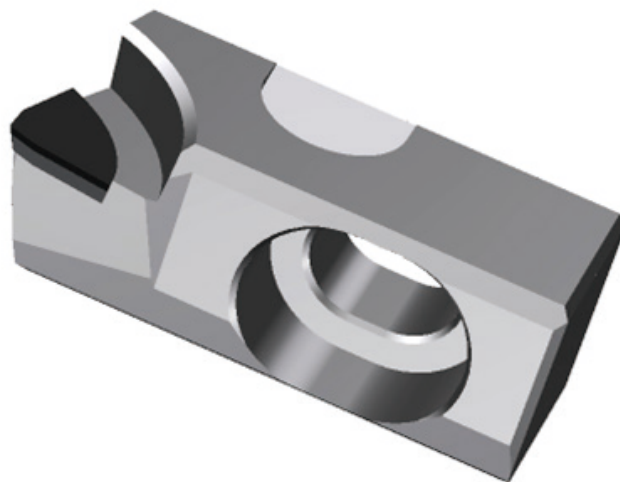
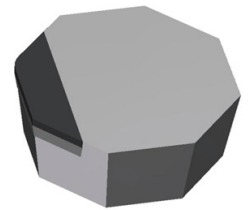
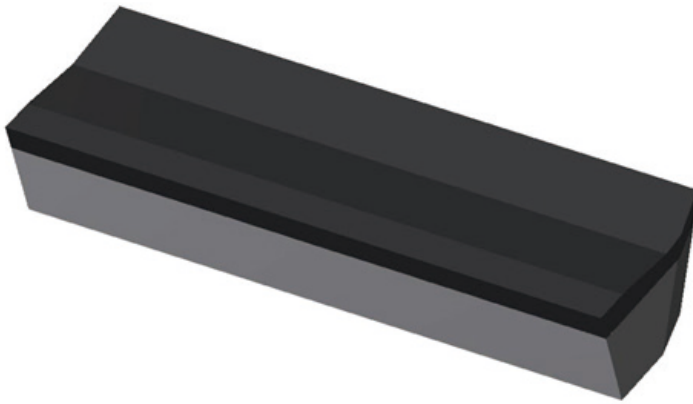


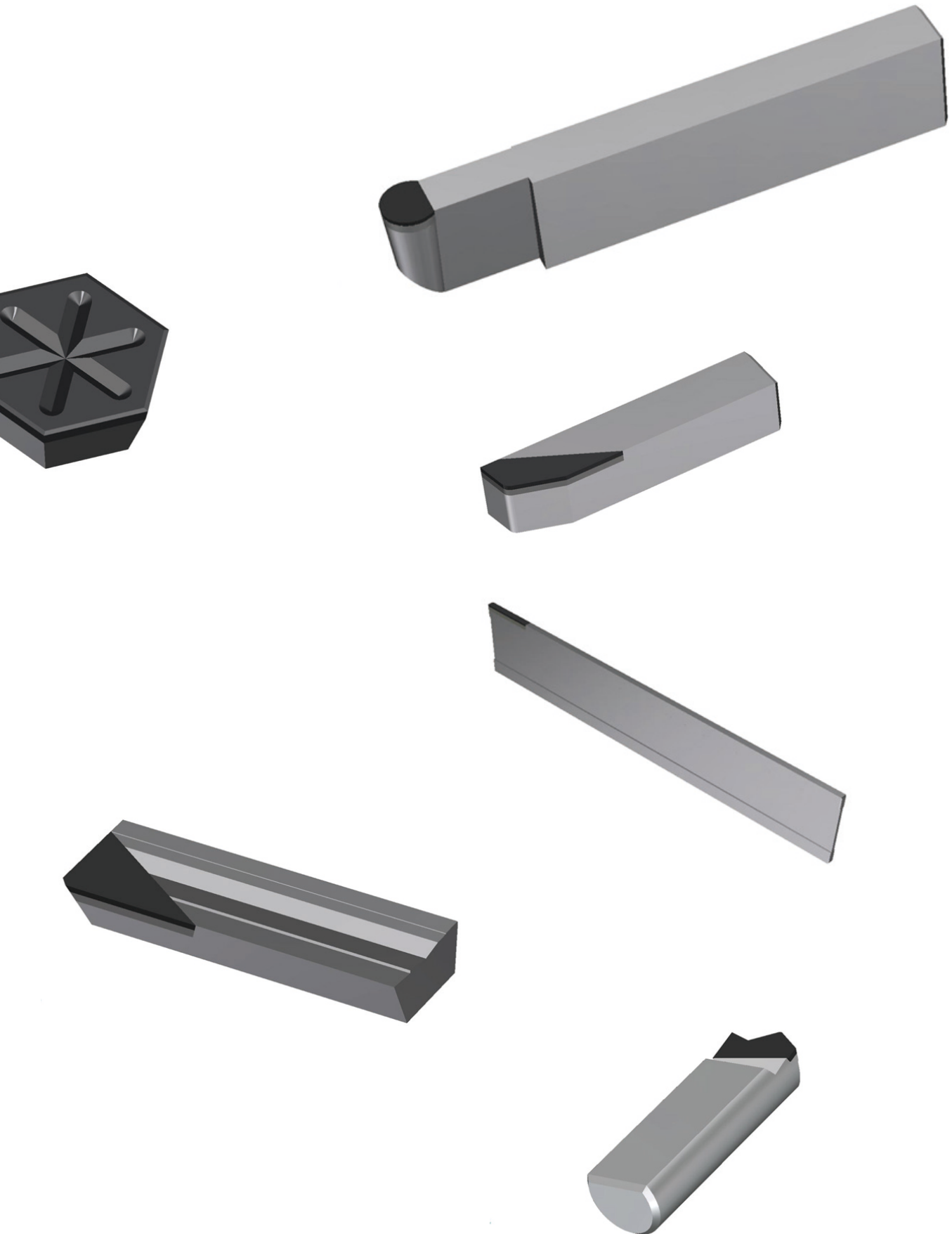
inserts type	dimensions				standard cutting edge
	L	$\phi i.c$	S	r	
RCMX060400Y	6	6.35	4.76	0.6	S02020 S05020 S10020
RCMX060500Y	6	6.35	5.0	0.6	
RCMX060700Y	6	6.35	7.94	0.6	
RCMX090700Y	9	9.525	7.94	1	
RCMX120700Y	12	12.7	7.94	1.2	
RCMX191000Y	19	19.05	10.0	1.2	
RCMX251200Y	20	20	12.0	1.2	

Non-Standard PCD/PCBN Products

Based on the principle of high efficiency, precision and customization, we provide targeted products in the production and manufacturing of diesel and gasoline engine, bringing more convenience to customers.

PCD or CBN as raw materials, tailored for you to be used for cutting non-iron other metals and aluminum alloy and non-metallic materials. You can get faster cutting speed and longer tool life, the surface quality of the machined material and machining accuracy will be higher.

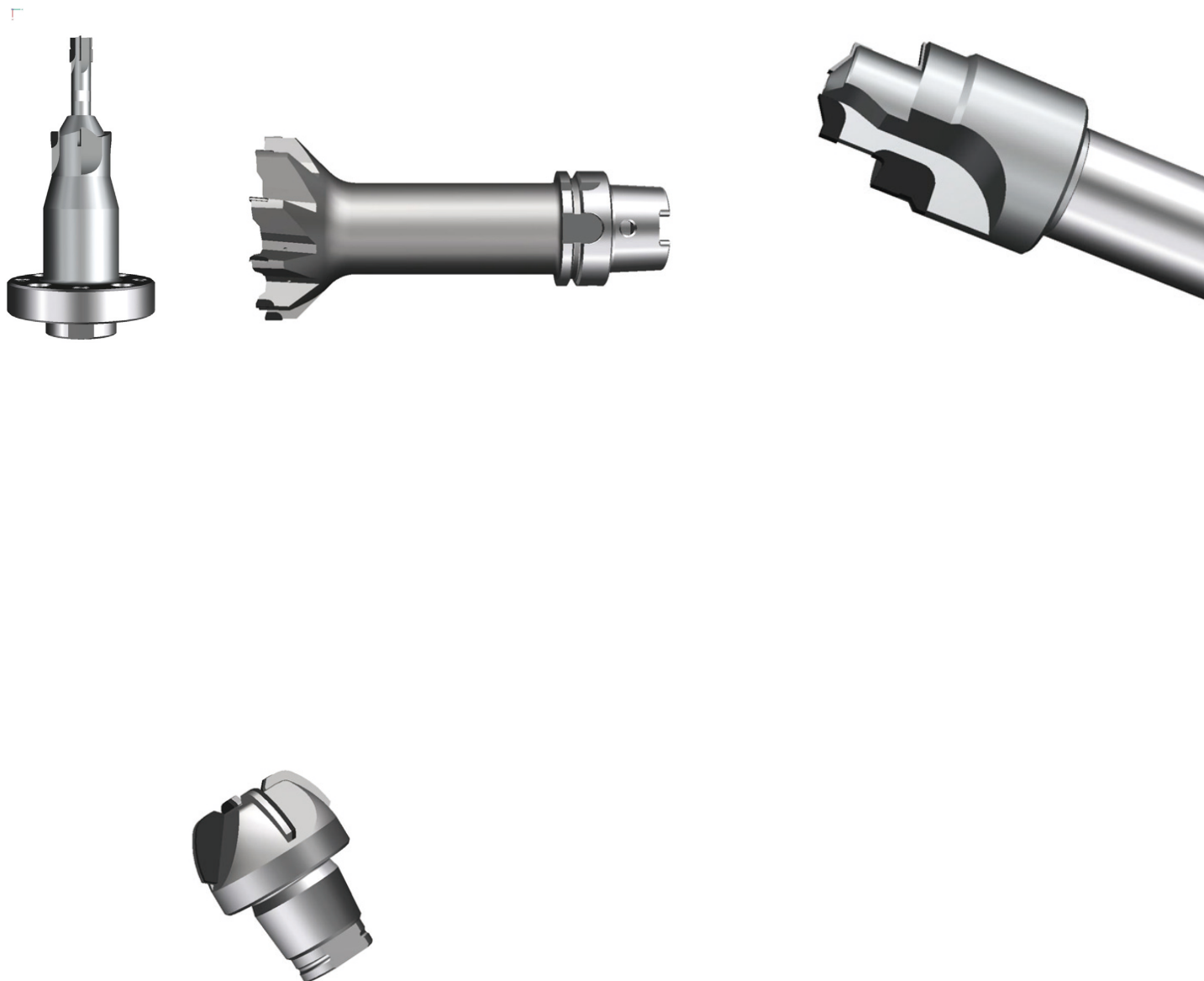


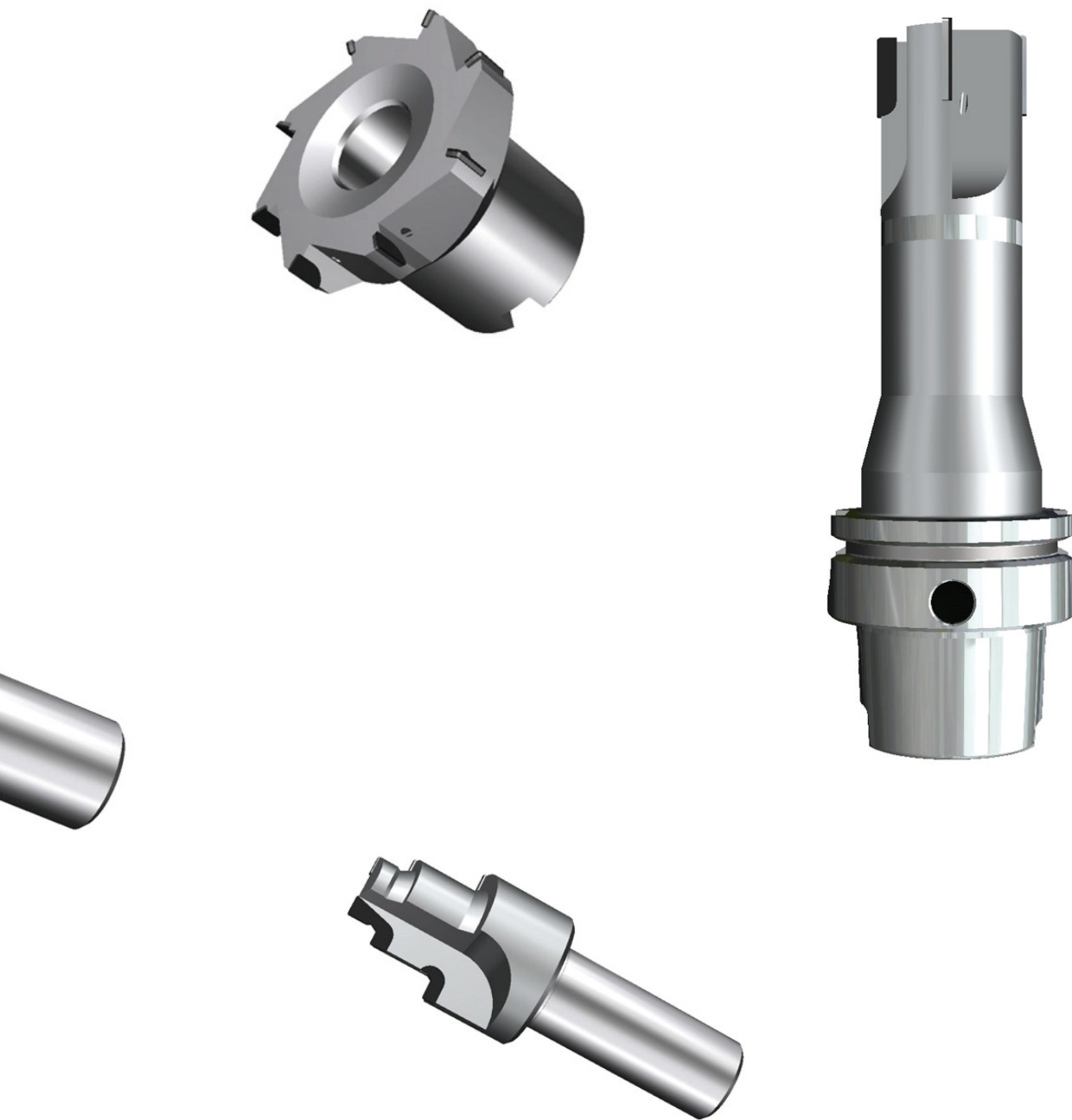


Forming Tools

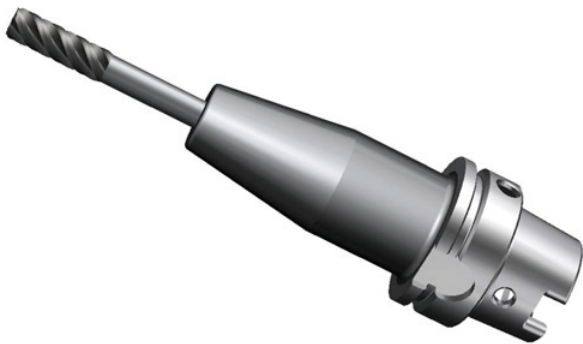
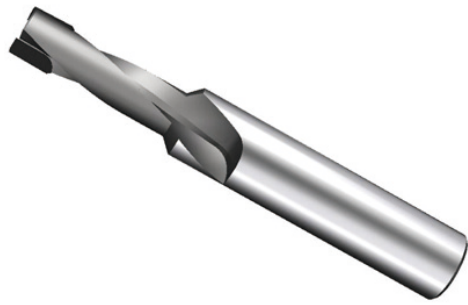
Forming tools are the most professional and precise tools for your batch processing. Imported PCD (polycrystalline diamond) is selected as the material of the cutter head. Through professional manufacturing technology, the diamond is processed into a special required angle, radian and geometric shape and welded on the handle body of a certain specification. It is convenient to use in the process of processing products, saves sharpening time, reduces costs, ensures processing quality, and improves production efficiency.

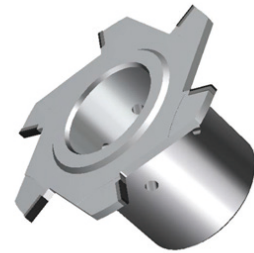
With the rapid development of the machine tool equipment industry and machinery manufacturing industry, the application of straight shank, HSK, BT to connect PCD tools is more widely used in this industry. Its high-precision customization is suitable for high-speed cutting, has more reliable stability and rigidity, and realizes efficient processing and production. Mainly used in: automotive engine cylinder block, cylinder head, valve guide, seat ring bottom hole and guide hole, seat ring cone surface, gearbox housing processing.



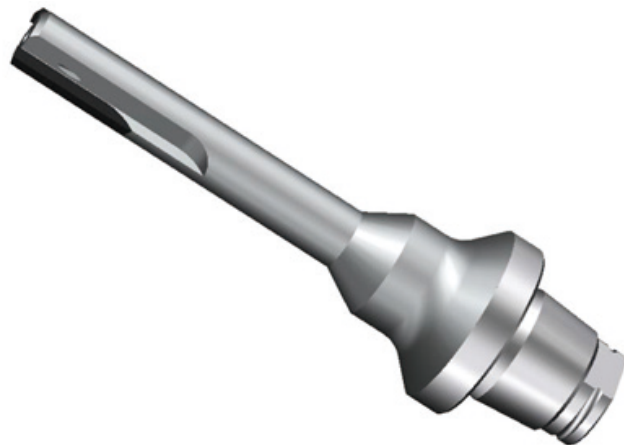


According to various workpiece drawings, combined with international advanced processing technology and processing concepts, we design different cutting tools for different customers, and solve the production and processing technology optimization of a complete set of cutting tool projects for customers, so as to improve processing efficiency and reduce processing costs.





In view of the fact that there are more and more enterprises using aluminum alloy materials for production and processing, the requirements for product processing, smoothness and processing efficiency are also getting higher and higher. It is forced that the machining tool must have better machining accuracy and longer machining life to meet the current machining needs. The traditional carbide cutting tools can no longer meet the high-precision and high-demand processing technology. Instead, the world's leading PCD material is used to process aluminum alloy, and its tool life is several times longer than that of cemented carbide cutting tools. According to the special shape of the workpiece, it can cut and process the processing requirements that standard tools cannot complete. While meeting your requirements, it saves processing costs and improves processing efficiency.



ND/MCD Cutting Tools

ND

Natural diamond tools are widely used in the finishing field of the machinery industry. The natural diamond material is welded to the tool body through vacuum welding. The tailor-made geometric angle is manufactured by a special grinding process and can be ground many times. characteristics. Natural diamond tools are divided into two types: discarded and shank-integrated. The integrated tool holder is mainly used in the mirror processing of clocks and watches and the decoration of products. The discarded tool is widely used in turning, milling and grinding wheel dressing due to its ultra-precision, high shock resistance, and excellent mirror processing capabilities. Considering the price factor, users have different requirements on the accuracy of materials and tools, so we will manufacture tools according to the drawings provided by users or make exclusive designs and manufacture tools for users.



MCD

Single crystal diamond can be transformed into specific properties in high voltage and high power applications, which is called: synthetic single crystal diamond. Synthetic single crystal diamonds are also called synthetic single crystals, abbreviated as SSCD or SMCD or MCD, which are man-made diamonds processed under controlled conditions without impurities, inclusions and cracks. MCD's blank SK wire dies are used to adjust the orientation of less than 1. The end result is that each die will have a nearly circular wear. In terms of quality, small natural diamond molds can be made in advance. Another advantage of MCD dies is that they are available in many sizes. This allows you to select the most suitable rough diamond for your recut plans.

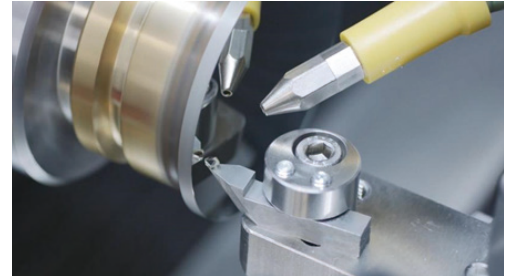
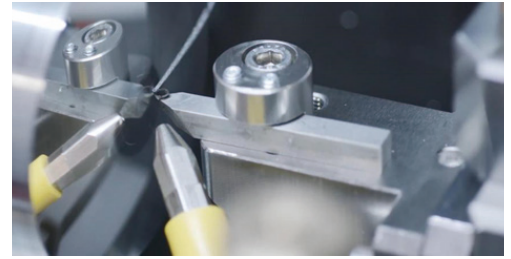
Advantages of Single Crystal Diamond Tools

The highest hardness and wear resistance can minimize the impact of tool tip wear on the workpiece size during ultra-precision machining

Good thermal conductivity, low thermal expansion coefficient will not produce large thermal formation during cutting

The roughness of the blade surface is small, and the cutting edge is very sharp, which can reach Ra0.01~0.006um. The cutting allowance of single crystal is less than 0.02, and the PCD is less than 0.2

Low coefficient of friction The surface roughness of non-ferrous metals can be as small as Ra0.1~0.02um. When the PCD tool is processed, the Ra is 0.15~0.5um when the surface is rough.



Applications of Single Crystal Diamond Tools

CVD Glasses Cutter

Fine turning tools for crystals in the infrared industry

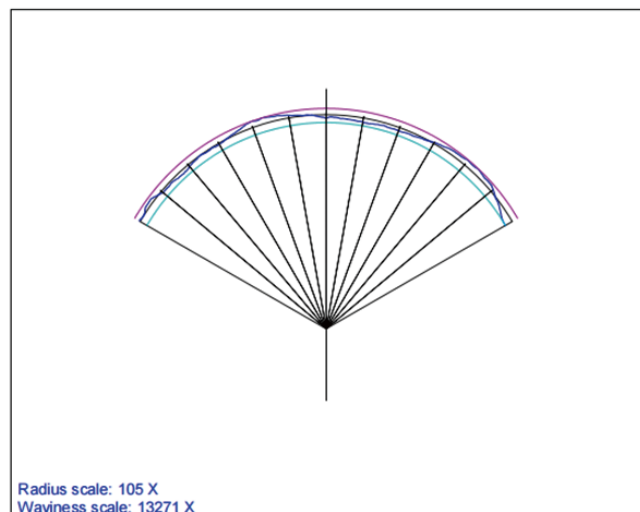
Medical Industry Human Organs

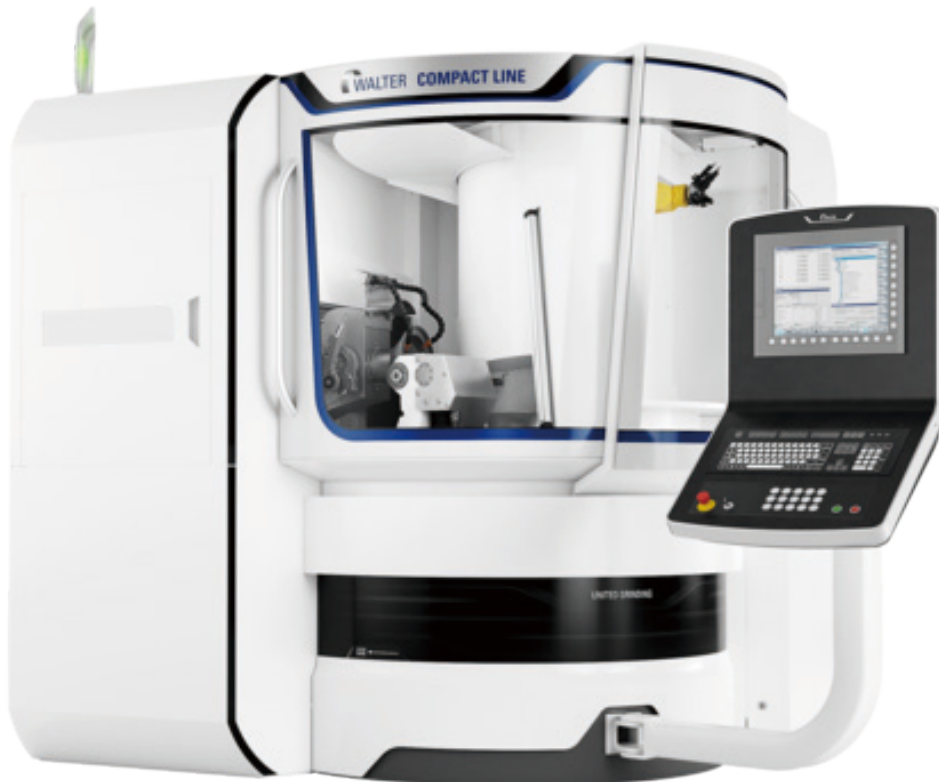
Fresnel lens processing arc cutter

Lens mold core processing tool

Waviness Measurement Report

Date	01/10/23	Radius	502.85 [μm]
Tool ID	121722263	Overall Waviness	0.064 [μm]
Cutting Height	4.35mm	Peak value	0.17 [μm]
Rake angle	0°	Wav. Window	120 [deg]
Clearance	12°		

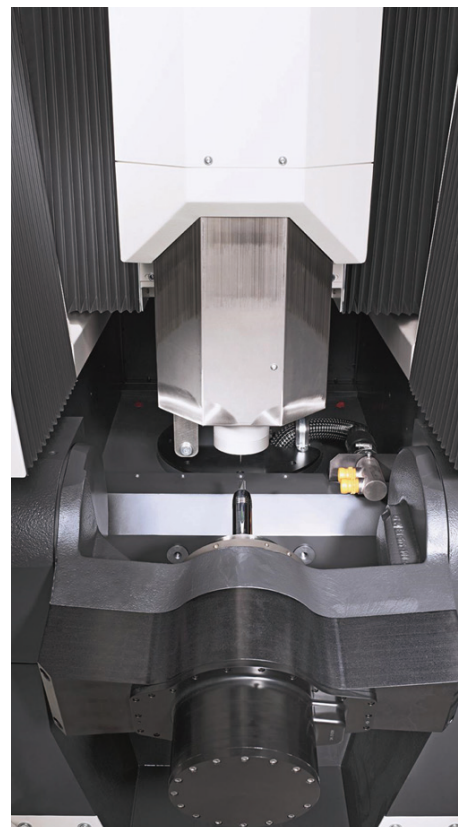
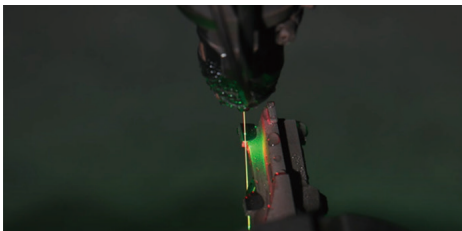
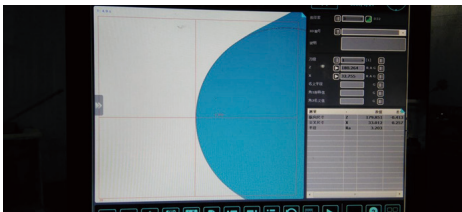




Quality Control

Since its establishment, More SuperHard has been committed to provide customers with high quality products.

Powerful equipment guarantees the quality. MORESUPERHARD uses the most advanced EDM, laser, vacuum brazing and grinding machines. We have Vollmer, EWAG, DMG and other well-known brand machines, with professional engineers' mature production experience to achieve the best quality tools.





More Super Hard Products Co., Ltd

www.morecuttingtools.com

Tel/Fax: 86-371-86545906

Email: cut@moresuperhard.com

WhatsApp/Wechat : +86 19913838101

Zhengzhou · China