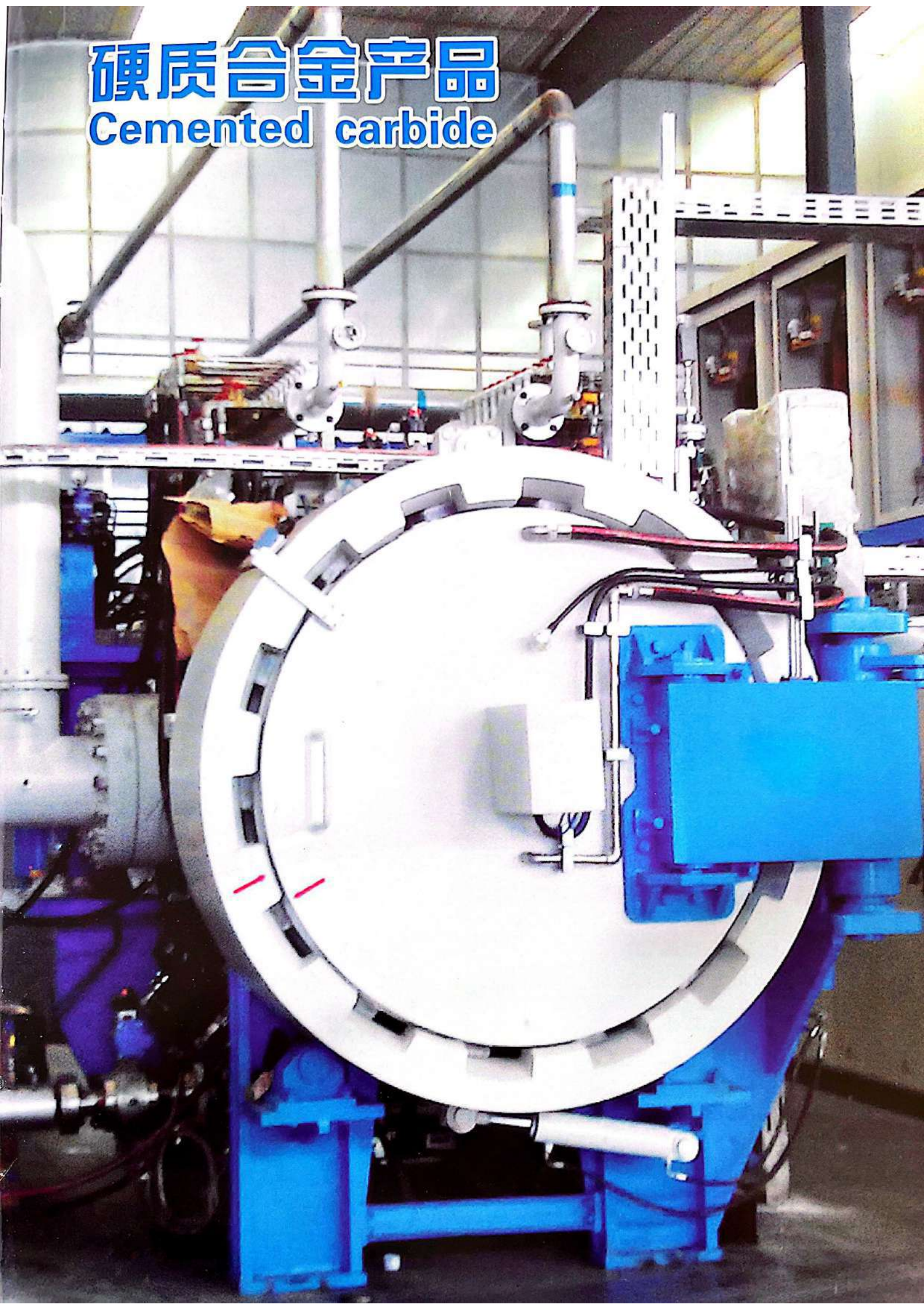


# 硬质合金产品

## Cemented carbide





# ■ 硬质合金牌号、性能及推荐用途

## Cemented carbide grade and applications

牌号 Grade	物理机械性能 Physical and mechanical properties			推荐用途 Applications recommended
	密度 Density g/cm <sup>3</sup>	抗弯强度 TRS N/mm <sup>2</sup>	硬度 Hardness (HRA)	
YF10	14.80-15.10	≥1880	≥92.5	适于铸铁、有色金属及低合金钢的半精加工以及石墨刹车片方面的新型材料加工。 Used for semi-machining of cast iron, nonferrous metals and low alloy steel, machining of various new material, such as graphite brake pads.
YF10.1	14.80-15.15	≥1980	≥92.0	有较高的硬度和耐磨性, 适用于高速拉丝模, 竹木刀具, 棒材, 耐磨件等。 Higher hardness and wear resistance, mainly used for high speed wire drawing dies, woodworking inserts, rods, bars, and various special wear-resistant parts.
YF10.2	14.30-14.16	≥2650	≥91.8	有很高的综合性能, 广泛用于电子, 金属, 木工, 竹子等行业的刀具。也可用于高性能耐磨件领域。 Excellent combination property, widely used for inserts of metal machining, woodworking industry and higher performance wear-resistant field.
YF10.3	14.80-15.05	≥2200	≥91.8	有较高的硬度和强度, 适用于加工纤维板等行业的刀具。 Higher hardness and compressive strength, rightly used for inserts to machine fibreboard field.
YL80	13.75-14.05	≥3200	≥89.5	有很高的硬度和韧性, 适用于生产电子行业引线框架、各类薄片、引线框架、马达定子、转子、弹簧片、矽钢片等冲压模具, 及剃须刀片冲压模具。 Higher hardness and T.R.S, rightly used for punching mold of electronic lead frame, engine stator and rotor, springs, coiled silicon steel sheet and razor blade.
YL80.1	14.70-14.90	≥2550	≥90.5	有较高的耐磨性, 用于粉末冶金模具、耐磨件、密封环及可加工成钻头、铣刀等。 Higher wear resistance, widely used for powder metallurgy dies, wear-resistant parts, sealing rings. Also solid blanks for various drills, end mills, etc.
YL80.2	14.00-14.20	≥2800	≥87.5	适用于制作冲压凹模、凸模、电子级进模; 硅钢片, 冷轧板冲压模具, 适合制作拉制模具、耐磨零件及冲压配件和硬质合金自动压力机用模芯等 Widely used for manufacturing concave and convex punching dies, electronics grade wire threading dies, punching dies to machine silicon steel plate and cold-rolled sheet, various wire drawing dies, wear-resistant parts and punching mold accessories and mold for automatic press machine of tungsten carbide field.



## ■ 硬质合金牌号、性能及推荐用途

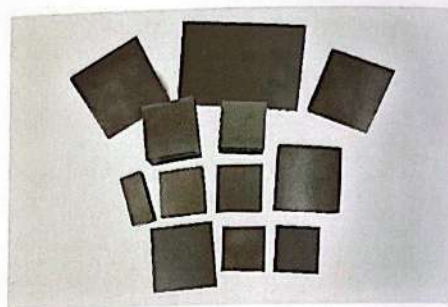
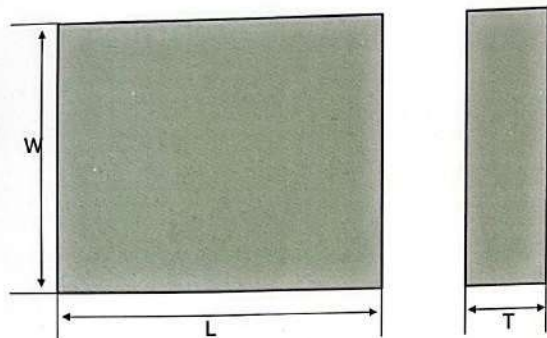
### Cemented carbide grade and applications

牌号 Grade	物理机械性能 Physical and mechanical properties			推荐用途 Applications recommended
	密度 Density g/cm <sup>3</sup>	抗弯强度 TRS N/mm <sup>2</sup>	硬度 Hardness (HRA)	
YL80.3	13.50-13.80	≥2750	≥85.0	适于生产在较大应力下冲压模具用板材。 Used for plates and strips which is applied under high pressure.
YL80.4	13.70-14.00	≥2850	≥86.0	具有较高的强韧性, 适用于形状复杂的模具、如齿轮模, 制作变压器用矽钢片圆剪辊剪刀。 Higher T.R.S, rightly used for complex molds, such as gear die, coiled silicon steel sheet and roller shear of transformer.
YL80.5	14.20-14.50	≥2750	≥88.0	具有较高的硬度, 适用于硅钢片矽钢片直剪刀具及铜片冲压等。 Higher hardness, used for inserts to machine silicon steel sheet and punching dies to machine copper sheet.
YL90	13.50-13.70	≥2500	≥83.0	具有较高的强度和抗疲劳韧性, 适于制作大规格缩颈模、六片模, 螺母模下仁。 Higher compressive strength and T.R.S, widely used for large dimension necking-down moulds, Hexagonal combination moulds, bottom part of nut moulds, etc.
YL90.1	13.90-14.10	≥2340	≥84.5	有较高的耐磨性和韧性, 适于制作一般耐冲击锻造模, 冷冲模具和螺母模上仁。 Higher wear resistance and T.R.S, widely used for general cold forging mould, punching moulds, and top part of nut moulds, etc.
YL90.2	13.40-13.90	≥2400	≥83.5	适于中规格螺栓缩颈模和螺母模上仁。 Widely used for medium dimension necking-down moulds and top part of nut moulds, etc.
YL90.4	13.20-13.40	≥2600	≥82.0	具有很高的强度和抗疲劳韧性, 用于螺母模下仁、全钨一冲等有较大冲击力的冷墩、冷冲、冷压模具。 High compressive strength and T.R.S, rightly used for bottom part of nut dies, cold forging die, cold punching dies, cold stamping dies.
YL90L	13.20-13.40	≥2450	≥82.0	用于一般冷冲螺丝模具和切断剪刀片。 Widely used for cold punching screw moulds and shear blade.



## ■ 硬质合金板材

### Cemented carbide plates



推荐牌号: YL80 YL80.1 YL80.2 YL80.3 YG8 YG15 YG20

- 主要适用于电子行业、半导体行业的接插件和马达转子、定子、EI硅钢片的精密高速冲孔。
- 产品性能稳定, 质量可靠。
- 压制模具规格齐全, 工艺成熟, 设备先进。
- 精坯、毛坯均能供应。

Recommended quality grade :

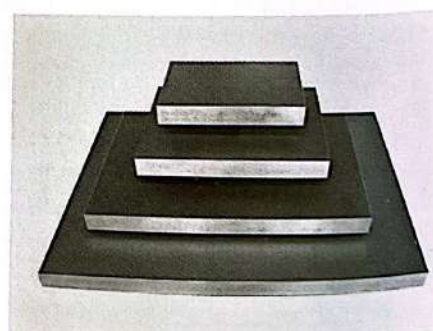
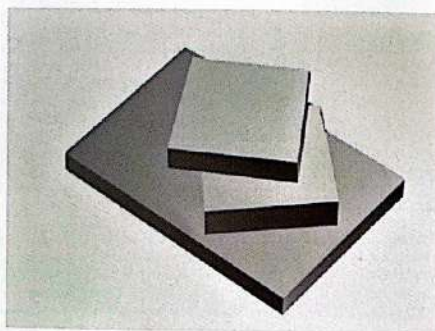
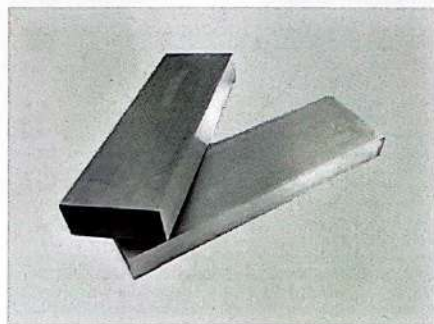
- Mainly used for wear-resistant parts of electronic and semi-conductor field, high precision punching of engine stators, engine rotors, and EI silicon steel sheet.
- Stable property, credible quality.
- Complete range of specification with mature procedure and improved facilities.
- Blank and well finished plates are both available here.

基本尺寸 (mm) Dimension			
L	W		T
50	50	100	2-60
80	80	110	2-70
100	100	150	2-70
105	105	200	2-60
120	120		2-60
125	125		2-60

基本尺寸 (mm) Dimension			
L	W		T
150	150	200	2-60
180	180	150	2-60
200	200	150	2-60
250	250	200	2-35
300	300	200	2-40
324	133		2-30

注: 以上为常用规格, 我公司也可根据用户提供图样或者尺寸生产其它规格!

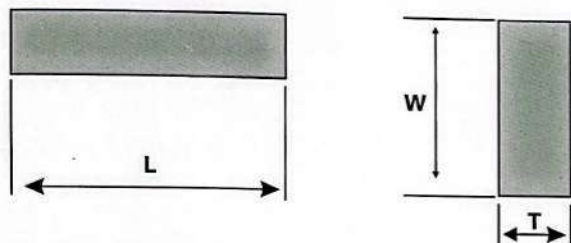
Remark: We could produce as your drawing and special specification.





## ■ 硬质合金长条薄片

### Cemented carbide bars



**推荐牌号:** YF10 YF10.1 YF10.2 YG8 YG15 YG20

**适用范围:** 适用于制作木工刀具中的成型刀、铰孔刀、锯齿刀、牙签刀以及各类异型刀具、耐磨件。

我们能根据客户需要加工各种规格型号的长条。请提供以下数据:

- 1 牌号
- 2 尺寸要求
- 3 尺寸公差
- 4 表面要求等。

**recommended quality grade:** YF10 YF10.1 YF10.2 YG8 YG15 YG20

**application field:** forming woodworking inserts,reaming inserts,saw blades,various wear-resistant parts and special carbide inserts.OEM is more than welcome here,we could produce as your specific grade,dimension,tolerance and roughness request.

W(mm)	T(mm)	L(mm)
4	1.2 ~ 10	10 ~ 330
5	1.2 ~ 10	10 ~ 330
6	1.2 ~ 10	10 ~ 330
7	1.2 ~ 10	10 ~ 330
8	1.2 ~ 10	10 ~ 330
9	1.2 ~ 10	10 ~ 330
10	1.2 ~ 10	10 ~ 330
11	1.2 ~ 10	10 ~ 330
12	1.2 ~ 10	10 ~ 330
13	1.2 ~ 10	10 ~ 330
14	1.2 ~ 10	10 ~ 330
15	1.2 ~ 10	10 ~ 330
16	1.2 ~ 10	10 ~ 330
17	1.2 ~ 10	10 ~ 330

W(mm)	T(mm)	L(mm)
18	1.2 ~ 10	10 ~ 330
20	1.2 ~ 10	10 ~ 330
22	1.2 ~ 10	10 ~ 330
25	1.2 ~ 10	10 ~ 330
28	1.2 ~ 10	10 ~ 330
30	1.2 ~ 10	10 ~ 330
32	1.2 ~ 10	10 ~ 330
35	1.2 ~ 10	10 ~ 330
38	1.2 ~ 10	10 ~ 330
40	1.2 ~ 10	10 ~ 330
50	1.2 ~ 10	10 ~ 330
70	1.2 ~ 10	10 ~ 330
80	1.2 ~ 10	10 ~ 330
100	1.2 ~ 10	10 ~ 330

## ■ 硬质合金冲压冷墩模

### Cemented carbide dies

冷墩、冷冲模具/Tungsten carbide cylindrical dies

规格/Specification :

外径Outer dia:  $\Phi 3 - \Phi 200\text{mm}$

内孔Inner bore:  $\Phi 0.5 - \Phi 180\text{mm}$

高Height: 2-150mm (semi-finish machining & HIP sintered)

冷墩冷冲模主要用于螺栓、螺母、异型件的制造

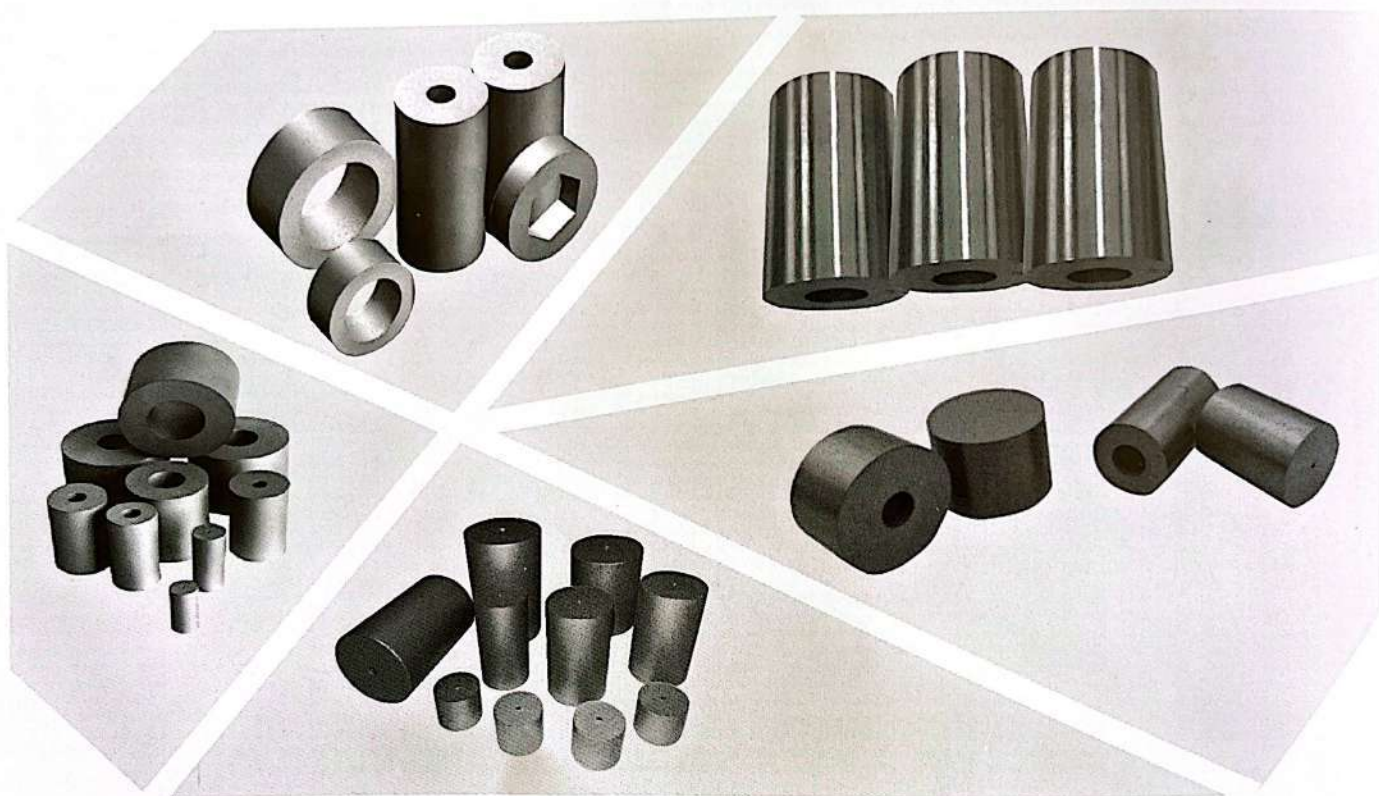
硬质合金是用粉末冶金方法制造的复合材料，其硬度很高、耐磨性好，用于制作冷墩模具，其使用寿命可提高数倍和数百倍。

我公司可根据客户需要进行定制生产各类型号规格的产品。

Semi-finish machining makes various standard and special cold forging and punching dies available in our factory, all items are sintered by HIP furnace and widely used in metal industry, such as fasteners and special accessories.

Tungsten carbide is composite material with high hardness and wear resistance produced through powder metallurgy, whose service life is decuple even hundreds of times than that of steel dies.

Customized products are more than welcome as your special specification and tolerance.





## ■ 硬质合金棒材类

### Cemented carbide rods

硬质合金棒材 tungsten carbide rod	  
D:0.4 ~ 40mm	
L:330mm,320mm,310mm,300mm	

单直孔硬质合金棒材 tungsten carbide rod with one straight hole	  
D:4.0 ~ 24mm	
d:0.8 ~ 10mm	
L:330mm	

**硬质合金圆棒推荐牌号：**YG6, YG8, YG6X, YL80、YL80.1、YL80.2、YF10、YF10.2 等

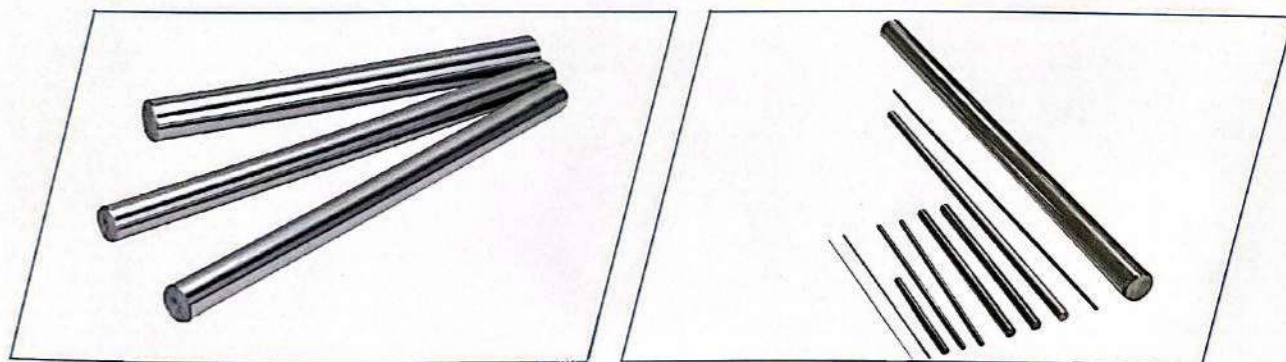
**主要用途：**硬质合金棒可用来加工制作铰刀、钻头、铣刀、摇杆、镗刀、沉头铣刀、枪钻，雕刻用钻头等等。

我公司为顾客提供各类优质硬质合金圆棒：圆棒毛坯，无孔毛坯和精加工圆棒。同时我公司还能为客户提供带一个孔，两个或者三个以上孔的棒材。我公司能提供长度为2-330mm长度范围，直径 $\phi 0.4$ - $\phi 330$ mm范围的圆棒。同时也可以根据客户的要求定制生产。

**Recommended quality grade :** YG6, YG8, YG6X, YL80、YL80.1、YL80.2、YF10、YF10.2 etc

**Main application:** Blank rods are widely used to produce shock-resistant turning tool bar, milling tool bar, reamer, drill bit, end mill, rocker, boring cutter, countersink, gun drill, graver bit, etc.

We supply solid carbide rods, carbide rods with ducts and well machined carbide rods with outer diameter from 0.4mm to 330mm, length from 2mm to 330mm. And we also could produce as your special specification.



## ■ 硬质合金轧辊类

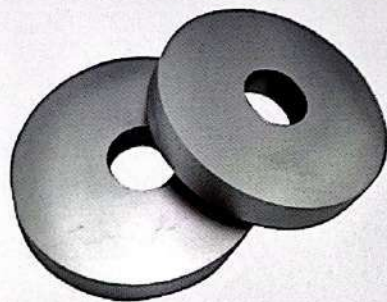
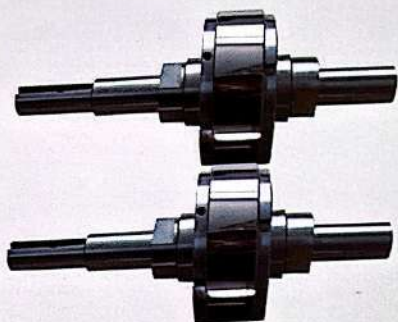
### Cemented carbide roller rings

硬质合金轧辊采用高硬度，高光洁度，高耐磨性的硬质合金作为工作面。硬质合金加以镜面抛光，保证了压出的片材光滑漂亮，尺寸精确。在挤压不锈钢网，五金线材压片，金银压片压线等广泛使用。异型金属丝用碳化钨轧辊。主要用于高精度、高光洁度，各类黑色、有色、稀有金属丝棒材的轧制。

可根据客户要求定制各种压线轮。

Tungsten carbide rolls are widely used in production of stainless steel mesh, hardware sheet, gold and silver wires and sheet, etc, its high precision mirror polished working surface with high hardness, fine finish and high wear resistance makes the machined items smooth and precise with good look. Some special rolls are mainly applied in metal industry, and used for rolling of ferrous metals, nonferrous metals and rare metals, which has higher request on precision and roughness.

Various wires and rods guiding rolls are available with your special request.





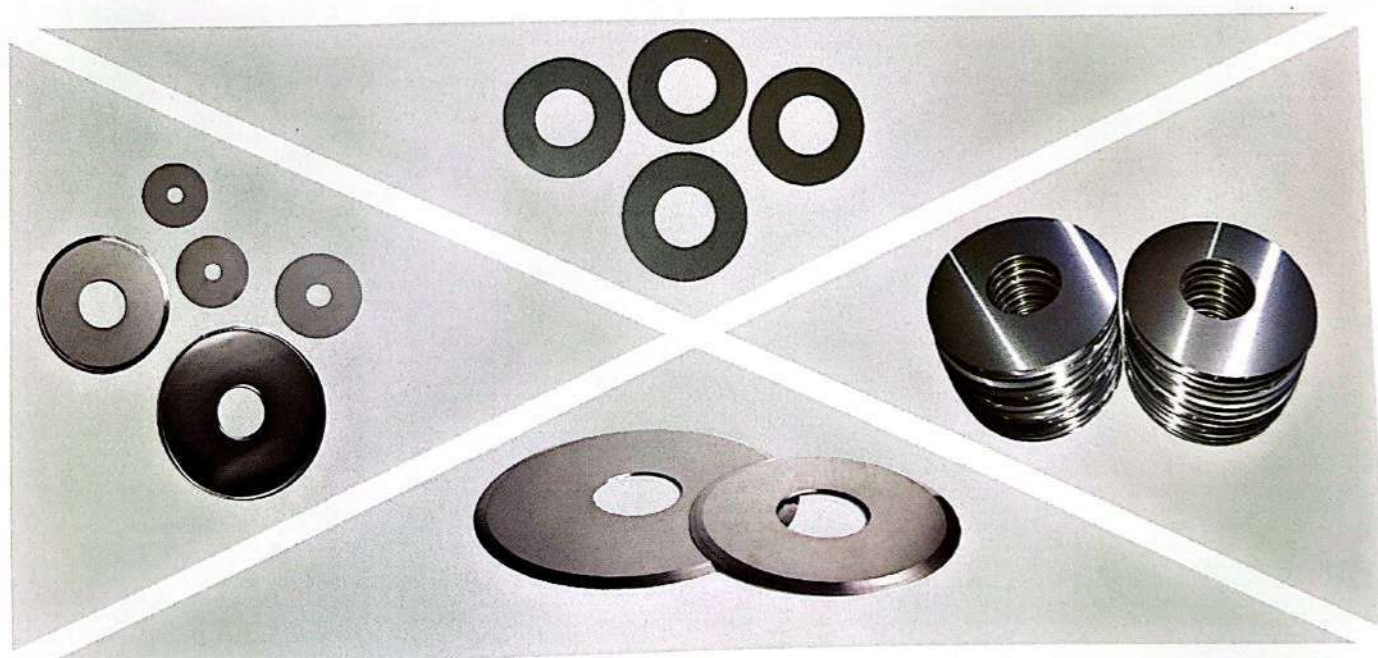
## ■ 硬质合金分条刀

### Cemented carbide cutting discs

硬质合金分切刀片，硬度高、耐磨性好，使用寿命长。采用高精度磨床精磨刃口，加工精度高，光洁度高达镜面效果，刃口锋利，被切割截面平整，光滑无毛刺。用于塑料、胶带、瓦楞纸、包装纸箱、薄膜、金、银箔、铜箔、铝箔、磁带等物品的分割切削的分切刀具。

With high hardness, superior wear resistance, mirror polished surface, high precision and fine finished sharp cutting edge, Tungsten carbide cutting discs has its excellent performance on cutting of plastic material, adhesive tapes, corrugated boards, paper boards, thin films, metal foils and other materials with long service life.

Φ 50* $\frac{f}{18}$ *8	Φ 104* $\frac{f}{11.5}$ *11.5	Φ 150* $\frac{f}{90}$ *20
Φ 50* $\frac{f}{25}$ *2.4	Φ 117* $\frac{f}{45}$ *5	Φ 150* $\frac{f}{95}$ *20
Φ 52* $\frac{f}{24}$ *2.5	Φ 117* $\frac{f}{70}$ *5	Φ 167* $\frac{f}{105}$ *8
Φ 61* $\frac{f}{12}$ *1.5	Φ 120.4* $\frac{f}{80}$ *5	Φ 195* $\frac{f}{125}$ *15
Φ 61* $\frac{f}{23}$ *15	Φ 125* $\frac{f}{10}$ *5	Φ 195* $\frac{f}{150}$ *15
Φ 65* $\frac{f}{27}$ *9	Φ 125* $\frac{f}{45}$ *5	Φ 202* $\frac{f}{160}$ *11
Φ 67.3* $\frac{f}{34}$ *10	Φ 125* $\frac{f}{60}$ *5	Φ 204* $\frac{f}{158}$ *11
Φ 70* $\frac{f}{32}$ *15	Φ 130* $\frac{f}{50}$ *25	Φ 208* $\frac{f}{132}$ *8
Φ 71* $\frac{f}{44}$ *6.8	Φ 130* $\frac{f}{60}$ *25	Φ 210* $\frac{f}{85}$ *15
Φ 75* $\frac{f}{40}$ *10	Φ 130* $\frac{f}{80}$ *25	Φ 210* $\frac{f}{88}$ *5
Φ 80* $\frac{f}{20}$ *4.5	Φ 130* $\frac{f}{85.9}$ *25	Φ 230* $\frac{f}{120}$ *6
Φ 100* $\frac{f}{64}$ *5	Φ 130* $\frac{f}{88}$ *1.5	Φ 250* $\frac{f}{140}$ *20



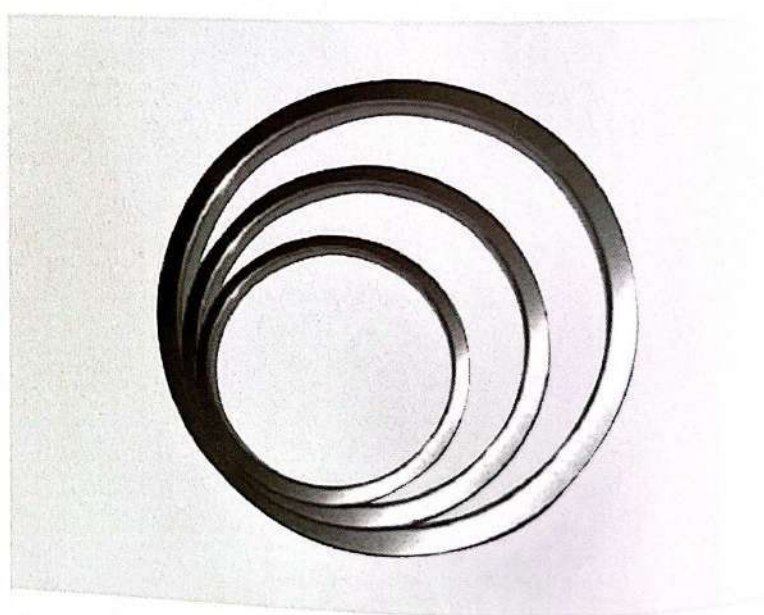
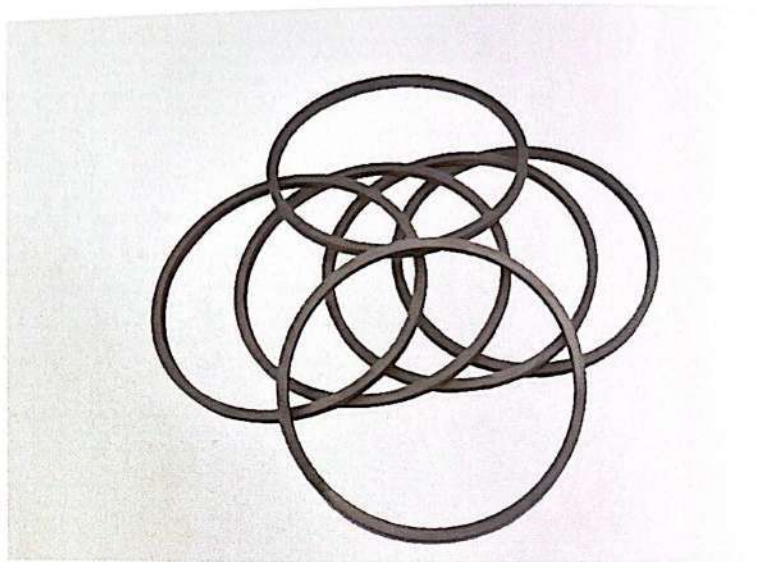


## ■ 硬质合金圆环/密封环

### Cemented carbide sealing rings

硬质合金密封环被广泛的用作机械密封件，例如炼油行业、石油化工厂、化肥机械制造行业、以及药物制药行业的泵、压缩机和搅拌机中。机械密封环经过不断的发展能耐高温，耐高压，同时能耐高浓度的化学腐蚀物。我们公司制作各类形状的密封环比如说平行环、DA型、T型、L型等。同时也能根据客户要求定制生产各类密封环。

After several years' research and improvement, we mainly supply tungsten carbide mechanical sealing rings which conform to ISO, ANSI, API standard. with high heat resistance, high pressure resistance, and excellent corrosion resistance, tungsten carbide mechanical sealing rings are widely used in petrochemical, electric power, steel, pharmacy, paper making, ship building and other industrial field.





## ■ 硬质合金喷嘴

### Cemented carbide nozzles

#### 特性 Advantages:

1. 硬质合金喷嘴采用超细颗粒碳化钨，添加抗磨、耐腐蚀微量元素，抗弯强度达到 $3000\text{ N/mm}^2$ 以上，具有硬度高、耐腐蚀、使用寿命长、性价比高等优点。
2. 硬质合金喷嘴被广泛应用于表面处理，喷砂，喷漆，石油、电子，化工，环保（脱硫、脱硝、脱氮、除尘等），食品喷嘴等行业。

1. Ultrafine particles are usually used for tungsten carbide nozzles, hard-wearing and erosion-resisting trace element added, which make its T.R.S more than  $3000\text{ N/mm}^2$  with excellent erosion resistance, long service life and high cost performance.
2. Tungsten carbide nozzles are widely used for surface treatment, sand blasting, paint, petroleum, electronic chemistry, environmental protection fields (desulfuration, denitration, denitrification, dedusting, etc), food nozzles, etc.

