



# 硬质合金产品样册

CEMENTED CARBIDE PRODUCT CATALOG

## 硬质合金耐磨方案

定制化服务

Customized solutions for wear resistance in tungsten carbide (WC) materials



株洲精钻硬质合金有限公司

电话: 182 7337 8706

邮编: 412007

网址: <http://www.haowugang.com>

地址: 中国湖南省株洲市动力谷产业园3栋

HAO CARBIDE CO., LTD

Phone No.: 182 7337 8706

Zip: 412007

Web: <http://www.haowugang.com>

Add: Building 3, Power Valley Industrial Park, Zhuzhou City, Hunan Province, China



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## COMPANY PROFILE 企业简介

株洲精钻硬质合金有限公司是一家致力于生产高品质硬质合金、钨基高比重合金及原料的企业，旗下拥有HAO CARBIDE、金伯仕等国内外知名品牌，产品线涵盖硬质合金型材、硬质合金模具、硬质合金圆棒、硬质合金板材及高比重钨合金和渔具系列产品等多个领域。公司成立至今，始终坚持“敬天爱人，传递真善美”为使命，遵循“孝、慈、爱、信、义、真”六项行为规范，凭借优质的产品和服务，获得了国内外广大客户的信任与支持。

精钻依靠雄厚的技术力量、现代化的生产设备和严格的产品检测流程，依托科学的管理制度、生产工艺和操作规程，从产品的设计、研发、生产、等各个环节出发，严格按照GB/T19001-2008/ISO9001:2008国际质量体系的要求执行。

经过多年发展，公司品牌和产品质量水平被国内外众多知名企业和客户所认可，并多次获得湖南省“守合同重信用”单位。未来也将围绕客户需求持续创新，秉承着“付出、反省、精进、热爱、感恩、精致”的六大企业精神，守正笃实，厚积薄发，不断进步。

HAO CARBIDE, a professional manufacturer of high quality tungsten carbide, tungsten alloy and raw materials, owns HAO CARBIDE, JINBOSH and other famous brands from home and abroad. Our main products are tungsten carbide rods, strips, dies and tungsten fishing weights and so on.

We take Respect nature, love mankind and deliver truth, kindness and beauty as our mission, and act out the codes of "Filial Piety, Compassion, Love, Faith, Righteousness and Truth". We gain trust and support from our clients with top-rated products and services.

For a long time, HAO CARBIDE has always followed the spirit of "never stop pursuing the best". It now has a technical team consisting of many professional engineers and other talents, and has formed a set of mature tungsten production technology with "JingZuan characteristics". We strictly follow the request of GB/T19001-2008/ISO9001:2008 international quality system in development, research and production of the products.

Our products are exported to many countries, such as the United States, Britain, Japan and Korea and so on. Our clients speak highly of our product quality and excellent services, and also we have been awarded "the Trustworthy Company that Keep the Contract" in Hunan Province for many times. In the future, we will continue to innovate around the needs of our customers, adhering to the six corporate spirits of "giving, reflection, refinement, love, gratitude and refinement", increasing our investment in research and development, building on our strengths and advancing the industry.



Your specialist  
for solidcarbide

Completely produce & Quality checking system

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# 硬质合金模具、耐磨件牌号表

CEMENTED CARBIDE MOULDS, WEAR-RESISTANT PARTS GRADE LIST

## 模具、耐磨件硬质合金牌号、性能和推荐用途

Moulds, wear parts carbide grades, properties and recommended applications

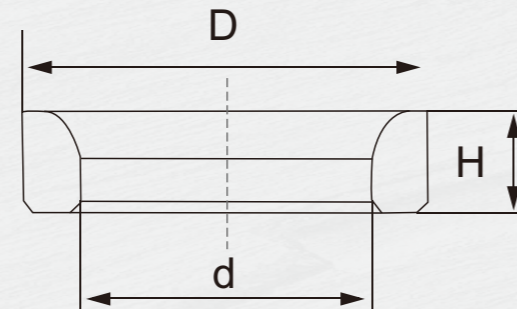
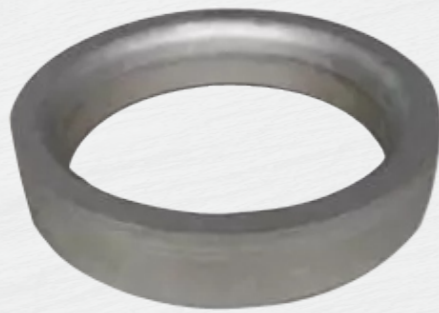
牌号 Grade	旧牌号 Old Grade	ISO旧牌号 ISO Old Grade	Co(Ni) %	晶粒度 Grain Size	物理机械性能 Properties And Plitions			推荐用途 Recommended Applications
					密度 (g/cm <sup>3</sup> )	硬度 (≥HRA)	抗弯强度 (≥N/mm <sup>2</sup> )	
JZ6	YG6	K10	6	中	14.7~15.1	90	2600	适用于应力较小的拉伸磨具，或用作耐磨易损件。
JZ6X	YG6X	K10	6	细		91	2700	
JZ8	YG8	K20	8	中	14.6~14.9	89	2700	适用于应力较小的拉伸磨具，或用作耐磨易损件。
JZ8X	YG8X	K20	8	细		90	2200	
JZ8A	YG8A	K20	8	中细		90.5	2400	
JZ8N	YG8N	K20	8	中		88.5	2500	常用于陶瓷地、墙砖的模具或镶件
JZ10	YG10	K40	10	中	14.3~14.7	88	2800	常用于拉伸模具或用作耐磨件。
JZ13X	YG13X	K40	13	细	14~14.5	88	3300	
JZ13	YG13	K40	13	中	14~14.5	87	3100	
JZ15X	YG15X	K40	15	细	13.8~14.2	88.5	3400	常用于高压压缩率拉伸模具、较大应力下的顶锻穿孔及冲压工具。
JZ15	YG15	K40	15	中		86.5	3200	
JZ18X	YG18X	K40	18	细	13.6~14	86.5	3300	常用于冲剪工、模具及大冲击整型和冲压模具。
JZ18	YG18	K40	18	中		85.5	2700	
JZ20	YG20	K40	20	细	13.4~13.8	85	3100	常用于制作标准件的冷墩、冷冲、热锻模具。
JZ20C	YG20C	K40	20	粗		82	3100	
JZ50	YG25		25	中	13~13.2	82	2800	
JZ25C	YG25C		25	粗		81	2600	
JN7	YN7		7	中	14.5~14.9	90	2000	不导磁合金，常用作密封环和不导磁的耐磨件。
JN9	YN9		9	中	14.1~14.6	88.5	2300	
JN13	YN13		13	中	14~14.4	87	2700	不导磁合金，常用于圆形的磁场成型模具。
JN15	YN15		15	中	13.8~14.2	86	3000	
JZ18	YN18		18	中	13.6~14	84	3000	不导磁合金，常用于异型的磁场成型模具。
JZ20	YN20		20	中	13.4~13.8	83	3000	
JZ25	YN25		25	中	12.6~13.2	81	2900	不导磁合金，常用于磁场成型模具的冲头。

## 硬质合金大制品系列

LARGE SIZE CEMENTED CARBIDE PRODUCTS SERIES

### 1-1.大规格拔管模

Large size pipe drawing die



φ820-φ710x120



编号 Items	尺寸范围 Dimension scope	公差 Tolerance
1	D:320~820mm	±1%
2	d:250~710mm	±1%
3	H:75~120mm	±2%

**优点:** 广泛应用于石油输送管、煤气罐管、特大气瓶钢管、压力容器血管材等行业。具有硬度高、光洁度高、韧性好、耐磨性能好、使用寿命长等优点，是进口模具的最佳替代品。

**Advantages:** Product widely used in fossil oil pipeline forming, gas tank forming, extra-large gas cylinder pipe forming, pressure vessel tube forming and other industries, which has the advantages of high hardness, high smooth finish, good toughness, good wear resistance and long service life span. It is the best substitute for finishing imported dies.

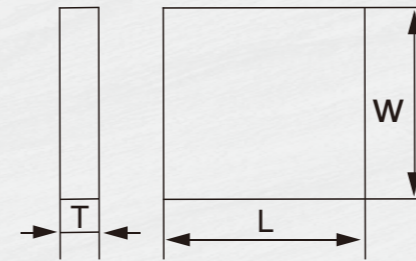
接受产品定制 Acceptable for customer's design

## 硬质合金大制品系列

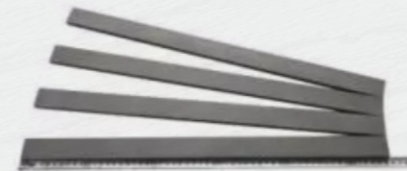
LARGE SIZE CEMENTED CARBIDE PRODUCTS SERIES

### 1-2.大规格硬质合金长条、板块

Large size cemented carbide strip & plate



编号 Items	尺寸范围 Dimension scope	公差 Tolerance
1	L:20~800mm	±2%
2	W:20~500mm	±2%
3	T:5~140mm	±2%

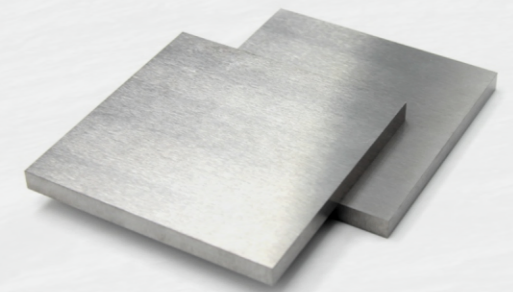


900x200



600x200

**供应态**  
product status  
六面平磨, HIP及去应力处理  
All sides grinded, stress release, HIP released treated



接受产品定制 Customized design is accepted

## 硬质合金大制品系列

LARGE SIZE CEMENTED CARBIDE PRODUCTS SERIES

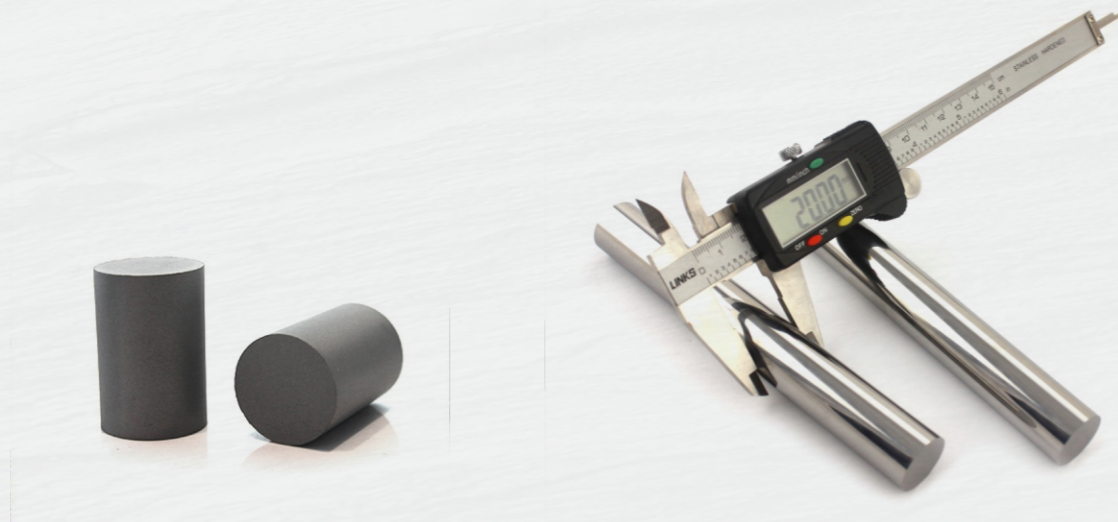
### 1-3.大规格硬质合金圆柱（棒）

Large size cemented carbide cylinder/rod



**供应态**  
product status  
HIP及去应力处理  
Stress released, HIP treated

编号 Items	尺寸范围 Dimension scope	公差 Tolerance
1	D: $\phi 20 \sim \phi 150\text{mm}$	$\pm 2\%$
2	L $\leq 900\text{mm}$	$\pm 2\%$



接受产品定制 Acceptable for customer's design

## 硬质合金大制品系列

LARGE SIZE CEMENTED CARBIDE PRODUCTS SERIES

### 1-4.其他非标异型大制品

Other non-standard shaped large size products



$\phi 310$  阀座  
Valve seat

$\phi 200$  阀芯  
Valve core

$\phi 480$  圆饼  
Disk



$\phi 550 \times \phi 530 \times 100$  合金套  
Carbide sleeve

560X38X13 刀具  
Cutter

$\phi 115 \times 50$  合金环  
Carbide ring

接受产品定制 Acceptable for customer's design

## 硬质合金模具系列

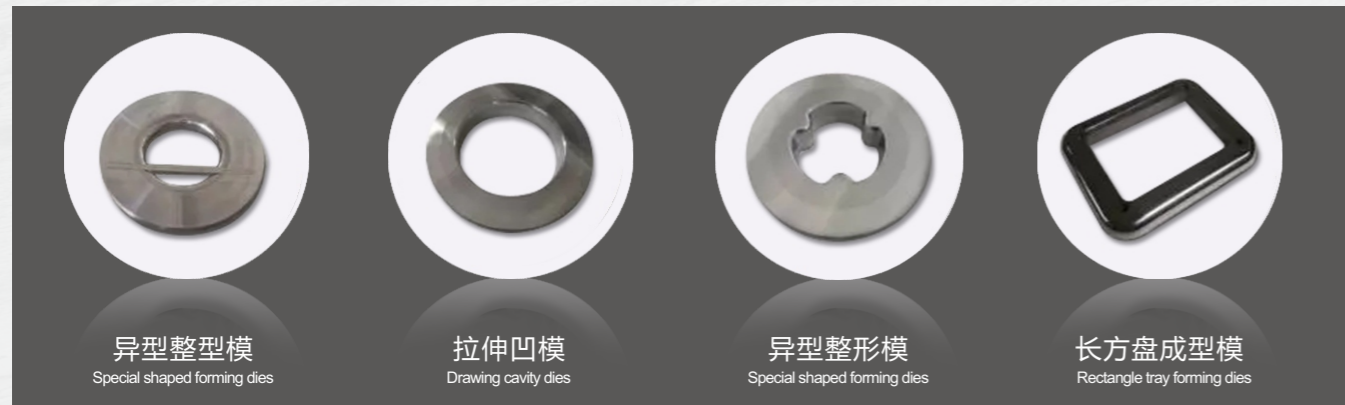
CEMENTED CARBIDE DIES SERIES

### 2-1. 拉伸成型模具

Stretch forming dies

适用范围：广泛应用于各行业的拉伸、成型、整型模具。如不锈钢餐具、金属器皿、五金配件的拉伸、成型等。

Application :Stretch forming dies are widely used as drawing, forming, molding dies such as stainless steel tableware, metalware, hardware fitting, etc.



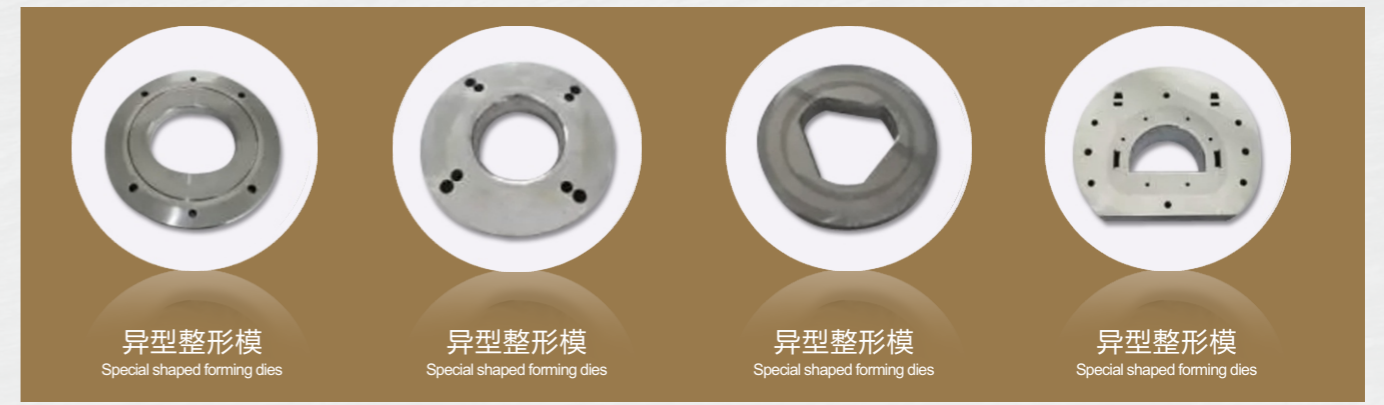
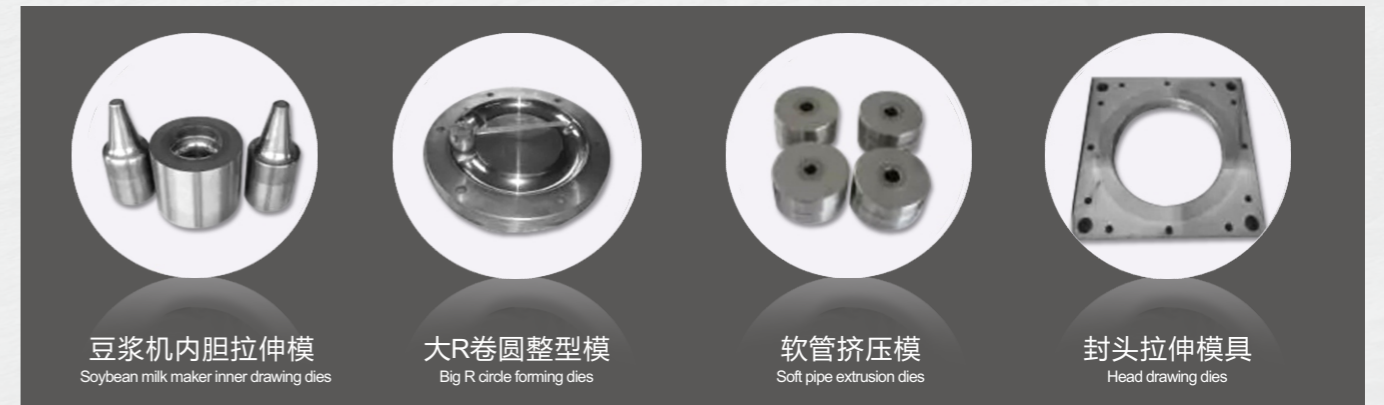
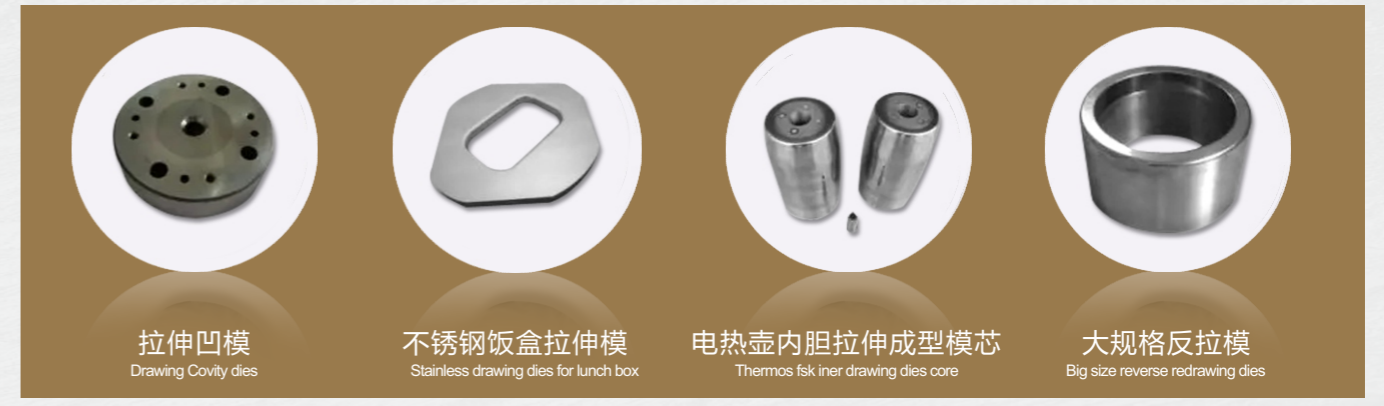
## 硬质合金模具系列

CEMENTED CARBIDE DIES SERIES

### 2-1. 拉伸成型模具

Stretch forming dies

接受产品定制 Acceptable for customer's design

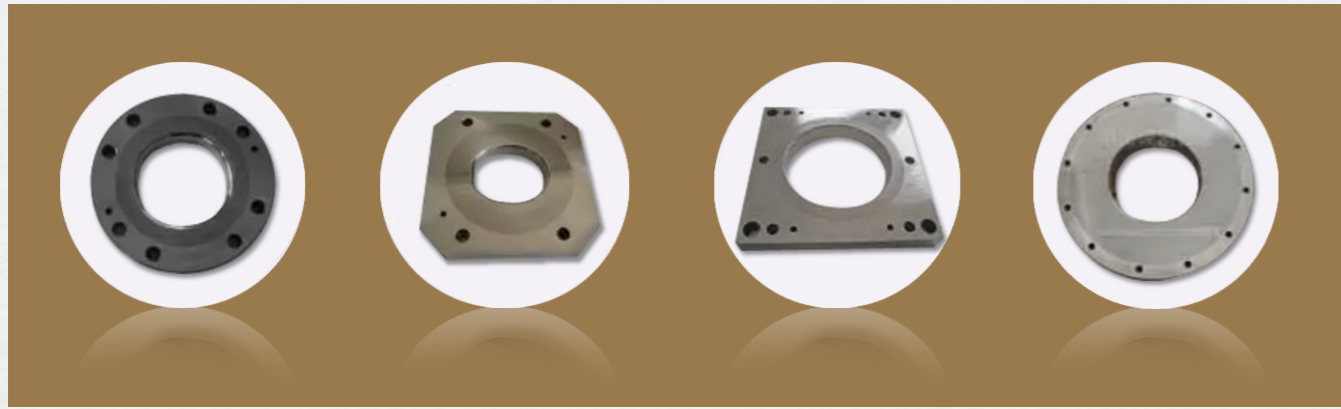


## 硬质合金模具系列

CEMENTED CARBIDE DIES SERIES

冷机拉伸模

Cold heading stretch drawing dies



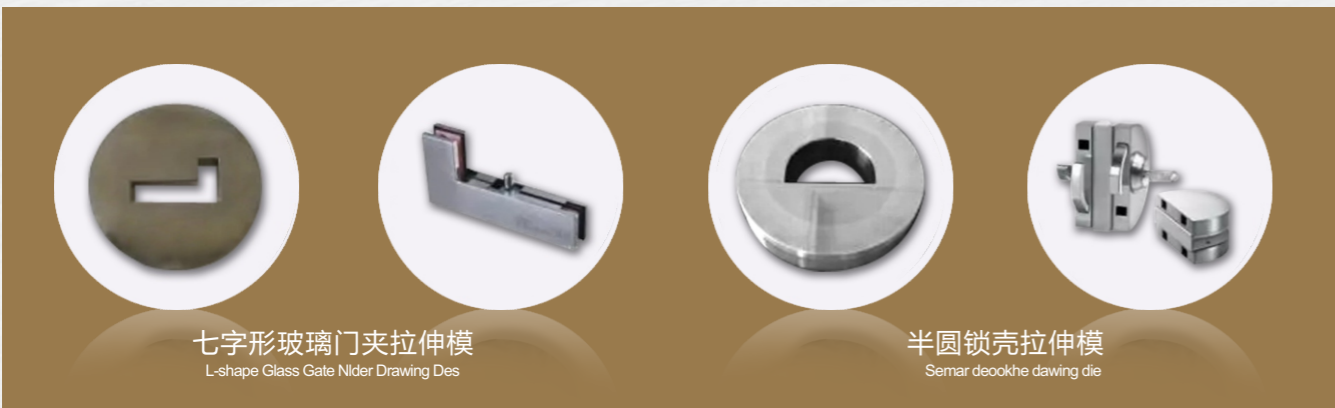
玻璃门夹、门锁拉伸成型模具

Glasses door holder, gate lock shell stretch forming dies



长方形锁壳模  
Rectangle lock shell dies

长方形锁壳模  
Rectangle lock shell dies



七字形玻璃门夹拉伸模  
L-shape Glass Gate Nider Drawing Dies

半圆锁壳拉伸模  
Semar deookhe dawing die

## 硬质合金模具系列

CEMENTED CARBIDE DIES SERIES

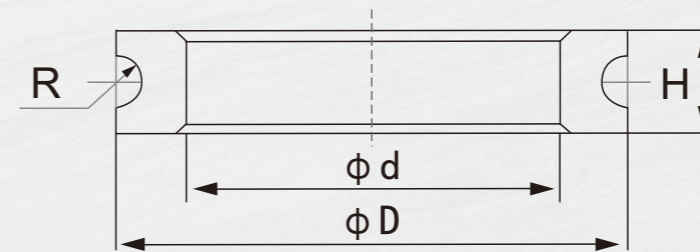
脚轮支架拉伸成型模具

Caster Bracket Stretch Forming Mould



2-2.电热管缩管模

Shrink die for electric heat pipe



## 硬质合金模具系列

CEMENTED CARBIDE DIES SERIES

### 2-3. 成型轮系列

Forming wheel series

#### 1. 不锈钢桶形产品、五金制品的卷边轮

Stainless barrel-shape product and metalware hemming roller.



#### 2. 玻璃盖的包边轮

Wrap-around wheels for glass lids



#### 3. 金属制品的旋压轮

Carbide bead roller

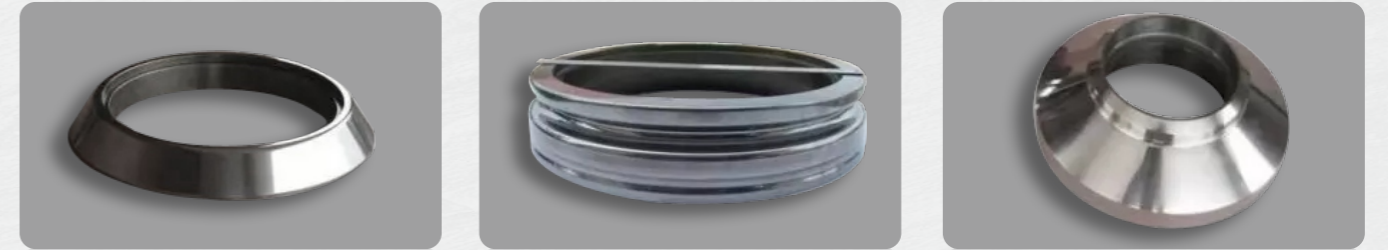


## 硬质合金模具系列

CEMENTED CARBIDE DIES SERIES

### 2-4. 汽车钢圈成型模具

Vehicle wheel rimforming dies



适用范围：广泛应用于无内胎钢制车轮、工程机械钢制车轮、卡车钢制车轮、农用运输钢制车轮等钢圈的扩口成型模具。具有耐磨性高、光洁度好、寿命长等优点。

Application : Vehicle wheel rim flaring dies are widely used in the rim of tubeless steel wheel, engineering machinery steel wheel, truck steel wheel and farm-oriented steel wheel etc. Such die has the advantages of high wear-resistance, good finish and long service life.

#### 常做规格尺寸

规格 Specification	尺寸 Dimensions		
	外径D	内径D	高度H
φ 350/ φ 295- φ 270 x 40	φ 350	φ 270	40
φ 375/ φ 320- φ 295 x 40	φ 375	φ 295	40
φ 400/ φ 345- φ 320 x 40	φ 400	φ 320	40
φ 460/ φ 405- φ 380 x 40	φ 460	φ 380	40
φ 462- φ 358 x 60	φ 462	φ 358	60
φ 478- φ 350/ φ 424 x 63	φ 478	φ 350	63
φ 485- φ 380 x 60	φ 485	φ 380	60
φ 496- φ 380 x 60	φ 496	φ 380	60
φ 503- φ 380 x 60	φ 503	φ 380	60
φ 510- φ 380 x 60	φ 510	φ 380	60
φ 575- φ 400 x 70	φ 575	φ 400	70
φ 577- φ 450 x 52	φ 577	φ 450	52
φ 585- φ 400 x 70	φ 585	φ 400	70

## 硬质合金轧辊系列

CEMENTED CARBIDE ROLLER SERIES

高线轧辊牌号、性能和推荐用途

Grade, properties and plitions

牌号 Grade	晶粒度 Grain Size	物理机械性能 Physical And Mechanical Properties			推荐用途 Recommended Applications
		密度 Density (g/cm <sup>3</sup> )	硬度 Hardness (≥HRA)	抗弯强度 Bending Strength (≥N/mm <sup>2</sup> )	
YGH20	≥3.2	14.2~14.5	86.5	2500	硬度高、耐磨性较好;用于精良高线轧机精轧机倒数第1、2架的普线和硬线轧制 High hardness, good wear-resistance and it's adopted in high speed fine rolling mill for wire or hard wire rolling.
YGH25	≥ 2	14.0~14.3	85.5	2520	高耐磨性, 适中的抗冲击性;用于精良高线轧机精轧机倒数第1、2架轧制 High hardness, proper shock resistance and adopted in high speed rolling mill
YGH30	≥ 3.2	13.8~14.2	84	2520	耐磨性及抗冲击性适中,通用性较好,用于精轧机倒数第1-4架或全部机架 Proper wear-resistance and shock-resistance with universality, which is adopted in fine rolling mill rack..
YGH40	≥ 2.4	13.4~13.9	83.5	2570	通用性最好,用于精轧机前部机架和一般轧机后部机架 Best universality and it's adopted in fine rolling mill rack.
YGH45	≥ 2.4	13.3~13.9	82.5	2570	用于精轧机第1—2架和预精轧机架;也适用于轧制速度低、设备精度较差、轧制工艺不稳定的轧制线各机架 Used in fine riling mill rack or other normal roling mill rack.
YGH55	≥ 2.0	12.6~13.2	81	2570	具有较好的韧性,抗腐蚀性和抗热裂纹性能;用于精轧机架和热轧螺纹钢 Used in fine riling mill rack or other normal roling mill rack.
YGR20	≥ 2.0	14.2~14.8	85.5	2400	具有较高的耐磨性和耐腐蚀性和抗热裂纹性能;用于精轧机架倒数1-3架 It has high wear-resistance n-resistance and heat cracking proof2480 performance, which is adopted in fine rling mill rack.
YGR25	≥ 2.4	14.0~14.3	84.5	2480	
YGR30	≥ 2.4	13.8~14.3	83.5	2360	具有较好的韧性,抗腐蚀性耐磨和抗热裂纹性能;用于精轧机中间机架和后部机架
YGR40	≥ 2.4	13.5~13.9	82.5	2400	It has goo toughness, wear-resistance corsion-esistance and heat cracking2400 prooi performance, which adopted in ine rllini mil rack.
YGR45	≥ 2.4	13.4~13.9	81	2250	具有良好的韧性,和抗热裂饮性能,用于精轧机架前部机架 Good toughness and heat cracking proof performance.
YGR55	≥ 2.4	12.9~13.4	79.5	2400	具有良好的抗冲击性,用于预精轧机架和热轧螺纹钢 Good impact-resistance and toughness, used in hot rolling rebar and re-rolling mill rack
YGR60	≥ 2.4	12.6~13.1	79	2200	具有良好的抗冲韧性,用于热轧螺纹钢和预精轧机前部1、2

## 硬质合金轧辊系列

CEMENTED CARBIDE ROLLER SERIES

3-1.高线轧辊

He High Speed Wie Rlini Series



轧辊环  
Roll Ring

轧辊环  
Roll Ring

弧 辊  
Curved roll



轧辊环  
Roll Ring

轧辊环  
Roll Ring

弧 辊  
Curved roll

## 硬质合金轧辊系列

CEMENTED CARBIDE ROLLER SERIES

### 3-2.高线轧辊

Flatting roller



**广泛用于:** 制造排钉、枪钉产品、五金线材、焊接管、光伏焊带、首饰制品、及成型各种钢丝、铁丝、不锈钢等金属线材。

**特点:** 硬度高、光洁度好、耐磨、可反复多次修磨。抗热裂性能超强，使用寿命是其他模具钢材的10倍以上。

Application :Manufacture array nails, Gun nail product, hardware, wire, welded pipe, photovoltaic welding belt, jewelry product and forming various wire like products, such as sheet wire,iron wire,stainless wire, etc

Features: High hardness, good finish, wear-resistance and repeatable grinding, high thermal cracking resistance and 10 times long service life than the mould steel.

### 3-3.抽屉导轨轮

Drawer guide wheel



## 硬质合金轧辊系列

CEMENTED CARBIDE ROLLER SERIES

### 3-4.模切辊刀

Rotary die cutter



大号婴儿纸尿裤模切辊总成  
Big size baby diaper rotary die cutter



纸尿裤生产线  
Diaper production line



卫生巾生产线  
Sanitary towel production line



小号婴儿纸尿裤模切套辊  
Small size baby diaper rotary



模切辊合金套  
Carbide sleeve for die cutter



纸尿裤模切辊毛坯  
Diaper die cutter blank

**广泛用于:** 生活用纸行业的卫生巾、卫生护垫、婴儿纸尿裤、成人纸尿裤、医用绷带和贴膏、一次性口罩、一次性手套、纸巾、湿巾等用品生产中。

Application :It is widely used in household paper industry of sanitary napkin, sanitary pad, baby diaper, adult diaper and medical bandage Paste, disposable masks, disposable gloves,tissues, wipes, etc.



焊管轮  
Welding pipe roller



缩径轮  
Necking roller



轧辊  
bead roller

### 3-5.其他轧辊

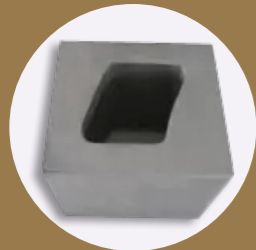
Other rollers

## 无磁硬质合金系列

NON-MAGNETIC CEMENTED CARBIDE SERIES

无磁硬质合金材料常用于磁性材料的成型模具,具有硬度高、使用寿命长、耐磨性好,抗腐蚀性强等特点。

Non-magnetic cemented carbide material is used for forming moulds of magnetic materials, with high hardness, long service life, good wear resistance and strong resistance to corrosion.



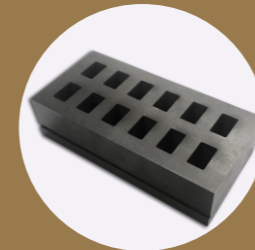
异型模毛坯  
Special shaped die blank



方模坯  
Rectangle dies blank



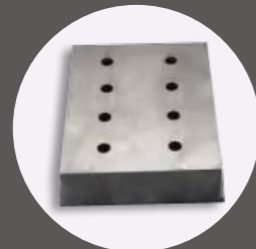
瓦型毛坯  
Tile shaped blank



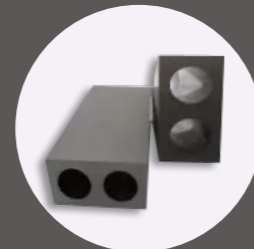
多孔模  
Multi-hole dies



方模坯  
Rectangle dies blank



方模坯  
Rectangle dies blank



椭圆双孔凹模  
Double ellipse holes cavity die



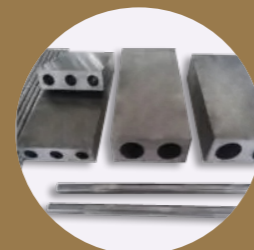
异型模坯  
Special shaped dies blank



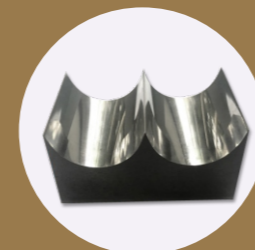
磁瓦模具  
Arcs magnetic die



方模  
Rectangle dies



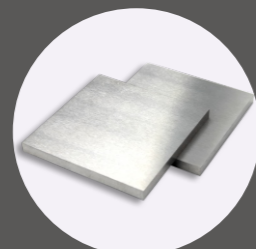
椭圆凹模芯棒  
Ellipse holes cavity die & bar core



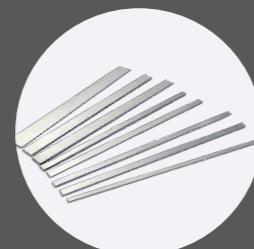
压杆模头  
Compression rod die head



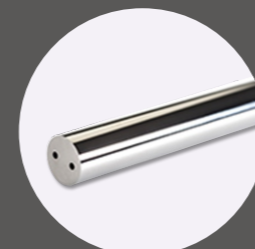
椭圆凹模  
Ellipse holes cavity die



板块  
Carbide plate



长条薄片  
Long slice



圆棒  
Carbide rod

## 非标硬质合金坯料系列

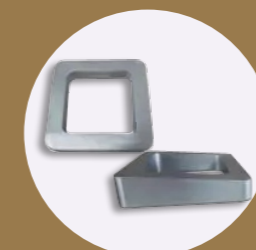
NON-STANDARD CEMENTED CARBIDE BLANK SERIES

接受产品定制

Acceptable for customer's design



盘阀毛坯  
Disk valve blank



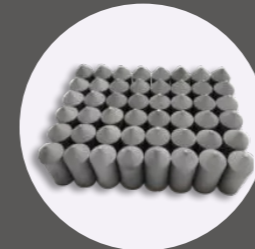
异型方模  
Special shaped dies



阀芯  
Valve core



合金钎  
Carbide Dowel



热咀毛坯  
Hot nozzle blank



缩管轮毛坯  
Necking roller blank



螺旋合金  
Carbide helical lobe



阀座  
Valve seat



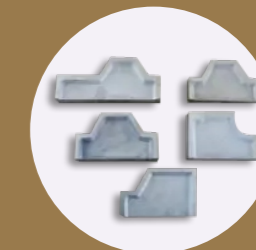
破碎盘  
Crushing disk



异型毛坯  
Special shape blank



冷挤模毛坯  
Cold extrusion die blank



波切刀毛坯  
Corrugated cutter blank



焊管轮坯  
Welding p p roller blank



合金毛坯  
Carbide blank



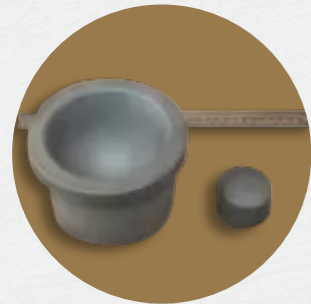
过线模  
Wire transfer die



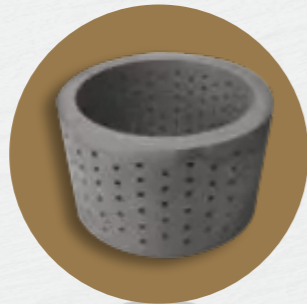
合金毛坯  
Carbide blank

## 非标硬质合金坯料系列

NON-STANDARD CEMENTED CARBIDE BLANK SERIES



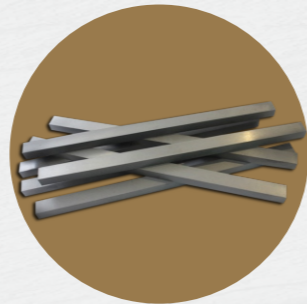
合金钵  
Carbide bowl



φ270m多孔圆筒  
Porous bushing



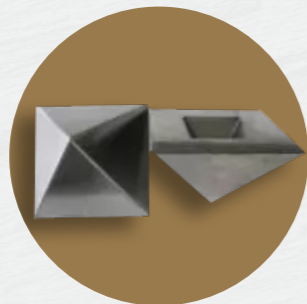
拔管模  
Tube drawing die



长条  
Strip



方模毛坯  
Square die blank



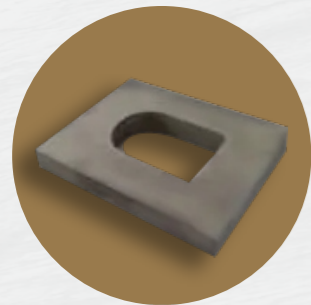
金字塔合金  
Pyramid shaped carbide



合金模  
Carbide die blank



长条  
Strip



合金模  
Carbide die blank



旋压轮  
Bead rille



轮脚支架模具毛坯  
Wheel holder dies blank



异型模  
Special shape die

## 非标硬质合金坯料系列

NON-STANDARD CEMENTED CARBIDE BLANK SERIES



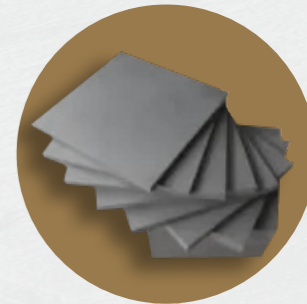
纸尿裤轧辊毛坯  
Rotary die cutter blank



拔管模毛坯  
Tube drawing dies blank



凸模毛坯  
Convex mould blank



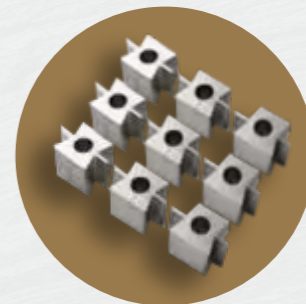
合金板块  
Carbide Plate



合金模  
Carbide blank



滚轮毛坯  
Roller blank



合金镶件  
carbide insert



密封环  
Seal ring



喷嘴  
Nozzle



合金配件  
Carbide accessories



合金配件  
carbide parts



抛光盘  
Polishing disk

## 主要设备 MAIN EQUIPMENT

### 4-1. 硬质合金生产设备

Cemented carbide production equipment



滚动球磨机  
Polling bearing mill



喷雾干燥制粒塔  
Spray drying granulator



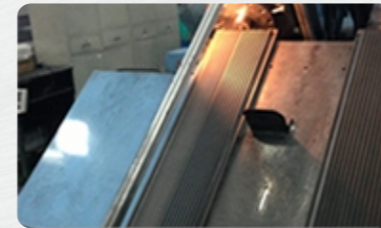
TPA全自动压力机  
TPA automatic press



双层立式真空干燥炉  
Double layer vertical vacuum drying furnace



过压烧结炉  
Overpressure sintering furnace



挤压成型机  
Extrusion molding machine



2000吨压机  
2000T Press Equipment



真空搅拌干燥机  
Vacuum stirring dryer



500吨测压机  
500T Press Testing Equipment

### 4-2. 硬质合金加工设备

Cemented carbide processing equipment



数控铣床  
CNC milling machine



数控钻床  
CNC drilling machine



数控车床  
CNC lathe

## 主要设备 MAIN EQUIPMENT

### 4-2.1 硬质合金加工设备

Cemented carbide processing equipment



数控卧轴矩台平面磨床  
CNC surface grinding machine



电火花打孔机  
EDM drilling machine



线切割机  
Wire cutting EDM machine



卧轴矩台平面磨床  
Surface grinding machine



无心磨床  
Centerless grinding machine



立轴圆台平面磨床  
Vertical surface grinding machine

### 4-3. 硬质合金检测设备

Cemented carbide testing equipment



硬度检测仪  
Hardness tester



金相图像分析仪  
Metallographic image analyzer



电子万能试验机  
Electronic universal testing machine



分光光度计  
Spectrophotometer



3D投影仪  
3D Projector



探伤仪  
Flaw detector