

昆山长鹰硬质材料科技股份有限公司
CY CARBIDE MFG. CO., LTD.

CYC® 长鹰硬科

昆山长鹰硬质材料科技股份有限公司
CY CARBIDE MFG. CO., LTD.

地址:江苏省昆山市玉城北路67号, 邮编 215316

电话:400 863 2919 0512-82622907

传真:0512-86162380

邮箱:sales@cycarbide.com | milly.wang@cycarbide.com

Add: 215316 No. 67, Yucheng Road (N.), Kunshan, Jiangsu, China

Tel: 86-400-863-2919 86-512-82622907

Fax: 86-512-86162380

Email: sales@cycarbide.com | milly.wang@cycarbide.com

www.cycarbide.com



扫一扫·了解更多

23REV2

油气行业硬质合金耐磨零件

Carbide Wear Parts for Oil & Gas Applications



▲ 昆山城北-公司总部
North of Kunshan - Headquarter



▶ 昆山城南-硬质材料工厂
South of Kunshan -
Hard materials factory



◀ 江西抚州-原料工厂
Fuzhou, Jiangxi -
RTP factory



▶ 江西常熟-数控刀片工厂
Changshu, Jiangsu -
Inserts factory



ISO9001:2015

About Us

公司介绍

昆山长鹰硬质材料科技股份有限公司创立于2003年,是一家专业的硬质材料制造商和供应商。我司生产的高性能的标准产品和特殊订制产品,可充分满足全球客户在金属加工、木材加工、采矿、建筑工程、石油和天然气、模具等行业的多种应用需求。

长鹰硬质材料生产基地位于距上海50公里的昆山市和常熟市,在江西有粉末原料生产基地。拥有近4万平方米的生产车间、先进的实验室和完备的研发设施设备,超过800名熟练的员工,包括优秀的材质、模具和工艺设计工程师团队。

我司为德国莱茵TUV ISO9001:2015质量体系的认证企业,高标准、严要求是我们品质管理工作的核心原则。通过构建全面的品质管理系统,严格控制原材料供应链,保持生产工序的100%可追溯性,确保交付给客户品质如一的高性能产品。

长鹰坚持负责任和可持续的商业行为,包括无冲突的原材料采购,积极的员工健康管理,以及对环境和能源可持续发展的关注。公司先后通过了ISO14001:2015环境管理体系、ISO50001:2018能源管理体系以及ISO45001:2008职业健康安全管理体系的认证。我司开放透明的经营理念让我们的客户、员工和外部供应商对我们的业务和产品充满信心。

CY CARBIDE MFG.CO.LTD., established in 2003, is a professional manufacturer and exporter of high performance tungsten carbide products and CERMET inserts materials. CYC delivers globally high performance standard and non-standard products, which meet the most challenging demands from various applications including metalworking, mining, construction, oil & gas, die & mold, and woodworking.

CYC production sites are located in Kunshan, 50 km away from Shanghai, Changshu and Jiangxi, raw material production factory, consisting of production, laboratories and R&D facilities. There are over 40,000 square meters production areas. We have 800+ skilled staff, including tooling and grade design engineers.

CYC is an ISO 9001:2015(TUV) certified company. High standard and strict requirement is our core value for quality. Consistent quality of products are guaranteed by a complete quality management system, strict control of raw material supply chain and 100% traceability in the entire production process.

CYC adheres to responsible and sustainable business practices, including conflict free raw materials sourcing, proactive health management to our employees, and concern about environment and energy sustainable development. Our open and transparent business philosophy allows our customers, employees, and external suppliers, to have confidence in our business, ways of working and our products.

目录 | Content

- 03 发展历程
Development
- 05 生产工艺流程
Manufacturing Process
- 07 我们的能力
Our Capabilities
- 09 牌号表
Grade Chart

11 阀用硬质合金耐磨件 Carbide Wear Parts for Valves

整体式合金笼套、合金挡环
Carbide Trim and Ring

节流嘴
Choke Bean

节流阀阀板
Valve Disk

针阀
Flow Control Points & Shell Points

球阀芯、球阀座
Valve Ball & Seat

16 喷嘴 Nozzle

钻头硬质合金喷嘴
Nozzles for Drill Bits

定制喷嘴
Customized Nozzle

19 硬质合金耐磨块 Carbide Wear Inserts for Stabilizers

20 耐磨零件 Carbide Wear Accessories

油泵用硬质合金轴套
Carbide Sleeves for Oil Pumps

随钻测量仪用硬质合金配件
Carbide Accessories for MWD & LWD

RTTS封隔器用硬质合金片
Carbide Round Inserts for RTTS Packers

Enterprise History

发展历程

2003.10

在江苏昆山高新工业园区开始建设工厂
Set up factory at Jiangsu Kunshan High-tech Industry Park.

2010.01

推出高端模具应用材料品牌
长野硬质合金

Established new brand GREATLOY for premium Die & Mold applications



2012.10

被评为江苏省高新技术产业
Rated as High Technology Innovation Company in Jiangsu Province



2014.02

公司通过ISO9001质量管理体系认证
Acquired ISO9001 quality management system certification.



2017.10

投建江西抚州工厂
Set up new factory in Fuzhou, Jiangxi Province.



2018.05

昆山城南工厂开始正式生产
Kunshan south factory started production.



2018.10

被评为江苏省企业技术中心
Rated as Jiangsu Province Recognized Corporation Technical Center



2019.06

成立 东莞华南办事处
Established Dongguan South-east office.



2019.07

设立 长鹰日本公司
Set up CY Carbide (Japan) MFG. Co., Ltd.

2020.01

公司正式更名：
昆山长鹰硬质材料科技股份有限公司
Officially update the company Chinese name.

2020.10

成立 超硬材料事业部
Set up Superhard Material BU

2021.10

数控刀片工厂正式生产
Inserts factory started production.



2022.08

被评为国家级专精特新“小巨人”
Rated as National Specialized, Refined, Specialized, Innovative “Little Giant”

2023.01

荣获江苏省绿色工厂称号
Rated as Green Factory in Jiangsu Province

2003

2010

2012

2014

2017

2018

2019

2020

2021

2022

2023

Manufacturing Process

生产工艺流程

01 材质设计 Grade Design



始终以需求和市场应用为导向进行材质设计。我们的生产制程从粉末混合开始,原材料为碳化钨(Wc),钴(Co)和其他微量元素。

CYC grades are designed upon requests and applications. Our process starts with powder mixing. Raw materials includes WC, Co and other elements.

02 混合料球磨 RTP Ball milling



覆盖特细、超微到特粗不同晶粒度,有超过100个材质可供客户选用。不同晶粒度的粉末在彼此隔离的系统中球磨、筛分和制粒,以避免混晶。

Over 100 CYC designed grades from superfine to coarse grain size are available. Grades with different grain sizes are ball-milled, sieved, granulated in separated systems to avoid grain contamination.

03 压制成型 Direct Pressing



绝大部分耐磨块均能通过自动压制成型,我们的自动压制系统和独到的技术使得产品尺寸能保持良好的一致性。

Most of the oil & gas wear inserts can be formed by direct pressing. CYC direct pressing system and technical know-how ensure consistency of dimension.

04 加压烧结 Sintering



采用HIP热等静压烧结炉,经过1400°C左右的高温加压烧结,使硬质合金具备更高的物理性能来满足各项严苛和复杂的应用需求。

Green blanks are sintered at temperature around 1400 °C (cobalt melting) to become super hard and tough. CYC utilizes HIP (hot-isostatic pressure) sintering furnace which gives carbide maximum toughness to meet the most critical working applications.

05 加工处理 Post-processing

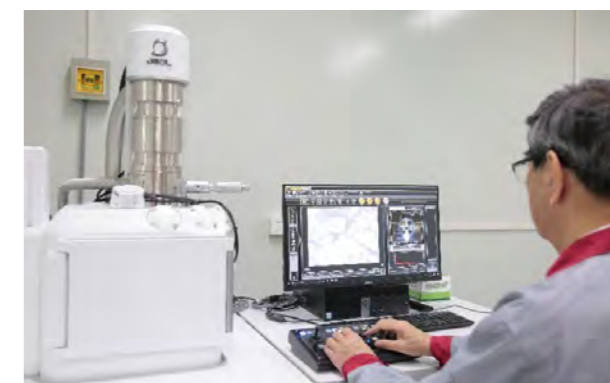


根据客户的实际应用需求,我们可以提供多种加工处理方案,包括外圆磨、内圆磨、端面磨、螺纹磨、电火花加工等,保证产品的优异性能和尺寸精度。



CYC offers multiple finishing options, including OD, ID, end face, thread grinding, EDM etc. for high performance and accurate dimensions, under the most demanding applications.

06 检验 Inspection



原料、混合料和烧结毛坯的关键性能指标都在我们自有的实验室得到全面的监控,以确保产品的品质和性能。所有成品都会经过严苛的尺寸检验,更有高效率的自动检验设备,确保产品合格才会发送到客户手上。

The Key properties are monitored from raw material, RTP and raw sintered parts in our laboratory for quality and performance guarantee. Strict dimensional measurements by automatic equipment will be done before the parts are shipped to the customer.

Our Capabilities

我们的能力

超过20年的硬质合金研发和制造经验，长鹰已建立一个由全球技术和商业领域专家组成的团队，专注为我们的客户提供优质的产品和服务。

Over 20 years of experience in R&D and manufacturing carbide, CYC has built a dedicated team consisting of global experts in technical and commercial areas who always stands behind our customers.



QUALITY 品质

稳定的品质是硬质合金的核心。
Carbide consistent quality has to be the top priority.



稳定

CONSISTENCY

我们的流程完全根据ISO9001:2015(TUV)管理体系要求运转。品质一致性和可追溯性是我们对客户的承诺。

Our manufacturing process is operating fully in compliance with ISO9001:2015 (TUV). Consistency and traceability is the promise we keep to our customers.



EXPERTISE 专业

“满足并超越客户期望”是长鹰的一贯使命。我们专业和多样的生产能力，能为客户提供更多增值服务。

Meeting and exceeding customer's expectations is our mission. Our professional and multiple production capabilities delivers more added value services to customers.

1. 特定应用的材质设计
2. 特定作业所需产品几何形状设计
3. 任意数量打样服务
4. 2D / 3D图纸制作
5. 成品磨加工服务, 包括:
 - 外圆磨
 - 内圆磨
 - 平面磨
 - 螺纹磨
 - 电火花加工
 - 线切割

1. Grade design for specific applications
2. Geometry design for specific operations
3. Prototypes for any quantity
4. 2D/3D drawings
5. Post-processing services include: OD Grinding / ID Grinding / Plain Surface Grinding / Thread Grinding / EDM / Wire cutting



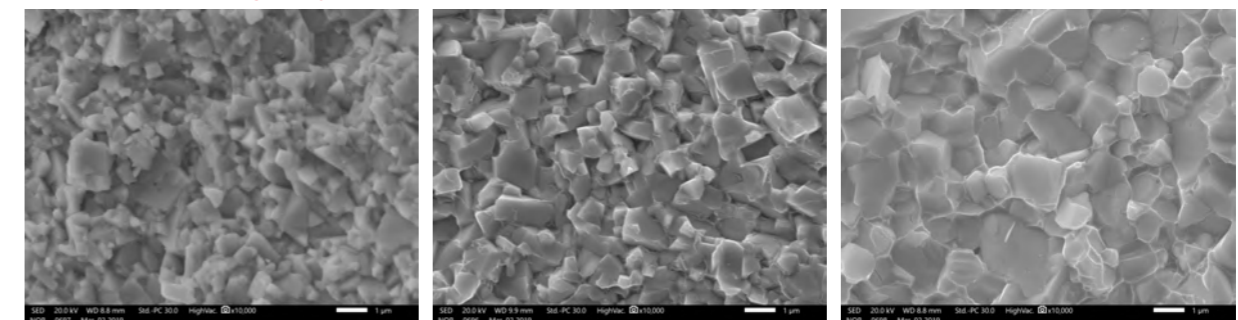
Grade Chart

牌号表

牌 号 Grades	粘结相 Binder %	晶粒度 Grain Size	密度 Density		硬度 Hardness		抗折力 T.R.S N/mm	抗弯强度 Psi
			g/cm	HRA	HV10			
MH5	4.8	超细晶粒 Submicron	14.95	94.1	2070	2400	348,331	适用于喷嘴,高耐磨性。 Suitable for nozzle, with high wear resistance.
MH6	5.0	超细晶粒 Submicron	14.95	93.6	1950	2800	406,386	适用于轴套,硬度高,高耐磨性。 Suitable for sleeve and bushings, with high hardness and good wear resistance.
MH7	6.5	超细晶粒 Submicron	14.85	93.1	1840	2800	406,386	适用于节流阀配件。 Suitable for choke valve component.
MH10F	10.0	超细晶粒 Submicron	14.45	91.8	1600	3800	551,524	适用于钻井配件。 Suitable for drilling accessories.
CF10	6.0	细晶粒 Fine	14.90	92.0	1630	3000	435,414	适用于喷嘴、流体控制的耐磨阀零件。 Suitable for nozzle and wear resistant valve parts for fluid control.
YG8H	8.0	中晶粒 Medium	14.7	90.3	1400	3000	435,414	适用于阀用耐磨零件、轴套。 Suitable for wear parts of valves, sleeves and bushings.
CG25	7.0	中晶粒 Medium	14.75	90.2	1390	3200	464,441	适用于阀用耐磨零件、轴套。 Suitable for wear parts for valves, sleeves and bushings.
CG35	9.5	中晶粒 Medium	14.55	89.3	1290	3400	493,469	适用于喷嘴、有较高要求的耐磨且有冲击的零件。 Suitable for nozzle, wear parts with a high requirements of wear-resistant and anti-impact.
CG65	15.0	中晶粒 Medium	13.95	87.0	1080	3600	522,496	适用于较强冲击的耐磨零件。 Suitable for high impact resistance wear parts.

牌 号 Grades	粘结相 Binder %	晶粒度 Grain Size	密度 Density		硬度 Hardness		抗折力 T.R.S N/mm	抗弯强度 Psi
			g/cm	HRA	HV10			
CK401	11.5	粗晶粒 Coarse	14.30	87.6	1130	2700	391,872	适用于较强冲击的耐磨零件。 Suitable for high impact resistance wear parts.
CK402T	15.0	粗晶粒 Coarse	14.00	85.8	980	2600	377,358	适用于较强冲击的耐磨零件。 Suitable for high impact resistance wear parts.
CT80	20.0	粗晶粒 Coarse	13.45	84.0	840	2600	377,358	适用于应力很大条件下,用做异型产品结构件、机械零附件,强度及冲击韧性佳。 Suitable for large stress conditions, used as special-shaped product, mechanical parts and accessories, good strength and impact toughness.
SK10	9.5(Co+Ni)	超细晶粒 Submicron	14.45	91.5	1550	3000	435,414	适用于耐磨耐腐蚀零件,超强耐腐蚀性及高耐磨性。 Suitable for wear resistance and corrosion resistance parts, super corrosion resistance and high wear resistance.
SK15	10.0(Co+Ni)	超细晶粒 Submicron	14.40	90.9	1480	3800	551,524	适用于整体式合金笼套,具有良好的抗腐蚀性和抗冲蚀性。 Suitable for solid carbide cage, with excellent corrosion & erosion resistance.
SK20N	7.5(Ni)	超细晶粒 Submicron	14.55	92.5	1720	2500	362,845	适用于耐腐蚀耐冲蚀零件。 Suitable for corrosion and erosion resistance parts.

金相图谱范例 Example of Metallography 10000X



超细晶粒 Submicron

细晶粒 Fine

中晶粒 Medium

Carbide Wear Parts for Valves

阀用硬质合金耐磨件

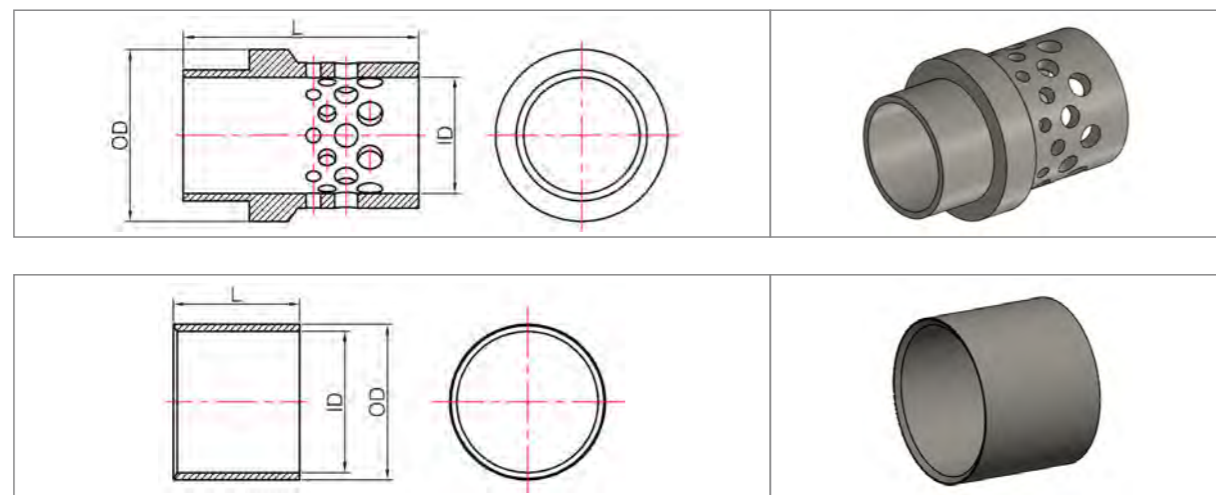
阀用硬质合金耐磨件因其硬度高、耐磨性、耐腐蚀性、抗冲蚀和抗压及抗热震性能好,可满足恶劣工况下的硬面密封需求。

Carbide wear parts for valves has high hardness, wear resistance, corrosion resistance, erosion resistance as well as good impact resistant and thermal shock properties, can meet the hard surface sealing requirements under harsh working conditions.

整体式合金笼套、合金挡环 Carbide Trim and Ring

整体式合金笼套在侵蚀环境下提供最佳耐磨性,应用于笼套式节流阀。

Solid carbide cage provides optimum wear resistance in erosive conditions, used in cage choke valve.

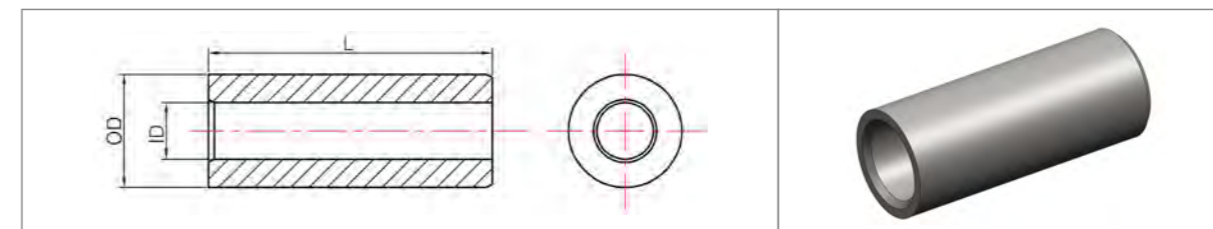


尺寸 Size	阀芯 Trim			环 Ring		
	外径OD(mm)	内孔ID(mm)	长度L(mm)	外径OD(mm)	内孔ID(mm)	长度L(mm)
1"	48.05	25.4	108.43	41.35	35.35	33.46
1.5"	67.32	38.1	125.45	57.27	51.11	55.8
2"	76.19	50.8	134.58	69.9	63.98	63.09
3"	112.93	76.2	154.66	105.02	95.58	85.3

节流嘴 Choke Bean

硬质合金节流嘴抗腐蚀、抗侵蚀和抗冲击性能,在高压和高温工作条件下具有耐久性。

Carbide choke valve bean has anti-corrosion, anti-erosion, and impact resistant properties, giving lasting endurance in high pressure, and high temperature working conditions, in erosive conditions, used in cage choke valve.



尺寸 Size	外径 OD(inch)	外径 ID(mm)	内孔 ID(inch)	内孔 ID(mm)	长度 L(inch)	长度 L(mm)
2/64"			0.031	0.787		
4/64"			0.062	1.575		
6/64"	0.650	16.510	0.093	2.362		
8/64"			0.125	3.175		
10/64"			0.156	3.962		
12/64"			0.187	4.750		
14/64"	0.650	16.510	0.218	5.537		
16/64"			0.250	6.350		
18/64"			0.281	7.137		
20/64"			0.312	7.925		
22/64"	0.945	24.003	0.343	8.712		
24/64"			0.375	9.525		
26/64"			0.406	10.312		
28/64"			0.437	11.100		
30/64"	0.945	24.003	0.468	11.887		
32/64"			0.500	12.700		
34/64"			0.531	13.487		
36/64"			0.562	14.275		
38/64"	1.181	29.998	0.593	15.062	5.880	149.352
40/64"			0.625	15.875		
42/64"			0.656	16.662		
44/64"			0.687	17.450		
46/64"	1.181	29.998	0.718	18.237		
48/64"			0.750	19.050		
50/64"			0.781	19.837		
52/64"			0.812	20.625		
54/64"	1.339	34.011	0.843	21.412		
56/64"			0.875	22.225		
58/64"			0.906	23.012		
60/64"			0.937	23.800		
62/64"	1.417	35.992	0.968	24.587		
64/64"			1.000	25.400		
66/64"			1.031	26.187		
68/64"			1.062	26.975		
70/64"	1.625	41.275	1.093	27.762		
72/64"			1.125	28.575		

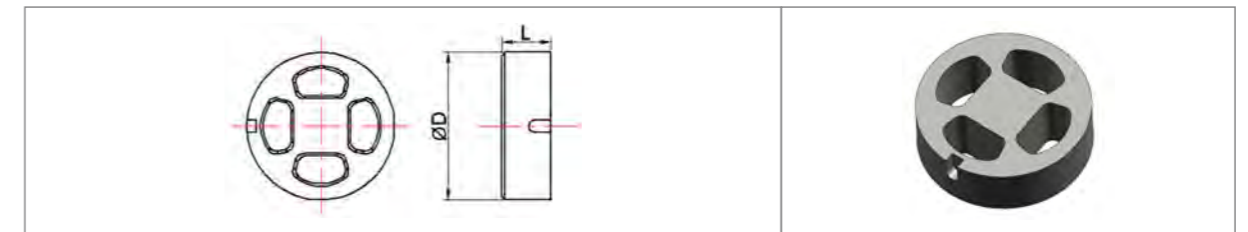
尺寸 Size	外径 OD(inch)	外径 ID(mm)	内孔 ID(inch)	内孔 ID(mm)	长度 L(inch)	长度 L(mm)
74/64"			1.156	29.362		
76/64"	1.625	41.275	1.187	30.150		
78/64"			1.218	30.940		
80/64"			1.250	31.750		
82/64"			1.281	32.537		
84/64"	1.772	45.009	1.312	33.325		
86/64"			1.343	34.112		
88/64"			1.375	34.925		
90/64"			1.406	35.712		
92/64"	1.909	48.489	1.437	36.500		
94/64"			1.468	37.287		
96/64"			1.500	38.100		
98/64"			1.531	38.887		
100/64"	2.047	51.994	1.562	39.675		
102/64"			1.563	39.700		
104/64"			1.625	41.275		
106/64"			1.656	42.062		
108/64"	2.165	54.991	1.687	42.850	5.880	149.352
110/64"			1.718	43.637		
112/64"			1.750	44.450		
114/64"			1.781	45.237		
116/64"	2.283	57.988	1.812	46.025		
118/64"			1.843	46.812		
120/64"			1.875	47.625		
124/64"			1.937	49.200		
126/64"	2.913	73.9902	1.968	49.987		
128/64"			2.000	50.800		
136/64"			2.125	53.975		
144/64"	3.405	86.487	2.250	57.150		
152/64"			2.375	60.325		
160/64"			2.500	63.500		
168/64"			2.625	66.675		
176/64"	2.402	61.0108	2.750	69.850		
184/64"			2.875	73.025		
192/64"			3.000	76.200		



节流阀阀板 Valve Disk

节流阀板广泛应用于节流阀和调节阀中，对流体的体积和压力进行精确控制。

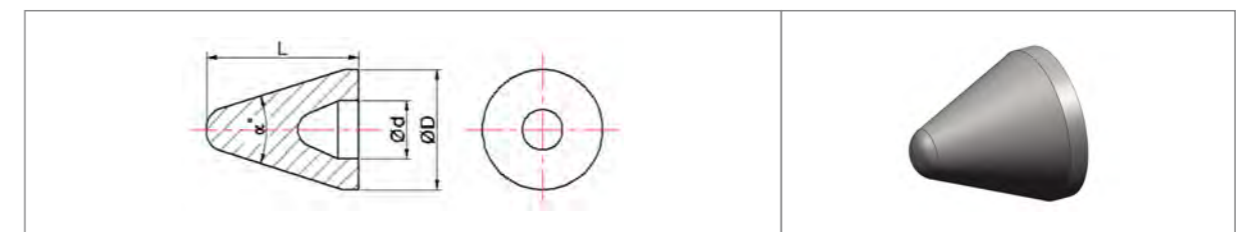
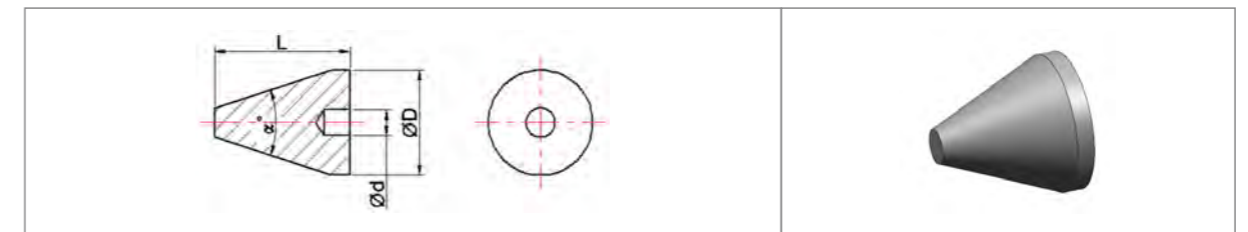
The valve disk is widely used in choke valve and control valve to accurately control the volume and pressure of fluid.



针阀 Flow Control Points & Shell Points

可按要求提供硬质合金针阀芯或直接可使用配件。

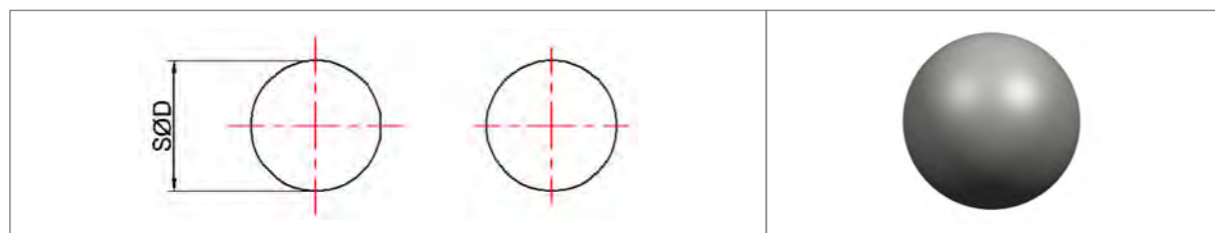
Upon request, provide carbide wear parts or turn key service-accessory that can be used directly.



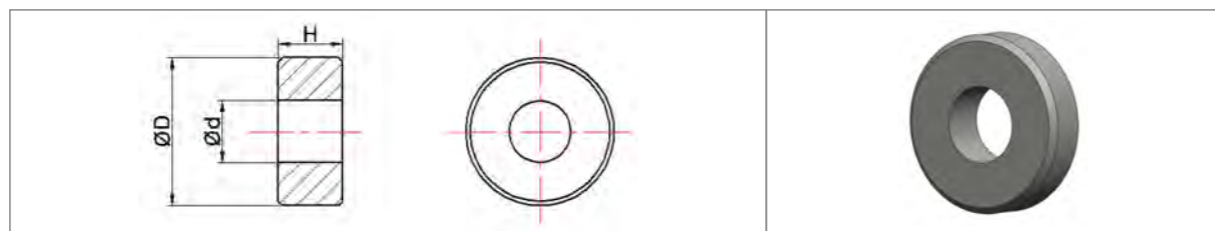
球阀芯、球阀座 Valve Ball & Seat

可按要求, 提供硬质合金未磨球阀座或精磨到位产品。

Upon request, provide unground carbide ball and seats or high precision parts ready to use.



球阀芯 API Ball	外径 OD(inch)	外径 OD(mm)
V11-106	5/8	15.875
V11-125	3/4	19.05
V11-150	15/16	23.8125
V11-175	1-1/8	28.575
V11-225	1-3/8	34.925
V11-250	1-11/16	42.8625
V11-375	2-1/4	57.15



球阀座 API Seat	外径 OD(inch)	外径 ID(mm)	内孔 ID(inch)	内孔 ID(mm)	长度 L(inch)	长度 L(mm)
V11-106	0.793	20.142	0.468	11.89	0.5	12.7
V11-125	0.918	23.317	0.575	14.61	0.5	12.7
V11-150	1.168	29.667	0.702	17.83	0.5	12.7
V11-175	1.388	35.255	0.830	21.08	0.5	12.7
V11-225	1.720	43.688	1.046	26.57	0.5	12.7
V11-250	2.010	51.054	1.265	32.13	0.5	12.7
V11-375	3.072	78.029	1.752	44.5	0.75	19.05



Nozzle

喷嘴

硬质合金材料喷嘴有更好的耐磨耐蚀性, 抵抗液体高压对喷嘴的磨损, 可提高喷嘴的使用寿命。

Nozzle has better wear resistance and corrosion / erosion resistance, and resists the wear of the nozzle under high liquid pressure, which can improve the life of the nozzle.

钻头硬质合金喷嘴 Nozzles for Drill Bits

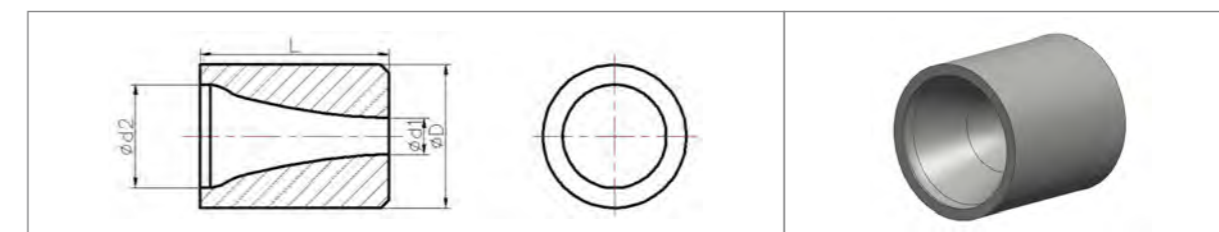
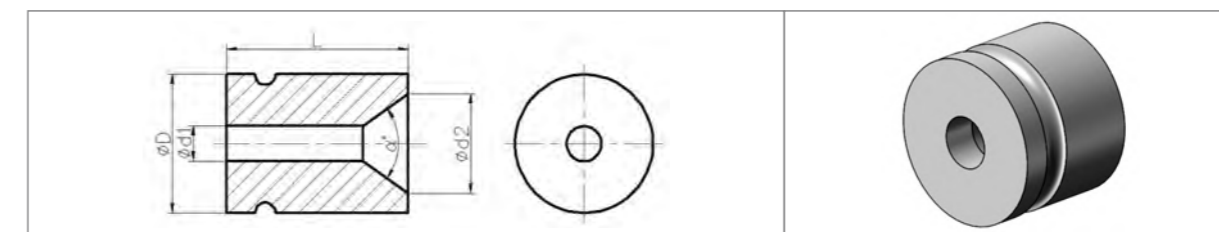
- ▶ 梅花扳手系列螺纹喷嘴
Threaded nozzle of plumblossom teeth wrench series
- ▶ 内六角扳手系列螺纹喷嘴
Threaded nozzle of inner hexagon wrench series
- ▶ 外六角扳手系列螺纹喷嘴
Threaded nozzle of hexagon wrench series
- ▶ 十字槽扳手系列螺纹喷嘴
Threaded nozzle of castle top wrench series
- ▶ 泥浆喷嘴
Mud nozzle

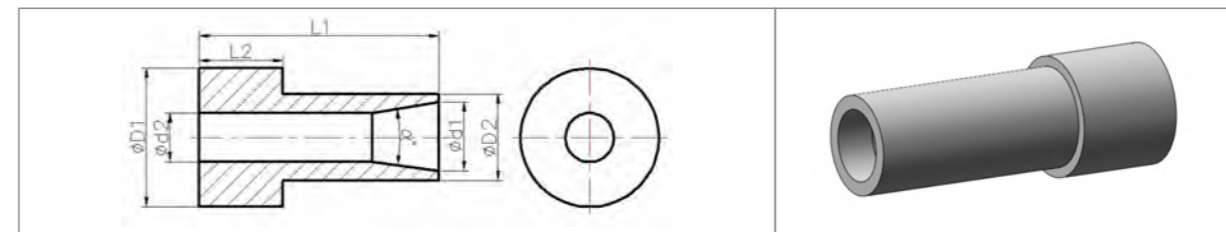
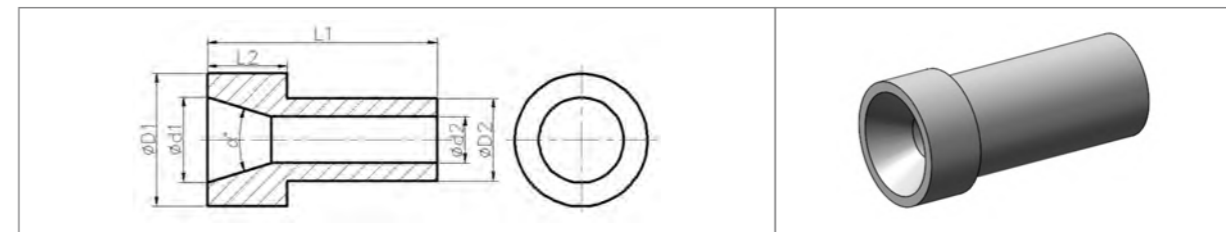
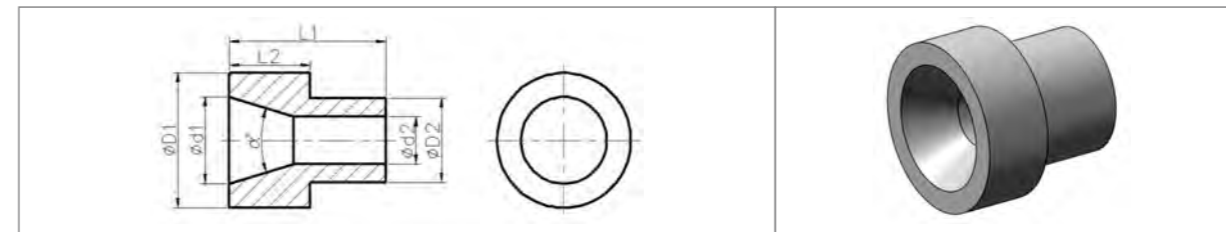
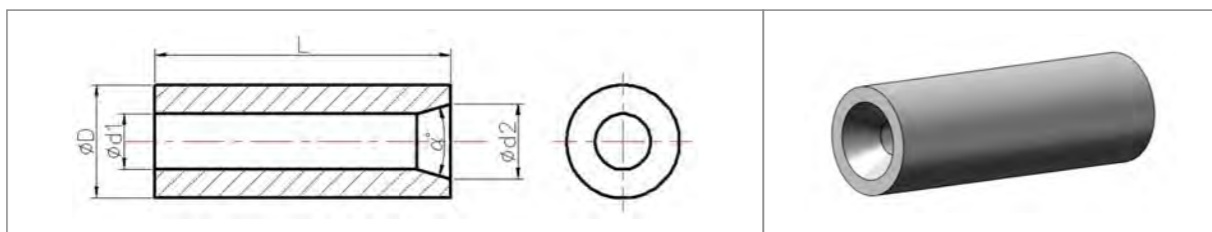
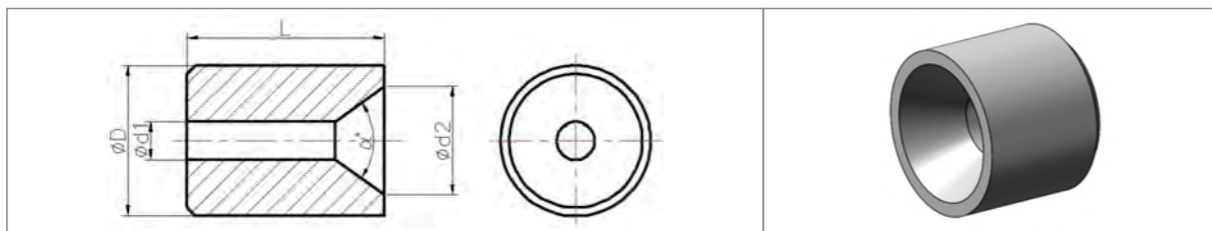
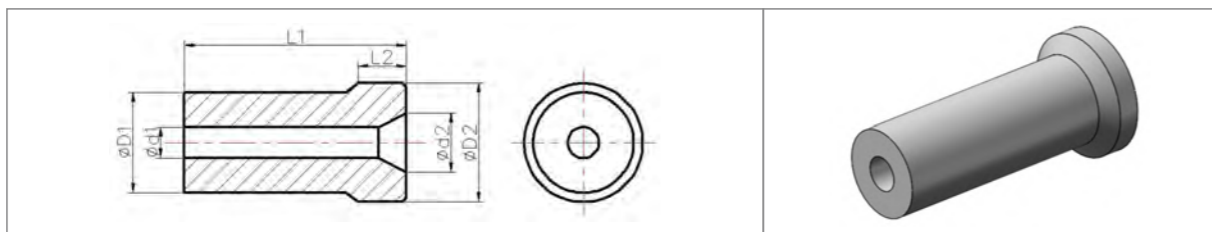
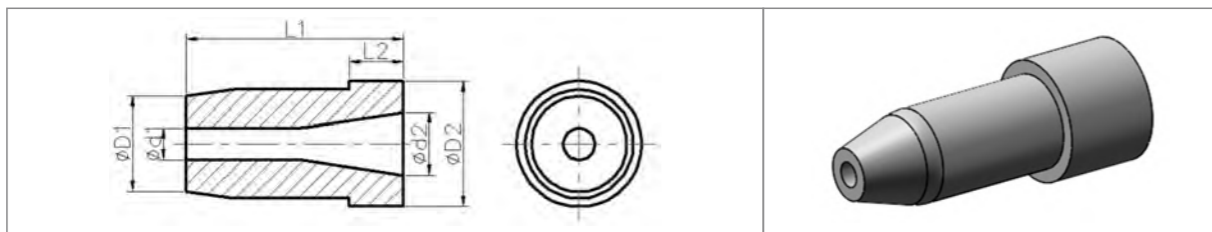
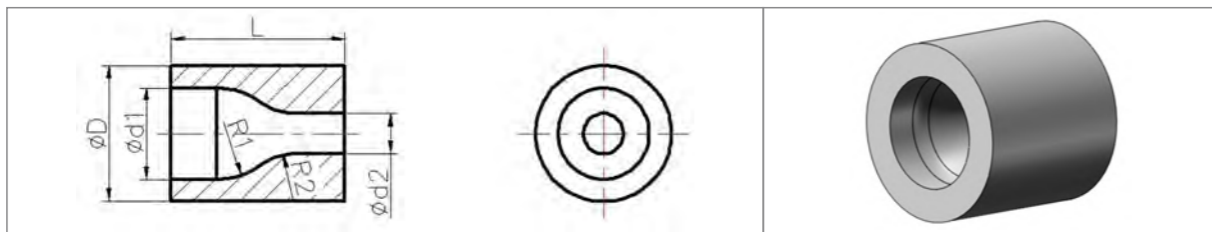
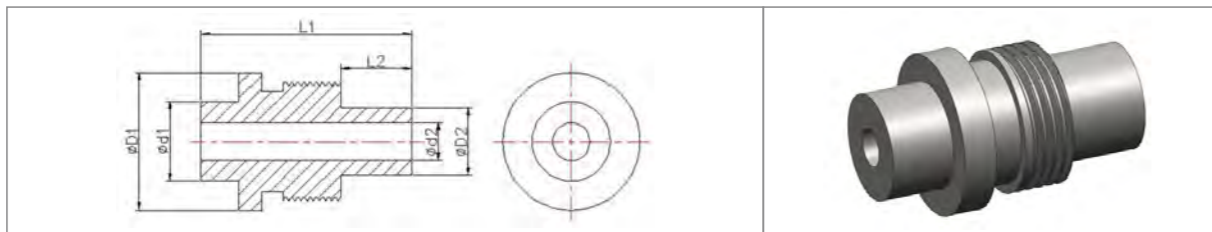


定制喷嘴 Customized nozzle

可按要求, 提供各种非标材质及尺寸喷嘴。

Upon request, provide nozzles with customized materials and geometries.





Carbide Wear Inserts for Stabilizer

硬质合金耐磨块

主要应用于扶正器井下作业设备的基体保护。
Mainly used as wear resistant parts for maintaining drilling stability of downhole tools.

钻具稳定器的外观是决定寿命最重要的因素，
硬质合金块的使用对稳定器工作段的耐磨性和抗腐蚀能力的提高非常重要。

The appearance of stabilizer is the most important factor to determine the service life.
The carbide insert is very important to improve the wear resistance and corrosion resistance of the working section of the stabilizer.

形状 Shape	L(mm)	W(mm)	W(mm)
长方形 Rectangular	6	5	3/4/5
	13		
	20		
	25		
带肋长方形 Rectangular with rib	13	5	3/4/5
	20		
	25		



Carbide Wear Accessories

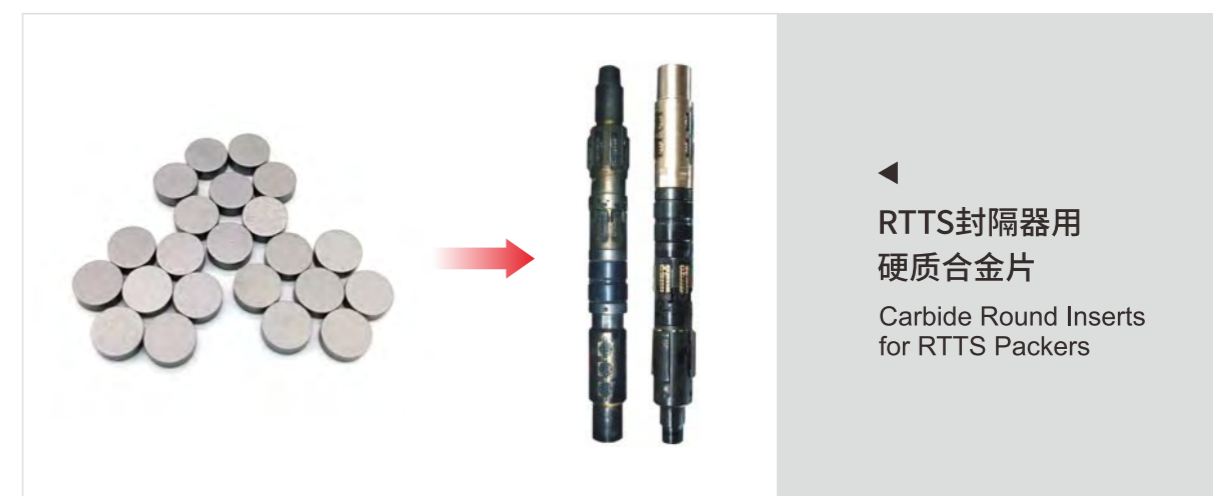
耐磨零件



◀
油泵用
硬质合金轴套
Carbide Sleeves
for Oil Pumps



▶
随钻测量仪用
硬质合金配件
Carbide Accessories
for MWD & LWD



◀
RTTS封隔器用
硬质合金片
Carbide Round Inserts
for RTTS Packers

