



— 雄琛科技 —

XIONGCHEN
TECHNOLOGY

SPECIALIZED MANUFACTURER
OF **WEAR PARTS**

耐磨零部件专业生产商

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About Us

关于我们

雄琛科技坐落于拥有三千年古蜀文化的历史名城——广汉，总投资人民币6000万元。公司致力于超硬材料及石油钻采工具的研发、生产及制造，广泛应用于石油、航天、船舶、采矿等领域，取得了ISO认证以及20多项专利，是从事特种耐磨零部件的专业制造商，与国内外该领域多家企业有着长期合作。雄琛科技除拥有自身的成熟技术外，也以稳健的步伐投入研发，充分发挥生产高效和产品精细的优势，为客户提供优质的服务。

With a total investment of RMB 60 million, Xiongchen Technology is located in Guanghan, a historic city with three thousand years of the ancient Shu culture. The company is committed to the R&D, and manufacture of superhard materials and oil drilling tools which are widely applied in petroleum, aerospace, marine and mining industries, with ISO certification and more than 20 patents. At present, it is one of the professional manufacturers engaged in special wear parts in China. It has built long-term cooperation with many enterprises in this field at home and abroad. In addition to the mature technology, Xiongchen also invests in research and development at a steady pace, and fully utilizes the advantages of high production efficiency and fine products to provide excellent services for customers.

A photograph of a modern, multi-story office building with a light-colored facade and many windows. The building is the headquarters of Xiongchen Technology. On the right side of the building, there is a large, vertical sign with the company's logo and name in Chinese characters: 雄琛科技. The logo consists of a stylized 'X' shape in blue and red. The building is surrounded by some greenery, including a tree in the foreground.

雄琛科技

Certification »

体系认证及专利证书

20⁺



雄琛科技在2021年获得环境管理体系认证、质量管理体系认证证书、职业健康安全管理认证证书。

雄琛科技获得发明专利2项，中国专利证书15项以上，包括5项发明专利，9项实用新型专利证书，1项外观设计专利证书，3项软件著作权登记证书等。

Xiongchen Technology obtained environmental management system certification, quality management system certification, and occupational health and safety management certification in 2021.

Xiongchen Technology has obtained 2 international invention patent and more than 15 Chinese patent certificates, including 5 invention patents, 9 utility model patent certificates, 1 design patent certificate, 3 software copyright registration certificates, etc.



Product Introduction

产品介绍



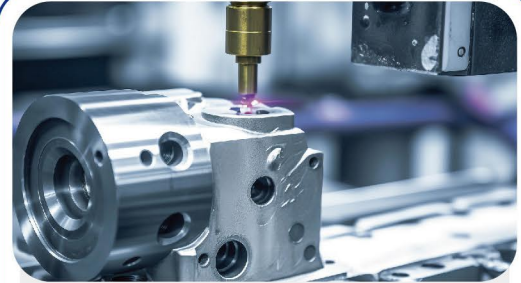
轴承 Bearing

- PDC轴承
PDC Bearing
- TC轴承
TC Bearing
- 聚晶金刚石轴承
Polycrystalline
Diamond Bearing
- 其他轴承
Other Bearings



超硬材料 Superhard Materials

- 聚晶金刚石复合片
PDC Cutter
- 金刚石截流阀片
PDC Throttle Plate
- 硬质合金耐磨件
Tungsten Carbide
Wear Parts



井下工具 Downhole Tools

- 连续偏心扩眼器
Eccentric Drilling Reamer
- 扶正套
Centralizer
- 精密机械件
Precision Machinery Parts

PDC Bearing »

PDC轴承

PDC BEARING

PDC（聚晶金刚石复合片）轴承通常分为三类：推力轴承、径向轴承、组合轴承。在野外恶劣复杂的环境中，磨料液体和混合相流体的结合部分必须使用PDC轴承。目前，PDC轴承已广泛应用于旋转导向系统、涡轮钻具、泥浆马达、电动潜水泵以及油田作业中。

There are usually three kinds of PDC (polycrystalline diamond compact) bearings: thrust bearing, radial bearing and combination bearing. PDC bearing is necessary for harsh environments, which is applied in turbo drills, mud motors, electric submersible pumps, RSSs (rotary steerable systems), oil field operations, etc.



PDC推力轴承

PDC Thrust Bearing



PDC径向轴承

PDC Radial Bearing



PDC组合轴承

PDC Combination Bearing

Advantages »

产品优势

高导热性

可以降低导致轴承退化的局部极限温度，避免在轴承启动或停机的过程中产生的高热量对轴承材料造成的损伤。

高负载

可在相当高的速度和负载范围下有效运行。例如：在某些石油和天然气钻探中，金刚石轴承可以在高达60000磅的负载下运行100-6000转/分钟。

耐磨耐高温

金刚石材质具有极低的摩擦系数(摩擦系数在0.01到0.03之间)，可以在高温(目前最高温度233°C)下进行作业。

高断裂韧性

具有出色断裂韧性的轴承材料能够降低冲击负荷导致损坏的可能性。

高耐腐蚀性

可以不受应用环境中腐蚀性物质的影响，例如，可以不受钻井中存在的天然的或者泥浆里的化学物质的影响。

简化性

金刚石轴承在使用过程中，无需专门对其保障润滑，由于不需要密封件和独立润滑系统，可以简化设备和组件。

长寿命

使用寿命可达到1000小时到多年不等，是传统碳化钨轴承或其它的硬质合金轴承(TC轴承)6倍以上。

High thermal conductivity

The PDC material reduces the local limit temperatures that lead to bearing degradation and prevents damage to the bearing material caused by the high heat.

High load

They can operate effectively over a wide range of speeds and loads. For example, in some oil and gas drilling, diamond bearings can operate at loads of up to 60,000 pounds at 100-6,000 rpm.

Wear resistance and heat resistance

The PDC material has an extremely low coefficient of friction (coefficient of friction between 0.01 and 0.03). It can operate under the temperature up to 233 degrees Celsius

High fracture toughness

Bearing materials with excellent fracture toughness reduce the likelihood of damage caused by shock loads.

High corrosion resistance

They can be unaffected by corrosive substances (natural corrosive substances or chemicals in mud in the well) in the application environment.

Simplicity

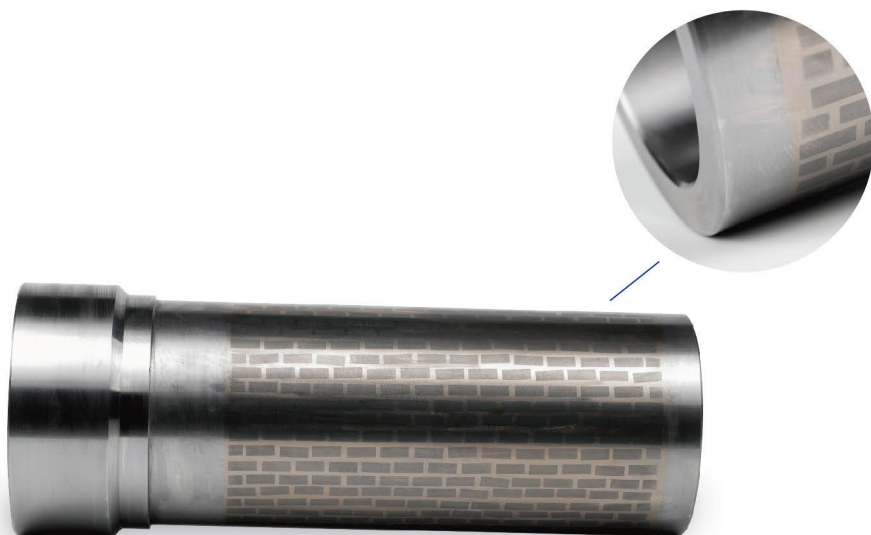
There is no need for specialized lubrication during use, simplifying equipment and components by eliminating the need for seals and separate lubrication systems.

Long life span

The service life is 1000 hours to many years, which is more than 6 times longer than that of traditional tungsten carbide (WC) bearings.

TC Bearing »

TC轴承



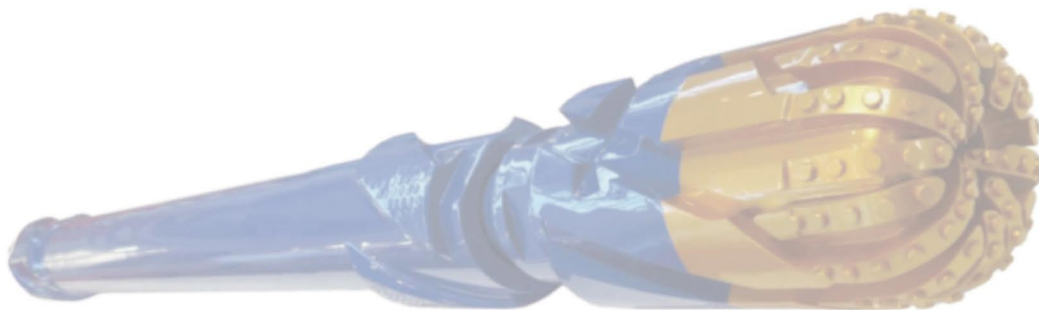
TC轴承又称硬质合金轴承，是采用氧乙炔火焰喷焊工艺方法，它由胎体与碳化钨粉和硬质合金，经火焰喷焊融为一体，后经机械加工而成。可以应用于旋转导向系统、涡轮钻具、泥浆马达、螺杆钻具、垂钻系统中。



TC bearing, also called cemented carbide bearing, is machined after welding the substrate, tungsten carbide powder and cemented carbide through the technology of oxy-acetylene spray welding. It can be applied in PDM drills, mud motors, RSSs, turbo drills and vertical drilling systems.

Advantages »

产品优势



200°C +

以上
ABOVE

- 适用于200°C以上的高温钻井工况以及不同的钻井液体系，具有耐磨损、耐腐蚀、耐冲击、耐高温的特性。
- 采用氧乙炔火焰喷焊工艺，防止出现开裂和剥落现象。雄琛生产的TC轴承寿命可达到400小时以上，是普通烧结工艺轴承寿命的2倍以上。

400 H +

以上
ABOVE

- With the characteristics of wear resistance, corrosion resistance and high temperature resistance, it is suitable for high-temperature drilling conditions above 200 degrees Celsius and different drilling fluid systems.
- Adopting the technology of oxy-acetylene spray welding to avoid crack or fall, our TC bearing is quite different from traditional one which is processed through ordinary sintering technology. Its life span is above 400 hours, which is twice longer than that of traditional TC bearing.

Polycrystalline Diamond Bearing »

聚晶金刚石轴承



聚晶金刚石轴承：聚晶厚度4mm，聚晶中间由陶瓷碳化硼粉末填充，耐磨性强，摩氏硬度9，通过喷焊工艺焊接在公轴承或者母轴承上，本体硬度没有变化，机械性能不会降低，轴承使用过程中散热性能好，耐热更持久，不易开裂起皮脱落，聚晶的磨耗超过了TC寿命的10倍以上，大大降低了传统TC轴承所产生的事故率。

The polycrystalline, whose thickness is 4 mm, is filled with ceramic boron carbide powder. It is wear-resistant and the Mohs hardness reaches 9. The body hardness does not change and mechanical properties are not reduced through the spray welding technology on the male or female bearing. The bearing has excellent heat-resistant performance during use. Thus, it is not easy to crack and peel. The service life of the polycrystalline is 10 times longer than that of the Tungsten Carbide, greatly reducing the accident rate of the traditional TC bearings.

Other Bearings »

其他轴承

■ 表面硬质合金颗粒轴承

Hardfacing 5000 Hardmetal Bearing

硬质合金颗粒广泛应用于金属表面的堆焊喷涂,主要用于石油、矿山、采煤、地质等工业中,具有硬度高,耐磨损、耐腐蚀、耐高温性,无杂质,焊接效果好等特性。

Tungsten carbide particles are widely used in metal surface surfacing and spraying in petroleum, mining, coal, geology and other industries. With the surfacing technology, tungsten carbide is possessed of the characteristics of high hardness, wear resistance, corrosion resistance, high-temperature resistance, no impurities, good welding performance, etc.

■ 镍铬合金耐磨轴承

Hardfacing Nicr 60 Bearing

镍铬合金具有高硬度、高强度、高耐磨性和抗腐蚀性等特点,用其粉末制备涂层致密,与基体结合好,能够有效地保护零件表面免受磨损和腐蚀。

Nickel-chromium alloy is characterized by high hardness, high strength, high wear resistance and corrosion resistance, etc.. Its powder can be used onto the surface of the substrate as the coating to prevent it from abrasion and corrosion.

■ 高密度碳化钨粉末轴承

Hardfacing 4500 Carbide Powder Bearing

涡轮钻具、泥浆马达等要求苛刻的井下应用,需要独特的轴承解决方案。雄琛科技研发的高密度碳化钨粉末轴承,能提供产品卓越的性能与可靠性。

Turbine drilling tools, mud motors and other demanding downhole applications require unique bearing solutions. Xiongchen has developed high-density tungsten carbide powder bearings that provide product with superior performance and reliability.

PDC Cutter ▶▶

聚晶金刚石复合片

聚晶金刚石复合片（PDC）由金刚石粉末和硬质合金基体在高温高压下烧结而成，具有极高的耐磨性和抗冲击性。可根据客户提供的图纸加工成不同的形状、尺寸和倒角。产品广泛用于石油钻井、地质钻探、采矿工程、建筑施工等领域。

Polycrystalline diamond compact (PDC) is sintered from diamond powder and cemented carbide substrate under high temperature and high pressure, and has extremely high wear resistance and impact resistance. It can be processed in different size, shape and chamfer according to the customer's drawing. Products are widely used in oil drilling, geological drilling, mining engineering, construction and other fields.

耐磨损 

High wear resistance

耐冲击 

High impact resistance

耐高温 

High heat resistance

高硬度 

High hardness

产品优势



PDC Throttle Plate »

金刚石截流阀片

金刚石截流阀片具有耐冲刷、耐腐蚀、耐冷热冲击的特性。阀门开关过程中摩擦系数低，阀芯与阀座的耦合更紧密，密封性能更好。

The PDC throttle plate has the characteristics of scouring resistance, corrosion resistance and thermal shock resistance. The friction coefficient is low during the valve switch process, the coupling between the valve core and the valve seat is tighter, and the sealing performance is better.



耐冲刷

Scouring resistance

耐腐蚀

Corrosion resistance

耐冷热冲击

Thermal shock resistance

Tungsten Carbide Wear Parts »

硬质合金耐磨件

硬质合金耐磨件在石油钻井工具和随钻测斜仪中应用广泛，例如基座、套筒、限流环、转子、定子、提升阀、笔帽等，可适用于高压、高温、强腐蚀等恶劣复杂的工况。

Tungsten carbide wear parts are widely used in oil drilling tools and inclinometer, such as seat, sleeve, restrictor ring, rotor, stator, poppet valve, pen cap, etc. They can be applied in harsh and complex working conditions such as high pressure, high temperature and strong corrosion.

耐磨损

Wear resistance

耐腐蚀

Corrosion resistance

耐高温

Heat resistance

Eccentric Drilling Reamer »»

连续偏心扩眼器



连续偏心扩眼器，根据不同的井况也叫做岩床破坏器，微扩孔，旋流清砂器。

流道的设计为鹰翼型，如鹰在长空面对流阻一划而过，又因偏心结构携砂能力变的更强，对于井眼的缩径修整更是探囊取物一般，特别是在深井井塌，水平井段出现急弯，岩屑床卡阻钻具组合划伤钻柱本体，导向工具憋卡难以起钻等情况下能起到更好的改善作用。

Eccentric drilling reamers are also called bed breakers, micro reamers, and cyclone sand cleaners depending on the well conditions.

The flow channel is designed as an eagle wing, like an eagle in the sky to face the flow resistance. On account of the eccentric structure, the sand carrying capacity gets stronger, and it is easy for the borehole shrinkage and repair. They play a significant role especially in the deep well collapse and the dogleg of the horizontal section when the cuttings bed jams drilling assembly and scratches the drilling column body, or the guide tool gets stuck and difficult to pull out of the hole.



Centralizer »

扶正套



钻具稳定器（扶正套）是石油、天然气及地质勘探钻井工程中，防止井斜变化的重要工具，用途最为广泛，不论是增斜降斜段，还是稳斜稳平段，都是不可缺少的工具之一。根据不同生产段的需要和井身特点，有着不同的形状和几何尺寸。

Centralizer (stabilizer) is an important tool to prevent well slope change in oil, gas and geological exploration drilling projects, and it is most widely used and indispensable in the section of increasing and decreasing slope, or the section of stabilizing slope and leveling. According to the needs of different production phases and the characteristics of the well, it has different shapes and geometrical sizes.

应用

Applications

斜井及水平井： 雄琛扶正套能有效减小启动力和下放力，保证套管成功下放到井底

小井眼及不规则井眼： 雄琛扶正套的弓片具有良好的弹性和稳定性，能保证套管安全地通过缩径、J型、S型等各种复杂井眼

油层段： 实验室和现场应用数据表明，必须保证80-90%的套管居中度才能达到良好的固井效果，尤其是水平井固井。使用性能优异的整体式扶正套，能有效提高油层段的固井质量

Inclined and Horizontal Wells: Xiongchen Centralizer can effectively reduce the starting force and running force to ensure that the casing pipe is successfully lowered to the bottom of the well

Small and Irregular Boreholes: The bow piece of Xiongchen Centralizer has good elasticity and stability, which ensures that the casing pipe can safely pass through various complicated boreholes, such as reduction, J-type, S-type, etc.

Oil Formation Segment: Laboratory and field application data show that 80-90% casing centering must be ensured to achieve good cementing effect, especially for horizontal well cementing. The use of the integrated centralizer with excellent performance can effectively enhance the well cementing quality of the oil formation segment

Precision Machinery Parts »

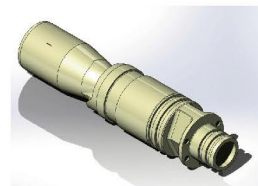
精密机械件



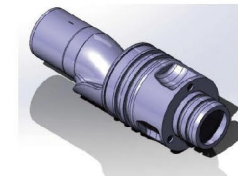
4.75"导流保护器 (分流器)
4.75"Diversion Protector (Splitter)



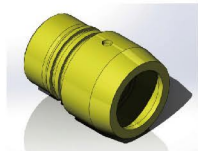
4.75"导流保护器 (分流器)
4.75"Diversion Protector (Splitter)



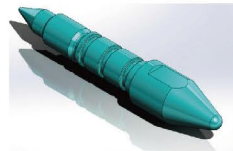
4.75"分流器 (升级版)
4.75" Splitter (Updated version)



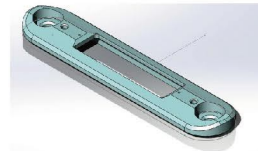
6.75"导流保护器 (分流器)
6.75"Diversion Protector (Splitter)



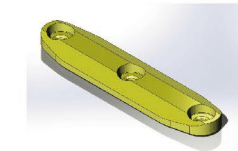
套筒中心分流器
A Sleeve-type Splitter



分流器
Splitter



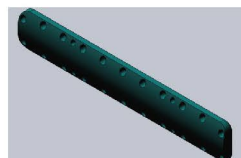
盖板
Cover Plate



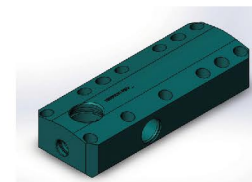
盖板
Cover Plate



套筒
Sleeve



盖板
Cover Plate



非磁性模块转换器 ASO2
MODULE_TRANSDUCER_NONMAG_AS02



AZO-模块-0675-ORD
AZO-MODULE-0675-ORD

CUSTOM SERVICES

特种耐磨件定制服务

Custom Services of Special Wear Parts

雄琛提供特种耐磨件的定制服务，如螺杆钻具和旋转导向系统配件。旋导系统通常用于定向井、水平井或大位移井，其配件多种多样，如分流器、套筒、盖板等。

Xiongchen provides custom services of special wear parts, such as accessories of downhole motors and rotary steerable system (RSS). RSSs typically are deployed when drilling directional, horizontal, or extended-reach wells. There are many kinds of RSS accessories, such as splitter, cover plate, and sleeve.



Applications

应用领域



石油开采

Oil Exploitation



地质钻探

Geological Drilling



风力发电

Wind Power Generation

APPLICATIONS



▼
采矿工程
Mining



▼
航空航天
Aerospace



▼
船舶重工
Marine



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