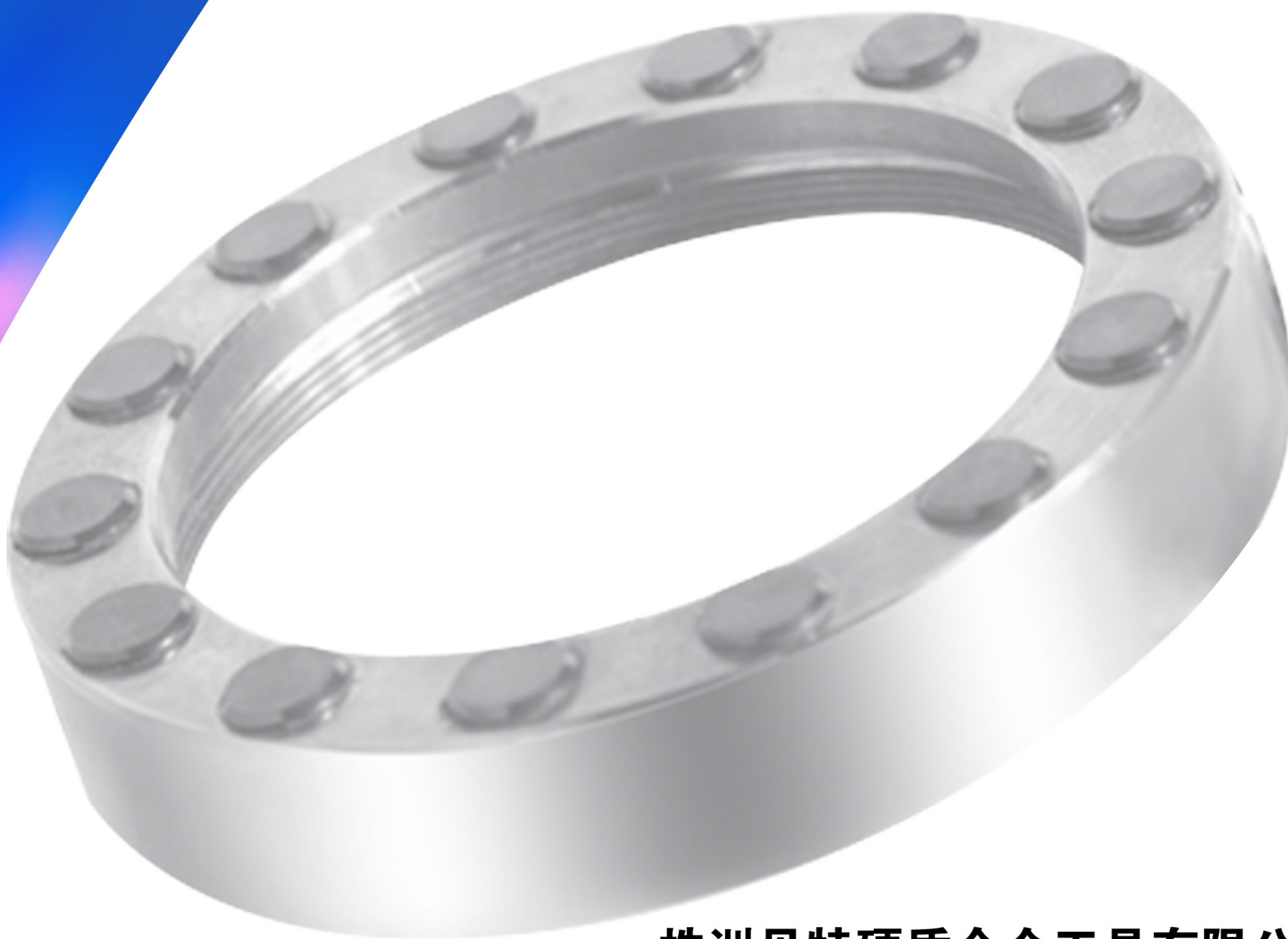




PDC TC TSP Bearings

For Energy & Mining, Oil Field



株洲贝特硬质合金工具有限公司
Zhuzhou Better Tungsten Carbide Co., Ltd

推力轴承 Thrust Bearings



螺杆钻具专用PDC推力轴承 PDC Thrust Bearing

螺杆钻具专用 PDC 推力轴承，可在高转速、高压降等恶劣工况下，大幅减少钻具的维修次数，降低设备的维护成本。特别适用于钻探深井及超深井的螺杆钻具。

PDC thrust bearing for Downhole Motor can significantly reduce the number of drilling tool repairs and reduce equipment maintenance costs under high, low, and high pressure downhole conditions. It is especially suitable for screw drilling tools for drilling deep and ultra-deep wells.



特点 Characters

- 1.耐磨材料可选择范围有，硬质合金，PDC, TSP
Optional for wear resistance materials, Tungsten carbide, PDC, TSP
- 2.工作寿命时长极大提高，提高电机效率
Extended bearing service life, Improve motor efficiency
- 3.最大限度地减少磨损和摩擦损失
Minimizing Wear and Frictional Losses

PDC可倾瓦推力轴承 PDC Tilt Pad Thrust Bearing

PDC可倾瓦推力轴承，基体材料选用特殊处理的钢，瓦块采用钢质基体和PCD 材料，从而可以获得较低的摩擦系数、抗化学腐蚀、很高的抗粘结特性、极高的耐磨性和较好的耐热性能。优化设计的瓦块结构、高精度的瓦块尺寸、优异的耐磨材料可以使该轴承更加易于实现动压润滑。螺杆钻具专用 PDC 推力轴承，可在高转速、高压降等恶劣工况下，大幅减少钻具的维修次数，降低设备的维护成本。特别适用于钻探深井及超深井的螺杆钻具。



The base material is specially treated steel, and the tiles are made of steel base and PDC, so as to obtain a lower friction coefficient, resistance to chemical corrosion, high anti-adhesion properties, extremely high wear resistance and better resistance to corrosion. Thermal performance. The optimized design of the pad structure, high-precision pad size, and excellent wear-resistant materials can make the bearing easier to achieve dynamic pressure lubrication.

径向轴承 Radial Bearings



PDC径向轴承 PDC Radial Bearing

PDC径向轴承是由一个旋转的内圈和固定的轴承外圈组成，在圆周面上分别钎焊上一系列PDC复合片。在运行过程中，轴承内圈和外圈的PDC表面相互摩擦。非常低的摩擦力、高硬度、高耐磨性、高导热性、抗腐蚀性，特别适用于过程流体沙石磨粒润滑、具有酸碱的环境等恶劣的工况条件下运行，高抗压强度使径向轴承在运行过程中可以承受很高的载荷。由于磨损率非常低，根据不同的工况条件，PDC轴承的使用寿命从 1000 小时到多年不等。

PDC radial bearing is composed of a rotating inner ring and a fixed bearing outer ring, and a series of PDC composite cutters are brazed on the circumferential surface respectively. During operation, the PDC surfaces of the inner and outer rings of the bearing rub against each other. Very low friction, high hardness, high wear resistance, high thermal conductivity, corrosion resistance, especially suitable for process fluid sand abrasive particle lubrication, acid-base environment and other harsh working conditions, high compressive strength The radial bearing can withstand high loads during operation. Due to the very low wear rate, the service life of PDC bearings ranges from 1000 hours to years, depending on the application.



Advantages

- The characteristics of high precision, high load, ultra-low friction coefficient and long service life.
- bearings can be applied to various special requirements.
- Highest wear and impact resistance PDC cutters.
- Hardest known stainless base.
- Ultra-high accuracy and finish
- Load can exceed 60000 pounds
- Speed from 100 to 6000 r/min minutes
- Friction coefficient is between 0.01 and 0.03

径向轴承 Radial Bearings



TSP-径向轴承 TSP Radial Bearing

TSP-径向轴承采用高温炉整体烧结工艺，有先进的保护措施，改善材料氧化问题，烧结层收缩均匀无缺陷。

The TSP-radial bearing adopts a high-temperature integrated sintering process with advanced protective measures to improve material oxidation resistance, and the sintering layer shrinks uniformly without defects.



TC-径向轴承 TC Radial Bearing

特殊牌号的硬质合金可以最大程度地减少径向磨损。烧结层与钢体结合牢固，不剥落，使用寿命可达300-400小时。

Special grade Tungsten Carbide tile matrix for the radial bearings for maximum protection against radial wear, The sintered layer is firmly bonded to the steel body without peeling, and the service can be 300-400 hours.



Advantages

- Highly resistant to abrasion, version, corrosion, and mechanical failure.
- Extremely resistant to chipping, cracking, and flaking which are inherent problems in cladding or welded overlay processes.
- High heat conductivity eliminates thermal cracking.
- Proprietary design eliminates catastrophic downhole radial bearing failure.
- Carbide tile and matrix design ensures extended life compared to cladding of welded overlay designs.
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组合轴承 PDC Combined Bearing



组合轴承 PDC Combined Bearing

在一些应用中，可能会要求轴承同时承受推力和径向负载，PCD组合轴承将PCD推力轴承和PCD径向轴承组合到一个轴承单元中，可以更紧凑地将轴承组件集成到一起以满足负载的需求，并可以通过调整锥形角度以适应各个应用对推力负载和径向负载的要求。

In some applications, bearings may be required to withstand both thrust and radial loads. PCD combined bearings combine PCD thrust bearings and PCD radial bearings into one bearing unit. The bearing assemblies can be more compactly integrated to meet the requirements of the load, and can be adjusted by adjusting the taper angle to meet the requirements of the thrust load and radial load of various applications.



PDC阀片 PDC Valve

PDC阀片 PDC Valve

PDC金刚石复合片特别适用于高温、含有腐蚀性化学物质、含有大量研磨性高的固相颗粒等恶劣工况条件，用这种材料制作成的PCD阀片寿命长，稳定可靠。

PDC cutter is especially suitable for high temperature, containing corrosive chemicals, containing a large number of high abrasive solid particles and other harsh working conditions. PDC valve made of this material has long service life, is stable and reliable. Our company has a unique processing technology, which can be customized according to customer drawings or samples, and the accuracy can reach within 0.005mm of the contact gap between the two surfaces.





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