



临清市九星轴承科技有限公司  
Linqing Juxing Bearing Science & Technology Co., Ltd



国内首家专业研发电绝缘轴承

CHINA FIRST PROFESSIONAL R&D ELECTRICAL INSULATED BEARING

山东九星是集轴承研发、工业生产、营销贸易于一体的科工贸型企业，是山东省轴承制造优秀企业之一。本公司技术力量雄厚，生产工艺与检测手段完善，具有完善的先进轴承生产加工设备，建立了行之有效的质量保证体系，拥有一批高级工程师技术人员，并聘请国内知名专家进行技术研讨指导。九星主营业务有：深沟球轴承，电绝缘轴承，深沟球混合陶瓷轴承。其中电绝缘轴承，深沟球胶木保持器轴承是九星自主研发生产的，我们是国内首家专业研发及生产电绝缘轴承的企业，已获得 ISO9001 质量体系认证，并且可以根据客户需求定制 50mm-500mm 的轴承。



Shandong nine star is one of the bearing manufacturing enterprises in Shandong province, covering bearing research and development, manufacturing, marketing and trade. The company owns abundant technical force, perfect production technology and detection means, integrated advanced processing equipment, effective quality assurance system, a group of senior engineering and technical personnel, and domestic well-known experts for technical consultation. Our main products are: deep groove ball bearing, electric insulation bearing and deep groove ball hybrid ceramic bearing. The electric insulation bearing and deep groove ball bakelite retainer bearing are Nine-Star's independent research and development products. We are the first enterprise of professional R&D and manufacturing of electrical insulating bearing in domestic, obtained the ISO9001 quality system certification. We can supply customized bearings within the range of 50 mm to 500 mm according to clients' requirements.



#### 什么是电绝缘轴承?

电绝缘轴承就是指能够阻止电流通过,轴承自身具有绝缘性能的轴承总称,其绝缘性能通常是采用国际先进工艺在轴承外圈或内圈上加工一层氧化铝涂层,以承受电压直流。

#### 电绝缘轴承分类,技术参数

一般分为内圈涂层绝缘轴承,外圈涂层绝缘轴承。其基本涂层能承受电压高达 1000 伏的直流。然而可根据客户要求供应 500V—3000V 直流的涂层。其代号采用国际轴承代号。

#### 电绝缘轴承应用场合

主要应用在大功率电动机,风力发电机,铁路机车牵引电机,变频电机,发电机等场合。

#### 电绝缘轴承型号分类

深沟球电绝缘轴承,圆柱滚子电绝缘轴承,调心球电绝缘轴承,角接触球电绝缘轴承,调心滚子电绝缘轴承,圆锥滚子电绝缘轴承。其型号表示方法和普通型号轴承一致,只多了一些后缀,参考国际轴承代号。

SKF: VL0241, VL2071, VA3091

FAG: J20A, J20AA, J20B, J20C

#### What is the electric insulation bearing?

It means bearing itself has the insulation performance to prevent current through. The insulation performance usually adopts international advanced technology to coat a oxide aluminum layer on rings to withstand voltage dc.

#### Electric insulation bearing classification Technical parameters

Generally, it is divided into the inner-ring coating insulation bearing, outer-ring coating insulation bearing. The basic coating can withstand voltage up to 1000 v dc. However, our bearings could run within 500 v—3000 v dc safely, according to the customers' different requirements. The code adopts the international bearing code.

#### Electric insulation bearing applications

Mainly used in high power motor, wind generators, railway locomotive traction motor, frequency conversion motor, generator, etc.

#### Electric insulation bearing type classification

Electric insulation deep groove ball bearings, electric insulation cylindrical roller bearing, electric insulation self-aligning ball bearings, electric insulation angular contact ball bearing, electrical insulating self-aligning roller bearing, electric insulation taper roller bearing. The model representation is consistent to the general model bearing, only adding a few suffix. International bearing code is also available for reference.

SKF: VL0241, VL2071, VA3091

FAG: J20A, J20AA, J20B, J20C





什么是混合陶瓷轴承?

混合陶瓷轴承是由轴承钢制的轴承圈和轴承极氮化硅制的滚动体 (Si3N4) 组成, 由于氮化硅的电绝缘性能极佳, 因此混合陶瓷轴承在电机应用中有效绝缘轴承座与轴。

型号分类: 单列深沟球轴承, 单列圆柱滚子轴承, 混合陶瓷角接触轴承, 混合陶瓷不锈钢轴承。

应用场合: 电机, 发电机, 风力发电机, 和有特殊需求的环境中应用。

What is a hybrid ceramic bearing?

Hybrid ceramic bearing is a chrome steel material rings combined with bearing level silicon nitride (Si3N4) rollers. Because of the excellent electrical insulation properties of silicon nitride, such type bearings' application is applied to motors as insulation bearing and shaft.

Type classification: single row deep groove ball bearings, single row cylindrical roller bearings, hybrid ceramic angular contact bearings, hybrid ceramic stainless steel bearings.

Applications: motors, generators, wind turbines, and other special environment.





深沟球轴承分类:

#### 1. 钢板冲压保持器轴承

这种保持器轴承在深沟球中应用最为广泛,一般用于大型机械,冶金,矿业,汽车,电机仪表,工程机械等场合,其优点为噪音低,旋转灵活,较不适于震动大,温度高的地方。

#### 2. 黄铜实体保持器轴承

共分为三种类型:M型,MA型,MB型保持器。M型保持器的结构式由钢球引导,其优点为噪音低,转速高,寿命长,摩擦系数小等,较不适于撞击大,震动大的地方。MA型保持器的结构是由外圈引导,其优点为转速高,寿命长,与M型相比,可承受转速更高的地方,环境震动及撞击承受能力比M型好其缺点为摩擦系数高,噪音偏大。MB型保持器的结构是由内圈引导,其优点为低转速运行好,稳定性强。缺点为噪音偏大,摩擦系数高,震动值大,此类型缺点多,现被采用较少。

总而言之,黄铜实体保持器的共同优点:耐高温,保持器耐摩擦,使用可靠,寿命长。

#### 3. 胶木保持器轴承

该保持器具有很高的机械强度,良好的耐腐蚀,防锈,耐热和润滑性,同时具有重量轻,强度高等特点。有一般保持器无法替代的作用,主要应用在:空调压缩机,高性能水泵等轻载荷低噪音场合。

Deep groove ball bearing classification:

#### 1. Steel punching cage bearings

The retainer is most widely applied in the deep groove ball bearings, commonly used in heavy machinery, metallurgy, mining, automotive, electrical instrumentation, engineering machinery, and others. It's advantages are low noise and flexible rotating. However, it is not suitable for big vibration and high temperature.

#### 2. Brass cage bearings

Such series cage could be subdivided into three types: M, MA, MB. M type structure is guided by steel balls, it's advantages are low noise, high speed, long life, small friction coefficient, but is not suitable for strong impact and violent vibration. MA is guided by outer ring. Its advantage is high speed, long life, withstand higher speed, environmental vibration and impact to bear ability is better than M type. Its shortcomings are high the friction coefficient, big noise. MB structure is guided by inner ring, its advantage is running good with low speed, strong stability. Faults are big noise, high coefficient of friction, large vibration value. Therefore, MB retainer is used less in recent.

In all, brass solid retainer mutual advantages as following: high temperature, rubbing resistant, reliable, long lifetime.

#### 3. Bakelite cage bearings

The cage has high mechanical strength, good corrosion resistance, anti-rust, heat resistance and lubricity. Meanwhile, it possesses light-weight, strong-strength, and other irreplaceable usages. It's mainly applied in light load and low noise working environment, such as air conditioning compressor, high performance pump and so on.

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我们的业务：技有专攻，创领专业  
我们的长项：精益求精，创先时代  
我们的伙伴：以诚为本，创造合作

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Linqing Jiuxing Bearing Science&Technology Co.,Ltd



临清市九星轴承科技有限公司  
Linqing Juxing Bearing Science & Technology Co., Ltd

地址：山东省临清市八岔路镇工业园

Add: Ba Chalu Industrial Area, Linqing city, Shandong province, China

电话 /Tel: 0086-635-7555000

邮箱 /Mail: info@jxgdzc.com

传真 /Fax: 0086-635-2101369

网站 /Web: www.jxgdzc.com