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Fast & safe shipping. Every time. Everywhere.



# INTRODUCTION

## Engineered Self-lubricating Solutions!

Your engineering partner from prototype to production provides engineering, custom fabrication, and manufacturing of high-performance metallic bushing and self-lubricating bearings materials. Our capabilities include component design, material selection, prototype, production and manufacturing.

# SF-1、SF-1D、SF-1T 轴承 SF-1、SF-1D、SF-1T BEARING

## SF-1 无油润滑轴承

SF-1无油润滑轴承,是以优质低碳钢板为基体,中间烧结球形青铜粉,表面轧制以聚四氟乙烯(PTFE)为主的低摩擦材料卷制而成的滑动轴承。产品具有耐磨性能优异,塑料层与铜层结合强度高,抗疲劳、抗冲击性能好等优点。产品广泛应用于各种液压机械滑动部位。

SF-1 oilless bearing is a sliding bearing made of high-quality low carbon steel plate, sintered spherical bronze powder in the middle, and rolled with PTFE as the main low friction material. The products have excellent wear resistance, high bonding strength between plastic layer and copper layer, good fatigue resistance and impact resistance. The products are widely used in various sliding parts of hydraulic machinery.

最大承载压力	140N/mm <sup>2</sup>	摩擦系数 $\mu$	0.03~0.18
适用温度范围	-195°C~280°C	允许最高PV值(干)	4.3N/mm <sup>2</sup> ·m/s
最高滑动速度	5m/s	允许最高PV值(油)	50N/mm <sup>2</sup> ·m/s



## SF-1D 液压专用无油润滑轴承

SF-1D液压专用轴承。在无油的条件下显得更耐磨,特别适用于往复频繁的大侧向力场合。其性能与国外DP4相似,适用于汽车、摩托车减震器以及各种液压缸等领域。

SF-1D hydraulic special bearing. It is more wear-resistant under the condition of oil-free, especially suitable for the occasion of frequent reciprocating large lateral force. The performance of DP4 is similar to that of DP4 abroad. It is suitable for shock absorbers of automobiles, motorcycles and various hydraulic cylinders.

最大承载压力	140N/mm <sup>2</sup>	摩擦系数 $\mu$	0.04~0.20
适用温度范围	-195°C~280°C	允许最高PV值(干)	3.8N/mm <sup>2</sup> ·m/s
最高滑动速度	5m/s	允许最高PV值(油)	50N/mm <sup>2</sup> ·m/s



## SF-1T 齿轮泵专用无油润滑轴承

SF-1T齿轮泵专用轴承,是在SF-1材料的结构基础上,根据齿轮油泵的高PV值工况条件而设计推出的特殊配方产品。产品具有特殊的抗疲劳、抗冲击的优点,在流体润滑境界下PV值可达60N/mm<sup>2</sup>·m/s,是各种齿轮油泵、柱塞泵、叶片泵的最佳选择。

SF-1T gear pump special bearing is a special formula product designed and produced based on the structure of SF-1 material and according to the high PV working condition of gear oil pump. The product has special anti fatigue and anti impact advantages, under the condition of fluid lubrication, the PV value can reach 60N/mm<sup>2</sup>·m/s. It is the best choice for all kinds of gear pump, plunger pump and vane pump.

最大承载压力	140N/mm <sup>2</sup>	摩擦系数 $\mu$	0.03~0.18
适用温度范围	-195°C~280°C	允许最高PV值(干)	4.3N/mm <sup>2</sup> ·m/s
最高滑动速度	10m/s	允许最高PV值(油)	60N/mm <sup>2</sup> ·m/s



# SF-1P、SF-1B、SF-1S 轴承 SF-1P、SF-1B、SF-1S BEARING

## SF-1P 往复运动专用无油润滑轴承

SF-1P往复运动轴承,是在SF-1材料的结构基础上,根据往复运动的特殊工况条件而设计的新颖配方产品,其性能与国外DD2相似。具有断油条件下自润滑能力强、耐磨性能好、保持油膜清晰等优点,该产品能较好地保护对磨轴表面不受磨损。

目前该产品已广泛应用于汽车减震器、摩托车减震器、各种液压油缸、液压马达、气动元件等领域。

SF-1P reciprocating bearing is a new formula product based on the structure of SF-1 material and the special working conditions of reciprocating motion. Its performance is similar to DD2 abroad. It has the advantages of strong self-lubricating ability, good wear resistance and clear oil film under the condition of oil cut-off. The product can better protect the surface of grinding shaft from wear.

At present, the product has been widely used in automotive shock absorbers, motorcycle shock absorbers, various hydraulic cylinders, hydraulic motors, pneumatic components and other fields.

最大承载压力	140N/mm <sup>2</sup>	摩擦系数 $\mu$	0.04~0.20
适用温度范围	-195°C~280°C	允许最高PV值 (干)	3.6N/mm <sup>2</sup> ·m/s
最高滑动速度	5m/s	允许最高PV值 (油)	50N/mm <sup>2</sup> ·m/s



## SF-1B 铜基无油润滑轴承

SF-1B铜基无油润滑轴承,是以锡青铜为基体,中间烧结球形青铜粉,表面轧制PTEE和耐高温填充材料而成的产品。

它在连续工作不能停机修理的场所和高温不能加油的场所特别适用。目前已广泛应用在冶金钢铁工业,连铸机方坯滚道、高温炉前设备,水泥灌浆泵和螺旋式输送机上。它可以在外部组合钢套,也可以制成翻边,达到端面、内孔同时摩擦使用的效果。

SF-1B copper base oilless lubricating bearing is a product made of tin bronze as the base, sintered spherical bronze powder in the middle, surface rolling PTEE and high temperature resistant filler.

It is especially suitable for continuous work in places where the repair cannot be stopped and the high temperature cannot be refueled. It has been widely used in metallurgical and iron industry, billet rolling track of continuous casting machine, equipment in front of high temperature furnace, cement grouting pump and screw conveyor. It can be combined with steel sleeve outside, and can be made into flanging, which can achieve the effect of friction and use of end face and inner hole at the same time.

最大承载压力	140N/mm <sup>2</sup>	摩擦系数 $\mu$	0.03~0.18
适用温度范围	-195°C~300°C	允许最高PV值 (干)	4.3N/mm <sup>2</sup> ·m/s
最高滑动速度	5m/s	允许最高PV值 (油)	50N/mm <sup>2</sup> ·m/s



## SF-1S 不锈钢无油润滑轴承

SF-1S不锈钢无油润滑轴承,是以不锈钢板为基体,中间烧结球形青铜粉,表面轧制以聚四氟乙烯为主的低摩擦材料,经过卷制成型的一种十分有效的耐腐蚀轴承。它具有耐油、耐酸、耐碱、耐海水和耐磨损的特点。在食品饮料机械、化工中度酸碱流量的泵阀、制药机械、印染机械、化工机械、海洋工业耐腐蚀滑动部位最适合使用。

SF-1S stainless steel oil-free lubrication bearing is a kind of very effective corrosion-resistant bearing, which is made of stainless steel plate as the matrix, sintered spherical bronze powder in the middle, and rolled with PTFE as the main low friction material on the surface. It has the characteristics of oil resistance, acid resistance, alkali resistance, seawater resistance and wear resistance. It is most suitable to be used in the corrosion-resistant sliding parts of food and beverage machinery, chemical pump valve with moderate acid-base flow, pharmaceutical machinery, printing and dyeing machinery, chemical machinery and marine industry.

最大承载压力	140N/mm <sup>2</sup>	摩擦系数 $\mu$	0.04~0.20
适用温度范围	-195°C~280°C	允许最高PV值 (干)	3.6N/mm <sup>2</sup> ·m/s
最高滑动速度	5m/s	允许最高PV值 (油)	50N/mm <sup>2</sup> ·m/s



# SF-2、SF-2Y、SF-2L 轴承 SF-2、SF-2Y、SF-2L BEARING

## SF-2 边界润滑轴承

SF-2边界润滑轴承,是以优质低碳钢板为基体、中间烧结球形青铜粉,表面轧制改性聚甲醛(POM),并含有储油坑的产品。它适用于常温条件下,低速重载的场所,取代传统铜套既降低成本又延长使用寿命。在轧钢机上使用,能节省加油频次、简化更换程序。该产品已广泛应用于汽车底盘、锻压机床、冶金矿山机械、工程机械、轧钢行业等领域。

SF-2 boundary lubricated bearing is made of high quality low carbon steel plate, sintered spherical bronze powder in the middle, surface rolling modified Polyoxymethylene (POM) and oil storage pit. It is suitable for the place with low speed and heavy load under normal temperature, replacing the traditional copper sleeve, which not only reduces the cost but also prolongs the service life. When it is used on the rolling mill, the frequency of oil filling can be saved and the replacement procedure can be simplified. The product has been widely used in automobile chassis, forging machine, metallurgy and mining machinery, engineering machinery, steel rolling industry and other fields.

最大承载压力	70N/mm <sup>2</sup>	摩擦系数 $\mu$	0.05~0.25
适用温度范围	-40°C~130°C		
最高滑动速度	2.5m/s	允许最高PV值	22N/mm <sup>2</sup> m/s

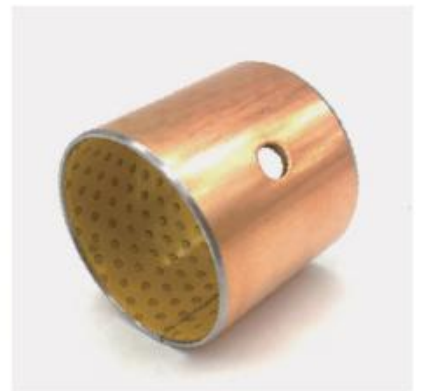


## SF-2Y 边界润滑轴承

SF-2Y边界润滑轴承,是在SF-2的基础上改进而成。其性能与SF-2相同,目前该产品已应用于进口纺织设备、柱塞泵摆动部位、汽车操纵杆部位等中速、中载、油脂润滑的场合。

SF-2Y boundary lubricated bearing is improved on the basis of SF-2. Its performance is the same as SF-2. At present, the product has been used in imported textile equipment, piston pump swing parts, automobile control lever parts and other occasions with medium speed, medium load and grease lubrication.

最大承载压力	70N/mm <sup>2</sup>	摩擦系数 $\mu$	0.05~0.25
适用温度范围	-40°C~130°C		
最高滑动速度	2.5m/s	允许最高PV值	22N/mm <sup>2</sup> m/s



## SF-2L 边界润滑轴承

SF-2L边界润滑轴承,是在SF-2的基础上改进而成。具有摩擦系数低,耐磨性能好,使用寿命长等优点。

SF-2L boundary lubricated bearing is improved on the basis of SF-2. It has the advantages of low friction coefficient, good wear resistance and long service life.

最大承载压力	70N/mm <sup>2</sup>	摩擦系数 $\mu$	0.05~0.25
适用温度范围	-40°C~130°C		
最高滑动速度	2.5m/s	允许最高PV值	25N/mm <sup>2</sup> m/s



# JF-800、FB-090、FB-092 轴承 JF-800、FB-090、FB-092 BEARING

## JF-800 双金属轴承

JF-800双金属轴承,是以优质低碳钢板为基体,表面烧结CuPb10Sn10材料的铜合金产品。该产品是双合金轴承中承载能力最强的一种,重型车的平衡桥衬套、垫片;推土机的从动轮、支重轮;汽车钢板衬套、均使用该产品。它是一种用途很广的低速重载滑动轴承。

JF-800 bimetal bearing is a copper alloy product with high quality low carbon steel plate as the base and surface sintered CuPb10Sn10. The product is the most bearing capacity of the double alloy bearing, the balance bridge bushing and gasket of heavy truck; Driven wheel and supporting wheel of bulldozer; The steel plate bushing of automobile is used. It is a kind of low speed and heavy load sliding bearing with a wide range of applications.

合金层材质	CuSn10Pb10	合金层硬度	HB70~100
最大承载压力	65N/mm <sup>2</sup>		
最高使用温度	260°C		



## FB-090 青铜卷制轴承

FB090青铜轴承,采用特殊配方的高密度铜合金为基体,表面轧制菱形油穴。具有密度高、承载力大、耐磨性能好、使用寿命长等优点,以取代传统的铸造铜套,可以缩小机械体积,降低生产成本。FB090已广泛应用于起重机械、建筑机械、汽车拖拉机底盘、机床工业及采矿机械中,还可以制成轴瓦、翻边轴套、止推垫片和球碗等形式。

FB090 bronze bearing is made of high density copper alloy with special formula, and its surface is rolled with rhombic oil hole. It has the advantages of high density, large bearing capacity, good wear resistance and long service life, so as to replace the traditional casting copper sleeve, reduce the mechanical volume and production cost. FB090 has been widely used in lifting machinery, construction machinery, chassis of automobile and tractor, machine tool industry and mining machinery. It can also be made into bearing bush, flanging sleeve, thrust gasket and ball bowl.

材质	CuSn8	适用温度范围	-200°C~350°C
硬度	HB90~120	最高滑动速度	2.5m/s
最大承载压力	75N/mm <sup>2</sup>		



## FB-092 青铜卷制轴承

FB092青铜轴承,是以青铜材料为基体,加工均匀有序的注油孔,经卷制而成的薄壁轴承,在装配后注入润滑油脂,再配置端面密封而使用。该轴承具有存油量大、安装方便、设计体积小的优点,而且可以取代铜套使用,能大大地降低生产成本,目前该产品已应用于输送机、升降机、卷扬机、校平机等中载、中速的场合。

FB092 bronze bearing is a thin-walled bearing made of bronze material with uniform and orderly oil filling holes. After assembly, it is filled with lubricating oil and then equipped with end face seal. The bearing has the advantages of large oil storage, convenient installation and small design volume, and can replace the copper sleeve, which can greatly reduce the production cost. At present, the product has been used in conveyor, elevator, winch, leveling machine and other occasions with medium load and medium speed.

材质	CuSn8	适用温度范围	-200°C~350°C
硬度	HB90~120	最高滑动速度	2.5m/s
最大承载压力	60N/mm <sup>2</sup>		



# JF-200、JDB、FZ 轴承 JF-200、JDB、FZ BEARING

## JF-200 高锡铝轴承

JF-200高锡铝轴承,是以优质低碳钢板为基体,表面辊压AlSn20Cu材料的产品。该产品具有中等疲劳强度和承载能力,良好的抗腐蚀性能,较好的滑动性能等特点,常用作中小功率的内燃机轴瓦、火车发动机轴瓦、空气压缩机轴套等场合,是取代巴氏合金的新颖产品。

JF-200 high tin aluminum bearing is based on high-quality low-carbon steel plate, surface rolling AlSn20Cu material products. The product has the characteristics of medium fatigue strength and bearing capacity, good corrosion resistance and good sliding performance. It is often used for medium and small power internal combustion engine bearing bush, train engine bearing bush, air compressor bearing bush and other occasions. It is a new product to

合金层材质	AlSn20Cu	最高使用温度	300°C
最大承载压力	60N/mm <sup>2</sup>	合金层硬度	HB60~90



## JDB 镶嵌式固体润滑轴承

JDB固体镶嵌轴承,是在高力黄铜、锡青铜、铝青铜等合金材料的基体上镶嵌石墨和MoS<sub>2</sub>等固体润滑剂的一种高性能润滑产品。它突破了一般轴承依靠油脂润滑的局限性。在使用过程中,通过摩擦热使固体润滑剂与轴摩擦,形成油膜润滑的优异条件,既保护轴不被磨损,又使固体润滑剂得到充分利用。它的硬度比一般铜套高一倍,耐磨性能也高一倍。目前已广泛运用于冶金连铸机,列车支架、轧钢设备、矿山机械、船舶、气轮机等高温、重载等场合。

JDB solid inlaid bearing is a kind of high-performance lubricating product inlaid with solid lubricants such as graphite and MoS<sub>2</sub> on the base of high-strength brass, tin bronze, aluminum bronze and other alloy materials. It breaks through the limitation of grease lubrication in general bearings. In the process of use, the solid lubricant is rubbed against the shaft by friction heat to form excellent conditions of oil film lubrication, which can not only protect the shaft from wear, but also make full use of the solid lubricant. Its hardness is twice as high as that of ordinary copper sleeve, and its wear resistance is also twice as high. At present, it has been widely used in metallurgical continuous casting machine, train support, rolling equipment, mining machinery, ships, gas turbines and other high temperature, heavy load and other occasions.

基体材质	CuZn25Al16Fe3Mn4	极限动载荷	100N/mm <sup>2</sup>
基体硬度	HB ≥ 210	摩擦系数 μ	<0.16
最高使用温度	400°C	最高滑动速度	干0.4m/s 油5m/s



## FZ 钢球保持架

FZ保持架分别以铜合金、铝合金、POM树脂为基体,并在其外圆表面上,按一定的角度和密度有序地排列,采用特殊工艺加工而成。该产品广泛应用于冷冲模、滚动模架、独立导柱、冲裁模、级进模以及高精度轴向和径向同时运动等场合。

FZ cages are made of copper alloy, aluminum alloy and POM resin, which are arranged orderly according to a certain angle and density on the outer surface of the cages and processed by special technology. The product is widely used in cold stamping die, rolling die base, independent guide pillar, blanking die, progressive die and high precision axial and radial simultaneous motion.

最大承载压力	100N/ mm <sup>2</sup>	装配过盈	0.01mm~0.02mm
最高线速度	10m/s	钢球直径偏差	<0.002mm
摩擦系数 μ	0.01~0.08		



# SF-1 无油润滑轴承 SF-1 OILLESS BEARING





# SF-1 无油润滑轴承 SF-1 OILLESS BEARING

## SF-1 无油润滑轴承

### 基材特性 MATERIAL FEATURES

适用于无法加油或较难加油的工作部位,耐磨性能好、磨擦系数小、使用寿命长;走合性能好、低噪音、无污染、耐腐蚀性好;运转中形成的转移膜起到保护对磨轴的作用,无咬轴现象;对磨轴的加工要求降低,减轻了用户加工成本。

Suitable for dry running, low coefficient of friction, lower wear, good sliding characteristics, forming a transfer film can protect the mating metal surface, suitable for rotary and oscillating movement. High chemical resistance, lower adsorption of water and swelling, Also performs well with lubrication.

### 材料组织 MATERIAL STRUCTURE

1. PTFE/Pb混合物0.01~0.03mm,一种耐磨材料,运作过程中可形成转移膜。
2. 铜粉层0.2~0.3mm提高PTFE/Pb与钢板的结合强度,具有很好的承载能力和耐磨性。同时铜又一种很好的导热材料,可快速转移轴承运作过程中产生的热量。
3. 低碳钢,提高轴承的承载能力和热转移作用。
4. 电镀层:镀锡层厚0.005mm,或镀铜层厚0.008mm

1. PTFE / Pb mixture 0.01 ~ 0.03mm, a kind of wear-resistant material, can form transfer film during operation.
2. Bronze powder layer, 0.2-0.3mm, which further strengthen the combination of the steel plate and PTFE layer and transfer the heat more quickly.
3. Low carbon steel, which can strengthen the load and transfer heat.
4. Electroplated layer: tin layer thickness 0.005mm, or copper layer thickness 0.008mm



### 应用特点 APPLICATION CHARACTER

1. “无油润滑或少油润滑”适用于无法加油或较难加油的场合,可以在使用时不保养或少保养;
2. 耐磨性能好,摩擦系数小,使用寿命长;
3. 可在-195℃~+280℃范围内使用;
4. 走合性能好,低噪音,无污染;
5. 在运作时能形成转移膜,起到保护对磨轴的作用,无咬轴现象;
6. 对磨轴的硬度要求低,未经调质处理的轴都可使用,从而降低了相关零件的加工难度;
7. 无吸水、吸油性,热膨胀系数小,散热性好,尺寸稳定;
8. 钢背面可电镀多种金属,因此可在腐蚀性介质中使用,不会生锈;目前已广泛运用于各种机械的滑动部位,如自动化机械设备(伸缩、摇摆、滑动、弯曲、回旋、回转部位)油压气缸导套、齿轮泵浦、纺织机械、自动售货机、塑胶成型机、压铸机、橡胶机械、烟草机、健身器材、办公机械、液压搬运车、汽机车、摩托车、农林机械等。

1. Dry or only a trace of grease or oil required maintenance free while in operation;
2. Resist abrasion, low coefficient of friction long operating life;
3. Operating in -195°C ~ +280°C;
4. Good mending, low-noise, non-pollution in operation;
5. Forming a transferred film during operation to protect shaft;
6. Low demand to the shaft even no surface hardness treatment, which lower the cost of the mating components;
7. No absorption to water/oil, small coefficient of Thermal expansion, good thermal conductivity and size stability;
8. The back of the steel strip can be plated with various metal, anti-corrosion. The products now are used in sliding components of different machines, such as auto machines, piston pump, gear pump, textile machine, auto-sides machine, Injection Machine, sports Machine office equipment etc.

## SF-1D 液压专用无油润滑轴承 SF-1D SPECIAL OILLESS BEARING FOR HYDRAULIC SYSTEM

### SF-1D 液压专用无油润滑轴承

#### 基材特性 MATERIAL FEATURES

液压专用轴承,是在SF-1的基础上结合油缸及减震工作原理而设计的一种新型材料,在无油的条件下显得更耐磨,该产品除具有SF-1的优点外,特别适用于往复频繁的大侧向力场合,其性能与国外DP4相似。

Hydraulic special bearing is a new material designed on the basis of SF-1 combined with the working principle of oil cylinder and shock absorption. It is more wear-resistant under the condition of no oil. In addition to the advantages of SF-1, this product is especially suitable for large lateral force occasions with frequent reciprocation. Its performance is similar to that of foreign DP4.

#### 材料组织 MATERIAL STRUCTURE

1. 聚四氟乙烯与专用纤维混合物0.01-0.03mm
  2. 球形青铜粉0.2-0.3mm
  3. 低碳钢背0.7-2.3mm
  4. 电镀层: 镀锡层厚0.005mm,或镀铜层厚0.008mm
1. PTFE and special fiber mixture 0.01-0.03mm
  2. Spherical bronze powder 0.2-0.3mm
  3. Low carbon steel back 0.7-2.3mm
  4. Electroplated layer: tin layer thickness 0.005mm, or copper layer thickness 0.008mm



#### 应用特点 APPLICATION CHARACTER

1. PTFE、亲油性纤维的混合物在运动时可形成很好的转移膜;
  2. 耐磨性能好、摩擦系数低;
  3. 走合性能好、无咬轴现象;
  4. 可运用于旋转、摇摆、往复运动这中;
  5. 产品除具有SF-1的特点外,特别适用于往复运动频繁,大侧向力的场合,适用于汽车,摩托车减震器及各类液压油缸等领域。
1. The mixture of PTFE and lipophilic fiber can form a good transfer membrane during movement;
  2. Good wear resistance and low friction coefficient;
  3. Good running in performance and no shaft biting;
  4. It can be used in rotating, rocking and reciprocating motion;
  5. In addition to the characteristics of SF-1, the product is especially suitable for the occasions with frequent reciprocating motion and large lateral force, and is suitable for steam turbine Automobile, motorcycle shock absorber and all kinds of hydraulic cylinder and other fields.

# SF-1T 齿轮泵专用无油润滑轴承

## SF-1T OILLESS LUBRICATION BEARING OF GEAR PUMP

### SF-1T 齿轮泵无油润滑轴承

#### 基材特性 MATERIAL FEATURES

SF-1T是根据齿轮油泵的高PV值工况条件而设计推出的特殊配方产品。产品具有特殊的抗疲劳冲击优点。适应的油泵压力:16-25Mpa,线速度为3.5-5m/S。产品具有特殊的抗疲劳、抗冲击的优点,在流体润滑境界下PV值可达 $60\text{N}/\text{mm}^2 \cdot \text{m}/\text{s}$ ;是各种齿轮油泵、柱塞泵、叶片泵的最佳选择。

SF-1T is a special formula product designed according to the working condition of high PV value of gear oil pump. The product has special anti fatigue impact advantages. Suitable oil pump pressure: 16-25Mpa, linear speed: 3.5-5m / s.

The product has the special advantages of anti fatigue and anti impact, and the PV value can reach  $60\text{N}/\text{mm}^2 \cdot \text{m}/\text{s}$  under the fluid lubrication boundary; It is the best choice for all kinds of gear pump, plunger pump and vane pump.



#### 材料组织 MATERIAL STRUCTURE

1. PTFE/Pb 混合物0.01~0.03mm,一种耐磨材料,运作过程中可形成转移膜。  
2. 铜粉层0.2~0.3mm提高PTFE/Pb与钢板的结合强度,具有很好的承载能力和耐磨性。

3. 低碳钢,提高轴承的承载能力和热转移作用。

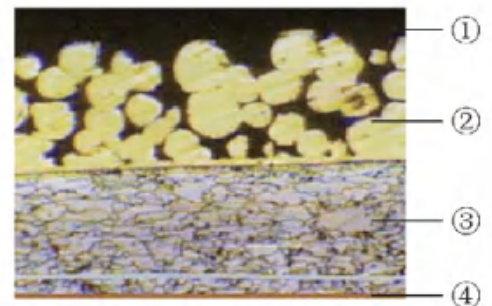
4. 电镀层:镀锡层厚0.005mm,或镀铜层厚0.008mm

1. PTFE / Pb mixture 0.01 ~ 0.03mm, a kind of wear-resistant material, can form transfer film during operation.

2. The copper powder layer of 0.2 ~ 0.3mm improves the bonding strength between PTFE / Pb and steel plate, and has good bearing capacity and wear resistance.

3. Low carbon steel, bear high load transfer heat.

4. Electroplated layer: tin layer thickness 0.005mm, or copper layer thickness 0.008mm



#### 应用特点 APPLICATION CHARACTER

1. 在有油润滑条件下摩擦系数小而稳定。

2. 耐磨性能好、抗冲击性能好。

3. 在流体润滑条件下PV值可达 $60\text{N}/\text{mm}^2 \cdot \text{m}/\text{s}$ 。

4. 该产品目前已广泛运用于各种齿轮油泵、柱塞泵、叶片泵等场合,对流体润滑或境界润滑条件下的中高压齿轮泵尤其适用。

1. Low Friction under oil condition.

2. Wear resistant and anti-impact.

3. Under the condition of fluid lubrication, the PV value can reach  $60\text{N}/\text{mm}^2 \cdot \text{m}/\text{s}$ .

4. It is the best choice for the bushes in various kinds of gear pumps as well as plunger, vane pumps and so on.

## SF-1B 铜基无油润滑轴承 SF-1B COPPER BASE OILLESS LUBRICATION BEARING

### SF-1B 铜基无油润滑轴承

#### 基材特性 MATERIAL FEATURES

SF-1B铜基轴承,是以锡青铜为基体,中间烧结球形青铜粉,表面轧制聚四氟乙烯 (PTFE)和耐高温填充材料而成。

SF-1B copper base bearing is made of tin bronze as matrix, spherical bronze powder sintered in the middle, PTFE and high temperature resistant filling material rolled on the surface.

#### 材料组织 MATERIAL STRUCTURE

1.PTFE/Pb混合物0.01~0.03mm,一种耐磨材料,运作过程中可形成转移膜。  
2.铜粉层0.2~0.3mm提高PTFE/Pb与铜板的结合强度,具有很好的承载能力和耐磨性。同时铜又一种很好的导热材料,可快速转移轴承运作过程中产生的热量。

1. PTFE / Pb mixture 0.01 ~ 0.03mm, a kind of wear-resistant material, can form transfer film during operation.

2. The copper powder layer of 0.2 ~ 0.3mm improves the bonding strength between PTFE / Pb and copper plate, and has good bearing capacity and wear resistance. At the same time, copper is also a good heat conduction material, which can quickly transfer the heat generated in the process of bearing operation.



#### 应用特点 APPLICATION CHARACTER

除了与SF-1相同的优点外,还具有以下特性:由于铜本身具有其自润性能,所以可用于需长时间工作而无法停机加油的部位,具有比SF-1更好的抗腐蚀性能。产品广泛运用于弱酸强碱场合、港口机械、船舶机械、冶金钢铁工业,连铸机方坯滚道、高温炉钢环部位、水泥灌浆泵和螺旋式输送机上。它可以在外部组合钢套,或制成翻边,端面、内孔同时摩擦使用。

In addition to the same advantages as SF-1, it also has the following characteristics: because of its self-lubricating property, copper can be used in the parts that need to work for a long time but can not stop for refueling, and it has better corrosion resistance than SF-1. Products are widely used in weak acid and strong alkali occasions, port machinery, marine machinery, metallurgy and iron and steel industry, billet raceway of continuous caster, steel ring of high temperature furnace, cement grouting pump and screw conveyor. It can be combined with steel sleeve on the outside, or made into flanging, end face and inner hole friction at the same time.

# SF-1S 不锈钢无油润滑轴承

## SF-1S STAINLESS STEEL OILLESS BEARING

### SF-1S 不锈钢无油润滑轴承

#### 基材特性 MATERIAL FEATURES

SF-1S不锈钢耐腐蚀轴承,是以不锈钢(304/316/316L)为基体,中间烧结锡青铜铜粉和聚四氟乙烯,经过卷制成型的一种十分有效的耐腐蚀轴承。

它具有耐油、耐酸、耐碱、耐海水和耐磨损的特点,在食品饮料机械、印染机械、化工机械、海洋工业耐腐蚀滑动部位最适合使用。

SF-1S stainless steel corrosion-resistant bearing is a kind of very effective corrosion-resistant bearing, which is made of stainless steel (304 / 316 / 316L) as the matrix, sintered tin bronze powder and polytetrafluoroethylene.

It has the characteristics of oil resistance, acid resistance, alkali resistance, seawater resistance and wear resistance. It is most suitable for the corrosion-resistant sliding parts of food and beverage machinery, printing and dyeing machinery, chemical machinery and marine industry.



#### 材料组织 MATERIAL STRUCTURE

1. PTFE/Pb混合物0.01-0.03mm,一种耐磨材料,运作过程中可形成转移膜,以保护对磨轴。

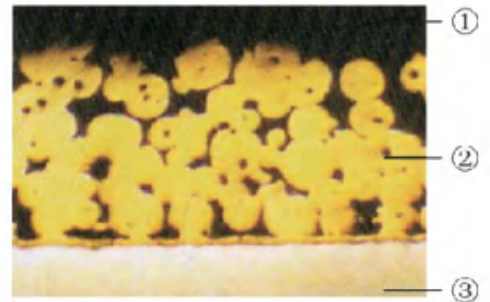
2. 铜粉层,0.20-0.3mm,提高PTFE/不锈钢板的结合强度,具有很好的承载能力和耐磨性。较高的导热系数可迅速转移运作过程产生的热量。

3. 不锈钢基板,提高轴承的承载能力和热传递,且有更好的耐腐蚀能力。

1. PTFE/Pb composition, 0.01-0.03mm, anti-abrasion material, which will form alubricating film during operation.

2. Copper powder layer, 0.20-0.3mm, improves the bonding strength of PTFE / stainless steel plate, has good bearing capacity and wear resistance. High thermal conductivity can quickly transfer the heat generated in the operation process.

3. Bronze plate, bear high load and transfer heat, anti-corrosion.



#### 应用特点 APPLICATION CHARACTER

1. PTFE混合物在运动时可形成转移膜。

2. 耐磨性好,摩擦系数低。

3. 走合性能好,无咬轴现象。

4. 可运行于旋转、摇摆、往复运动中。

5. 耐腐蚀性能好。

6. 典型用途:主要运用于中酸、强碱场合,例如:化工中酸碱流量计、泵、阀,印染机械、海洋工业耐腐蚀滑动部位。

1. PTFE mixture can form transfer film when it moves.

2. It is of low friction coefficient, good anti-wear.

3. Good running in property.

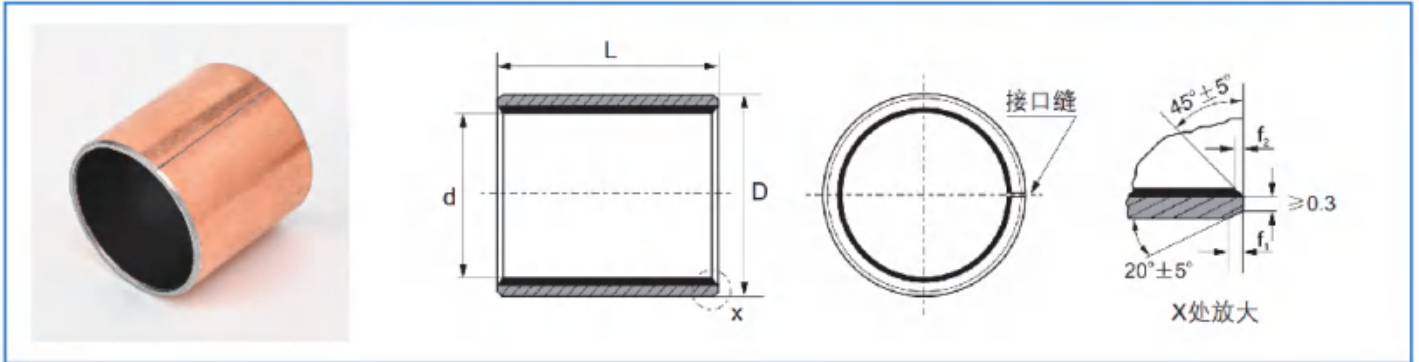
4. It fits well in motion of circumgyration, sway and to-and-fro.

5. Good anti-corrosion.

6. It is mainly used in the condition of strong acid and alkali, such as chemical industry, pumps, valves etc.

SF-1、SF-1D、SF-1T、SF-1P、SF-1B、SF-1S 轴承标准公制尺寸  
SF-1、SF-1D、SF-1T、SF-1P、SF-1B、SF-1S BEARING STANDARD METRIC SIZE

# SF-1、SF-1D、SF-1T、SF-1P、SF-1B、SF-1S轴承



Unit(单位):mm

内径 (d)	外径 (D)	相配轴径 (f7)	相配座孔 (H7)	长度 (L)										f1	f2
				6	8	10	12	15	20	25	30	40	50		
$6_0^{+0.018}$	$8_{+0.025}^{+0.055}$	$6_{-0.013}^{-0.013}$	$8_{+0.015}^{+0.015}$	0606	0608	0610								0.6	0.3
$8_0^{+0.022}$	$10_{+0.025}^{+0.055}$	$8_{-0.013}^{-0.013}$	$10_{+0.015}^{+0.015}$	0806	0808	0810	0812	0815							
$10_0^{+0.022}$	$12_{+0.030}^{+0.065}$	$10_{-0.016}^{-0.016}$	$12_{+0.015}^{+0.015}$	1006	1008	1010	1012	1015	1020						
$12_0^{+0.027}$	$14_{+0.030}^{+0.065}$	$12_{-0.016}^{-0.016}$	$14_{+0.015}^{+0.015}$	1206	1208	1210	1212	1215	1220	1225					
$13_0^{+0.027}$	$15_{+0.030}^{+0.065}$	$13_{-0.016}^{-0.016}$	$15_{+0.015}^{+0.015}$			1310			1320						
$14_0^{+0.027}$	$16_{+0.030}^{+0.065}$	$14_{-0.016}^{-0.016}$	$16_{+0.015}^{+0.015}$			1410	1412	1415	1420	1425					
$15_0^{+0.027}$	$17_{+0.030}^{+0.065}$	$15_{-0.016}^{-0.016}$	$17_{+0.015}^{+0.015}$			1510	1512	1515	1520	1525					
$16_0^{+0.027}$	$18_{+0.030}^{+0.065}$	$16_{-0.016}^{-0.016}$	$18_{+0.021}^{+0.021}$			1610	1612	1615	1620	1625					
$17_0^{+0.027}$	$19_{+0.035}^{+0.075}$	$17_{-0.016}^{-0.016}$	$19_{+0.021}^{+0.021}$			1710	1712		1720						
$18_0^{+0.027}$	$20_{+0.035}^{+0.075}$	$18_{-0.020}^{-0.020}$	$20_{+0.021}^{+0.021}$			1810	1812	1815	1820	1825					
$20_0^{+0.033}$	$23_{+0.035}^{+0.075}$	$20_{-0.020}^{-0.020}$	$23_{+0.021}^{+0.021}$			2010	2012	2015	2020	2025	2030				
$22_0^{+0.033}$	$25_{+0.035}^{+0.075}$	$22_{-0.020}^{-0.020}$	$25_{+0.021}^{+0.021}$			2210	2212	2215	2220	2225	2230				
$24_0^{+0.033}$	$27_{+0.035}^{+0.075}$	$24_{-0.020}^{-0.020}$	$27_{+0.021}^{+0.021}$						2420	2425	2430				
$25_0^{+0.033}$	$28_{+0.035}^{+0.075}$	$25_{-0.020}^{-0.020}$	$28_{+0.021}^{+0.021}$			2510	2512	2515	2520	2525	2530	2540	2550		
$28_0^{+0.033}$	$32_{+0.045}^{+0.085}$	$28_{-0.020}^{-0.020}$	$32_{+0.025}^{+0.025}$					2815	2820	2825	2830	2840			
$30_0^{+0.033}$	$34_{+0.045}^{+0.085}$	$30_{-0.020}^{-0.020}$	$34_{+0.025}^{+0.025}$				3012	3015	3020	3025	3030	3040	3050		
$32_0^{+0.039}$	$36_{+0.045}^{+0.085}$	$32_{-0.025}^{-0.025}$	$36_{+0.025}^{+0.025}$						3220		3230	3240			
$35_0^{+0.039}$	$39_{+0.045}^{+0.085}$	$35_{-0.025}^{-0.025}$	$39_{+0.025}^{+0.025}$				3512	3515	3520	3525	3530	3540	3550		
$38_0^{+0.039}$	$42_{+0.045}^{+0.085}$	$38_{-0.025}^{-0.025}$	$42_{+0.025}^{+0.025}$					3815			3830	3840			
$40_0^{+0.039}$	$44_{+0.045}^{+0.085}$	$40_{-0.025}^{-0.025}$	$44_{+0.025}^{+0.025}$				4012	4015	4020	4025	4030	4040	4050		

SF-1、SF-1D、SF-1T、SF-1P、SF-1B、SF-1S轴承标准公制尺寸  
SF-1、SF-1D、SF-1T、SF-1P、SF-1B、SF-1S BEARING STANDARD METRIC SIZE

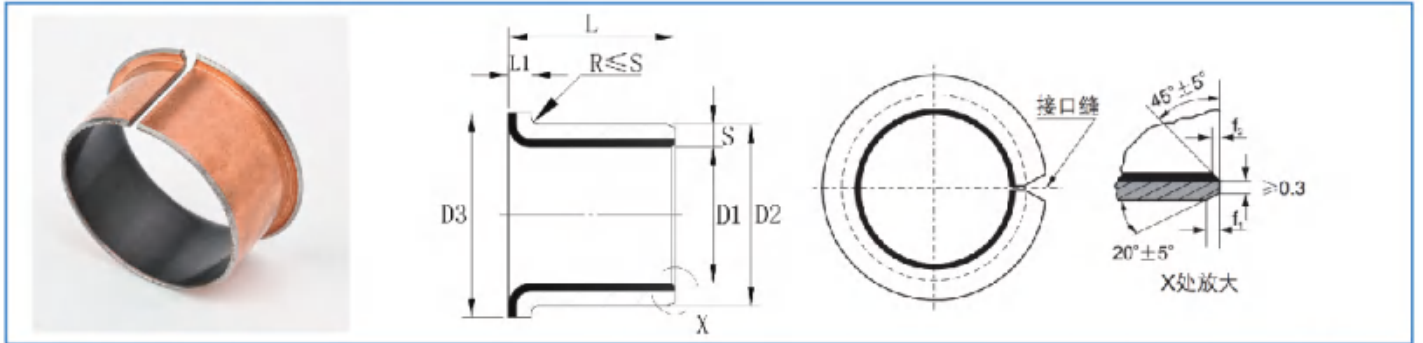
Unit(单位):mm

内径 (d)	外径 (D)	相配轴径 (f7)	相配座孔 (H7)	长度 (L)										f1	f2		
				6	8	10	12	15	20	25	30	40	50				
45 <sub>0</sub> <sup>+0.039</sup>	50 <sub>0</sub> <sup>+0.045</sup>	45 <sub>0</sub> <sup>-0.025</sup>	50 <sub>0</sub> <sup>+0.030</sup>	4025	4525	4530	4540	4550									
50 <sub>0</sub> <sup>+0.039</sup>	55 <sub>0</sub> <sup>+0.055</sup>	50 <sub>0</sub> <sup>-0.030</sup>	55 <sub>0</sub> <sup>+0.030</sup>	5020		5030	5040	5050	5060								
55 <sub>0</sub> <sup>+0.046</sup>	60 <sub>0</sub> <sup>+0.055</sup>	55 <sub>0</sub> <sup>-0.030</sup>	60 <sub>0</sub> <sup>+0.030</sup>			5530	5540	5550	5560								
60 <sub>0</sub> <sup>+0.046</sup>	65 <sub>0</sub> <sup>+0.055</sup>	60 <sub>0</sub> <sup>-0.016</sup>	65 <sub>0</sub> <sup>+0.030</sup>			6030	6040	6050	6060	6070							
65 <sub>0</sub> <sup>+0.046</sup>	70 <sub>0</sub> <sup>+0.055</sup>	65 <sub>0</sub> <sup>-0.030</sup>	70 <sub>0</sub> <sup>+0.030</sup>			6530	6540	6550	6560	6570							
70 <sub>0</sub> <sup>+0.046</sup>	75 <sub>0</sub> <sup>+0.055</sup>	70 <sub>0</sub> <sup>-0.030</sup>	75 <sub>0</sub> <sup>+0.030</sup>				7040	7050	7060	7070	7080						
75 <sub>0</sub> <sup>+0.046</sup>	80 <sub>0</sub> <sup>+0.055</sup>	75 <sub>0</sub> <sup>-0.030</sup>	80 <sub>0</sub> <sup>+0.035</sup>			7530	7540	7550	7560	7570	7580						
80 <sub>0</sub> <sup>+0.046</sup>	85 <sub>0</sub> <sup>+0.070</sup>	80 <sub>0</sub> <sup>-0.036</sup>	85 <sub>0</sub> <sup>+0.035</sup>				8040	8050	8060	8070	8080	80100					
85 <sub>0</sub> <sup>+0.054</sup>	90 <sub>0</sub> <sup>+0.070</sup>	85 <sub>0</sub> <sup>-0.036</sup>	90 <sub>0</sub> <sup>+0.035</sup>				8540				8580	85100					
90 <sub>0</sub> <sup>+0.054</sup>	95 <sub>0</sub> <sup>+0.070</sup>	90 <sub>0</sub> <sup>-0.036</sup>	95 <sub>0</sub> <sup>+0.035</sup>				9040	9050	9060		9080	90100					
95 <sub>0</sub> <sup>+0.054</sup>	100 <sub>0</sub> <sup>+0.070</sup>	95 <sub>0</sub> <sup>-0.036</sup>	100 <sub>0</sub> <sup>+0.035</sup>					9550	9560		9580	95100					
100 <sub>0</sub> <sup>+0.054</sup>	105 <sub>0</sub> <sup>+0.070</sup>	100 <sub>0</sub> <sup>-0.036</sup>	105 <sub>0</sub> <sup>+0.035</sup>					10050	10060		10080		100115				
105 <sub>0</sub> <sup>+0.054</sup>	110 <sub>0</sub> <sup>+0.070</sup>	105 <sub>0</sub> <sup>-0.036</sup>	110 <sub>0</sub> <sup>+0.035</sup>						10560		10580		105115				
110 <sub>0</sub> <sup>+0.054</sup>	115 <sub>0</sub> <sup>+0.070</sup>	110 <sub>0</sub> <sup>-0.036</sup>	115 <sub>0</sub> <sup>+0.035</sup>						11060		11080		110115				
120 <sub>0</sub> <sup>+0.054</sup>	125 <sub>0</sub> <sup>+0.100</sup>	120 <sub>0</sub> <sup>-0.043</sup>	125 <sub>0</sub> <sup>+0.040</sup>						12060		12080	120100					
125 <sub>0</sub> <sup>+0.063</sup>	130 <sub>0</sub> <sup>+0.100</sup>	125 <sub>0</sub> <sup>-0.043</sup>	130 <sub>0</sub> <sup>+0.040</sup>						12560			125100	125115				
130 <sub>0</sub> <sup>+0.063</sup>	135 <sub>0</sub> <sup>+0.100</sup>	130 <sub>0</sub> <sup>-0.043</sup>	135 <sub>0</sub> <sup>+0.040</sup>						13060		13080	130100					
140 <sub>0</sub> <sup>+0.063</sup>	145 <sub>0</sub> <sup>+0.100</sup>	140 <sub>0</sub> <sup>-0.043</sup>	145 <sub>0</sub> <sup>+0.040</sup>						14060		14080	140100					
150 <sub>0</sub> <sup>+0.063</sup>	155 <sub>0</sub> <sup>+0.100</sup>	150 <sub>0</sub> <sup>-0.043</sup>	155 <sub>0</sub> <sup>+0.040</sup>						15060		15080	150100					
160 <sub>0</sub> <sup>+0.063</sup>	165 <sub>0</sub> <sup>+0.100</sup>	160 <sub>0</sub> <sup>-0.043</sup>	165 <sub>0</sub> <sup>+0.040</sup>						16060		16080	160100	160115				
180 <sub>0</sub> <sup>+0.063</sup>	185 <sub>0</sub> <sup>+0.130</sup>	180 <sub>0</sub> <sup>-0.050</sup>	185 <sub>0</sub> <sup>+0.046</sup>								18080	180100					
190 <sub>0</sub> <sup>+0.072</sup>	195 <sub>0</sub> <sup>+0.130</sup>	190 <sub>0</sub> <sup>-0.050</sup>	195 <sub>0</sub> <sup>+0.046</sup>								19080	190100					
200 <sub>0</sub> <sup>+0.072</sup>	205 <sub>0</sub> <sup>+0.130</sup>	200 <sub>0</sub> <sup>-0.050</sup>	205 <sub>0</sub> <sup>+0.046</sup>						20060		20080	200100					
220 <sub>0</sub> <sup>+0.072</sup>	225 <sub>0</sub> <sup>+0.130</sup>	220 <sub>0</sub> <sup>-0.050</sup>	225 <sub>0</sub> <sup>+0.046</sup>								22080	220100					
250 <sub>0</sub> <sup>+0.072</sup>	255 <sub>0</sub> <sup>+0.170</sup>	250 <sub>0</sub> <sup>-0.056</sup>	255 <sub>0</sub> <sup>+0.052</sup>								25080	250100					
260 <sub>0</sub> <sup>+0.081</sup>	265 <sub>0</sub> <sup>+0.170</sup>	260 <sub>0</sub> <sup>-0.056</sup>	265 <sub>0</sub> <sup>+0.052</sup>								26080	260100					
280 <sub>0</sub> <sup>+0.081</sup>	285 <sub>0</sub> <sup>+0.170</sup>	280 <sub>0</sub> <sup>-0.056</sup>	285 <sub>0</sub> <sup>+0.052</sup>								28080	280100					
300 <sub>0</sub> <sup>+0.081</sup>	305 <sub>0</sub> <sup>+0.170</sup>	300 <sub>0</sub> <sup>-0.056</sup>	305 <sub>0</sub> <sup>+0.052</sup>								30080	300100					

1.6 0.8

# SF-1F 翻边轴承标准公制尺寸 SF-1F FLANGING BEARING STANDARD METRIC SIZE

## SF-1F翻边轴承



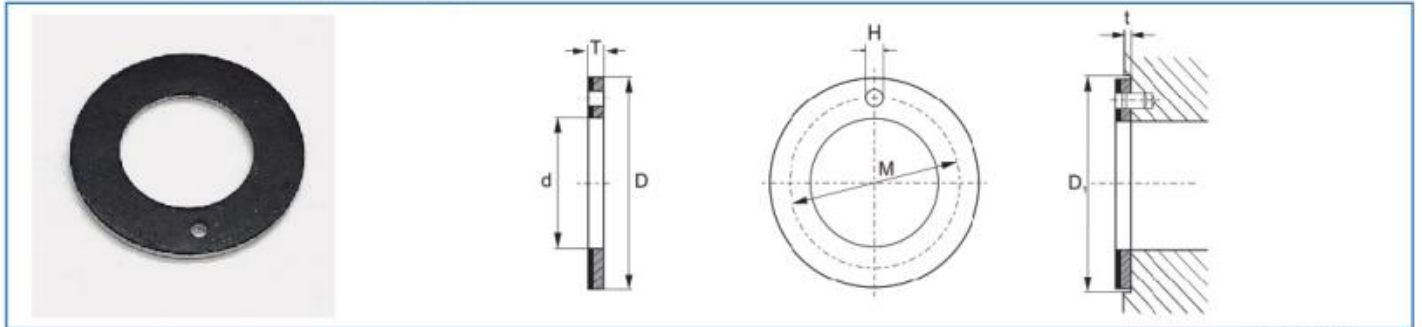
Unit(单位):mm

型号规格 Designation	尺寸							相配轴径 Shaft Dia.	相配座孔(H7) Housing (H7)		
	D1	D2	D3±0.5	L±0.25	L1	f1	f2				
SF-1F 06040	6	8	12	4	1	0.6	0.3	-0.013	8 <sup>+0.015</sup>		
SF-1F 06070				7				6 <sub>-0.028</sub>			
SF-1F 08055	8	10	5.5	15				8 <sub>-0.028</sub>	10 <sup>+0.015</sup>		
SF-1F 08075			7.5								
SF-1F 10070	10	12	7	18				10 <sub>-0.034</sub>	12 <sup>+0.018</sup>		
SF-1F 10090			9								
SF-1F 10020			12								
SF-1F 12070			7								
SF-1F 12090	12	14	9	20				0.6	0.3	-0.016	14 <sup>+0.018</sup>
SF-1F 12120			12							12 <sub>-0.034</sub>	
SF-1F 14120	14	16	12		22	14 <sub>-0.034</sub>	16 <sup>+0.018</sup>				
SF-1F 14170			17								
SF-1F 15090	15	17	9		23	15 <sub>-0.034</sub>	17 <sup>+0.018</sup>				
SF-1F 15120			12								
SF-1F 15170			17								
SF-1F 16120	16	18	12		24	16 <sub>-0.034</sub>	18 <sup>+0.018</sup>				
SF-1F 16170			17								
SF-1F 18120	18	20	12							26	18 <sub>-0.034</sub>
SF-1F 18170			17								
SF-1F 18200			20								
SF-1F 20115	20	23	11.5	30	0.8	0.4	-0.020	23 <sup>+0.021</sup>			
SF-1F 20165			16.5				20 <sub>-0.041</sub>				
SF-1F 20215			21.5				22 <sub>-0.041</sub>				
SF-1F 22150	22	25	15				32	22 <sub>-0.041</sub>	25 <sup>+0.021</sup>		
SF-1F 22200			20								
SF-1F 25115	25	28	11.5				35	25 <sub>-0.041</sub>	28 <sup>+0.021</sup>		
SF-1F 25165			16.5								
SF-1F 25215			21.5								
SF-1F 30160	30	34	16	42	1.2	0.6	-0.025	34 <sup>+0.025</sup>			
SF-1F 30260			26				30 <sub>-0.050</sub>				
SF-1F 35160	35	39	16				47	35 <sub>-0.050</sub>	39 <sup>+0.025</sup>		
SF-1F 35260			26								
SF-1F 40260	40	44	26	52	40 <sub>-0.050</sub>	44 <sup>+0.025</sup>					
SF-1F 40400			40								



# WCSF-1、SF-1板材 标准公制尺寸 WCSF-1、SF-1BOARD STANDARD METRIC SIZE

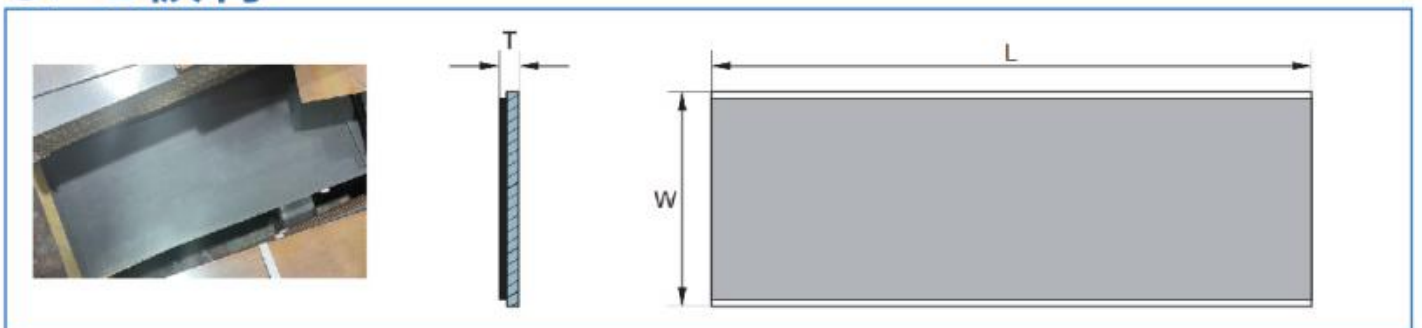
## WCSF-1止推垫片



Unit(单位):mm

型号规格 Designation	垫片尺寸 Washer size				相配轴径 Shaft Dia.	安装尺寸 Install size		
	$d^{+0.25}$	$D_{-0.25}$	$T_{-0.05}$	$M \pm 0.12$		$^{+0.4}H_{+0.1}$	$t \pm 0.2$	$D1^{+0.12}$
WC10SF-1	10	20	1.5	15	8	1.5	1	20
WC12SF-1	12	24		18	10			24
WC14SF-1	14	26		20	12			26
WC16SF-1	16	30		23	14			30
WC18SF-1	18	32		25	16			32
WC20SF-1	20	36		28	18	36		
WC22SF-1	22	38		30	20	38		
WC24SF-1	24	42		33	22	42		
WC26SF-1	26	44		35	24	44		
WC28SF-1	28	48		38	25	48		
WC32SF-1	32	54	43	30	54			
WC38SF-1	38	62	50	35	62			
WC42SF-1	42	66	54	40	66			
WC48SF-1	48	74	61	45	74			
WC52SF-1	52	78	2	65	50	1.5	78	
WC62SF-1	62	90		76	60		90	

## SF-1板材

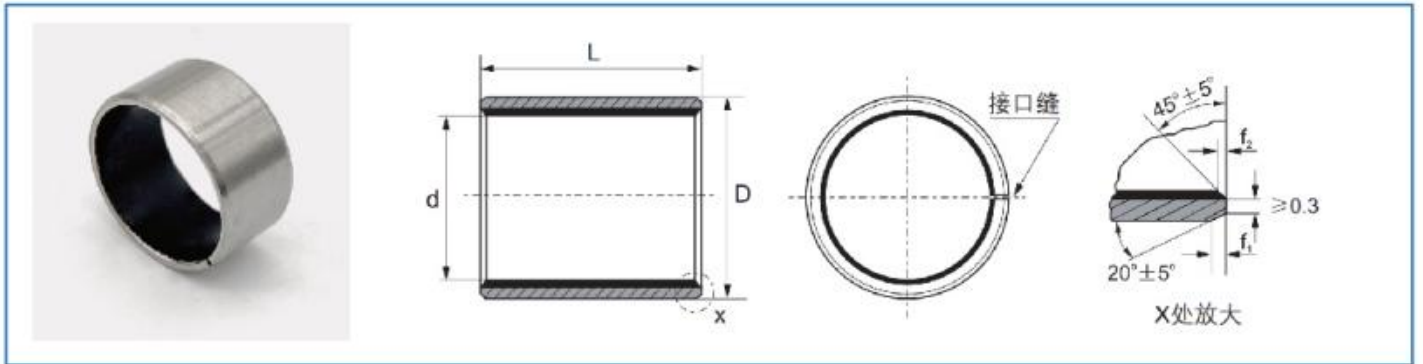


Unit(单位):mm

型号Type	长度 (L) $\pm 1$	宽度 (W) $\pm 1$	厚度 (T) $-0.05$
SP	500	150	1.0
SP	500	150	1.5
SP	500	150	2.0
SP	500	150	2.5

# DU轴承英制标准尺寸 BEARING DU INCH STANDARD SIZE

## DU轴承英制标准尺寸



Unit(单位):inch

型号规格 Designation	公称尺寸NominalDiameter			相配轴径 Axle	相配座孔 Housing	安装后内孔 Installed I.D	f1	f2
	∅d	∅D	L					
02DU02	1/8	3/16	1/8	0.1243	0.1878	0.1268	0.008 0.024	0.004 0.012
02DU03			3/16	0.1236	0.1873	0.1243		
03DU03			3/16	0.1865	0.2503	0.1893		
03DU04	3/16	1/4	1/4	0.1858	0.2497	0.1867		
03DU06			3/8	0.2490	0.3128	0.2518		
04DU04	1/4	5/16	1/4	0.2481	0.3122	0.2492		
04DU06			3/8	0.3115	0.3753	0.3143		
05DU06	5/16	3/8	3/8	0.3106	0.3747	0.3117		
05DU08			1/2	0.3740	0.4691	0.3769		
06DU06	3/8	15/32	3/8	0.3731	0.4684	0.3742		
06DU08			1/2	0.4365	0.5316	0.4394		
06DU12			3/4	0.4355	0.5309	0.4367		
07DU08	7/16	17/32	1/2	0.4990	0.5941	0.5019		
07DU12			3/4	0.4980	0.5934	0.4992		
08DU08			1/2	0.5615	0.6566	0.5644		
08DU10	1/2	19/32	5/8	0.5605	0.6559	0.5617		
08DU14			7/8	0.6240	0.7192	0.6270		
09DU08	9/16	21/32	1/2	0.6230	0.7184	0.6242		
09DU12			3/4	0.7491	0.8755	0.7525		
10DU08			1/2	0.7479	0.8747	0.7493		
10DU10	5/8	23/32	5/8	0.8741	1.0005	0.8775		
10DU12			3/4	0.8729	0.9997	0.8743		
12DU08	3/4	7/8	1/2					
12DU12			3/4					
12DU16			1					
14DU12	7/8	1	3/4					
14DU16			1					

# DU轴承英制标准尺寸 BEARING DU INCH STANDARD SIZE

Unit(单位):inch”

型号规格 Designation	公称尺寸NominalDiameter			相配轴径 Axle	相配座孔 Housing	安装后内孔 Installed I.D	f1	f2
	Ød	ØD	L					
16DU12	1	9/8	3/4	0.9991	1.1256	1.0026	0.020 0.040	0.005 0.025
16DU16			1	0.9979	1.1246	0.9992		
18DU12	9/8	41/32	3/4	1.1238	1.2818	1.1278		
18DU16			1	1.1226	1.2808	1.1240		
20DU12	5/4	45/32	3/4	1.2488	1.4068	1.2528		
20DU16			1	1.2472	1.4058	1.2490		
20DU20			5/4					
22DU16	11/8	49/32	1	1.3738	1.5318	1.3778		
22DU22			11/8	1.3722	1.5308	1.3740		
24DU16	3/2	53/32	1	1.4988	1.6568	1.5028		
24DU24			3/2	1.4972	1.6558	1.4990		
24DU32			2					
26DU16	13/8	57/32	1	1.6238	1.7818	1.6278		
26DU24			3/2	1.6222	1.7808	1.6240		
28DU16	7/4	31/16	1	1.7487	1.9381	1.7535		
28DU28			7/4	1.7471	1.9371	1.7489		
28DU32			2					
30DU16	15/8	33/16	1	1.8737	2.0633	1.8787		
30DU30			15/8	1.8721	2.0621	1.8739		
30DU36			9/4					
32DU16	2	35/16	1	1.9987	2.1883	2.0037		
32DU32			2	1.9969	2.1871	1.9989		
32DU40			5/2					
36DU32	9/4	39/16	2	2.2507	2.4377	2.2573		
36DU36			9/4	2.2489	2.4365	2.2509		
36DU48			3					
40DU32	5/2	43/16	2	2.5011	2.6881	2.5077		
40DU48			3	2.4993	2.6869	2.5013		
44DU32	11/4	47/16	2	2.7500	2.9370	2.7566		
44DU48			3	2.7482	2.9358	2.7502		
48DU32	3	51/16	5/2	3.0000	3.1872	3.0068		
48DU48			3	2.9982	3.1858	3.0002		
48DU60			15/4					
64DU48	4	67/16	3	4.0000	4.1872	4.0068		
64DU60			15/4	3.9978	4.1858	4.0002		
64DU76			19/4					

# SF-2 边界润滑轴承 SF-2 MARGINAL-LUNTRICATION BEARING



# SF-2 边界润滑轴承

## SF-2 MARGINAL-LUNRICATION BEARING

### SF-2 边界润滑轴承

#### 基材特性 MATERIAL FEATURES

SF-2 边界润滑轴承以优质低碳钢为基体,中间烧结球形多孔青铜粉,与表面改性聚甲醛(POM)牢固嵌合。表面轧制储油坑,从而实现了摩擦面之间良好润滑。

它具有良好的耐磨性和承载能力,钢背表面镀层防腐蚀,广泛应用于汽车底盘、锻压机床、矿山机械、冶金机械、水利和轧钢行业等。

SF-2 boundary lubrication bearing is based on high-quality low carbon steel, and the spherical porous bronze powder is sintered in the middle, which is firmly embedded with surface modified POM. The surface rolling oil storage pit can realize the good lubrication between the friction surfaces.

It has good wear resistance and bearing capacity, and the coating on the back of steel is corrosion resistant. It is widely used in automobile chassis, forging machine tool, mining machinery, metallurgical machinery, water conservancy and rolling industry.



#### 材料组织 MATERIAL STRUCTURE

1. POM 0.30-0.50mm改性聚甲醛,具有很高的耐磨性能,甚至在瞬间缺油的情况下也具有较低的摩擦系数。轴承表面有排布规律的带有螺旋角度的储油坑,装配时必须涂满润滑油脂。

2.铜粉层0.2~0.3mm,具有很好的承载能力和耐磨性,良好的导热性能可及时转移轴承运作过程中产生的热量。复合材料可渗入到铜粉球的间隙中,提高了结合强度。

3.低碳钢,提高轴承的承载能力和热转移作用。

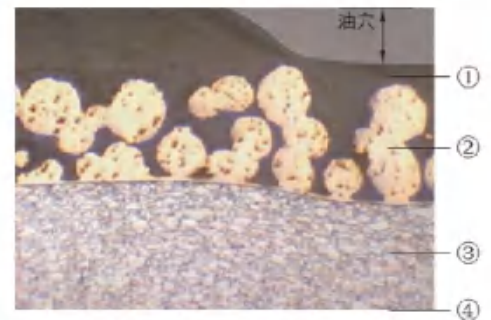
4.电镀层:镀锡层厚0.005mm,或镀铜层厚0.008mm

1. POM 0.03-0.50mm,anti abrasion,low friction coefficient even no oil given.The inside of the bearing are full of indentions, which need to be filled withgrease before installing.

2. Bronze powder layer, 0.2-0.3mm, high load capacity and anti-abrasion,good-thermal conductivity,which also further strengthen the combination of the POM layer and steel plate.

3. Low carbon steel, which improved, load capacity & thermal conductivity.

4. Electroplated layer: tin layer thickness 0.005mm, or copper layer thickness 0.008mm



#### 应用特点 APPLICATION CHARACTER

特别适用于低速重载下的旋转运动,摇摆运动以及经常在载荷下启闭而不易形成流体润滑的部位;其表面的塑料层在轴套成型加工时可留有一定的余量,压入座孔后可自行加工,以达到更好的装配尺寸。目前主要运用于冶金机械、矿山机械、水利机械、汽车底盘、建筑机械、农用机械、轧钢机械等。

It is especially suitable for low speed and heavy load rotating motion, rocking motion and often open and close under load, which is not easy to form fluid lubrication; The plastic layer on the surface of the shaft sleeve can leave a certain margin when forming and processing, and can be processed by itself after pressing into the seat hole, so as to achieve a better assembly size. At present, it is mainly used in metallurgical machinery, mining machinery, water conservancy machinery, automobile chassis, construction machinery, agricultural machinery, steel rolling machinery, etc.

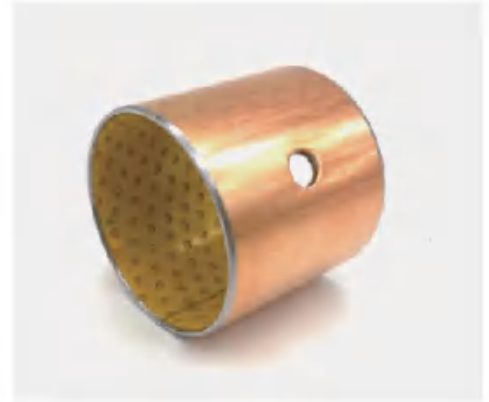
## SF-2Y、SF-2L 边界润滑轴承 SF-2Y、SF-2L MARGINAL-LUNTRICATION BEARING

### SF-2Y 边界润滑轴承

#### 基材特性 MATERIAL FEATURES

该产品是以优质低碳钢板为基体，中间烧结多孔青铜粉，表面轧制改性聚甲醛 (POM)。能提供较好的承载性和耐磨损性。产品应用于汽车底盘、锻压机床、冶金机械、矿山机械、水利行业、轧钢行业等。

The product is based on high-quality low-carbon steel plate, sintered porous bronze powder in the middle, and rolled surface modified Polyoxymethylene (POM). It can provide better bearing capacity and wear resistance. Products are used in automobile chassis, forging machine tools, metallurgical machinery, mining machinery, water conservancy industry, steel rolling industry, etc.



#### 应用特点 APPLICATION CHARACTER

特别适用于低速重载下的旋转运动，摇摆运动以及经常在载荷下启闭而不易形成流体润滑的部位；其表面的塑料层在轴套成型加工时可留有一定的余量，压入座孔后可自行加工，以达到更好的装配尺寸。目前主要运用于冶金机械、矿山机械、水利机械、汽车底盘、建筑机械、农用机械、轧钢机械等。

It is especially suitable for low speed and heavy load rotating motion, rocking motion and often open and close under load, which is not easy to form fluid lubrication; The plastic layer on the surface of the shaft sleeve can leave a certain margin when forming and processing, and can be processed by itself after pressing into the seat hole, so as to achieve a better assembly size. At present, it is mainly used in metallurgical machinery, mining machinery, water conservancy machinery, automobile chassis, construction machinery, agricultural machinery, steel rolling machinery, etc.

### SF-2L 边界润滑轴承

#### 基材特性 MATERIAL FEATURES

该产品是以优质低碳钢板为基体，中间烧结多孔青铜粉，表面轧制改性聚甲醛 (POM)。产品应用于汽车底盘、锻压机床、冶金机械、矿山机械、水利行业、轧钢行业等。

The product is based on high-quality low-carbon steel plate, sintered porous bronze powder in the middle, surface rolling modified Polyoxymethylene (POM). The product is used in automobile chassis, forging machine, metallurgical machinery, mining machinery, water conservancy industry, steel rolling industry, etc.



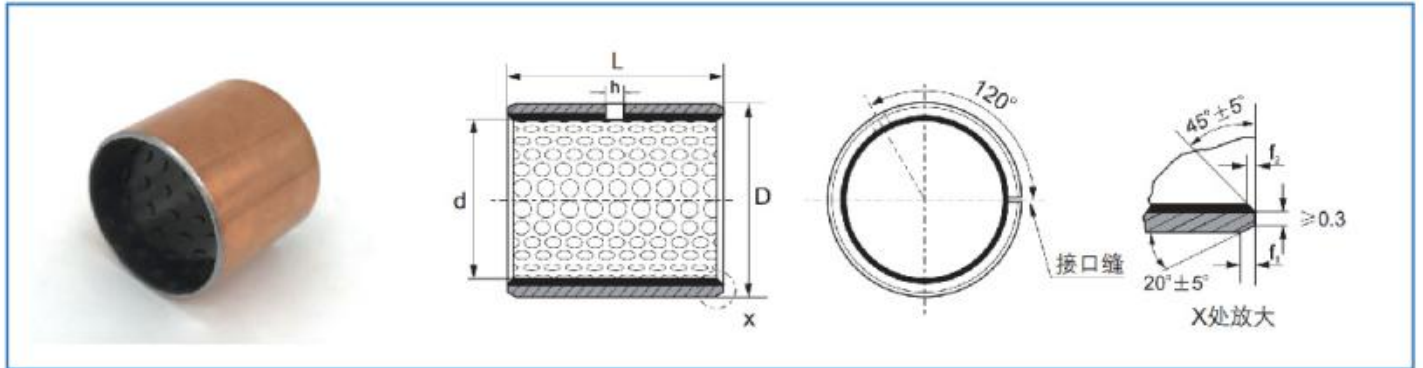
#### 应用特点 APPLICATION CHARACTER

特别适用于低速重载下的旋转运动，摇摆运动以及经常在载荷下启闭而不易形成流体润滑的部位；其表面的塑料层在轴套成型加工时可留有一定的余量，压入座孔后可自行加工，以达到更好的装配尺寸。目前主要运用于冶金机械、矿山机械、水利机械、汽车底盘、建筑机械、农用机械、轧钢机械等。

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# SF-2、SF-2Y、SF-2L 轴承标准公制尺寸 SF-2、SF-2Y、SF-2L BEARING STANDARD METRIC SIZE

## SF-2、SF-2Y、SF-2L 轴承



Unit(单位):mm

内径 (d)	外径 (D)	相配轴(h8) Shaft Dia.	相配座孔(H7) Housing (H7)	油孔(h) Oil Hole	f1	f2	长度 (L)														
							10	15	20	25	30	35	40	45	50	60					
10 <sub>0</sub> <sup>+0.036</sup>	12 <sub>0</sub> <sup>+0.065</sup>	10 <sub>-0.022</sub>	12 <sup>+0.018</sup>	4	0.6	0.3	1010	1015	1020												
12 <sub>0</sub> <sup>+0.043</sup>	14 <sub>0</sub> <sup>+0.090</sup>	12 <sub>-0.027</sub>	14 <sup>+0.018</sup>				1210	1215	1220												
14 <sub>0</sub> <sup>+0.043</sup>	16 <sub>0</sub> <sup>+0.090</sup>	14 <sub>-0.027</sub>	16 <sup>+0.018</sup>					1415	1420												
15 <sub>0</sub> <sup>+0.043</sup>	17 <sub>0</sub> <sup>+0.090</sup>	15 <sub>-0.027</sub>	17 <sup>+0.018</sup>					1515	1520	1525											
16 <sub>0</sub> <sup>+0.043</sup>	18 <sub>0</sub> <sup>+0.090</sup>	16 <sub>-0.027</sub>	18 <sup>+0.018</sup>					1615	1620	1625											
18 <sub>0</sub> <sup>+0.043</sup>	20 <sub>0</sub> <sup>+0.095</sup>	18 <sub>-0.027</sub>	20 <sup>+0.021</sup>					1815	1820	1825											
20 <sub>0</sub> <sup>+0.052</sup>	23 <sub>0</sub> <sup>+0.095</sup>	20 <sub>-0.033</sub>	23 <sup>+0.021</sup>				6	0.8	0.4		2015	2020	2050	2030							
22 <sub>0</sub> <sup>+0.052</sup>	25 <sub>0</sub> <sup>+0.095</sup>	22 <sub>-0.033</sub>	25 <sup>+0.021</sup>								2215		2225								
25 <sub>0</sub> <sup>+0.052</sup>	28 <sub>0</sub> <sup>+0.095</sup>	25 <sub>-0.033</sub>	28 <sup>+0.021</sup>		2515	2520				2525	2530										
28 <sub>0</sub> <sup>+0.052</sup>	32 <sub>0</sub> <sup>+0.045</sup>	28 <sub>-0.033</sub>	32 <sup>+0.025</sup>							2820		2830									
30 <sub>0</sub> <sup>+0.052</sup>	34 <sub>0</sub> <sup>+0.045</sup>	30 <sub>-0.033</sub>	34 <sup>+0.025</sup>	8	1	0.5							3020	3025	3030		3040				
35 <sub>0</sub> <sup>+0.062</sup>	39 <sub>0</sub> <sup>+0.045</sup>	35 <sub>-0.039</sub>	39 <sup>+0.025</sup>										3520		3530	3535	3540				
40 <sub>0</sub> <sup>+0.062</sup>	44 <sub>0</sub> <sup>+0.045</sup>	40 <sub>-0.039</sub>	44 <sup>+0.025</sup>										4020		4030		4040		4050		
45 <sub>0</sub> <sup>+0.062</sup>	50 <sub>0</sub> <sup>+0.045</sup>	45 <sub>-0.039</sub>	50 <sup>+0.025</sup>										4520		4530		4540	4545	4550		
50 <sub>0</sub> <sup>+0.062</sup>	55 <sub>0</sub> <sup>+0.055</sup>	50 <sub>-0.046</sub>	55 <sup>+0.030</sup>				8	1.2	0.6				5030		5040		5050	5060			
55 <sub>0</sub> <sup>+0.074</sup>	60 <sub>0</sub> <sup>+0.055</sup>	55 <sub>-0.046</sub>	60 <sup>+0.030</sup>												6030		5540		5550	5560	
60 <sub>0</sub> <sup>+0.074</sup>	65 <sub>0</sub> <sup>+0.055</sup>	60 <sub>-0.046</sub>	65 <sup>+0.030</sup>														6040		6050	6060	

# SF-2、SF-2Y、SF-2L 轴承标准公制尺寸

## SF-2、SF-2Y、SF-2L BEARING STANDARD METRIC SIZE

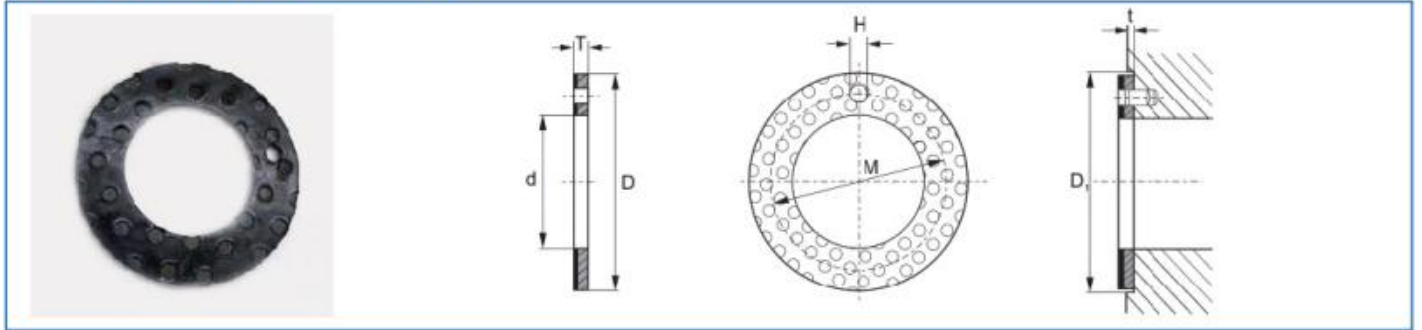
Unit(单位):mm

内径 (d)	外径 (D)	相配轴(h8) Shaft Dia.	相配座孔(H7) Housing (H7)	油孔(h) Oil Hole	f1	f2	长度 (L)									
							40	50	60	80	90	95	100	110	120	
65 <sub>0</sub> <sup>+0.074</sup>	70 <sub>+0.055</sub> <sup>+0.100</sup>	65 <sub>-0.046</sub>	70 <sub>+0.030</sub>	8	1.2	0.6	6540		6560							
70 <sub>0</sub> <sup>+0.074</sup>	75 <sub>+0.055</sub> <sup>+0.100</sup>	70 <sub>-0.046</sub>	75 <sub>+0.030</sub>				7040	7050		7080						
75 <sub>0</sub> <sup>+0.074</sup>	80 <sub>+0.055</sub> <sup>+0.100</sup>	75 <sub>-0.046</sub>	80 <sub>+0.030</sub>				7540		7560	7580						
80 <sub>0</sub> <sup>+0.074</sup>	85 <sub>+0.070</sub> <sup>+0.120</sup>	80 <sub>-0.046</sub>	85 <sub>+0.035</sub>				8040		8060	8080						
85 <sub>0</sub> <sup>+0.087</sup>	90 <sub>+0.070</sub> <sup>+0.120</sup>	85 <sub>-0.054</sub>	90 <sub>+0.035</sub>				8540		8560	8580						
90 <sub>0</sub> <sup>+0.087</sup>	95 <sub>+0.070</sub> <sup>+0.120</sup>	90 <sub>-0.054</sub>	95 <sub>+0.035</sub>				9040		9060	9080	9090					
100 <sub>0</sub> <sup>+0.087</sup>	105 <sub>+0.070</sub> <sup>+0.120</sup>	100 <sub>-0.054</sub>	105 <sub>+0.035</sub>	9.5	1.4	0.7		10050		10080		10095				
105 <sub>0</sub> <sup>+0.087</sup>	110 <sub>+0.070</sub> <sup>+0.120</sup>	105 <sub>-0.054</sub>	110 <sub>+0.035</sub>						10560	10580		10595		105110		
110 <sub>0</sub> <sup>+0.087</sup>	115 <sub>+0.070</sub> <sup>+0.120</sup>	110 <sub>-0.054</sub>	115 <sub>+0.035</sub>						11060	11080		11095		110110		
120 <sub>0</sub> <sup>+0.087</sup>	125 <sub>+0.100</sub> <sup>+0.170</sup>	120 <sub>-0.054</sub>	125 <sub>+0.040</sub>						12060	12080				120110		
125 <sub>0</sub> <sup>+0.100</sup>	130 <sub>+0.100</sub> <sup>+0.170</sup>	125 <sub>-0.063</sub>	130 <sub>+0.040</sub>						12560					125110		
130 <sub>0</sub> <sup>+0.100</sup>	135 <sub>+0.100</sub> <sup>+0.170</sup>	130 <sub>-0.063</sub>	135 <sub>+0.040</sub>							13050	13060	13080		130100		
140 <sub>0</sub> <sup>+0.100</sup>	145 <sub>+0.100</sub> <sup>+0.170</sup>	140 <sub>-0.063</sub>	145 <sub>+0.040</sub>				14050	14060	14080		140100					
150 <sub>0</sub> <sup>+0.100</sup>	155 <sub>+0.100</sub> <sup>+0.170</sup>	150 <sub>-0.063</sub>	155 <sub>+0.040</sub>				15050	15060	15080		150100					
160 <sub>0</sub> <sup>+0.100</sup>	165 <sub>+0.100</sub> <sup>+0.170</sup>	160 <sub>-0.063</sub>	165 <sub>+0.040</sub>	11	1.6	0.8		16050	16060	16080			160100			
170 <sub>0</sub> <sup>+0.100</sup>	175 <sub>+0.100</sub> <sup>+0.170</sup>	170 <sub>-0.063</sub>	175 <sub>+0.040</sub>						17050		17080			170100		
180 <sub>0</sub> <sup>+0.100</sup>	185 <sub>+0.130</sub> <sup>+0.210</sup>	180 <sub>-0.063</sub>	185 <sub>+0.046</sub>						18050	18060	18080			180100		
190 <sub>0</sub> <sup>+0.115</sup>	195 <sub>+0.130</sub> <sup>+0.210</sup>	190 <sub>-0.072</sub>	195 <sub>+0.046</sub>						19050	19060	19080			190100	190120	
200 <sub>0</sub> <sup>+0.115</sup>	205 <sub>+0.130</sub> <sup>+0.210</sup>	200 <sub>-0.072</sub>	205 <sub>+0.046</sub>						20050	20060	20080			200100	200120	
220 <sub>0</sub> <sup>+0.115</sup>	225 <sub>+0.130</sub> <sup>+0.210</sup>	220 <sub>-0.072</sub>	225 <sub>+0.046</sub>						22050	22060	22080			220100	220120	
240 <sub>0</sub> <sup>+0.115</sup>	245 <sub>+0.130</sub> <sup>+0.210</sup>	240 <sub>-0.072</sub>	245 <sub>+0.046</sub>	12	1.6	0.8		24050	24060	24080			240100	240120		
250 <sub>0</sub> <sup>+0.115</sup>	255 <sub>+0.170</sub> <sup>+0.260</sup>	250 <sub>-0.072</sub>	255 <sub>+0.052</sub>						25050	25060	25080			250100	250120	
260 <sub>0</sub> <sup>+0.115</sup>	265 <sub>+0.170</sub> <sup>+0.260</sup>	260 <sub>-0.081</sub>	265 <sub>+0.052</sub>						26050	26060	26080			260100	260120	
280 <sub>0</sub> <sup>+0.115</sup>	285 <sub>+0.170</sub> <sup>+0.260</sup>	280 <sub>-0.081</sub>	285 <sub>+0.052</sub>						28050	28060	28080			280100	280120	
300 <sub>0</sub> <sup>+0.115</sup>	305 <sub>+0.170</sub> <sup>+0.260</sup>	300 <sub>-0.081</sub>	305 <sub>+0.052</sub>						30050	30060	30080			300100	300120	



# WCSF-2、SF-2板材 标准公制尺寸 WCSF-2、SF-2BOARD STANDARD METRIC SIZE

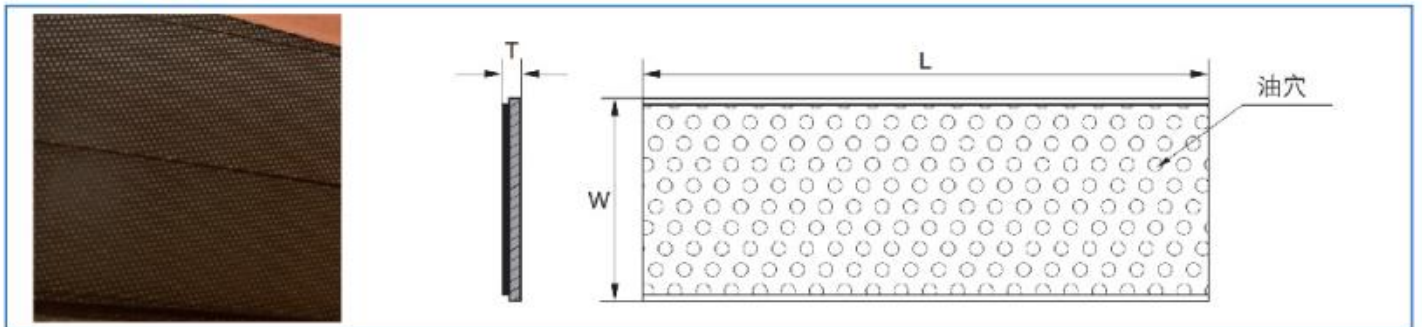
## WCSF-2止推垫片



Unit(单位):mm

型号规格 Designation	垫片尺寸 Washer size				相配轴径 Shaft Dia.	安装尺寸 Install size		
	$d^{+0.25}$	$D_{-0.25}$	$T_{-0.05}$	$M \pm 0.12$		$^{+0.4}_{H_{+0.1}}$	$t \pm 0.2$	$D1^{+0.12}$
WC10SF-2	10	20	1.5	15	8	1.5	1	20
WC12SF-2	12	24		18	10			24
WC14SF-2	14	26		20	12			26
WC16SF-2	16	30		23	14			30
WC18SF-2	18	32		25	16			32
WC20SF-2	20	36		28	18	36		
WC22SF-2	22	38		30	20	38		
WC24SF-2	24	42		33	22	42		
WC26SF-2	26	44		35	24	44		
WC28SF-2	28	48		38	25	48		
WC32SF-2	32	54	43	30	54			
WC38SF-2	38	62	50	35	62			
WC42SF-2	42	66	54	40	66			
WC48SF-2	48	74	2	61	45	4	1.5	74
WC52SF-2	52	78		65	50			78
WC62SF-2	62	90		76	60			90

## SF-2板材

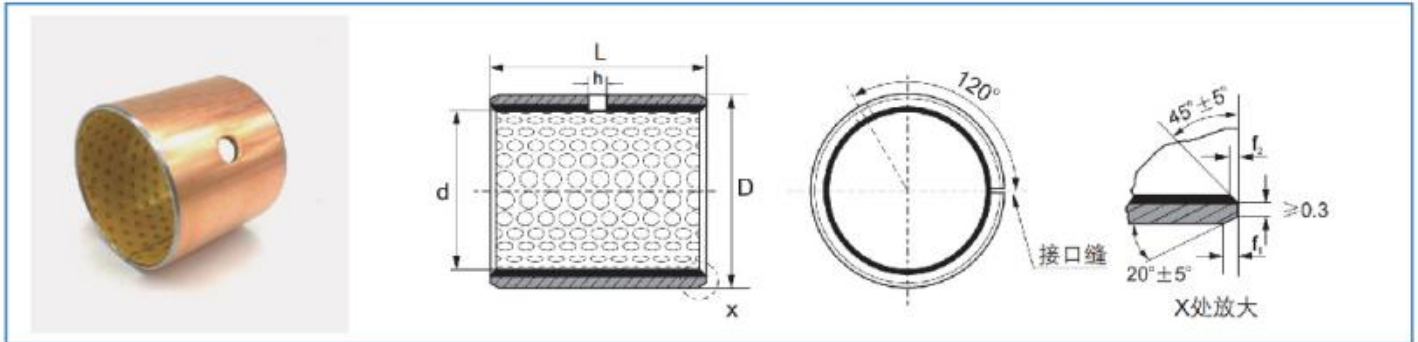


Unit(单位):mm

型号Type	长度 (L) $\pm 1$	宽度 (W) $\pm 1$	厚度 (T) $-0.05$
SF-2 SF-2H SF-2S	500	125	1.0
SF-2 SF-2H SF-2S	500	125	1.5
SF-2 SF-2H SF-2S	500	125	2.0
SF-2 SF-2H SF-2S	500	125	2.5

# DX轴承英制标准尺寸 BEARING DX INCH STANDARD SIZE

## DX轴承英制尺寸



Unit(单位):inch”

型号规格 Designation	公称尺寸Nominal Diameter			Hole Øh	相配轴径 Axle	相配座孔 Housing	安装后内孔 Installed I.D	f1	f2
	Ød	ØD	L						
06DX06			0.375	No hole	0.3648	0.4694	0.3694	0.020	0.005
06DX08	3/8	15/32	0.500		0.3639	0.4687	0.3667		
06DX12			0.750						
07DX08	7/16	17/32	0.500		0.4273	0.5319	0.4319		
07DX12			0.750		0.4263	0.5312	0.4292		
08DX06			0.375		5/32				
08DX08	1/2	19/32	0.500	0.4897		0.5944	0.4944		
08DX10			0.625	0.4887		0.5937	0.4917		
08DX14			0.875						
09DX08	9/16	21/32	0.500	0.5522		0.6569	0.5569		
09DX12			0.750	0.5512		0.6562	0.5542		
10DX08			0.500	1/4				0.020	0.005
10DX10	5/8	23/32	0.625		0.6146	0.7195	0.6195		
10DX12			0.750		0.6136	0.7187	0.6167		
10DX14			0.875						
12DX08	3/4	7/8	0.500		0.7390	0.8758	0.7444		
12DX12			0.750		0.7378	0.8750	0.7412		
12DX16			1.000						
14DX12	7/8	1	0.750	0.8639	1.0008	0.8694			
14DX14			0.875	0.8627	1.0000	0.8662			
14DX16			1.000						
16DX12	1	9/8	0.750	0.9888	1.1258	0.9944			
16DX16			1.000	0.9876	1.1250	0.9912			
16DX24			1.500						
18DX12	9/8	41/32	0.750	1.1138	1.2822	1.1202			
18DX16			1.000	1.1126	1.2812	1.1164			
18DX24			1.500						

# DX轴承英制标准尺寸 BEARING DX INCH STANDARD SIZE

Unit(单位):inch”

型号规格 Designation	公称尺寸NominalDiameter			Hole Øh	相配轴径 Axle	相配座孔 Housing	安装后内孔 Installed I.D	f1	f2	
	Ød	ØD	L							
20DX12	5/4	45/32	0.750	1/4	1.2387	1.4072	1.2452	0.020 0.040	0.005 0.025	
20DX16			1.000		1.2371	1.4062	1.2414			
20DX20			1.250							
22DX16	11/8	49/32	1.000		1.3635	1.5322	1.3702			
22DX22			1.375		1.3619	1.5312	1.3664			
22DX28			1.750							
24DX16	3/2	53/32	1.000	5/16	1.4884	1.6572	1.4952			
24DX20			1.250		1.4868	1.6562	1.4914			
24DX24			1.500							
26DX16	13/8	57/32	1.000		1.6133	1.7822	1.6202			
26DX24			1.500		1.6117	1.7812	1.6164			
28DX16	7/4	31/16	1.000		3/8	1.7383	1.9385			1.7461
28DX24			1.500	1.7367		1.9375	1.7415			
28DX28			1.750							
30DX30	15/8	33/16	1.875	1.8632		2.0637	1.8713			
30DX36			2.250	1.8616		2.0625	1.8665			
32DX24	2	35/16	1.500	5/8		1.9881	2.1887			1.9963
32DX32			2.000		1.9863	2.1875	1.9915			
32DX40			2.500							
36DX32	9/4	39/16	2.000		3/4	2.2378	2.4387			2.2463
36DX36			2.250			2.2360	2.4375			2.2415
36DX40			2.500							
40DX32	5/2	43/16	2.000	7/8		2.4875	2.6887			2.4963
40DX40			2.500			2.4857	2.6875			2.4915
44DX32	11/4	47/16	2.000			1 1/8	2.7351	2.9387	2.7457	
44DX40			2.500		2.7333		2.9375	2.7393		
44DX48			3.000							
48DX32	3	51/16	2.000		1 1/2		2.9849	3.1889	2.9959	
48DX48			3.000	2.9831			3.1875	2.9893		
48DX60			3.750							
56DX48	7/2	59/16	3.000	1 3/4		3.4844	3.6889	3.4959		
56DX60			3.750			3.4822	3.6875	3.4893		
64DX48	4	67/16	3.000			2	3.9839	4.1889	3.9959	
64DX60			3.750		3.9817		4.1875	3.9893		

# JF-800 双金属轴承 JF-800 BIMETAL BEARING



# JF-800 双金属轴承 JF-800 BIMETAL BEARING

## JF-800 双金属轴承

### 结构及应用 STRUCTURE AND APPLICATION

双金属轴承是以优质低碳钢为基体，表面烧结铜、锡合金，经压延而成的卷制滑动轴承，标准的合金材料有：CuSn10Pb10, CuPb24Sn4, CuPb30, CuSn6Zn6Pb3, AlSn20Cu 等。内表合金层化学成份的改变能满足不同承载压力，不同使用温度、不同滑动速度的要求，摩擦面在生产中设计出不同结构的油槽、油穴能满足不同加油方式的要求，并能防止咬轴现象。

Bimetallic bearing is a rolled sliding bearing based on high-quality low carbon steel and sintered with copper and tin alloy. The standard gold bearing materials are CuSn10Pb10, CuPb24Sn4, CuPb30, CuSn6Zn6Pb3, AlSn20Cu, etc. The change of the chemical composition of the inner surface alloy layer can meet the requirements of different load-bearing pressure, different temperature and different sliding speed. The oil groove and oil hole with different structure are designed in the production of the friction surface, which can meet the requirements of different refueling methods and prevent the phenomenon of shaft biting.



### 加油设计 TECHNICS DESIGN

双金属轴承的应用，必须设计有油润滑的条件。一般的低速场合加油条件是装配时加油脂全封闭，使用时按周期用油栓加油，例：汽车平衡桥中，弹簧钢板座孔中，制动蹄中；转向节中；冲床滑动部位；推土机支重轮、引导轮中等。运动中速场合应配置油杯稀油润滑，例：连杆部位、冲剪机转轴部位、输送轮部位等。高速的场合是浸泡在油中的加油条件，例：齿轮箱体中、油泵中、油缸中、发动机中、离合器等。

The application of bimetal bearing must be designed with oil lubrication. General low-speed occasions refueling condition is that the grease is completely closed during assembly, and the oil is filled with the oil bolt according to the cycle when using, for example: in the automobile balance axle, in the spring plate seat hole, in the brake shoe; In the steering knuckle; Sliding part of punch press; The roller and guide wheel of bulldozer are medium. Oil cup and thin oil lubrication should be provided for medium speed occasions, such as connecting rod, punching and shearing machine shaft, conveying wheel, etc. High speed occasion is immersed in oil refueling conditions, such as: gear box, oil pump, oil cylinder, engine, clutch medium.

### 板材厚度尺寸及公差

### PLATE THICKNESS DIMENSION AND TOLERANCE

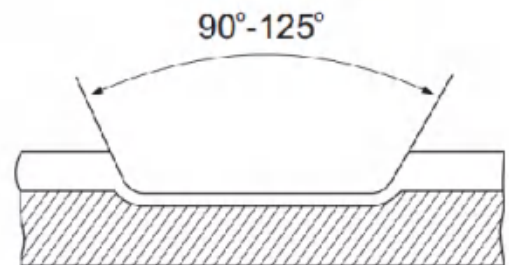
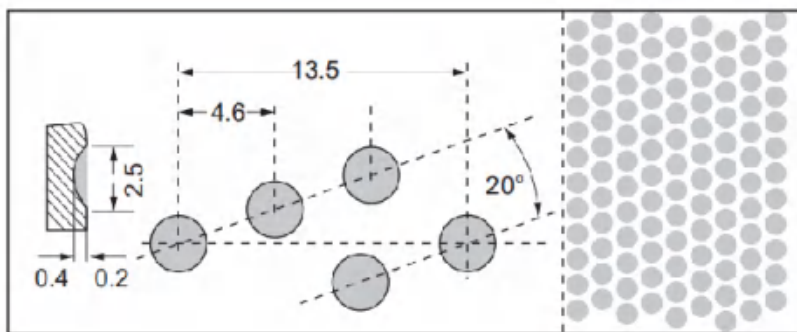
公差厚度 Nominal Thickness	1.0 <sub>-0.025</sub>	1.5 <sub>-0.03</sub>	2.0 <sub>-0.03</sub>	2.5 <sub>-0.04</sub>	3.0 <sub>-0.045</sub>	3.5 <sub>-0.05</sub>	4.0 <sub>-0.055</sub>	4.5 <sub>-0.060</sub>	5.0 <sub>-0.065</sub>
钢背厚度 Thickness of Steel Backing	0.5	1.0	1.4	1.9	2.3	2.8	3.2	3.6	4
铜铅合金厚度 Thickness of Bronze Layer	0.5	0.5	0.6	0.6	0.7	0.7	0.8	0.9	1
可供板材长×宽 Length×Width of The Strips	500×125	500×125	600×150	600×150	800×150	800×150	800×150	800×150	800×150

# JF-800 双金属轴承 JF-800 BIMETAL BEARING

## 钢-铜铅合金轴套内孔可加工与不可加工壁厚公差 Wall Thickness of Machinable and Non-machinable Bore of Bushes and Their Tolerances

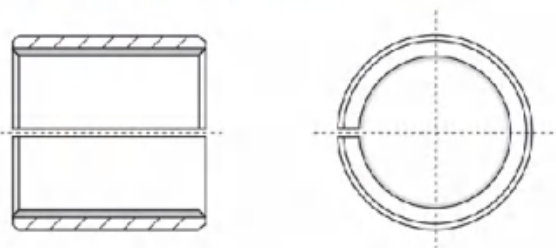
工称尺寸 Nominal Thickness	系列B内孔不可加工壁厚公差 Tolerances of Series B(non-machinable)	系列C内孔可加工壁厚公差 Tolerances of Series C(machinable)
1	-0.025	+0.15 +0.25
1.5	-0.030	+0.15 +0.25
2	-0.035	+0.15 +0.25
2.5	-0.040	+0.15 +0.30
3	-0.045	+0.15 +0.30
3.5	-0.050	+0.15 +0.30

## 双金属轴套的油槽油穴形式 TYPES FOR BUSH'S GROOVES & INDENTATIONS

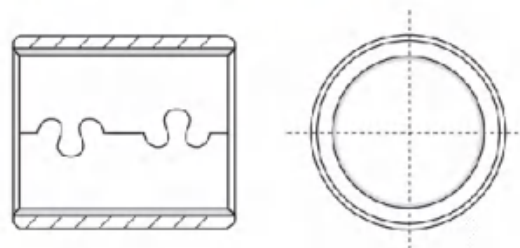


## 双金属轴套的接口形式 LOCK TYPES OF WRAPPED BUSHES

a. 开口型 Straight Joint

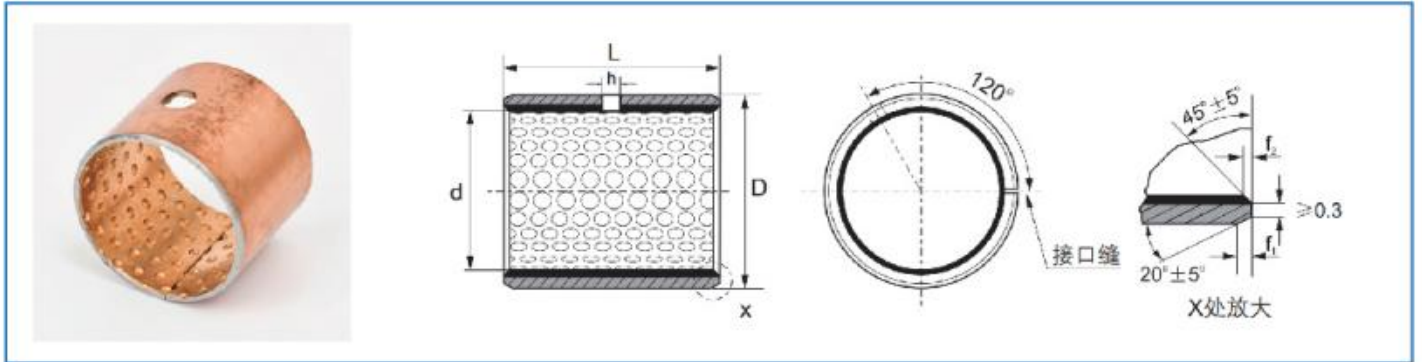


b. 互锁搭口型 Inter Locking Joint



# JF-800 双金属轴承标准公制尺寸 JF-800 BIMETAL BEARING STANDARD METRIC SIZE

## JF-800轴承



Unit(单位):mm

内径 (d)	外径 (D)	相配轴(h8) Shaft Dia.	相配座孔(H7) Housing (H7)	油孔(h) Oil Hole	f1	f2	长度 (L)													
							10	15	20	25	30	35	40	45	50	60				
$10_0^{+0.036}$	$12_{-0.030}^{+0.065}$	$10_{-0.022}$	$12_{+0.018}$	4	0.6	0.3	1010	1015	1020											
$12_0^{+0.043}$	$14_{-0.030}^{+0.065}$	$12_{-0.027}$	$14_{+0.018}$				1210	1215	1220											
$14_0^{+0.043}$	$16_{-0.030}^{+0.065}$	$14_{-0.027}$	$16_{+0.018}$					1415	1420											
$15_0^{+0.043}$	$17_{-0.030}^{+0.065}$	$15_{-0.027}$	$17_{+0.018}$					1515	1520	1525										
$16_0^{+0.043}$	$18_{-0.030}^{+0.065}$	$16_{-0.027}$	$18_{+0.018}$					1615	1620	1625										
$18_0^{+0.043}$	$20_{-0.035}^{+0.075}$	$18_{-0.027}$	$20_{+0.021}$		6	0.8	0.4		1815	1820	1825									
$20_0^{+0.052}$	$23_{-0.035}^{+0.075}$	$20_{-0.033}$	$23_{+0.021}$						2015	2020	2050	2030								
$22_0^{+0.052}$	$25_{-0.035}^{+0.075}$	$22_{-0.033}$	$25_{+0.021}$						2215		2225									
$25_0^{+0.052}$	$28_{-0.035}^{+0.075}$	$25_{-0.033}$	$28_{+0.021}$						2515	2520	2525	2530								
$28_0^{+0.052}$	$32_{-0.045}^{+0.085}$	$28_{-0.033}$	$32_{+0.025}$								2820		2830							
$30_0^{+0.052}$	$34_{-0.045}^{+0.085}$	$30_{-0.033}$	$34_{+0.025}$	8		1	0.5				3020	3025	3030		3040					
$35_0^{+0.062}$	$39_{-0.045}^{+0.085}$	$35_{-0.039}$	$39_{+0.025}$								3520		3530	3535	3540					
$40_0^{+0.062}$	$44_{-0.045}^{+0.085}$	$40_{-0.039}$	$44_{+0.025}$								4020		4030		4040		4050			
$45_0^{+0.062}$	$50_{-0.045}^{+0.085}$	$45_{-0.039}$	$50_{+0.025}$								4520		4530		4540	4545	4550			
$50_0^{+0.062}$	$55_{-0.055}^{+0.100}$	$50_{-0.046}$	$55_{+0.030}$						1.2	0.6				5030		5040		5050	5060	
$55_0^{+0.074}$	$60_{-0.055}^{+0.100}$	$55_{-0.046}$	$60_{+0.030}$								6030		5540		5550	5560				
$60_0^{+0.074}$	$65_{-0.055}^{+0.100}$	$60_{-0.046}$	$65_{+0.030}$										6040		6050	6060				

# JF-800 双金属轴承标准公制尺寸

## JF-800 BIMETAL BEARING STANDARD METRIC SIZE

Unit(单位):mm

内径 (d)	外径 (D)	相配轴(h8) Shaft Dia.	相配座孔(H7) Housing (H7)	油孔(h) Oil Hole	f1	f2	长度 (L)											
							40	50	60	80	90	95	100	110	120			
65 <sub>0</sub> <sup>+0.074</sup>	70 <sub>+0.055</sub> <sup>+0.100</sup>	65 <sub>-0.046</sub>	70 <sub>+0.030</sub>	8	1.2	0.6	6540		6560									
70 <sub>0</sub> <sup>+0.074</sup>	75 <sub>+0.055</sub> <sup>+0.100</sup>	70 <sub>-0.046</sub>	75 <sub>+0.030</sub>				7040	7050		7080								
75 <sub>0</sub> <sup>+0.074</sup>	80 <sub>+0.055</sub> <sup>+0.100</sup>	75 <sub>-0.046</sub>	80 <sub>+0.030</sub>				7540		7560	7580								
80 <sub>0</sub> <sup>+0.074</sup>	85 <sub>+0.070</sub> <sup>+0.120</sup>	80 <sub>-0.046</sub>	85 <sub>+0.035</sub>				8040		8060	8080								
85 <sub>0</sub> <sup>+0.087</sup>	90 <sub>+0.070</sub> <sup>+0.120</sup>	85 <sub>-0.054</sub>	90 <sub>+0.035</sub>				8540		8560	8580								
90 <sub>0</sub> <sup>+0.087</sup>	95 <sub>+0.070</sub> <sup>+0.120</sup>	90 <sub>-0.054</sub>	95 <sub>+0.035</sub>				9040		9060	9080	9090							
100 <sub>0</sub> <sup>+0.087</sup>	105 <sub>+0.070</sub> <sup>+0.120</sup>	100 <sub>-0.054</sub>	105 <sub>+0.035</sub>	9.5	1.4	0.7		10050		10080		10095						
105 <sub>0</sub> <sup>+0.087</sup>	110 <sub>+0.070</sub> <sup>+0.120</sup>	105 <sub>-0.054</sub>	110 <sub>+0.035</sub>						10560	10580		10595		105110				
110 <sub>0</sub> <sup>+0.087</sup>	115 <sub>+0.070</sub> <sup>+0.120</sup>	110 <sub>-0.054</sub>	115 <sub>+0.035</sub>						11060	11080		11095		110110				
120 <sub>0</sub> <sup>+0.087</sup>	125 <sub>+0.100</sub> <sup>+0.170</sup>	120 <sub>-0.054</sub>	125 <sub>+0.040</sub>						12060	12080				120110				
125 <sub>0</sub> <sup>+0.100</sup>	130 <sub>+0.100</sub> <sup>+0.170</sup>	125 <sub>-0.063</sub>	130 <sub>+0.040</sub>						12560					125110				
130 <sub>0</sub> <sup>+0.100</sup>	135 <sub>+0.100</sub> <sup>+0.170</sup>	130 <sub>-0.063</sub>	135 <sub>+0.040</sub>							13050	13060	13080			130100			
140 <sub>0</sub> <sup>+0.100</sup>	145 <sub>+0.100</sub> <sup>+0.170</sup>	140 <sub>-0.063</sub>	145 <sub>+0.040</sub>	11	1.6	0.8		14050	14060	14080			140100					
150 <sub>0</sub> <sup>+0.100</sup>	155 <sub>+0.100</sub> <sup>+0.170</sup>	150 <sub>-0.063</sub>	155 <sub>+0.040</sub>						15050	15060	15080			150100				
160 <sub>0</sub> <sup>+0.100</sup>	165 <sub>+0.100</sub> <sup>+0.170</sup>	160 <sub>-0.063</sub>	165 <sub>+0.040</sub>						16050	16060	16080			160100				
170 <sub>0</sub> <sup>+0.100</sup>	175 <sub>+0.100</sub> <sup>+0.170</sup>	170 <sub>-0.063</sub>	175 <sub>+0.040</sub>						17050		17080			170100				
180 <sub>0</sub> <sup>+0.100</sup>	185 <sub>+0.130</sub> <sup>+0.210</sup>	180 <sub>-0.063</sub>	185 <sub>+0.046</sub>						18050	18060	18080			180100				
190 <sub>0</sub> <sup>+0.115</sup>	195 <sub>+0.130</sub> <sup>+0.210</sup>	190 <sub>-0.072</sub>	195 <sub>+0.046</sub>						19050	19060	19080			190100		190120		
200 <sub>0</sub> <sup>+0.115</sup>	205 <sub>+0.130</sub> <sup>+0.210</sup>	200 <sub>-0.072</sub>	205 <sub>+0.046</sub>	12	1.6	0.8		20050	20060	20080			200100		200120			
220 <sub>0</sub> <sup>+0.115</sup>	225 <sub>+0.130</sub> <sup>+0.210</sup>	220 <sub>-0.072</sub>	225 <sub>+0.046</sub>						22050	22060	22080			220100		220120		
240 <sub>0</sub> <sup>+0.115</sup>	245 <sub>+0.130</sub> <sup>+0.210</sup>	240 <sub>-0.072</sub>	245 <sub>+0.046</sub>						24050	24060	24080			240100		240120		
250 <sub>0</sub> <sup>+0.115</sup>	255 <sub>+0.170</sub> <sup>+0.260</sup>	250 <sub>-0.072</sub>	255 <sub>+0.052</sub>						25050	25060	25080			250100		250120		
260 <sub>0</sub> <sup>+0.115</sup>	265 <sub>+0.170</sub> <sup>+0.260</sup>	260 <sub>-0.081</sub>	265 <sub>+0.052</sub>						26050	26060	26080			260100		260120		
280 <sub>0</sub> <sup>+0.115</sup>	285 <sub>+0.170</sub> <sup>+0.260</sup>	280 <sub>-0.081</sub>	285 <sub>+0.052</sub>						28050	28060	28080			280100		280120		
300 <sub>0</sub> <sup>+0.115</sup>	305 <sub>+0.170</sub> <sup>+0.260</sup>	300 <sub>-0.081</sub>	305 <sub>+0.052</sub>			30050	30060	30080			300100		300120					



# FB-090、FB-092 青铜卷制轴承 FB-090、FB-092 BRONZE ROLLING BEARING



## FB-090 青铜卷制轴承 FB-090 BRONZE ROLLING BEARING

### FB-090 青铜卷制轴承

#### 基材特性 MATERIAL FEATURES

FB-090青铜卷制轴承,以锡青铜铜合金(CuSn8)为基体,表面轧制菱形油穴,起储存油脂作用,产品具有良好的抗疲劳性和承载能力、耐腐蚀、抗磨损。产品广泛运用于农业机械、建筑机械、工程机械等低速重载场合。

FB-090 bronze rolling bearing is made of tin bronze copper alloy (CuSn8) as the matrix, and its surface is rolled with rhombic oil hole to store grease. The product has good fatigue resistance, bearing capacity, corrosion resistance and wear resistance. Products are widely used in agricultural machinery, construction machinery, construction machinery and other low-speed heavy-duty occasions.

#### 材料组织 MATERIAL STRUCTURE

采用高密度青铜卷制成形,内表面轧制圆形或菱形油穴以减少磨损、延长使用寿命时间,并且做到很好的防腐蚀功能。

High density bronze is used for rolling forming, and the inner surface is rolled with round or rhombic oil holes to reduce wear, prolong service life and achieve good anti-corrosion function.

#### 应用特点 APPLICATION CHARACTER

1. 该产品内孔布满菱型油穴,在使用中可储存大量油脂,延长加油间隔时间;
2. 少油润滑,适用于较难加油或水润滑的场合;
3. 耐磨性能好、摩擦系数小、使用寿命长;
4. 走合性能好,低噪音,无污染;
5. 薄壁结构,质量轻,可缩小机械体积;
6. 基体具有密度高、无气缩孔、承载能力大;目前已广泛运用于各种机械的滑动部位,如:自动化机械设备(伸缩、摇摆、滑动、弯曲、回旋、回转部位) 液压气缸导套、纺织机械、塑胶成型机、压铸机、橡胶机械、液压搬运车、汽机车、摩托车工业、港口、水利、工程、农用机械等。

1. The inner hole of the product is full of rhombic oil holes, which can store a large amount of oil and prolong the interval of oil filling;
2. Minim oil lubrication, can be applied in water-lubrication environment;
3. Good anti-abrasion, low coefficient of friction, long operating life;
4. Good mending, low-noise, non-pollution;
5. This wall, light, can reducing the volume of the machine;
6. High density, high load no alveoli The products now are applied in different machine, such as auto machines, pumps, plastic injection machine, auto industry, heavy equipments, etc.



## FB-092青铜卷制轴承 FB-092 BRONZE ROLLING BEARING

### FB-092 青铜卷制轴承

#### 基材特性 MATERIAL FEATURES

FB-092青铜卷制轴承,以锡青铜铜合金(CuSn8)为基体,工作表面按一定角度、密度均匀排布着润滑通孔,在启动时容易形成油膜,从而降低启动摩擦系数。它具有良好的抗疲劳性和承载能力、耐腐蚀、抗磨损。该系列产品广泛运用于农业机械、林业机械、建筑机械、工程机械等高载低速场合。

FB-092 bronze rolling bearing is made of tin bronze copper alloy (CuSn8). The working surface is evenly arranged with lubrication through holes according to a certain angle and density. It is easy to form oil film when starting, so as to reduce the starting friction coefficient. It has good fatigue resistance, bearing capacity, corrosion resistance and wear resistance. This series of products are widely used in agricultural machinery, forestry machinery, construction machinery, engineering machinery and other high load and low speed occasions.



#### 材料组织 MATERIAL STRUCTURE

表面排布规则的油孔,可在装配前或装配后涂抹油脂,以便在工作中易形成转移油膜,降低摩擦系数。具有油脂储存量大、免维护周期长等优点。

Oil holes with regular arrangement on the surface can be smeared with grease before or after assembly, so as to form transfer oil film easily and reduce friction coefficient. It has the advantages of large oil storage and long maintenance free period.

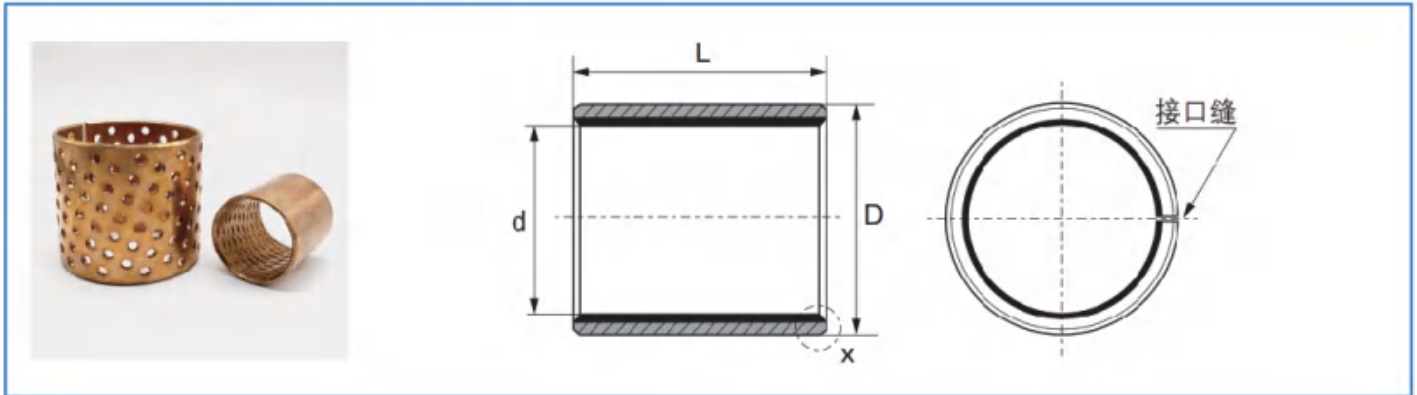


#### 应用特点 APPLICATION CHARACTER

1. 节约大量铜材、节省车制铜套工时;
  2. 与车制轴套、滚动轴承相比其重量轻、成本低;
  3. 油孔能储存更多的润滑油,并可在摩擦面加工出各种油槽;
  4. 极高的承载能力,特别是适用于粗糙的摩擦面;
  5. 高散热、膨胀系数小、使用状况稳定、使用寿命长。
1. Save a lot of copper materials and the working time of making copper sleeve;
  2. Compared with axle sleeve and rolling bearing made by car, it has light weight and low cost;
  3. The oil hole can store more lubricating oil and process various oil grooves on the friction surface;
  4. Very high bearing capacity, especially suitable for rough friction surface;
  5. High heat dissipation, small expansion coefficient, stable service condition and long service life.

FB-090、FB-092 青铜卷制轴承标准公制尺寸  
 FB-090、FB-092 BRONZE ROLLING BEARING STANDARD METRIC SIZE

# FB090、FB092轴承



Unit(单位):mm

型号规格 Designation	d×D×L	型号规格 Designation	d×D×L
FB090/FB092 1010	10×12×10	FB090/FB092 2515	25×28×15
FB090/FB092 1015	10×12×15	FB090/FB092 2520	25×28×20
FB090/FB092 1210	12×14×10	FB090/FB092 2525	25×28×25
FB090/FB092 1215	12×14×15	FB090/FB092 2530	25×28×30
FB090/FB092 1220	12×14×20	FB090/FB092 2815	28×32×15
FB090/FB092 1410	14×16×10	FB090/FB092 2820	28×32×20
FB090/FB092 1415	14×16×15	FB090/FB092 2825	28×32×25
FB090/FB092 1420	14×16×20	FB090/FB092 2830	28×32×30
FB090/FB092 1425	14×16×25	FB090/FB092 3015	30×34×15
FB090/FB092 1510	15×17×10	FB090/FB092 3020	30×34×20
FB090/FB092 1515	15×17×15	FB090/FB092 3025	30×34×25
FB090/FB092 1520	15×17×20	FB090/FB092 3030	30×34×30
FB090/FB092 1525	15×17×25	FB090/FB092 3040	30×34×40
FB090/FB092 1610	16×18×10	FB090/FB092 3215	32×36×15
FB090/FB092 1615	16×18×15	FB090/FB092 3220	32×36×20
FB090/FB092 1620	16×18×20	FB090/FB092 3225	32×36×25
FB090/FB092 1625	16×18×25	FB090/FB092 3230	32×36×30
FB090/FB092 1810	18×20×10	FB090/FB092 3240	32×36×40
FB090/FB092 1815	18×20×15	FB090/FB092 3515	35×39×15
FB090/FB092 1820	18×20×20	FB090/FB092 3520	35×39×20
FB090/FB092 1825	18×20×25	FB090/FB092 3525	35×39×25
FB090/FB092 2010	20×23×10	FB090/FB092 3530	35×39×30
FB090/FB092 2015	20×23×15	FB090/FB092 3540	35×39×40
FB090/FB092 2020	20×23×20	FB090/FB092 3550	35×39×50
FB090/FB092 2025	20×23×25	FB090/FB092 4020	40×44×20
FB090/FB092 2030	20×23×30	FB090/FB092 4025	40×44×25
FB090/FB092 2215	22×25×15	FB090/FB092 4030	40×44×30
FB090/FB092 2220	22×25×20	FB090/FB092 4040	40×44×40
FB090/FB092 2225	22×25×25	FB090/FB092 4050	40×44×50
FB090/FB092 2230	22×25×30	FB090/FB092 4060	40×44×60
FB090/FB092 2240	22×25×40		
FB090/FB092 2430	24×27×30		

# FB-090、FB-092 轴承标准公制尺寸

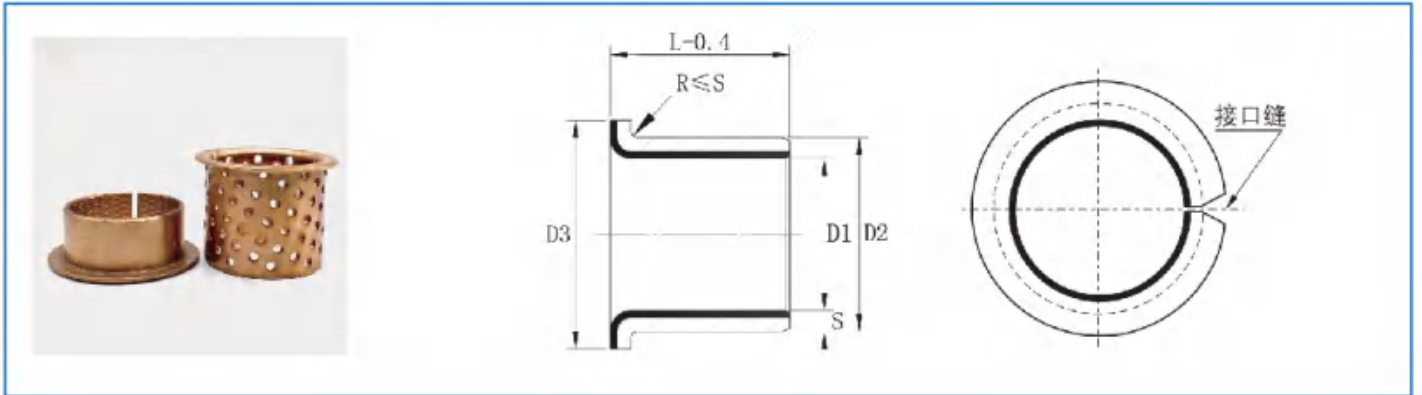
## FB-090、FB-092 BEARING STANDARD METRIC SIZE

Unit(单位):mm

型号规格 Designation	d×D×L	型号规格 Designation	d×D×L
FB090/FB092 4520	45×50×20	FB090/FB092 12060	120×125×60
FB090/FB092 4525	45×50×25	FB090/FB092 120100	120×125×100
FB090/FB092 4530	45×50×30		
FB090/FB092 4540	45×50×40	FB090/FB092 12560	125×130×60
FB090/FB092 4550	45×50×50	FB090/FB092 125100	125×130×100
FB090/FB092 4560	45×50×60		
		FB090/FB092 13060	130×135×60
FB090/FB092 5025	50×55×25	FB090/FB092 130100	130×135×100
FB090/FB092 5030	50×55×30		
FB090/FB092 5040	50×55×40	FB090/FB092 13560	135×140×60
FB090/FB092 5050	50×55×50	FB090/FB092 135100	135×140×100
FB090/FB092 5060	50×55×60		
		FB090/FB092 14060	140×145×60
FB090/FB092 5520	55×60×20	FB090/FB092 140100	140×145×100
FB090/FB092 5525	55×60×25		
FB090/FB092 5530	55×60×30	FB090/FB092 14560	145×150×60
FB090/FB092 5540	55×60×40	FB090/FB092 145100	145×150×100
FB090/FB092 5550	55×60×50		
FB090/FB092 5560	55×60×60	FB090/FB092 15060	150×155×60
		FB090/FB092 150100	150×155×100
FB090/FB092 6025	60×65×25	FB090/FB092 15560	155×160×60
FB090/FB092 6030	60×65×30	FB090/FB092 155100	155×160×100
FB090/FB092 6035	60×65×35		
FB090/FB092 6040	60×65×40		
FB090/FB092 6050	60×65×50	FB090/FB092 16060	160×165×60
FB090/FB092 6060	60×65×60	FB090/FB092 160100	160×165×100
FB090/FB092 6080	60×65×80		
		FB090/FB092 16560	165×170×60
FB090/FB092 6530	65×70×30	FB090/FB092 165100	165×170×100
FB090/FB092 6540	65×70×40		
FB090/FB092 6550	65×70×50	FB090/FB092 17060	170×175×60
FB090/FB092 6560	65×70×60	FB090/FB092 170100	170×175×100
FB090/FB092 6580	65×70×80		
		FB090/FB092 17560	175×180×60
FB090/FB092 7040	70×75×40	FB090/FB092 175100	175×180×100
FB090/FB092 7050	70×75×50		
FB090/FB092 7060	70×75×60	FB090/FB092 18060	180×185×60
FB090/FB092 7070	70×75×70	FB090/FB092 180100	180×185×100
FB090/FB092 7080	70×75×80		
FB090/FB092 7090	70×75×90	FB090/FB092 18560	185×190×60
		FB090/FB092 185100	185×190×100
FB090/FB092 7530	75×80×30	FB090/FB092 19060	190×195×60
FB090/FB092 7540	75×80×40	FB090/FB092 190100	190×195×100
FB090/FB092 7560	75×80×60		
FB090/FB092 7580	75×80×80	FB090/FB092 19560	195×200×60
		FB090/FB092 195100	195×200×100
FB090/FB092 8030	80×85×30	FB090/FB092 20060	200×205×60
FB090/FB092 8040	80×85×40	FB090/FB092 200100	200×205×100
FB090/FB092 8060	80×85×60		
FB090/FB092 8080	80×85×80		
FB090/FB092 8530	85×90×30	FB090/FB092 21560	215×220×60
FB090/FB092 8540	85×90×40	FB090/FB092 215100	215×220×100
FB090/FB092 8560	85×90×60		
FB090/FB092 8580	85×90×80	FB090/FB092 22560	225×230×60
		FB090/FB092 225100	225×230×100
FB090/FB092 9040	90×95×40	FB090/FB092 23560	235×240×60
FB090/FB092 9060	90×95×60	FB090/FB092 235100	235×240×100
FB090/FB092 9080	90×95×80		
FB090/FB092 9090	90×95×90		
		FB090/FB092 24560	245×250×60
FB090/FB092 10050	100×105×50	FB090/FB092 245100	245×250×100
FB090/FB092 10060	100×105×60		
FB090/FB092 10095	100×105×95	FB090/FB092 27560	275×280×60
		FB090/FB092 275100	275×280×100
FB090/FB092 10560	105×110×60	FB090/FB092 28560	285×290×60
FB090/FB092 105100	105×110×100	FB090/FB092 285100	285×290×100
FB090/FB092 11060	110×115×60	FB090/FB092 30060	300×305×60
FB090/FB092 110100	110×115×100	FB090/FB092 300100	300×305×100
FB090/FB092 11560	115×120×60		
FB090/FB092 115100	115×120×100		

FB-090F、FB-092F 翻边轴承标准公制尺寸  
FB-090F、FB-092F FLANGING BEARING STANDARD METRIC SIZE

# FB090F、FB092F翻边轴承



Unit(单位):mm

型号规格 Designation	D1×D2/D3×L	型号规格 Designation	D1×D2/D3×L
FB090F/FB092F 2515	25×28/35×15	FB090F/FB092F 11050	110×115/130×50
FB090F/FB092F 2525	25×28/35×25	FB090F/FB092F 11090	110×115/130×90
FB090F/FB092F 3020	30×34/45×20	FB090F/FB092F 12050	120×125/140×50
FB090F/FB092F 3030	30×34/45×30	FB090F/FB092F 12090	120×125/140×90
FB090F/FB092F 3520	35×39/50×20	FB090F/FB092F 13060	130×135/155×60
FB090F/FB092F 3535	35×39/50×35	FB090F/FB092F 13090	130×135/155×90
FB090F/FB092F 4025	40×44/55×25	FB090F/FB092F 14060	140×145/165×60
FB090F/FB092F 4040	40×44/55×40	FB090F/FB092F 14090	140×145/165×90
FB090F/FB092F 4530	45×50/60×30	FB090F/FB092F 15060	150×155/180×60
FB090F/FB092F 4545	45×50/60×45	FB090F/FB092F 15090	150×155/180×90
FB090F/FB092F 4550	45×50/60×50	FB090F/FB092F 16060	160×165/190×60
FB090F/FB092F 5030	50×55/65×30	FB090F/FB092F 16090	160×165/190×90
FB090F/FB092F 5050	50×55/65×50	FB090F/FB092F 17060	170×175/200×60
FB090F/FB092F 5530	55×60/70×30	FB090F/FB092F 17090	170×175/200×90
FB090F/FB092F 5550	55×60/70×50	FB090F/FB092F 18060	180×185/215×60
FB090F/FB092F 6030	60×65/75×30	FB090F/FB092F 18090	180×185/215×90
FB090F/FB092F 6035	60×65/75×35	FB090F/FB092F 19060	190×195/225×60
FB090F/FB092F 6060	60×65/75×60	FB090F/FB092F 19090	190×195/225×90
FB090F/FB092F 6530	65×70/80×30	FB090F/FB092F 20060	200×205/235×60
FB090F/FB092F 6560	65×70/80×60	FB090F/FB092F 20090	200×205/235×90
FB090F/FB092F 7040	70×75/85×40	FB090F/FB092F 22560	225×230/260×60
FB090F/FB092F 7070	70×75/85×70	FB090F/FB092F 22590	225×230/260×90
FB090F/FB092F 7540	75×80/90×40	FB090F/FB092F 25060	250×255/290×60
FB090F/FB092F 7570	75×80/90×70	FB090F/FB092F 25090	250×255/290×90
FB090F/FB092F 8040	80×85/100×40	FB090F/FB092F 26560	265×270/305×60
FB090F/FB092F 8080	80×85/100×80	FB090F/FB092F 26590	265×270/305×90
FB090F/FB092F 9095	90×95/110×50	FB090F/FB092F 28560	285×290/325×60
FB090F/FB092F 9090	90×95/110×90	FB090F/FB092F 28590	285×290/325×90
FB090F/FB092F 10050	100×105/120×50	FB090F/FB092F 30060	300×305/340×60
FB090F/FB092F 10090	100×105/120×90	FB090F/FB092F 30090	300×305/340×90

# JDB 镶嵌式固体润滑轴承 JDB INLAID SOLID LUBRICATION BEARING



## JDB 镶嵌式固体润滑轴承主要材料推荐

### MAJOR RECOMMENDED MATERIALS OF JDB INLAID SOLID LUBRICATION BEARING

#### 主要材料种类 Major material category

物理指标 Base material	基体材质 Physics index	高力黄铜 JDB-1	铜合金 JDB-2	铜合金 JDB-3	铸铁 JDB-4
Cu%		65	85	80	
Sn%			5		
Pb%			5		
Zn%		25	5		
Ni%				5	
Al%		6		10	
Fe%		3		3	
Mn%		4			
Density 密度 g/cm <sup>3</sup>		8.0	8.8	8.3	7.3
Hardness HB 硬度		>210	>70	>210	
Tensile strength 抗拉强度 N/mm <sup>2</sup>		>750	>200	>500	>250
Elongation%伸长率		>12	>15	>10	
Coefficient of linear expansion 热胀系数		1.9*10 <sup>-5</sup> /°C	1.8*10 <sup>-5</sup> /°C	1.6*10 <sup>-5</sup> /°C	1.0*10 <sup>-5</sup> /°C
Limit Temp.温度°C		300~400	400	400	400
Max.Load N/mm <sup>2</sup> 最大动承载		100	60	100	100
Max.Speed m/s 最大线速度		10	10	10	5
Max.PV 最大PV N/mm <sup>2</sup> *m/s 压缩永久变形量 400N/mm <sup>2</sup>		3.8	3.8	3.8	3.8
		<0.01	<0.05	<0.04	<0.015

摩擦系数: 油润滑:0.03 干摩擦:0.16 Friction coefficient: oil lubrication: 0.03 dry friction: 0.16

#### 材料种类:金属基体 Material category:Metallic matrix

中国牌号 Chinese Code CB1776-87	相当国外牌号 International counterparts				适用情况 Applications
	国际 International ISO1338	日本 Japan Jis	美国(USA) ASTM(UNS)	德国 German DIN	
JDB-1	CuZn25Al6Fe3Mn4	H5102 CAC304	B30-92 C86300	DIN1709 G-CuZn25A/2.0598	高载荷、低速、一般用 High-load,low-speed,general use
JDB-2	QSn5-5-5	H5111 CAC406	B30-92 C93200	DIN1705 G-Cu5n5ZnPb/2.1096	中载荷、中速 Medium load,medium-speed
JDB-3	CuAl10Fe3	H5114 CAC703	B30-92 C95400	DIN1714 GB-CuAl10Ni/2.1096	高载荷、中速、一般用 High-load,medium-speed, general use
JDB-4	HT250	Fe250	ASTM class40		高载荷、低速 High-load,low-speed

#### 固体润滑剂 Solid Lubricant

固体润滑剂 Solid Lubricant	特性 Features
石墨+添加剂1 Graphite + additive 1	很好的耐磨性和化学稳定性 Excellent resistance against chemical attacks and low friction.
石墨+添加剂2 Graphite + additive 2	极低的摩擦系数和很好的水润滑性 Lowest in friction and good of water lubrication.



# JDB 镶嵌式固体润滑轴承

## JDB INLAID SOLID LUBRICATION BEARING

### ·应用领域 APPLICATION AREA

JDB轴承应用非常广泛,经铸造制作成轴瓦和衬套,国内外现在主要以高力黄铜为基体制作的固体润滑无油轴承(简称固润轴承),是采用高强度高力黄铜为基体,嵌入排列有序的圆柱状高分子填充物为磨擦材料(石墨、二硫化钼、聚四氟乙烯复合材料),既具有很高的承载能力,又突破一般轴承依靠油膜油脂润滑的界限,实现了无油润滑,嵌入的固体润滑剂容易形成润滑膜,对其摩擦磨损性能起到了很大的改善作用,稳定可靠,性价比高。这种自润滑导套导板可运用于诸多领域如:工程机械关节部位,如挖掘机,矿山铲运机,旋挖钻机、混凝土泵车,钻岩机械,卷扬机,港口吊机等,还有冶金机械连铸机械、水利机械,输送机械,轧机、吹瓶机吹膜机,注塑机十字头锁模差速器,轮胎硫化机,挂车平衡梁,高压开关等。

JDB bearing is widely used. It is made into bearing shells and bushes by casting. At home and abroad, solid lubricating oil-free bearing (solid lubrication bearing) is mainly made of high-strength and high-strength brass as the base, and the cylindrical polymer filling materials embedded in order are friction materials (graphite, molybdenum disulfide and polytetrafluoroethylene composite), It has high bearing capacity and breaks through the boundary of general bearing relying on oil film grease lubrication. It realizes oil-free lubrication. The embedded solid lubricant is easy to form lubricating film, which has greatly improved its friction and wear performance, which is stable, reliable and cost-effective. This self-lubricating guide plate can be used in many fields, such as: joint parts of engineering machinery, such as excavator, mine scraper, rotary drilling rig, concrete pump truck, rock drilling machine, winch, port crane, etc., as well as metallurgical machinery continuous casting machinery, water conservancy machinery, conveying machinery, rolling mill, bottle blower film blowing machine, cross head lock die differential of injection molding machine, tire vulcanizer, Trailer balance beam, high voltage switch, etc.

### JDB镶嵌式固体润滑轴承

#### JDB Solid Lubricant Embedded Bushes

### ·典型用途 APPLICATION

- 1.低速、重载自润滑如水坝工作弧门支铰轴承,水轮机轴承,汽轮机轴承等。
- 2.使用于高温场合,如钢铁厂、冶金设备、轧机、输送辊道、高温鼓风机、烘干炉用轴承。
- 3.汽机车工业、复盖件冲压模、组装流水线、传送带等用轴承。
- 4.其它工业用轴承,工程机械、注塑机、各种高精度磨具等。以及化工机械、食品机械、造纸机械、纺织印染机械等耐蚀耐水浸润场合,低速重载无法加油的工况场合。

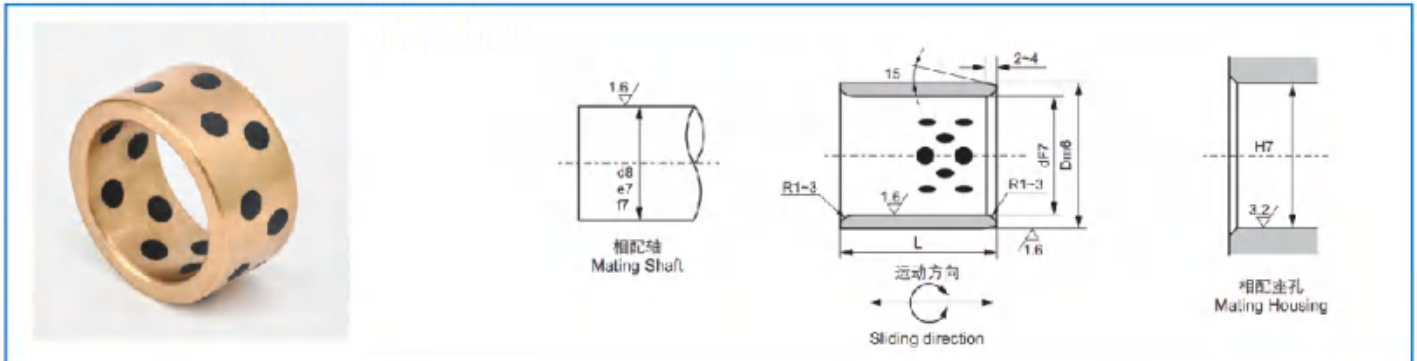
1. Low speed, heavy load self-lubricating, such as dam radial gate hinge bearing, turbine bearing, turbine bearing, etc.
2. Used in high temperature occasions, such as steel plant, metallurgical equipment, rolling mill, conveying roller table, high temperature blast furnace, drying furnace bearing.
3. Bearings for automobile and locomotive industry, stamping die of cover parts, assembly line, conveyor belt, etc.
4. Other industrial bearings, engineering machinery, injection molding machine, all kinds of high precision grinding tools, etc. As well as chemical machinery, food machinery, paper machinery, textile printing and dyeing machinery and other corrosion resistance and water infiltration, low speed and heavy load can not refuel working conditions.

### ·特点 FEATURES

- 1.可长时间在无油条件下工作。
  - 2.更适合于低速重载工况条件,具有很好的耐磨性和极低的摩擦系数。
  - 3.适合于往复、旋转和间歇运动等油膜难以形成的场合。
  - 4.具有耐腐蚀和抗氧化性。
  - 5.免维修,使用寿命长。
1. May work without any oil for long period.
  2. It is more suitable for low speed and heavy load conditions, with good wear resistance and very low friction coefficient.
  3. Particularly appropriate for low speed and high load.
  4. It has corrosion resistance and oxidation resistance.
  5. Can be used in wide range of temp.

# JDB 轴承标准公制尺寸 JDB BEARING STANDARD METRIC SIZE

## JDB轴承

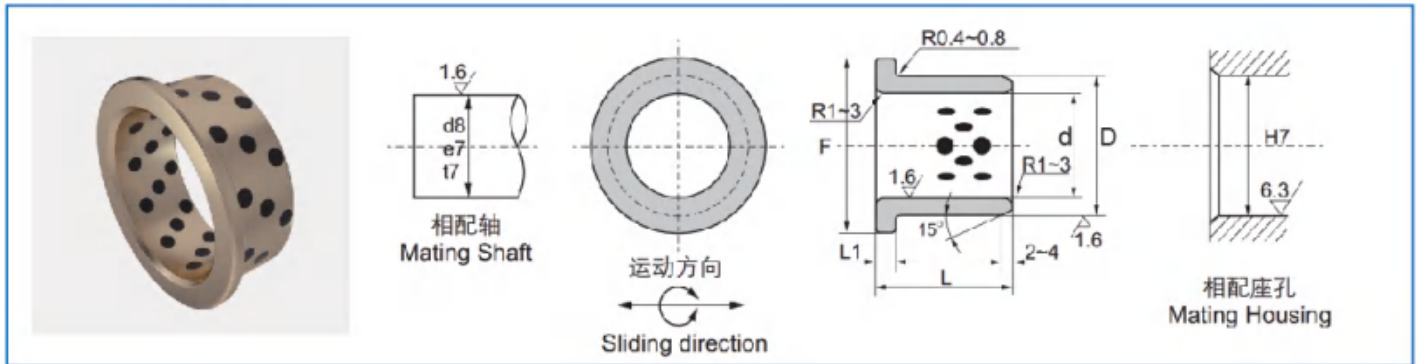


Unit(单位):mm

内径d (F7)	外径D (m6)	长度(L)																			
		8	10	12	15	16	20	25	30	35	40	50	60	70	80	100	120	130	140	150	
8 <sup>+0.02</sup> <sub>-0.03</sub>	12 <sup>+0.04</sup> <sub>-0.07</sub>	081208	081210	081212	081215																
10 <sup>+0.03</sup> <sub>-0.03</sub>	14 <sup>+0.07</sup> <sub>-0.09</sub>	101408	101410	101412	101415		101420														
12 <sup>+0.04</sup> <sub>-0.06</sub>	18 <sup>+0.08</sup> <sub>-0.07</sub>		121810	121812	121815	121816	121820	121825	121830												
13 <sup>+0.04</sup> <sub>-0.06</sub>	19 <sup>+0.08</sup> <sub>-0.08</sub>		131910		131915	131916															
14 <sup>+0.04</sup> <sub>-0.06</sub>	20 <sup>+0.08</sup> <sub>-0.08</sub>		142010	142012	142015		142020	142025	142030												
15 <sup>+0.04</sup> <sub>-0.06</sub>	21 <sup>+0.08</sup> <sub>-0.08</sub>		152110	152112	152115	152116	152120	152125	152130												
16 <sup>+0.04</sup> <sub>-0.06</sub>	22 <sup>+0.08</sup> <sub>-0.08</sub>		162210	162212	162215	162216	162220	162225	162230	162235	162240										
18 <sup>+0.04</sup> <sub>-0.06</sub>	24 <sup>+0.08</sup> <sub>-0.08</sub>			182412	182415	182416	182420	182425	182430	182435	182440										
20 <sup>+0.04</sup> <sub>-0.06</sub>	28 <sup>+0.08</sup> <sub>-0.08</sub>		202810	202812	202815	202816	202820	202825	202830	202835	202840	202850									
22 <sup>+0.04</sup> <sub>-0.06</sub>	32 <sup>+0.08</sup> <sub>-0.08</sub>			223212	223215		223220	223225													
25 <sup>+0.04</sup> <sub>-0.06</sub>	33 <sup>+0.08</sup> <sub>-0.08</sub>			253312	253315	253316	253320	253325	253330	253335	253340	253350	253360								
30 <sup>+0.04</sup> <sub>-0.06</sub>	38 <sup>+0.08</sup> <sub>-0.08</sub>			303812	303815		303820	303825	303830	303835	303840	303850	303860								
35 <sup>+0.04</sup> <sub>-0.06</sub>	45 <sup>+0.08</sup> <sub>-0.08</sub>						354520	354525	354530	354535	354540	354550	354560								
40 <sup>+0.04</sup> <sub>-0.06</sub>	50 <sup>+0.08</sup> <sub>-0.08</sub>						405020	405025	405030	405035	405040	405050	405060	405070	405080						
45 <sup>+0.04</sup> <sub>-0.06</sub>	55 <sup>+0.08</sup> <sub>-0.08</sub>								455530	455535	455540	455550	455560								
50 <sup>+0.04</sup> <sub>-0.06</sub>	60 <sup>+0.08</sup> <sub>-0.08</sub>								506030	506035	506040	506050	506060	506070	506080						
50 <sup>+0.04</sup> <sub>-0.06</sub>	62 <sup>+0.08</sup> <sub>-0.08</sub>								506230	506235	506240	506250	506260	506270							
50 <sup>+0.04</sup> <sub>-0.06</sub>	65 <sup>+0.08</sup> <sub>-0.08</sub>								506530		506540	506550	506560	506570	506580	5065100					
55 <sup>+0.04</sup> <sub>-0.06</sub>	70 <sup>+0.08</sup> <sub>-0.08</sub>										557040	557050	557060	557070							
60 <sup>+0.04</sup> <sub>-0.06</sub>	75 <sup>+0.08</sup> <sub>-0.08</sub>								607530	607535	607540	607550	607560	607570	607580	6075100					
63 <sup>+0.04</sup> <sub>-0.06</sub>	75 <sup>+0.08</sup> <sub>-0.08</sub>												637560	637570	637580						
65 <sup>+0.04</sup> <sub>-0.06</sub>	80 <sup>+0.08</sup> <sub>-0.08</sub>												658050	658060	658070	658080					
70 <sup>+0.04</sup> <sub>-0.06</sub>	85 <sup>+0.08</sup> <sub>-0.08</sub>										708535	708540	708550	708560	708570	708580	7085100				
75 <sup>+0.04</sup> <sub>-0.06</sub>	90 <sup>+0.08</sup> <sub>-0.08</sub>													759060	759070	759080	7590100				
80 <sup>+0.04</sup> <sub>-0.06</sub>	100 <sup>+0.08</sup> <sub>-0.12</sub>										8010040	8010050	8010060	8010070	8010080	80100100	80100120		80100140		
90 <sup>+0.04</sup> <sub>-0.06</sub>	110 <sup>+0.08</sup> <sub>-0.12</sub>								9011030			9011050	9011060	9011070	9011080	90110100	90110120				
100 <sup>+0.04</sup> <sub>-0.06</sub>	120 <sup>+0.08</sup> <sub>-0.12</sub>												10012060	10012070	10012080	100120100	100120120		100120140		
110 <sup>+0.04</sup> <sub>-0.06</sub>	130 <sup>+0.08</sup> <sub>-0.12</sub>														11013080	110130100	110130120				
120 <sup>+0.04</sup> <sub>-0.06</sub>	140 <sup>+0.08</sup> <sub>-0.12</sub>														12014080	120140100	120140120		120140140		
125 <sup>+0.04</sup> <sub>-0.06</sub>	145 <sup>+0.08</sup> <sub>-0.12</sub>																125145100	125145120			
130 <sup>+0.04</sup> <sub>-0.06</sub>	150 <sup>+0.08</sup> <sub>-0.12</sub>																130150100		130150130		
140 <sup>+0.04</sup> <sub>-0.06</sub>	160 <sup>+0.08</sup> <sub>-0.12</sub>																140160100			140160140	
150 <sup>+0.04</sup> <sub>-0.06</sub>	170 <sup>+0.08</sup> <sub>-0.12</sub>																150170100				150170150
160 <sup>+0.04</sup> <sub>-0.06</sub>	180 <sup>+0.08</sup> <sub>-0.12</sub>																160180100				160180150

# JFB 翻边轴承标准公制尺寸 JFB FLANGING BEARING STANDARD METRIC SIZE

## JFB轴承

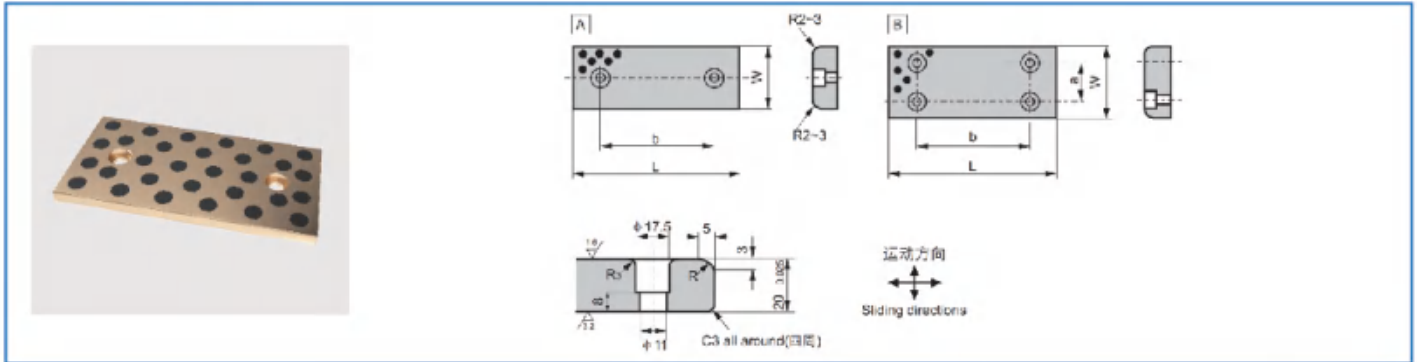


Unit(单位):mm

内径d (E7)	外径D (r6)	F	L1-0.10	长度(L)												
				15	20	25	30	35	40	50	60	80	100			
$10^{+0.040}_{+0.025}$	$14^{+0.034}_{+0.023}$	22	2	1015	1020											
$12^{+0.050}_{+0.032}$	$18^{+0.034}_{+0.023}$	25	3	1215	1220											
$13^{+0.050}_{+0.032}$	$19^{+0.041}_{+0.028}$	26		1315	1320											
$14^{+0.050}_{+0.032}$	$20^{+0.041}_{+0.028}$	27		1415	1420											
$15^{+0.050}_{+0.032}$	$21^{+0.041}_{+0.028}$	28		1515	1520	1525	1530									
$16^{+0.050}_{+0.032}$	$22^{+0.041}_{+0.028}$	29		1615	1620	1625	1630									
$20^{+0.061}_{+0.040}$	$30^{+0.050}_{+0.028}$	40	5	2015	2020	2025	2030			2040						
$25^{+0.061}_{+0.040}$	$35^{+0.050}_{+0.034}$	45		2515	2520	2525	2530			2540						
$30^{+0.061}_{+0.040}$	$40^{+0.050}_{+0.034}$	50			3020	3025	3030	3035	3040	3050						
$31.5^{+0.075}_{+0.050}$	$40^{+0.050}_{+0.034}$	50			3120			3135								
$35^{+0.075}_{+0.050}$	$45^{+0.050}_{+0.034}$	60			3520			3530		3540	3550					
$40^{+0.075}_{+0.050}$	$50^{+0.050}_{+0.034}$	65			4020			4030		4040	4050					
$45^{+0.075}_{+0.050}$	$55^{+0.060}_{+0.041}$	70						4530		4540	4550	4560				
$50^{+0.075}_{+0.050}$	$60^{+0.060}_{+0.041}$	75						5030		5040	5050	5060				
$55^{+0.090}_{+0.060}$	$65^{+0.060}_{+0.041}$	80								5540		5560				
$60^{+0.090}_{+0.060}$	$75^{+0.062}_{+0.043}$	90		7.5						6040	6050			6080		
$63^{+0.090}_{+0.060}$	$75^{+0.062}_{+0.043}$	85												6380		
$70^{+0.090}_{+0.060}$	$85^{+0.073}_{+0.051}$	105									7050			7080		
$75^{+0.090}_{+0.060}$	$90^{+0.073}_{+0.051}$	110											7560			
$80^{+0.090}_{+0.060}$	$100^{+0.073}_{+0.051}$	120												8060	8080	80100
$90^{+0.107}_{+0.072}$	$110^{+0.076}_{+0.054}$	130	10										9060	9080		
$100^{+0.107}_{+0.072}$	$120^{+0.076}_{+0.054}$	150													10080	100100
$120^{+0.107}_{+0.072}$	$140^{+0.088}_{+0.063}$	170													12080	120100

# JSP 滑板标准公制尺寸 JSP SKATE STANDARD METRIC SIZE

## JSP滑板

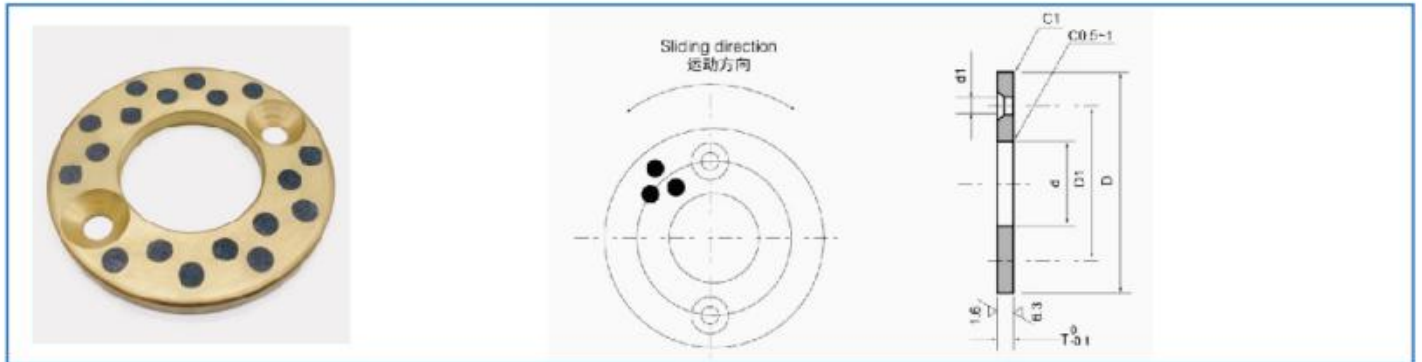


Unit(单位):mm

型号规格	W	L	A	B	C	D	E	平头螺钉 Flat Head Screw	孔数 No.of holes
JSP-1875	18	75	15	45				M6	2
JSP-18100	18	100	25	50				M6	2
JSP-18125	18	125	25	75				M6	2
JSP-18150	18	150	25	100				M6	2
JSP-2875	28	75	15	45				M6	2
JSP-28100	28	100	25	50				M6	2
JSP-28125	28	125	25	75				M6	2
JSP-28150	28	150	25	100				M6	2
JSP-35100	35	100	20	60				M8	2
JSP-35150	35	150	20	55	55			M8	3
JSP-35200	35	200	20	55	50	55		M8	4
JSP-35250	35	250	20	70	70	70		M8	4
JSP-35300	35	300	20	65	65	65	65	M8	5
JSP-35350	35	350	20	80	75	75	80	M8	5
JSP-3875	38	75	15	45				M6	2
JSP-38100	38	100	25	50				M6	2
JSP-38125	38	125	25	75				M6	2
JSP-38150	38	150	15	100				M6	2
JSP-4875	48	75	25	45				M6	2
JSP-48100	48	100	25	50				M6	2
JSP-48125	48	125	25	75				M6	2
JSP-48150	48	150	25	100				M6	2
JSP-50100	50	100	20	60				M8	2
JSP-50150	50	150	20	55	55			M8	3
JSP-50200	50	200	20	55	50	55		M8	4
JSP-50250	50	250	20	70	70	70		M8	4
JSP-50300	50	300	20	65	65	65	65	M8	5
JSP-50400	50	400	20	90	90	90	90	M8	5
JSP-75150	75	150	20	110				M8	4
JSP-75200	75	200	20	80	80			M8	6
JSP-75250	75	250	20	105	105			M8	6
JSP-75300	75	300	20	90	90	85		M8	8
JSP-75400	75	400	20	120	120	120		M8	8
JSP-75500	75	500	20	115	115	115	115	M8	10

# JTW 止推垫片标准公制尺寸 JTW THRUST WASHER STANDARD METRIC SIZE

## JTW止推垫片

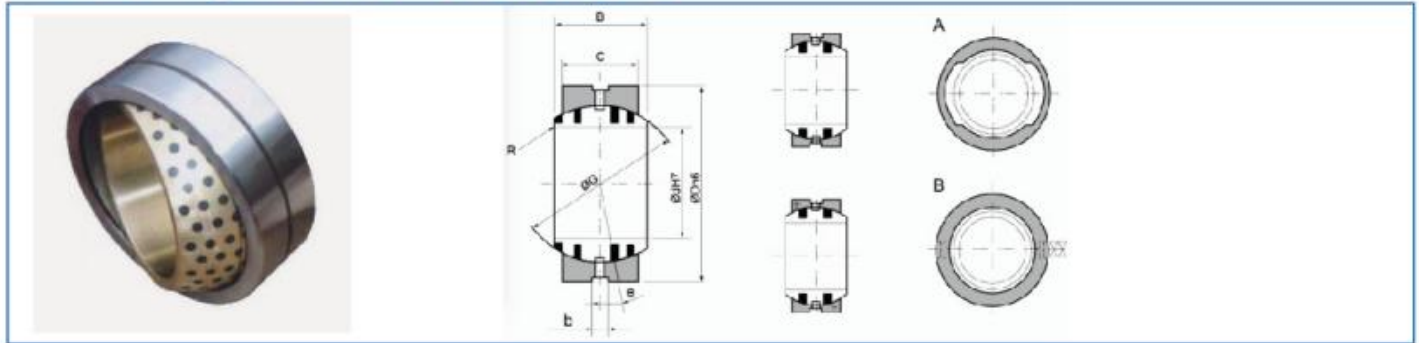


Unit(单位):mm

型号规格	内径 d	外径 D	厚度 $T_{-0.10}$	螺孔中心距D1	d1	平头螺钉 Flat Head Screw	孔数 No.of holes
JTW10	10.2	30	3	20	3.5	M3	2
JTW12	12.2	40	3	28		M3	2
JTW13	13.2	40	3	28		M3	2
JTW14	14.2	40	3	28		M3	2
JTW15	15.2	50	3	35		M3	2
JTW16	16.2	50	3	35		M3	2
JTW18	18.2	50	3	35		M3	2
JTW20	20.2	50	5	35		M5	2
JTW25	25.2	55	5	40	6	M5	2
JTW30	30.2	60	5	45		M5	2
JTW35	35.2	70	7	50		M6	2
JTW40	40.2	80	7	60	7	M6	2
JTW45	45.2	90	8	70		M6	2
JTW50	50.3	100	8	75		M6	4
JTW55	55.3	110	8	85		M6	4
JTW60	60.3	120	8	90		9	M8
JTW65	65.3	125	10	95	M8		4
JTW70	70.3	130	10	100	M8		4
JTW75	75.3	140	10	110	M8		4
JTW80	80.3	150	10	120	M8		4
JTW90	90.5	170	10	140	11	M10	4
JTW100	100.5	190	10	160		M10	4
JTW120	120.5	200	10	175		M10	4

# JDB-QJ 关节自润滑轴承 JDB-QJ JOINT BEARING

## JDB-QJ关节自润滑轴承



Unit(单位):mm

Standard No. 型号规格	d	H7	D	h6	B	C	G	b	Alignment Angle $\alpha^\circ$ 角度调整	Allowable Radial load(kN) 径向承载	Allowable Thrust load(kN) 轴向载荷	
JDB-QJ15	15	$\begin{matrix} +0.018 \\ 0 \end{matrix}$	26	$\begin{matrix} 0 \\ -0.011 \end{matrix}$	12	9	22	4	8	6.5	0.5	
JDB-QJ20	20	$\begin{matrix} +0.021 \\ 0 \end{matrix}$	35	$\begin{matrix} 0 \\ -0.016 \end{matrix}$	16	12	29		4	12.6	1.4	
JDB-QJ25	25		42		20	16	35.5		5	21.8	2.5	
JDB-QJ30	30	$\begin{matrix} +0.025 \\ 0 \end{matrix}$	47	$\begin{matrix} 0 \\ -0.019 \end{matrix}$	22	18	40.7		6	32.0	3.5	
JDB-QJ35	35		55		25	20	47		5	43.7	4.8	
JDB-QJ40	40		62		28	22	53		6	54.7	5.7	
JDB-QJ45	45		68		32	25	60		5	69.7	7.2	
JDB-QJ50	50		75		35	28	66		5	92.4	10	
JDB-QJ60	60		$\begin{matrix} +0.030 \\ 0 \end{matrix}$		90	$\begin{matrix} 0 \\ -0.022 \end{matrix}$	44		36	80	6	143
JDB-QJ70	70	105		49	40		92		5	181	20	
JDB-QJ80	80	120		55	45		105		6	254	30	
JDB-QJ90	90	130		60	50		115		6	313	36	
JDB-QJ100	100	$\begin{matrix} +0.035 \\ 0 \end{matrix}$	150	$\begin{matrix} 0 \\ -0.025 \end{matrix}$	70	55	130	6	6	544	64	
JDB-QJ120	120		180		85	70	160		6	797	94	
JDB-QJ140	140	$\begin{matrix} 0 \\ -0.029 \end{matrix}$	210	$\begin{matrix} 0 \\ -0.029 \end{matrix}$	90	70	180		7	668	56	
JDB-QJ160	160		230		105	80	200		8	891	73	
JDB-QJ180	180		260		105	80	225		6	1002	74	
JDB-QJ200	200		290		130	100	250		7	1434	117	
JDB-QJ220	220	$\begin{matrix} +0.046 \\ 0 \end{matrix}$	320	$\begin{matrix} 0 \\ -0.032 \end{matrix}$	135	100	275		8	1577	118	
JDB-QJ240	240		340		140	100	300		9	8	1720	118
JDB-QJ260	260	$\begin{matrix} 0 \\ -0.036 \end{matrix}$	370	$\begin{matrix} 0 \\ -0.036 \end{matrix}$	150	110	325			7	2072	143
JDB-QJ280	280		400		155	120	350			6	2455	172
JDB-QJ300	300		430		165	120	375			7	2630	172

# FZ 钢球保持架 FZ BALL REATINER



## FZ 钢球保持架 FZ BALL REATINER

### FZ 钢球保持架

#### 基材特性 MATERIAL FEATURES

FZH(铜基):FZL(铝基);FZP(树脂基) 钢球保持架, 分别以铜合金、铝合金、POM树脂为基体, 并在其外圆表面上, 加工出排列有序、大小适当, 形状特殊的孔穴, 在其孔穴中镶入滚动轴承钢球。孔口采用最新的沟槽圆周锁球工艺, 有效地解决了传统点式锁球和压痕锁球不能完全防止钢球脱落的难题。孔底加工出90°止口使钢球在孔内自由转动而不脱落。由于钢球的直径大于保持架的壁厚, 所以在使用时钢球高出保持架内、外圆表面, 直接与相配的孔与轴接触, 使基体(保持架)浮于中间, 并且相配的孔与轴半径之差小于钢球直径, 即钢球与之配合为过盈配合, 配合精度高, 轴与孔相对运动灵活。是传统保持架的更新换代产品。

FZH (copper base): FZL (aluminum base); FZP (resin based) steel ball cage is based on copper alloy, aluminum alloy and POM resin respectively. Holes with ordered arrangement, proper size and special shape are machined on its cylindrical surface. Rolling bearing steel balls are inserted into the holes. The orifice adopts the latest groove circle ball locking technology, which effectively solves the problem that the traditional point type ball locking and indentation ball locking can not completely prevent the steel ball from falling off. The hole bottom is processed to 90 ° The stop makes the steel ball rotate freely in the hole without falling off. Because the diameter of the steel ball is larger than the wall thickness of the cage, the steel ball is higher than the inner and outer surface of the cage, and directly contacts with the matching hole and shaft, so that the matrix (cage) floats in the middle, and the radius difference between the matching hole and shaft is less than the diameter of the steel ball, that is, the steel ball fits with it as interference fit, with high precision, and the relative movement of the shaft and the hole is flexible. It is a new product of traditional cage.



#### 优点与用途 ADVANTAGES AND

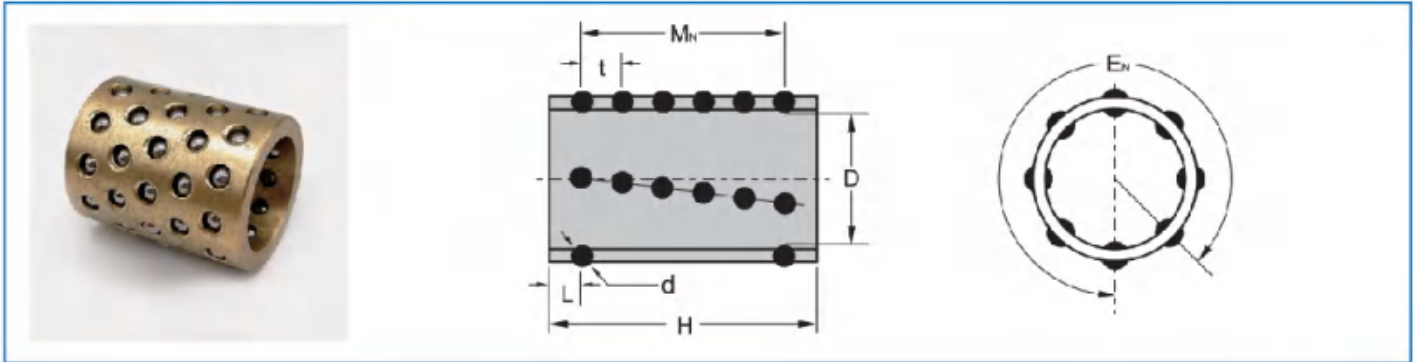
传统的保持架相对运动的孔与轴是有一定间隙的, 孔与轴之间的运动摩擦系数较大, 使用钢球保持架后, 轴与孔不直接接触, 而是通过中间有微量过盈的钢球接触, 因而运动精度高, 滚动摩擦代替了滑动摩擦, 滚动灵活, 摩擦系数低, 使用寿命长。在既有转动、又有移动的场所, 用无油或加油的轴套与轴相配, 虽然能满足, 但运动精度较低, 用滚动轴承, 只能满足轴相对转动的场合, 而钢球保持架, 则上述二个条件均满足, 目前已广泛应用于冷冲模、滚动模架、独立导柱、冲裁模、级进模以及要求高精度轴向或轴径向同时运动场合。

The traditional cage has a certain clearance between the holes and the shaft, and the friction coefficient between the holes and the shaft is relatively large. After using the steel ball cage, the shaft does not contact the hole directly, but through the steel ball with a small interference in the middle. Therefore, the motion precision is high, the rolling friction replaces the sliding friction, and the rolling friction is flexible, the friction coefficient is low and the service life is long. In the case of both rotation and movement, the shaft sleeve without oil or oil filling is used to match the shaft. Although it can meet the requirements, the motion accuracy is low. Rolling bearing can only meet the relative rotation of the shaft. The steel ball cage meets the above two conditions. At present, it has been widely used in cold stamping, rolling mold, independent guide post, blanking die Progressive die and high precision axial or axial radial simultaneous motion is required.



# FZ 钢球保持架标准公制尺寸 FZ BALL REATINER STANDARD METRIC SIZE

## FZ钢球保持架



Unit(单位):mm

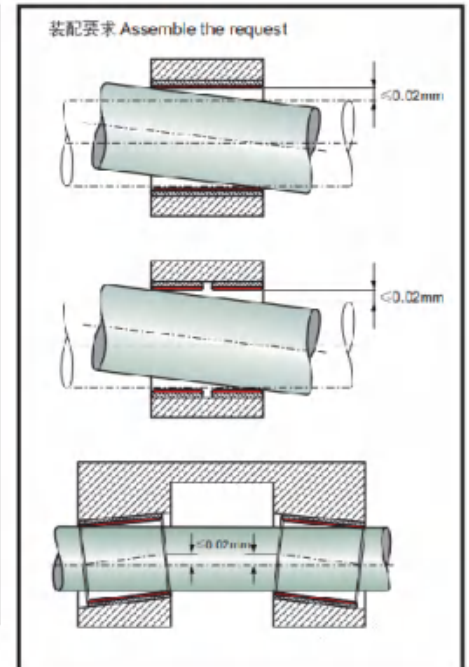
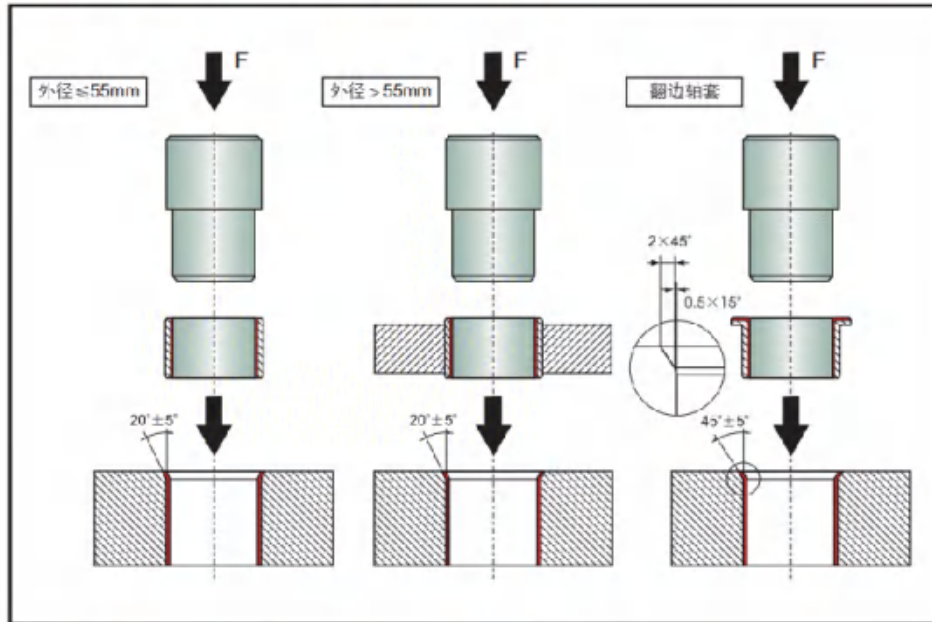
型号规格 Designation	D	d	H	$E_N$	$M_N$	球/BALLS	t	L
FZ1950	19	3	50	12	8	96	5.5	5.75
FZ1960	19	3	60	12	10	120	5.5	5.25
FZ2050	20	3	50	12	8	96	5.5	5.75
FZ2060	20	3	60	12	10	120	5.5	5.25
FZ2250	22	3	50	14	8	112	5.5	5.75
FZ2260	22	3	60	14	10	140	5.5	5.25
FZ2360	23	3	60	14	10	140	5.5	5.25
FZ2475	24	3	75	16	13	208	5.45	4.8
FZ2550	25	3	50	16	8	128	5.5	5.75
FZ2560	25	3	60	16	10	160	5.5	5.25
FZ2575	25	3	75	16	13	208	5.45	4.8
FZ2775	27	3	75	16	13	208	5.45	4.8
FZ2860	28	4	60	14	8	112	6.5	7.25
FZ2875	28	4	75	14	11	154	6.5	5.0
FZ3060	30	4	60	14	8	112	6.5	7.25
FZ3075	30	4	75	14	11	154	6.5	5.0
FZ3260	32	4	60	16	8	128	6.5	7.25
FZ3275	32	4	75	16	11	176	6.5	5.0
FZ3290	32	4	90	16	13	208	6.5	6.0
FZ3685	36	4	85	16	12	192	6.5	6.75
FZ3690	36	4	90	16	13	208	6.5	6.0
FZ3870	38	5	70	16	8	128	8.0	7.0
FZ3890	38	5	90	16	11	176	7.9	5.5
FZ4090	40	5	90	16	11	176	7.9	5.5
FZ4590	45	5	90	18	11	198	7.9	5.5
FZ45110	45	5	110	18	13	234	8.0	7.0
FZ5090	50	5	90	20	11	220	7.9	5.5
FZ50110	50	5	110	20	13	260	8.0	7.0
FZ6090	60	5	90	22	11	242	7.9	5.5
FZ60110	60	5	110	22	13	286	8.0	7.0
FZ80130	80	5	130	28	15	420	8.0	9.0

注:FZ为:FZH(铜基)、FZL(铝基)、FZP(树脂基)  
Notes:FZ:FZH (Bronze based)、FZL (Aluminum based) FZP (Resin based)

# 轴承安装方法与检测标准 BEARING INSTALLING METHOD&TEST STANDARD

## 安装与检测 INSTALLING&CHECKING

### 安装方式 INSTALLING METHOD



### 安装注意事项 INSTALLING ATTENTION

1. 装配前应确保轴套、座孔表面无异物，座孔表面应尽可能光洁以免在装配时划伤。
2. 装配时可在轴套外表面适当涂上润滑油，帮助轴套较方便地安装，但不易过多以免在重载或往复运动时轴套会脱离出来。
3. 装配时应采用芯轴慢慢压入（建议使用油压机），禁止直接敲打轴套以免发生变形。
4. 座孔设计时如需采用易变形材料如铝合金或座孔壁厚较薄时，请予以说明，以免压装时使座孔变形。
5. 为了使装配更简单且不会破坏耐磨层，轴的端面必须有倒角圆滑过度，轴的材质建议为轴承钢表面淬火处理HRC45，表面粗糙度为Rz2-3，表面也可镀硬铬。
6. 装配时在轴表面涂上油脂以缩短轴套的磨合期。

1. To keep the bushing,housing dean before installing.
2. The outside surface be covered a little grease or oil during installing,which help the process. And please not too much.
3. The bushing should be pushed into housing slowly with mandrel (oil push machine is recommended), it is for hidden tohammer the part directly.
4. We need your instructions if the housing wall is thin or made from soft metal in order not to destroy it.
5. Zn order to simply the installment and keep the working layer,we recommend that the shaft should own chamfer andHRC45/Rz2-3. Gr plating layer is allowed.
6. During assembly, grease is applied on the surface of the shaft to shorten the running in period of the shaft sleeve.

### 轴套检验方式CHECKING METHOD

1. 外径: 采用环规通(GO)与止(NO GO)方式，环规通端为外径最大尺寸(+0.01)，环规止端为外径最小尺寸。
2. 内径: 将轴套压入基准孔(H7中间值公差)用圆柱塞规检验轴套，塞规的通端为轴套内孔最小尺寸，塞规的止端为轴套内孔最大尺寸。一般卷制类轴套内孔的精度等级为H9。
3. 环规、塞规尺寸按IS03547国际标准制作。

1. OD: checked by ring gauge with GO GO.
2. ID: checked by plug gauge with GO GO. The common wrapped bushing satisfy tolerance H9.
3. The Ring Gauge and plug gauge are made according to IS03547 international standard.

## 应用领域 APPLICATION FIELD



### 高温

- ⊕ 钢铁厂
- ⊕ 熔矿炉
- ⊕ 干燥设备
- ⊕ 烘烤炉
- ⊕ 热控制器



### 汽车制造

- ⊕ 冲床模具
- ⊕ 焊接组织
- ⊕ 烤漆与干燥线
- ⊕ 金属输送带
- ⊕ 工具机



### 防水

- ⊕ 水坝闸门
- ⊕ 沈水泵浦
- ⊕ 流体电门结构
- ⊕ 近海结构
- ⊕ 船坞及淤泥机设备



### 船舶

- ⊕ 甲板起重机
- ⊕ 起锚机
- ⊕ 舱口盖
- ⊕ 方向舵臂
- ⊕ 起重机械与吊环设备



### 抗化学

- ⊕ 化学工厂
- ⊕ 电镀设备
- ⊕ 废水处理设备
- ⊕ 染色机械
- ⊕ 油与化学药品提炼设备



### 风力

- ⊕ 风力发电
- ⊕ 新能源



### 重工业

- ⊕ 钢管工厂机械
- ⊕ 轮胎与造纸厂
- ⊕ 发电厂
- ⊕ 模具射出机械之连接曲肘



### 建筑、采矿、装载

- ⊕ 搅拌机、研磨机、粉碎机
- ⊕ 建筑机械
- ⊕ 采矿设备
- ⊕ 连杆轴承
- ⊕ 动力轴套



### 桥梁和升降轨

- ⊕ 桥梁轴承
- ⊕ 梁、桥架、吊桥
- ⊕ 核能相关反应器
- ⊕ 蒸汽发生器



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