



**公司及产品简介**  
**E-Profile of Company and Products**

**江苏苏新轴座有限公司**  
**Jiangsu SUXIN bearing housings Co.,LTD**

## WHO WE ARE

Jiangsu SUXIN bearing housings Co.,LTD  
 Top leader manufacturer of Insert Bearing/Bearing housings/Bearing units in China.  
 A member of CBIA.

## WHAT WE SUPPLY

- \* Insert Bearing
- \* Insert Bearing Housings
- \* Insert Bearing Units
- \* Bearing accessories
- \* Automotive parts (Casting freewheel)

## WHO WE SERVE

### Domestically,

TR

SDEC power

WUXI diesel engine works

YUCHAI group

### Overseas,

SNR France

NTN Japan

JIB Korea

EU area

USA

Brazil

## WHY CHOOSE US

- \* Over 20 years' experience of producing insert bearing housings and units.
- \* Over 80,000 SQM factory land and 65,000 SQM workshop area
- \* Over 400 sets of equipments including outer spherical boring machine, digital control lathe, specialized grinder, CNC and so on.
- \* Over 20,000 Tons casting parts yearly or 5,500,000 sets yearly capacity of insert bearing units
- \* Located near Shanghai port for Easy products' transfer and shipping.
- \* Certificate of ISO9001, IATF16949, ISO14001,SGS
- \* Professional technical and QC teams' support in producing/new designs/after-sales servise.

## WHAT WE BELIEVE

Professional engineers/Qualified products/Timely delivery/Responsible service



# 苏新<sup>®</sup>外球面球轴承单元

## SUXIN<sup>®</sup> Insert Bearing Units



## 苏新®外球面球轴承单元

### 苏新®带座外球面轴承

#### 1. 苏新®外球面球轴承单元概述

苏新®外球面球轴承单元是可直接与工作轴组装的结构单元体。为了使苏新®外球面球轴承单元的工作使用寿命最大限度的延长，其中的外球面轴承和对应轴承座在出厂前已装配完成，且预注润滑脂，经过密封工序处理。

#### 2. 苏新®外球面球轴承单元的基本构造

苏新®外球面球轴承单元包含两个部分：外球面球轴承和与之匹配的轴承座（高品质铸铁材质，不锈钢材质，冲压钢板材质，或塑料以及其他可使用的特殊材料）。外球面轴承的外圈表面和轴承座的内径均为球面，即轴承与轴承座的装配接触面均为球面，因此苏新®外球面球轴承单元具有一定的自动调心性能。

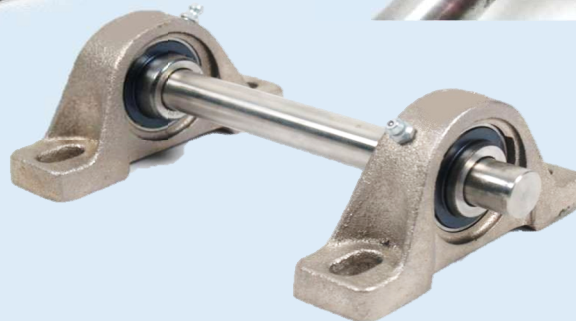
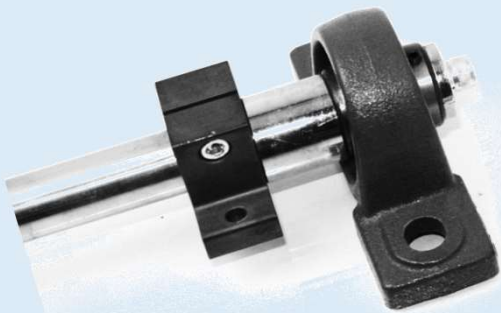


#### 3. 苏新®外球面球轴承单元与工作轴固定锁紧的方式

3.1 外球面轴承内圈伸长部分顶端的两个顶丝与轴锁紧

3.2 紧定套固定。适用于带锥度孔外球面球轴承。轴承的内圈内径孔为带1:12锥度的圆锥孔，通过齿形垫片折起后咬紧内圈外表面的槽口的方式连接紧定套后与紧定套一起锁紧轴。

3.3 偏心套锁紧。适用于轴承内圈孔一端有固定的偏心度，有偏心度相同的偏心套与其合作。偏心套结构也是用顶丝锁紧，只是顶丝不在内圈上，而在偏心套上。



## SUXIN® insert bearing units

### SUXIN® insert bearings with housings

#### 1. Introduction

SUXIN® insert bearing units are robust, ready-to-mount units that are assembled, lubricated and sealed at the factory before shipping for maximum service life. With their simple and safe installation, easy alignment and reliable locking technology, they are an excellent choice for you to purchase or use in your machines or equipments' designs.

#### 2. Construction

The SUXIN® insert bearing unit is a combination of a radial ball bearing and a housing of high-grade cast iron or stainless steel/Press steel plate/Plastic, which comes in various shapes. Sometimes there are two dust covers on both sides of housing according to special requirement customized.

The outer surface of bearing and the inner surface of housing are spherical so that the unit is self-aligning.

#### 3. Fitting methods of SUXIN® insert bearing units with shaft

Depending on the bearing type, the following methods of fitting easily to the shaft employed.

**3.1 The inner ring is fastened onto the shaft in 2 places by set screws.** and the set screws' location is on the longer side of inner ring. Sometime there will be nylon coating on the thread of set screws to improve its loosening resistance according to customer's special requirement.

**3.2 Inner has a tapered bore and is fitted to the shaft by means of an adapter.** This fitting way is suitable for insert bearing with 1:12 tapered bore.

The adapter will lock the shaft with gasket after which tooth is bended and occlude the sleeves on inner ring's surface.

**3.3 Fitting the shaft by the eccentric locking collar system.**

The inner ring is fastened to the shaft by means of eccentric grooves provided at the side of inner ring and on the collar. This system is also locked by set screws but different from 5.4.1 that its set screws will be located on the collar but not on the inner ring.

## 4. 苏新®外球面球轴承单元的设计特性和优点

### 4.1 免维护型外球面球轴承单元

苏新®免维护型外球面球轴承单元出厂前注入了高品质的润滑脂，具有长时间的使用寿命并且该种油脂适用于密封圈密封的轴承。苏新®免维护型外球面球轴承单元的特殊设计使得与之连接的工作轴在旋转时能带动轴承内部被密封的润滑脂随着轴的转动而覆盖到整个包含钢球的密封结构的内部，从而最大程度的给轴承起到润滑作用。这种免维护结构的设计使得轴承的润滑效果长期持久，而且不需要重新补充润滑脂。需要值得注意的是，苏新®免维护型外球面球轴承单元适用于一般性的普通工作环境，如：

- 机器或设备的工作环境足够干净（空气干净，没有灰/粉尘或只有少量灰/粉尘，干燥或不是过分潮湿）
- 机器或设备的工作特点，决定了轴承只需进行低强度工作，或者不需太大强度工作，比如工作轴只需要低转速即可。此种情况下使用的轴承单元可根据机器或设备的设计而进行选择。

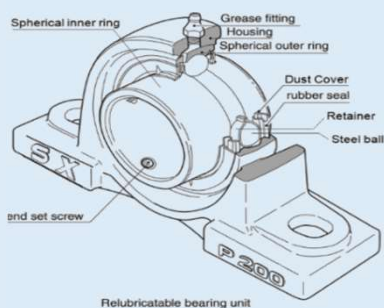
### 4.2 可重复润滑型外球面球轴承单元

苏新®可重复润滑型外球面球轴承单元可以通过轴承座上的注脂孔（油嘴）和与之匹配的外球面轴承外圈表面的注脂孔（油孔）将润滑脂注入到含钢球的轴承密封内部结构中。其中，轴承座的内径表面上的油（脂）槽与轴承外圈上的注脂孔（油孔）在同一平面，因此再次注脂（油）操作时无需将轴承从轴承单元中取出即可进行。因此外部异物无法进入轴承与轴承座的接触面甚至轴承内部，从而保证了轴承和轴承单元的使用寿命。

通常在轴承座外表面上进行钻孔工艺以加工出重复注脂操作时需要的注脂孔（油嘴）会引起轴承座本身的结构性损伤（降低轴承座可承受的工作强度），但是苏新®可重复润滑型外球面球轴承座在积累了多年的生产经验基础上，同时又根据客户的反馈进行了多次设计上的改进，注脂孔（油嘴）在轴承座表面加工时的准确定位可以把以上所述的轴承座的结构性损伤尽可能的降到最低。

对照4.1中提及的免维护型外球面球轴承单元适用于一般普通的工作环境，而在以下工作环境中则需要使用可重复润滑型外球面球轴承单元：

- 工作环境中轴承需要承受的温度变化范围比较大。而工作温度的经常性大幅度变化，会导致轴承内部的油脂成分结构遭到破坏，从而失去润滑作用。因此轴承在此环境下的工作过程中，需要重复注入新润滑脂。苏新®可重复润滑型外球面球轴承单元耐温差范围一般为-10℃到120℃。（这关键取决于轴承内部润滑脂的承温性能，苏新®公司按常规标准所使用的锂基润滑脂承温范围即是-10℃到120℃）。



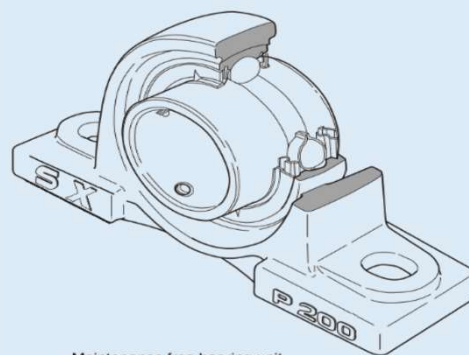
## 4. Features and advantages

### 4.1 SUXIN® free maintenance insert bearing units

SUXIN® free maintenance bearing units filled with high-grade grease which is good for over a long period and ideally suited to sealed-type bearing. The units are designed so that the rotation of the shaft causes the sealed-grease to circulate through the inside space, to provide maximum lubrication for bearings. This method of structure makes the lubrication effect over a long period and no need to replenish grease.

#### 4.1.1 Attention that SUXIN® free maintenance bearing units are used in normal working condition as following:

- Machine/equipment/instructure which is working in clean place with clean air, no dust or a little dust, dry or not much water in.
- According to designs that bearing working with light loads required by machines/equipment, such as running slowly.



### 4.2 SUXIN® relubricatable insert bearing units

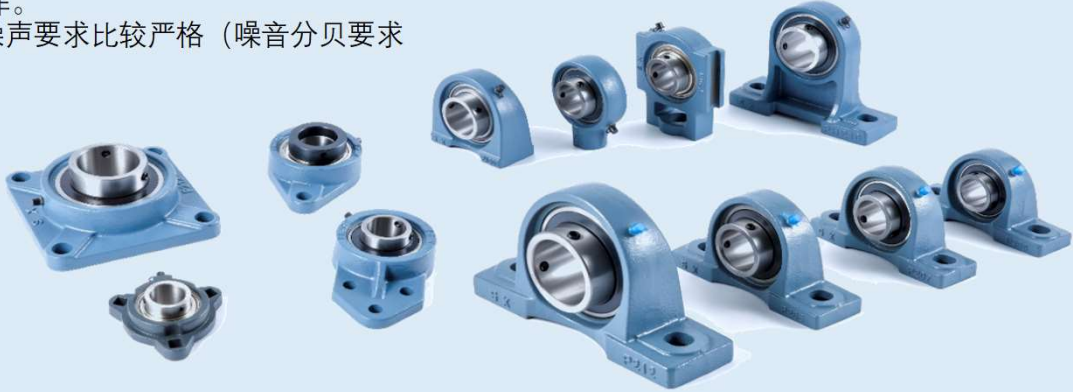
The SUXIN® relubricatable type insert bearing units can be regreased through the filling hole on outside surface of housings. Usually the hole through which the grease filling causes structural weakening of the housing, however, as huge work on designs and extensive testings, in Suxin® bearing unit the grease/oil hole is positioned to minimize the effect mentioned above. Meanwhile, the greasing groove on outer surface of bearing has designed to fill grease into bearing smoothly and minimize its weakening of bearing too.

So the instructure of greas filling in SUXIN® relubricatable insert bearing units makes each time of filling grease without opening unit to avoid foreign matters going insade of bearing and housing.

As point 4.1.1 that the maintenance free type bearing unit is suitable for using under normal operating conditions, then it is necessary to use relubricatable bearing unit in the following circumstances:

- Where the bearing's temperature changes in a wide margin during working. The instructure of grease's component will be damaged by regularly changing of temperature. So the bearings which working in this condition need relubrication. Workable Heat-resistant range of bearing unit: -10℃ to 120℃ It is according to feature of grease which used in SUXIN relubricatable insert bearing.
- Where has excessive dust but there is no space to use a cover on outside of bearing unit.

- b. 工作环境中有极多的灰/粉尘，且工作空间又不允许轴承单元外部再加装防尘盖。
- c. 轴承单元在工作过程中要长时间持续的暴露在水或其他液体的滴溅甚至浇注当中，或极为潮湿的工作环境中，同时工作空间又不允许轴承单元外部再加装密封盖，比如使用在有滚动冲洗程序的机器或设备中。
- d. 机器或设备本身只需要轴承单元间歇性断断续续工作的情况下。
- e. 机器或设备中的工作轴需要承担重负荷，或者工作轴是振荡摆动性工作。
- f. 对机器或设备的噪声要求比较严格（噪音分贝要求较低）的情况下。



- c. Where the bearing unit is persistent exposed to splashes of water or other kinds of liquid, irrigation working required, or high humidity, but space is not enough to use a bearing unit with a cover.
- d. Cases the machine in which the bearing is used running only intermittently.
- e. Cases the shaft working in heavy load capacity or the movement is oscillatory.
- f. Cases where the noise problem has to be considered and the noisy revolution number is required relatively low.

## 5. 苏新®外球面球轴承单元的密封性

### 5.1 苏新®标准外球面球轴承单元

苏新®标准外球面球轴承单元的密封性主要体现在外球面轴承上。苏新外球面轴承拥有一对对称结构，两只防高温防油复合橡胶材质的密封圈分部于轴承的两侧。该橡胶密封圈内部含有钢质骨架，一侧固定在轴承外圈上，另一侧的外露橡胶层与轴承内圈相接触，这种设计除了良好的密封效果之外，还最大限度的减小了因摩擦而产生的力矩。

苏新®标准外球面球轴承单元的这种密封结构可有效防止轴承内部润滑脂的泄露，并阻止外部异物进入轴承内部。

除了橡胶密封圈这种结构之外，有部分型号苏新®外球面轴承，在密封圈之外又加上一对钢板防尘盖，防尘盖一端固定在轴承内圈上，另一端与轴承外圈内径契合，在轴承工作时跟随内圈一起转动。该防尘盖结构旋转时产生的气流，能形成一定的压力将周围灰尘吹开，更好的阻止了外部异物进入轴承内部，且能够帮轴承承受一定的来自外部的破坏压力。

### 5.2 苏新®带盖外球面球轴承单元

苏新®可根据特定客户的要求，设计或生产带盖外球面球轴承单元。该轴承单元包含一套标准外球面轴承单元和轴承单元外部的防尘防水盖结构。

该种轴承单元，在防尘防水盖结构的底面设计有一个出水(尘)口，当整个轴承单元暴露于液体或灰/尘当中时，盖结构表面的液体或者粉尘会通过出水(尘)口排走。因为存在防尘防水盖结构，所以后期维护过程中为轴承单元重复注入润滑脂时，需打开防尘防水盖，直接将润滑脂注入到轴承内部或者通过轴座上的注脂孔注入到轴承内部。

苏新®带盖外球面球轴承单元经常使用于生产过程会制造出大量或极重灰/粉尘，或生产过程中需有液体持续浇注的机器设备上。同时，该种轴承单元也可用于日常日晒雨淋的户外工作环境，比如用在建筑机械或运输工具机械等重型户外工作设备上。

## 5. Sealing Feature of SUXIN® insert bearing units

### 5.1 SUXIN® standard insert bearing units

Standard bearing's sealing device is a duplex of structure of heat-resistant and oil-proof synthetic rubber seals. And the seal is fixed in the outer ring with steel-reinforced. Its lip which in contact with the inner ring is designed to minimize frictional torque. Except for rubber seals, there is a twins of steel plate covers which are on top of each rubber seal and fixed with inner ring, it means that the steel cover will be rotated by inner ring when the bearing is working. This structure like a fan that can make air move to blow away dust around bearing.

This type of sealing structure of seals and cover on both sides of bearing can prevent leakage of grease, foreign matters and break pressure entering the bearing from outside.

### 5.2 SUXIN® insert bearing units with covers

The SUXIN® insert bearing unit with a cover which designed according to customer's requirement is composed of a standard bearing unit and an outside cover for extra protection against dust and water.

Bearing units with covers always are used in where excessive dust or liquids is made. This type designs also suitable for outdoor environment where dust and rain are inevitable, in such as construction and transportation equipment which belongs to heavy industrial machinery.

There is a drain hole will be provided at the bottom of cover when bearing units are exposed to splashes of water rather than to dust. And grease should be applied to the side of bearing itself instead of into the cover.



## 6. 苏新®外球面球轴承单元可与轴牢固锁紧

轴承单元与轴的锁紧，基本是靠单元内的轴承与轴锁紧来实现。

苏新®外球面球轴承单元可通过几种特定的方式与工作轴进行锁紧，即使在轴跳动或晃动工作时也可防止松脱。

**6.1顶丝锁紧。拧紧两个紧定螺丝（位于内圈伸长端上）**来锁紧轴承与轴。顶丝的螺纹上涂尼龙涂料以提高其防松性能。

**6.2紧定套固定。适用于带锥度孔外球面球轴承。轴承的内圈内径孔为带1:12锥度的圆锥孔，通过齿形垫片折起后咬紧内圈外表面的槽口的方式连接紧定套后与紧定套一起锁紧轴。**

**6.3偏心套锁紧。适用于轴承内圈孔一端有固定的偏心度，有偏心度相同的偏心套与其合作。偏心套结构也是用顶丝锁紧，只是顶丝不在内圈上，而在偏心套上。**



## 7. 苏新®外球面球轴承单元的自动调心性

苏新®外球面球轴承单元中，外球面轴承的内径标准公差为正公差，从而保证了其与轴配合时的轻盈。且外球面轴承外圈表面与相接触的轴座内沟表面均为球形，因此整个轴承单元具有自动调心性。当由于安装操作失误时，工作轴产生的离心或者错位，苏新®外球面球轴承单元都能够自动进行中心调整。

## 8. 苏新®外球面球轴承单元具有高额定载荷，可进行高强度工作

苏新®外球面球轴承单元当中的外球面轴承的特性基本等同于深沟球轴承6200和6300系列的性能，因此其在工作时能承受来自径向和轴向两个方面的压力载荷。另外，轴座本身的材质也决定了整个轴承单元的高载荷特性。

## 9. 苏新®外球面球轴承单元质量轻便但轴承座足够结实

苏新®外球面球轴承单元中配套的苏新®外球面球轴承座有各种型号系列，其材质包括，灰口铸铁HT200，球墨铸铁QT450以及铸钢ZG35，决定了其重量轻便但在实际工作时又能表现出最大限度的强度。

## 10. 苏新®外球面球轴承单元安装简便且轴承替换简单

苏新®外球面球轴承单元在出厂前就已经装配好，是一个完整的整体单元。其中的外球面轴承在出厂前就已注入适量的高品质润滑脂。轴承单元使用时可直接装配在工作轴上，不需要在现场再进行轴承与轴承座的装配，从而减少了外部异物进入轴承单元内部的可能，且在轴承单元与轴装配好之后可以进行简单的试转测试。

苏新®外球面球轴承单元内部的外球面轴承是可替换的，一旦轴承出现老化或者其他损坏情况，可直接取下并安装进一个新的替换轴承。所有的更换操作都是在现有的轴承座基础上进行而无需更换新的轴承座。

## 6. Easy & secure fitting with shaft

The fitting of bearing unit and shaft is basically realized by locking bearing inside unit and shaft.

There are three methods to lock the bearing and shaft as following even no loosen of tighten during the shaft working in vibration.

**6.1 Inner ring is fastened onto the shaft in two places by set screws.**and the set screws' location is on the longer side of inner ring. Sometime there will be nylon coating on the thread of set screws to improve its loosening resistance according to customer's special requirement.

**6.2 Inner has a tapered bore and is fitted to the shaft by means of an adapter.** This fitting way is suitable for insert bearing with 1:12 tapered bore.

The adapter will lock the shaft with gasket after which tooth is bended and occlude the sleeves on inner ring's surface.

**6.3 Fitting the shaft by the eccentric locking collar system.**

The inner ring is fastened to the shaft by means of eccentrics grooves provided at the side of inner ring and on the collar. This system is also locked by set screws but different from 6.1 that its set screws will be located on the collar but not on the inner ring.

## 7. Self Aligning

For the bearing, it can tolerate some misalignment of the inner and outer ring due to the smaller contact area between steel balls and rings. At the same time, the inner ring diameter has positive tolerance to ensure light joint of bearing and shaft.

When the bearing assembled in correct housing, the outer surface of bearing and the inner surface of housing are spherical to make the bearing units self-aligning when there is mistake during installation or the shaft is working in centrifugal accident.

## 8. High loading capacity

Most of the feature of insert bearing is same as deep groove bearing series 6200 and 6300, it will bare the united loads of radial loading and axial loading. Meanwhile the raw material of housings help the bearing unit to load high capacity.

## 9. Light weight yet strong housing

The raw material of SUXIN® Insert Bearing Housing including:

— Gray Casting Iron HT200

— Spherical Graphite Casting Iron QT 450

— Carbon Steel Casting ZG35

— Stainless Steel

And SUXIN® insert bearing material is bearing steel or stainless steel.

All material above with professional designs and producing decides that the bearing unit combine lightness with maximum strength.

## 10. Easy mounting and replacing

SUXIN® insert bearing unit is an integrated unit including a bearing and a housing as the bearing is prelubricated at factory with the correct amount of high-grade grease. It can be directly mounted on the shaft. And it is sufficient to carry a short test running after mounten.

Bearing used in SUXIN® insert bearing unit is replaceable. In case of bearing failure, a new one can be fitted to the existing housing even no need to buy another one.

11. 苏新®外球面球轴承单元的品种分类

- ①苏新®带立式座外球面球轴承单元
- ②苏新®带方形座外球面球轴承单元
- ③苏新®带圆形座外球面球轴承单元
- ④苏新®带菱形座外球面球轴承单元
- ⑤苏新®带悬挂式座外球面球轴承单元
- ⑥苏新®带悬吊式座外球面球轴承单元
- ⑦苏新®带环形座外球面球轴承单元

11. Types of SUXIN® insert bearing units

- 1) SUXIN® Pillow Block units (P/PA/PH)
- 2) SUXIN® inserting bearings with Flanged Housings  
Includes:  
Square flanged casting housings (FU)  
Rhombus flanged casting housings(FLU)  
Adjustable rhombus flanged housings(FA)  
Suspension flanged housing(FB)  
Circle flanged housing(FC)
- 3) SUXIN® inserting bearings with Take-up block(T)
- 4) SUXIN® inserting bearings with Annular Housing (C)

外球面球轴承单元分类 Type of Insert Bearing Units with Housings

分类 Type	名称 Description	示图 Sample picture
带立式座 with Pillow Block	带立式轴承座 (P) with pillow block (P) or PA/PH	
带凸缘座 with Flanged Housing	方形座 (FU) square flanged housing (FU)	
	菱形座 (FLU) rhombus flanged housing (FLU)	
	悬吊式座 (FA) adjust rhombus flanged housing (FA)	
	悬挂式座 (FB) suspension flanged housing (FB)	
圆形座 (FC) circle flanged housing (FC)		
带滑带块座 with Take-up block	滑块座 (T或K) take-up block (T)	
带环形座 with annular housing	环形座 (C) annular housing (C)	



## 12. 苏新®外球面轴承单元推荐的应用行业

苏新®外球面球轴承单元因其品质卓越且使用成本低，被广泛推荐应用于以下行业：

- a. 农业机械
- b. 食品， 饮料加工以及包装机械
- c. 输送链系统
- d. 材料运转系统
- e. 纺织机械设备
- f. 工业鼓风机
- g. 特殊设备， 如自动洗车系统， 体院馆健身设备， 卡丁车等

## 12. Applications for SUXIN® insert bearing units

For its high quality, good performance and low using cost, SUXIN® insert bearing unit are widely used in the industries as following:

- a. Agriculture equipment
- b. Food/Soft drink producing machines/equipments
- c. conveyer system
- d. material transfer sytem
- e. textile machinery
- f. industrial fans
- g. special system such as car auto-washing line, gym equipment, go-kart and so on.

