



**MS-MARSHAL<sup>®</sup>**  
**NINGBO TAIHE BEARING CO.,LTD**

## 2006 年

公司成立，生产线4条，员工20人

Taihe was established with 4 production Lines and a staff of 20 people

## 2008 年

公司生产线增加至11条，员工60人

Bearing production line was increased To 11, and employees to 60

## 2010 年

公司引进网带炉热处理生产线，装配自动连线改造完成

Taihe introduced a production line of heat Treatment by mesh belt furnace, and refined Automatic assembly lines

## 2012 年

公司增加产品类型，生产中大型轴承

Taihe increased product type to Manufacture medium & big sized Bearings

## 2007 年

公司生产线增加至7条，员工40人

Taihe increased bearing production Line to 7, with 40 workers

## 2009 年

公司扩大生产规模和新增生产线至20条。员工200人，年生产能力突破3000万，产值5000万

Taihe scaled up production, And increased bearing production line to 20, And employees to 200. The production Capacity reached 30 million sets annually. In 2009, taihe salesturnover was rmb 50 million

## 2011 年

公司启动2条精品轴承生产线，和主机市场配套

Taihe started two new production lines to Manufacture bearings in better quality, which Aims at supporting motor market

## 2013 年

公司新厂房动工，新厂房占地面积18000平方米。可以容纳60条自动连线。新厂房采用最先进的集中过滤系统和自动连线工艺

Taihe started construction of new plant which covers an area of 18000 square meters and can accommodate 60 automatic production lines. The new plant will adopt the latest and most advanced concentrating Filtration system and automatic connecting production process



# Background

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- Establishment: 2006
- Plant area: 18,000 sqm
- Automatic production line: 24 lines
- Monthly production capacity: 3500,000 sets



# Main Products

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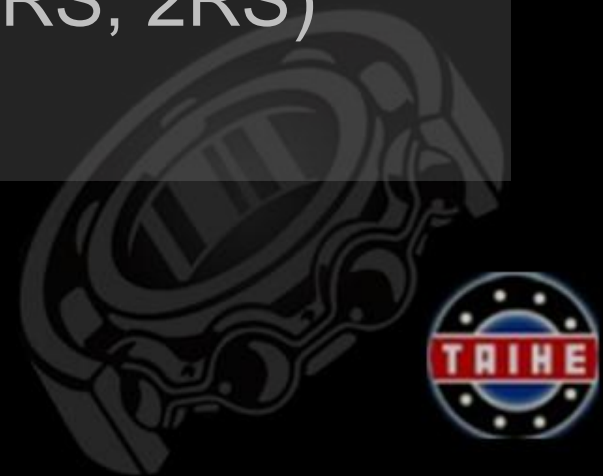
**NS-MARSHAL®**

# Main Products

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- 1. Deep groove ball bearing**  
607-609, 626-629,  
6000-6010, 6200-6210,  
6300-6310 , 6800, 6900  
(open, Z, ZZ, RS, 2RS)







### V-slot, dustproof rubber cover

International leading V-slot design, used in combination with dustproof rubber cover, forms 360° natural protective barrier to guarantee a safe operation.

### German Holder, German Steel Ball

High quality holder, steel balls from Germany, low-vibration, low-friction, make operation noiseless.

### Double Face Japanese Oil

Both faces of the bearing use the Japanese oil to decrease the friction of the bearing and smooth the operation.

### Xing Cheng Steel

Be of high rigidity, foreign body resistance and long life-span.

### Molding Chamfer

A new generation of molding chamfer technology makes installation and operation more convenient.



# Application

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**Car**



**Motorcycle**



**Gardening  
tool**



**Tractor**



**Agricultural  
machinery**



**Textile  
machinery**



**Industrial  
machine**



**Electric  
tool**



**Motor**



**Pump**

# Application

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**Fitness  
equipment**



**Massage  
chairs**



**Vacuum  
cleaner**



**Office  
equipment**



**Air  
conditioner**



**Pram**



**Sewing  
machine**



**Rangehood**



**Microwave  
oven**



**Fan**



# Motorcycle Bearing

## 摩托车轴承

用于发动机、变速装置、车轮等支撑行驶的重要的旋转部分，担负着降低摩擦、促使发动机的动力切实传至车轮的作用。

因此，摩托车用轴承所要求的性能是，通过低摩擦和低振动实现顺畅的旋转，还必须确保耐久性等。这些性能，影响着与我们生活紧密相关的耗油量及安全性。

作为世上使用广泛的移动手段而出现在于各种场所的摩托车中，始终要靠轴承才能转动。这些转动，使发动机传来令骑车者感到舒适的动力，也让车强有力地顺畅行驶。泰和轴承使摩托车给世上骑车人带来其所永远希望的心情愉快的行驶、良好的操作性和舒适的骑乘感觉以及安全可靠的运行。

摩托车的发动机及变速装置用轴承，由于要在异物环境中的高温、高速旋转并承受很大冲击载荷的条件下使用，因此，要求具有耐异物性和高刚性。另外，车轮用轴承，必须适于车在各种地形及用途方面使用，所以，对水、泥等也要具有耐久性。泰和轴承拥有可满足这些要求的具备长期耐久性的材料和热处理技术以及可实现高刚性的轴承内部规格优化技术，向广大用户提供各种高密封性轴承。



As the necessary rotation component in engines, transmissions and wheels, motorcycle bearings play an important role in reducing friction, and driving engine power to wheels.

Thus, requirements for motorcycle bearings are, smooth rotation with low friction and low vibration, and nice durability. These performance issues affect fuel consumption and security.

Motorcycle, as the most widely used vehicle in the world, relies on bearings to move. Bearings ensures the smooth movement of motorcycle, favorable operability, Security and good feeling of rider.

Bearings used in engines and transmissions of motorcycles, work under the condition of high temperature, high speed and large impact load with foreign bodies, therefore, these bearings have to be of high rigidity and resistant to foreign bodies. And wheel bearings make motorcycle move in various terrain, which requires wheel bearings have resistance of water and mud. Taihe has good material with long-term durability, advanced heat-treating equipment and optimization techniques for high rigidity, dedicated to the broad masses of users with good-sealing bearings.

## Electric Fan Bearing 风扇轴承

风扇可谓是家喻户晓的，家庭必备品，在工业上也应用广泛，起到散热，增加空气的流动速度或流量作用。风扇在转动过程中，要求具有转动平稳，噪音小，能耗小的特点。

Fans are household and family-essential goods. It's widely used in industry and played a role of cooling and increasing the air's flow rate. In the rotation process, Fans require a characteristic of smooth rotation, low noise and low energy consumption.



## Motor Bearings 电机轴承

电动机广泛引用于制造，动力行业，为所有产业作为动力源使用。泰和轴承广泛用于电机的转动部分，其在支持顺畅而安静的转动的同时，还能发挥承受电机所承载载荷的重大作用。

Motors are widely used in the manufacture and power industry, providing a power source for all industrial. Taihe bearing are widely used in rotating parts of the motor, which can support a smooth and quiet rotating. The motor also can play the role of withstand major carrying load.







## Agricultural Machinery Bearing 农机轴承

轴承具有适应环境能力强，疲劳寿命高，变形大，承重能量大的特点。

由于农机机械主要用在露天、沙地、潮湿或水中作业，受到物料摩擦和环境的腐蚀，使用环境恶劣，容易造成轴承密封失效，降低轴承使用寿命。而且常采用长轴或跨度大的结构。在工作中常会出现变形大、挠度大等情况。同时农业机械在制作安装中，安装定位不够精确，轴与座孔的轴线对中性差。

为了适应农业机械工作中会出现变形大、挠度大等特点，应该选用具备调心功能的轴承才能有效保证使用寿命。由于农业机械使用环境条件比较苛刻，轴承应该有良好的密封性能。

Bearing have characteristic of good ability to adapt to the environment, high fatigue life, deformation and good load-bearing capacity.

Agricultural machinery mainly used in the open air, sand, moisture or water operations, so subject to friction and environmental corrosion of materials. The harsh use environment may easy to cause the bearing seal failure and reduce bearing's life. Because often use long axis or span structures, so when they at work it may cause deformation, deflection and large. Meanwhile, in the installation process of agricultural machinery, the installation location is not precise enough, shaft and housing bore axis of the neutral difference.

In order to adapt to the problems such as deformation and deflection which may happened in the operation. Self-aligning function should be choosed to ensure the effectively life of bearing. The agricultural machinery always used in the harsh environmental conditions, so the bearings should have good sealing performance.







# Brand

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- Main brand: **MS-MARSHAL**
- Other brand: **Platinum**

**Crown**

**Superlight**

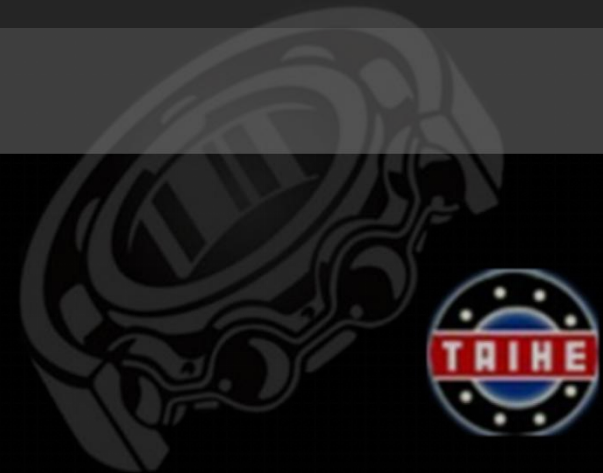




# Selling Network

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By the reliable quality and competitive prices, we have built up stable relationship with many clients from **Europe, South America, Southeast Asia, Middle East, Africa etc.** We always dedicate ourselves to complete customers satisfaction.



**Taihe possessing advanced technology and equipment, focuses on products' quality. Now we hold 24 professional production lines**

## **Production Process:**

Heat Treating; Grinding, Demagnetizing & Cleaning;  
Detecting (ring); Assembling; Cleaning; Assembling  
(cover); (Typing); Detecting ; Oil adding; Packing.





# Heat Treating

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Device name: Industrial Heat Treating Furnace  
★ Equipped with 2 hardness testers  
Quantity: 1



According to the national standard, the hardness of bearing ring should be HRC60 to HRC65. After heat treating, hardness of our bearing rings is controlled within a certain range (HRC61 - HRC63)



# Grinding

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Grinding is a very essential part of bearing production. Grinding process can be divided into many steps .

## No. 1 END FACE GRINDING

Device name: CNC End Grinding Machine

★ Each machine equipped with a Bearing Width Gauge  
Quantity: 5



# Grinding



Before



After

## No. 2 EXCIRCLE & LAPPING

Device name: CNC Centerless Grinder

★ Each machine equipped with Roundness Tester

Quantity: 5

After this grinding step, rings become brighter, and of high size precision. Then, rings will be demagnetized and cleaned, preparing for next grinding step.





# AUTOMATIC LINES (Grinding)



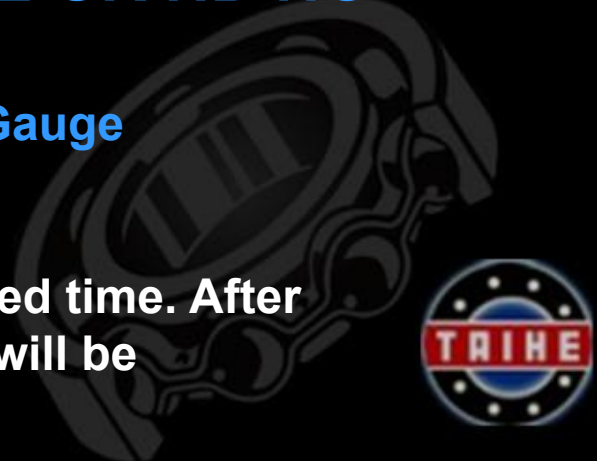
## No. 3 INNER & OUTER GROOVE GRINDING

Device name: CNC Grinding Machine

★ Each machine equipped with Bearing Groove Gauge

Quantity: 53

Each groove of ring is set to be grinded for a fixed time. After grinding, grooves become smooth. Then, rings will be demagnetized and cleaned again.





# AUTOMATIC LINES (Grinding)

## No. 4 INNER & OUTER GROOVE SUPER-FINISHING

**Device name: CNC Super-grinding Machine**

★ **Each machine equipped with Bearing Groove Gauge**

**Quantity: 53**



**For this step, groove is also grinded for a fixed time. This decreases the roughness of grooves to a minimum, which ensures high speed of our bearings. After this grinding step, rings will also be demagnetized and cleaned.**



## No. 5 FINAL OUTER CIRCLE GRINDING

Device name: CNC High-precision Centerless Grinder

★ Each machine equiped with Roundness Tester

Quantity: 5

This step aims at making circular degree of outer rings more precise, and appearance of bearings more beautiful.





# Demagnetizing & Cleaning

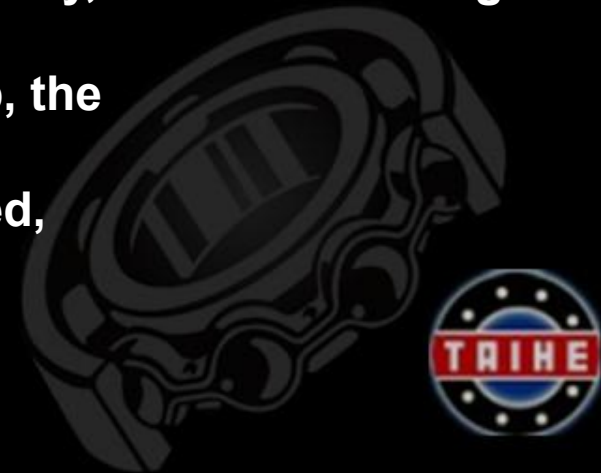
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**Device name: Cleaning Machine with Demagnetization Function**

**Quantity: 4**

Demagnetization and cleaning can be found after each grinding step. This part is very important and necessary part in grinding process of bearing rings. Because magnetism and impurity will hamper grinding work. It finally concerns bearing precision and quality, as well as bearing service life.

After all the grinding step, the rings will also be demagnetized and cleaned, which prepares for the detecting step.



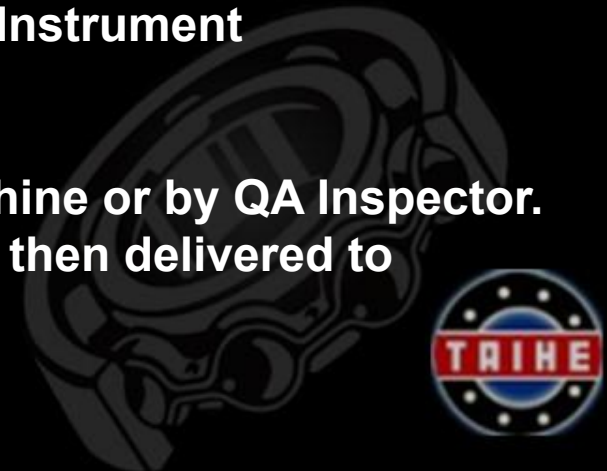
# Detecting (RING)

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**Device name: Bearing Ring Testing & Controlling Instrument**  
**Quantity: 18**

**Each inner ring and outer ring is detected by machine or by QA Inspector.  
Qualified rings will be demagnetized and cleaned, then delivered to  
assembly workshop**



# Detecting (RING)

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**Metallographic Detection**



**Material Property Tester**



**Roughness Instrument**



**High-precision Roundness Tester**





# automatic lines (Assembling)

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**Device name: CNC Assemble Machine**

★ **Each machine equipped with Bearing Clearance gauge**  
**Quantity: 24**



**These assembling lines are all automatic. The operators add outer rings, inner rings, balls and cages into the machines. And open bearings come out. It can also control bearing clearance.**



# Cleaning

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**Device name: Large-scale Multifunctional Bearing Cleaning Machine**  
**Quantity: 5**

The bearings came out from the machines will be transported to washing machine by conveyor belt. Open bearings will be cleaned for three times. And during the three times, we have professional inspectors to test the flexibility of products.





# automatic lines (Assembling)

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**Device name: CNC Oiling & Capping Machine**  
**Quantity: 24**



For sealed type, products will be transferred to another assembling step after cleaning. Bearings will be grease-added and sealed with rubber covers or metal covers through these automatic machines. In our production, each bearing number has a corresponding amount of grease. Good amount of grease will help bearings to function perfectly well.







The detection of finished bearing products will be divided into 2 parts

## Part 1. Visual Inspections

Each product will be checked carefully by our inspectors. We have strict requirements about the appearance of products.

## Part 2. Vibration & Noise Testing

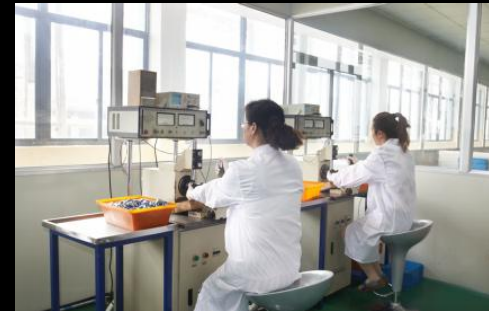
➤ Device name: Vibration Measurer  
(accelerated velocity)

Quantity: 6

➤ Device name: BVT  
(velocity)

Quantity: 5

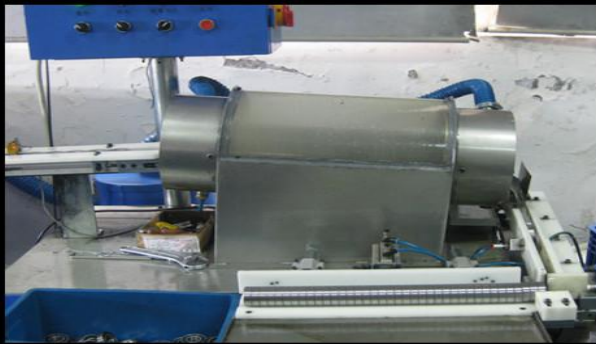
Grade for this test: Z1V1, Z2V2, Z3V3...



**Device name: Automatic Laser Typewriter**  
**Quantity: 2**

**We can offer you typing service, typing brand or item number on the bearing rings according to your request.**





**Device name: Automatic Atomizing Oil Machine**

**Quantity: 4**

**We also offer you oil-adding service. Anti-rust oil can be added before packing.**

**Usually, material for bearings is chrome steel (GCR 15). Steel will rust like other metal. Anti-rust oil coating can delay the rusting time of bearings and relieve rusting degree greatly.**



**Device name: Automatic Pillow-shaped Packing Machine**

**Quantity: 3**

**3 packing types: Tube (or plastic bag), single box and blister packing.**



*Welcome to  
visit our factory*