博盈轴承
BOYING BEARING

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博 物 君 子　持 盈 保 泰

洛阳博盈轴承有限公司
LUOYANG BOYING BEARING CO., LTD

Tel：+86 189 3901 9135

P.c：471600

Add：洛阳市宜阳县先锋路航空航天智创产业园3号

E-mail：Brent@bybearings.com

www.bybearings.com

Whatsapp　Wechat

交叉滚子轴承
Cross Roller Bearings Crossed

BRT转台轴承
Rotary Table Bearing Bearings

工业机器人轴承
Industrial Robotic Bearings Robotic

谐波减速机轴承
Bearings For Harmonic Drive Harmonic Drive Bearings

洛阳博盈轴承有限公司
LUOYANG BOYING BEARING CO., LTD

博盈轴承
BOYING BEARING

专注生产高精度机器人及数控机床轴承

Professional At High Precision Robotic
Bearing And CNC Tool Bearing

洛阳博盈轴承有限公司（BYC）坐落于洛阳市宜阳县先锋路航空航天智创产业园。我公司是一家专业从事精密轴承设计、研发、制造、销售于一体的“国家高新技术企业”，同时也是“精密滚子轴承省工程技术研究中心”。多年来经过团队不懈努力，技术与产品工艺不断创新，使得轴承的性能逐步提高。目前产品受到国内外客户的一致好评，因此打破此类产品在国际上被垄断的局面。

公司核心产品为高精度交叉圆柱滚子轴承、BRT转台轴承、工业机器人轴承、交叉圆锥滚子轴承，产品精度等级分别为：P5、P4、P2级。产品尺寸范围内径Φ10mm---外径Φ1800mm,主导产品为转台轴承BRT、BRTS、BRTM、BLDF系列及交叉圆柱滚子轴承BRB、BRE、BRU、BSU、BX、BBH、BRA、BBS系列，交叉圆锥滚子轴承BJXR、BXR系列，谐波减速机配套十字交叉滚子轴承BCSF、BCSG、BSHF、BSHG系列等高精度轴承，也可根据用户需求，设计、选型、制造各种非标精密轴承。产品主要适用于精密旋转工作台、工业机器人的关节和底座部位、测量检测仪器、医疗器械、计算器、IC制造装置等设备。

“天行健，君子自强不息”，近年来，公司投入大量资金购置新型自动化设备、建造新型工业厂房，聘请专业的管理、生产、技术人才，引进先进的管理理念，组建新型的现代化工业生产班底，建立轴承实验研究中心，实现从内而外的升华。

产品质量是工业企业的灵魂，公司一直高度重视产品质量，以期为客户提供更优质的产品。目前公司已通过ISO9001质量体系认证和GJB9001C武器装备质量管理体系认证，具备完善的质量控制体系。

“ 博物君子，持盈保泰”我们洛阳博盈轴承有限公司多年来一直秉承“专注细节，提升自我”的经营理念，竭诚为用户提供高品质的产品和全方位的服务，衷心希望与您精诚合作，携手共创辉煌。

Luoyang Boying Bearing Co., Ltd. (BYC) is located in the Aerospace Intelligent Innovation Industrial Park on Xianfeng Road, Yiyang County, Luoyang City. Our company is a "National High-tech Enterprise" specializing in the design, research and development, manufacturing, and sales of precision bearings. It is also a "Provincial Engineering Technology Research Center for Precision Roller Bearings".

Over the years, through the unremitting efforts of our team, continuous innovation in technology and product processes has gradually improved the performance of our bearings. Currently, our products have received unanimous praise from customers at home and abroad, thus breaking the international monopoly on such products.

The core products of our company are high-precision crossed cylindrical roller bearings, BRT turntable bearings, industrial robot bearings, and crossed tapered roller bearings. The precision grades of our products are P5, P4, and P2 respectively. The product size range is from inner diameterΦ10mm to an outer diameter of Φ1800mm. The leading products include the BRT, BRTS, BRTM, and BLDF series of turntable bearings, as well as the BRB, BRE, BRU, BSU, BX, BBH, BRA, and BBS series of crossed cylindrical roller bearings, the JXR and XR series of crossed tapered roller bearings, the BCSF, BCSG, BSHF, and BSHG series of crossed roller bearings for harmonic reducers, and other high-precision bearings. We can also design, select models, and manufacture various non-standard precision bearings according to the needs of users. Our products are mainly applicable to precision rotary tables, the joint and base parts of industrial robots, measuring and testing instruments, medical devices, calculators, IC manufacturing equipment, and other devices.

"As heaven changes through movement, a gentleman makes unremitting efforts to perfect himself." In recent years, the company has invested a large amount of funds to purchase new automated equipment, build new industrial plants, hire professional management, production, and technical talents, introduce advanced management concepts, establish a new modern industrial production team, and set up a bearing experimental research center, achieving a sublimation from the inside out.

Product quality is the soul of an industrial enterprise. Our company has always attached great importance to product quality, aiming to provide customers with better products. Currently, the company has passed the ISO9001 quality system certification and the GJB9001C weapon equipment quality management system certification, and has a complete quality control system.

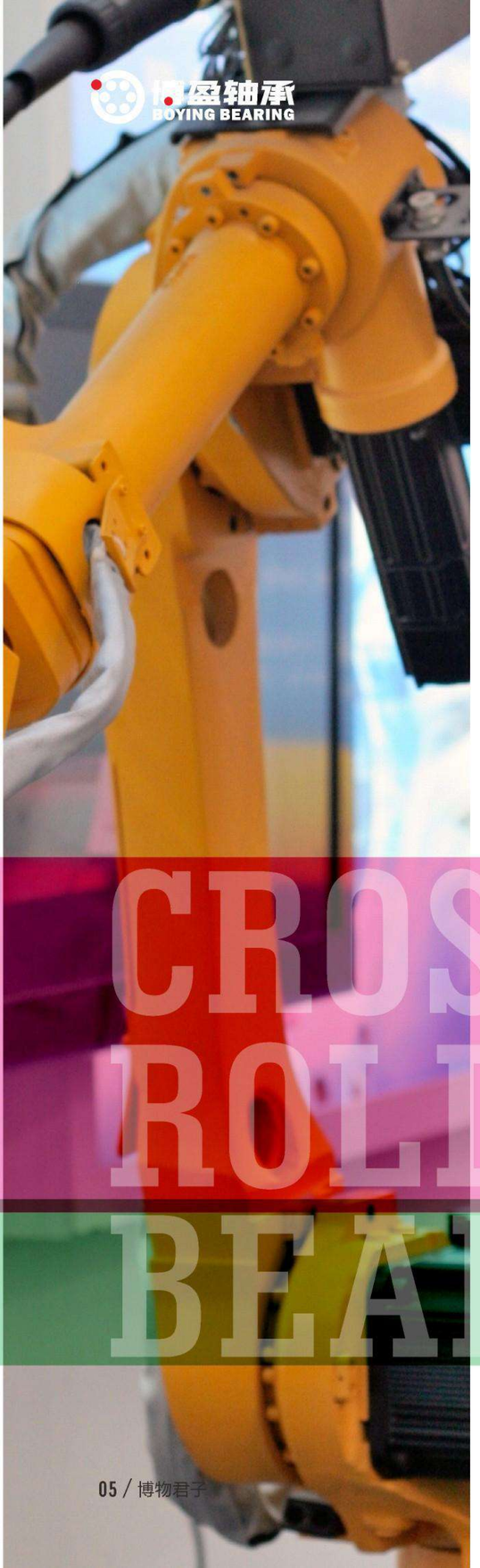
"A learned gentleman maintains his success and keeps his position secure." For many years, Luoyang Boying Bearing Co., Ltd. has been adhering to the business philosophy of "Focus on details and improve ourselves", wholeheartedly providing users with high-quality products and comprehensive services. We sincerely hope to cooperate sincerely with you and create brilliance hand in hand.

公司客户介绍

目前产品在国内市场非常成熟，客户辐射全国，主要集中沿海地区工业发达的地区和城市，客户行业也是非常广泛，近年来新兴的自动化设备、机器人产业，机床转台、军工等高端装备行业都有涉及，技术产品都非常成熟。近年来国外市场也在不断开拓，目前国外客户辐射欧洲、北美、东南亚、东亚等地区。

Company Customer Introduction

The product is very mature in the domestic market, with customers radiating nationwide, mainly concentrated in coastal industrial developed cities and regions. The product has a wide range of applications, mainly in the fields of automation equipment, industrial robots, machine tool turntables, military and other high-end equipment industries. In recent years, overseas markets have also been continuously expanding. Currently, overseas customers radiate to Europe, North America, Southeast Asia, East Asia and other regions.



用品质征服你
Conquer You With Quality,
用诚信感动你
Move You With Integrity

CROSS ROLLER BEARING

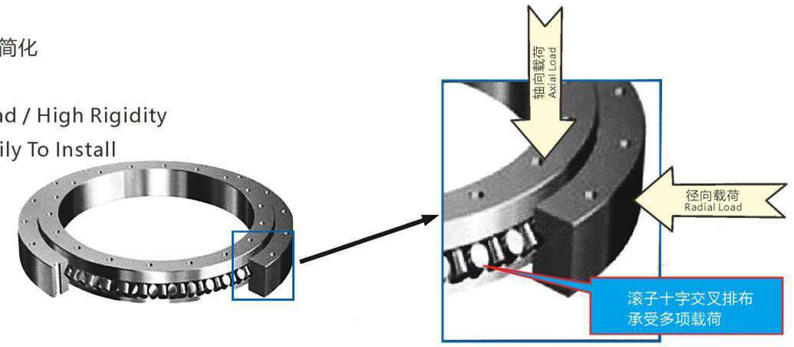
BYC博盈轴承的主要产品 MAIN PRODUCT OF BYC

一、交叉滚子轴承

Crossed Roller Bearings
(BRB/BRE/BRU/BXU/BSU/BX/BBH/BRA/BBS)

1、多向承载高刚性
2、高旋转精度 / 操作安装简化
3、机器人 / 精密仪器用

1、 Multidirectional Load / High Rigidity
2、 High Precision / Easily To Install
3、 Robotic Use



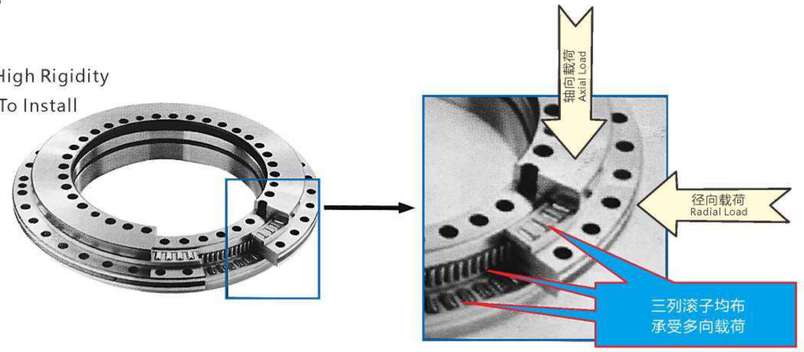
Rollers arranged in crossed configuration to withstand multiple loads.

二、转台轴承

Rotary Table Bearing (BRT/BRTM/BRTS/BLDF)

1、多向承载高刚性，轴向承载能力更强
2、高旋转精度/操作安装简化
3、数控转台/分度台用

1、 Multidirectional Load High Rigidity
2、 High Precision/Teasily To Install
3、 CNC Turntable Use



Three rows of rollers evenly distributed, withstand multiple loads.

交叉滚子轴承特点

结构特点:

交叉滚子轴承，是圆柱滚子在呈90的V形沟槽滚动面上通过隔离块被相互垂直地排列，所以交叉滚子轴承可承受径向负荷、轴向负荷及力矩负荷等多方向的负荷。内外圈的尺寸被小型化，极薄形式更是接近于极限的小型尺寸，并且具有高钢性，且精度可达到P5、P4、P2级。因此适合于工业机器人的关节和旋转部位、机械加工中心的旋转台，精密旋转工作台、医疗机器、计算器、军工、IC制造装置等设备。

旋转精度:

轴承中垂直排列的滚子间装有隔离块，防止了滚子的倾斜和滚子之间的相互摩擦，减小了旋转力矩。另外，与以前使用钢板保持器相比，不会发生滚子在一方接触现象或锁死现象。同时，因内圈(或外圈)是两分割的构造，轴承间隙可调整，即使被施加预载，也能获得高精度地旋转运动。

使用特点:

被分割的内环(或外环)，在装入滚柱和间隔保持器后，与交叉滚柱轴环固定在一起，以防止互相分离故安装交叉滚柱轴环时操作简单。通过间隔保持器使滚柱间的相互摩擦消失，防止滚柱侧倒，从而能获得稳定的旋转扭矩。由于滚柱为交叉排列，因此只用一套交叉滚柱轴承就可承受各个方向的负荷，与传统型号相比，刚性提高3~4倍。

Features of crossed roller bearings

STRUCTURE FEATURES

With the Cross Roller bearing, cylindrical rollers are arranged crosswise, with each roller perpendicular to the adjacent roller, in a 90°V groove, separated from each other by a spacer retainer. This design allows just one bearing to receive loads in all directions including, radial, axial and moment loads. Since the Cross-Roller Ring achieves high rigidity and the precision can reach up to P5,P4.P2, despite the minimum possible dimensions of the inner and outer rings, it is optimal for applications such as joints and swiveling units of industrial robots, swiveling tables of machining centers, precision rotary tables, medical equipment, measuring instruments and IC manufacturing machines.

Rotation accuracy

The spacer retainer fitting among cross-arrayed rollers prevents rollers from skewing and the rotation torque from increasing due to friction between rollers.Unlike conventional types using steel sheet retainers, the Cross Roller Bearing does not cause displacement or locking of rollers and provides a stable rotation torque.Since the inner and outer rings are designed to be separable, the bearing clearance can be adjusted. In addition, highly accurate rotary motion is ensured through adjusting the bearing clearance to provide a preload.

Usage characteristics

The inner and outer rings, which are separable, are secured to the Cross Roller Bearing body after the rollers and spacer retainers are installed. This procedure prevents the rings from separating from each other. Thus, it is easy to handle the rings when installing the Cross Roller Bearing. The spacer retainer keeps rollers in their proper position, thereby preventing them from skewing. This eliminates friction between rollers, and therefore secures a stable rotation torque. the cross array of rollers allows a single Cross Roller Bearing unit to receive loads in all directions, increasing the rigidity to three to four times greater than the conventional type.

交叉圆柱滚子轴承类型
Classification Of Crossed Roller Bearings

BRB型（外环分割型、内环旋转用）
Model BRB (Separable Outer Ring, Type for Inner Ring Rotation)

此系列型号为交叉圆柱滚子轴承的基本型，内、外环尺寸被最大限度地小型化，其构造是外环是分割型，内环是一体设计，适合于要求内环旋转精度高的部位。

Being the basic model of the Cross-Roller Ring, despite the minimum possible dimensions of the inner and outer rings, it`s outer ring is separable while the inner ring is integrated with the main body. This model is used in locations where the rotation accuracy of the inner ring is required.

BRE型（内环分割型、外环旋转用）
Model BRE (Separable Inner Ring, Type for Outer Ring Rotation)

此系列型号是由BRB型的设计理念产生的新型式，主要尺寸与BRB型相同。其构造是内环是分割型，外环是一体设计，适合于要求外环旋转精度高的部位。

This new model is based on the design of principal of the BRB, Having the same major dimensions as model BRB, it`s inner ring is separable while the outer ring is integrated with the main body, this model is used in locations where the rotation accuracy of the outer ring is required.

BRU型、BSU型、BXU型（内、外环一体型）
Model BRU 、BSU、BXU (Integrated Inner/Outer Ring Type)

此系列型号由于已进行了安装孔的加工，无需固定法兰和支撑座。另外，由于采用一体化带座内外环结构，安装对性能几乎没有影响，因此能够获得稳定的旋转精度和扭矩，且适能用于外环和内环旋转。

Since the mounting holes are provided, this model does not require a presser flange or housing. In addition, because it has an integrated inner/outer ring structure and it`s equipped with washers, it`s performance is minimally affected by the mounting procedure, ensuring stable rotation accuracy and torque. This model can be used for both inner-ring rotation and outer-ring rotation.

BX型（外环分割型，内环旋转用）
ModelBX (Separable Outer Ring, Type for Inner Ring Rotation)

其结构与BRB系列类似，外环是两分割的结构，通过三个固定环连接，内环一体设计，适合于要求内环旋转精度高的部位。

Its structure is similar to BRB series, the outer ring is separable and connected with three stating rings. While the inner ring is integrated with the main body. This model is used in locations where the rotation accuracy of the outer ring is required.

BBH型（内、外环一体型）
Model BBH (Integrated Inner/Outer Ring Type)

该系列型号内、外环都是一体结构，用于外环和内环旋转。

This model is with an integrated Inner/Outer Ring structure，can be used for both inner-ring rotation and outer-ring rotation.

BRA型（外环分割型、内环旋转用）
Model BRA (Separable Outer Ring Type for Inner Ring Rotation)

此系列型号是将BRB型内、外环厚度减小到极限的紧凑型。适合于需要重量轻、紧凑设计的部位，例如机器人和机械手旋转部位。

Based on model BRB, this model is a light and compact type with the thinnest possible inner and outer rings. It is optimal for location where weight reduction and downsizing are required, such as the hand swiveling unit of robots and manipulators.

BBS型（内外环一体型）
Model BBS(Integrated Inner/Outer Ring Type)

该系列与BRA系列有相同的尺寸规格，内外环都有较高的旋转精度。

This series has the same size specifications as the BRA series, and both the inner and outer rings have high rotational accuracy.

交叉滚子轴承旋转精度标准-BRB、BRE型

BRB型内环旋转精度

Rotation Accuracy of the Inner Ring of Model BRB、BRE

单位:微米
Unit: μm

轴承内径尺寸 Inner diameter (d) (mm)		内环旋转精度 Running accuracy of the inner ring					
		径向跳动 Radial runout			轴向跳动 Axial runout		
以上 Above	以下 Or less	P5 级	P4 级	P2 级	P5 级	P4 级	P2 级
18	30	4	3	2.5	4	3	2.5
30	50	5	4	2.5	5	4	2.5
50	80	5	4	2.5	5	4	2.5
80	120	6	5	2.5	6	5	2.5
120	150	8	6	2.5	8	6	2.5
150	180	8	6	5	8	6	5
180	250	10	8	5	10	8	5
250	315	13	10	6	13	10	6
315	400	15	12	7	15	12	7
400	500	18	14	9	18	14	9
500	630	20	16	10	20	16	10
630	800	23	18	11	23	18	11
800	1000	25	20	12	25	20	12
1000	1250	28	22	—	28	22	—

BRE型外环旋转精度

Rotation Accuracy of the Outer Ring of Model BRE

单位:微米
Unit: μm

轴承外径尺寸 Outer diameter (D) (mm)		外环旋转精度 Running accuracy of the outer ring					
		径向跳动 Radial runout			轴向跳动 Axial runout		
以上 Above	以下 Or less	P5 级	P4 级	P2 级	P5 级	P4 级	P2 级
30	50	7	5	2.5	7	5	2.5
50	80	8	5	4	8	5	4
80	120	10	6	5	10	6	5
120	150	11	7	5	11	7	5
150	180	13	8	5	13	8	5
180	250	15	10	7	15	10	7
250	315	18	11	7	18	11	7
315	400	20	13	8	20	13	8
400	500	23	15	9	23	15	9
500	630	25	16	10	25	16	10
630	800	30	20	13	30	20	13
800	1000	38	25	16	38	25	16
1000	1250	40	27	18	40	27	18
1250	1600	42	30	20	42	30	20

交叉滚子轴承旋转精度标准-BRU型

BRU型旋转精度

Rotation Accuracy of Model BRU

单位:微米
Unit: μm

型号 Model Number	内环旋转精度 Running accuracy of the inner ring						外环旋转精度 Running accuracy of the outer ring					
	径向跳动 Radial runout			轴向跳动 Axial runout			径向跳动 Radial runout			轴向跳动 Axial runout		
	P5 级	P4 级	P2 级	P5 级	P4 级	P2 级	P5 级	P4 级	P2 级	P5 级	P4 级	P2 级
BRU28	4	3	2	4	3	2	7	5	3	7	5	3
BRU42	4	3	2.5	4	3	2.5	8	5	4	8	5	4
BRU66	5	4	2.5	5	4	2.5	10	6	5	10	6	5
BRU85	5	4	2.5	5	4	2.5	10	6	5	10	6	5
BRU124	5	4	2.5	5	4	2.5	13	8	5	13	8	5
BRU148	6	5	2.5	6	5	2.5	15	10	7	15	10	7
BRU178	6	5	2.5	6	5	2.5	15	10	7	15	10	7
BRU228	8	6	5	8	6	5	18	11	7	18	11	7
BRU297	10	8	5	10	8	5	20	13	8	20	13	8
BRU445	15	12	7	15	12	7	25	16	10	25	16	10

注)对于BRU型,P5级为标准旋转精度。
Note: The standard rotation accuracy of model BRU is grade P5

交叉滚子轴承尺寸公差标准

轴承内径的容许尺寸公差 Dimensional Tolerance of the Bearing Inner Diameter

单位:微米 Unit:μm

轴承内径尺寸 Inner diameter (d)(mm)		轴承内径的容许尺寸公差 Dimensional Tolerance of the Bearing Inner Diameter								高度公差(所有级别通用) Height Tolerance	
		P0 级		P6 级		P5 级		P4/P2 级			
以上 Above	以下 less	高 Upper	低 Lower	高 Upper	低 Lower	高 Upper	低 Lower	高 Upper	低 Lower	高 Upper	低 Lower
18	30	0	-10	0	-8	0	-6	0	-5	0	-75
30	50	0	-12	0	-10	0	-8	0	-6	0	-75
50	80	0	-15	0	-12	0	-9	0	-7	0	-75
80	120	0	-20	0	-15	0	-10	0	-8	0	-75
120	150	0	-25	0	-18	0	-13	0	-10	0	-100
150	180	0	-25	0	-18	0	-13	0	-10	0	-100
180	250	0	-30	0	-22	0	-15	0	-12	0	-100
250	315	0	-35	0	-25	0	-18	0	-15	0	-120
315	400	0	-40	0	-30	0	-23	0	-18	0	-150
400	500	0	-45	0	-35	0	-25	0	-20	0	-150
500	630	0	-50	0	-40	0	-30	0	-25	0	-150
630	800	0	-75	0	-45	0	-35	0	-30	0	-150
800	1000	0	-100	0	-50	0	-40	0	-35	0	-300
1000	1250	0	-125	0	-60	0	-50	0	-45	0	-300

轴承外径的容许尺寸公差 Dimensional Tolerance of the Bearing Outer Diameter

单位:微米 Unit:μm

轴承外径尺寸 Outer diameter (d)(mm)		轴承外径的容许尺寸公差 Dimensional Tolerance of the Bearing Outer Diameter								高度公差(所有级别通用) Height Tolerance	
		P0 级		P6 级		P5 级		P4/P2 级			
以上 Above	以下 less	高 Upper	低 Lower	高 Upper	低 Lower	高 Upper	低 Lower	高 Upper	低 Lower	高 Upper	低 Lower
30	50	0	-11	0	-9	0	-7	0	-6	0	-75
50	80	0	-13	0	-11	0	-9	0	-7	0	-75
80	120	0	-15	0	-13	0	-10	0	-8	0	-75
120	150	0	-18	0	-15	0	-11	0	-9	0	-75
150	180	0	-25	0	-18	0	-13	0	-10	0	-100
180	250	0	-30	0	-20	0	-15	0	-11	0	-100
250	315	0	-35	0	-25	0	-18	0	-13	0	-120
315	400	0	-40	0	-28	0	-20	0	-15	0	-150
400	500	0	-45	0	-33	0	-23	0	-18	0	-150
500	630	0	-50	0	-38	0	-28	0	-20	0	-150
630	800	0	-75	0	-45	0	-35	0	-25	0	-150
800	1000	0	-100	0	-50	0	-40	0	-30	0	-300
1000	1250	0	-125	0	-60	0	-50	0	-35	0	-300
1250	1600	0	-160	0	-70	0	-60	0	-45	0	-300

注1) BRA、BRB、BRE和BRU型的标准内外径尺寸精度为0级,若需要比0级更高的精度,请向BYC博盈轴承咨询。

注2) dm表示轴承内径2点测量得到的最大直径和最小直径的算术平均值。Dm表示轴承外径2点测量得到的最大直径和最小直径的算术平均值。

注3) 表中轴承内径或外径的精度等级无数值表示的型号,低精度级也适用最高数值。

Note 1: The standard diameter accuracy of models BRA, BRB 、BRE and BRU is grade 0. For higher accuracy than grade 0, contact BYC.

Note 2: "dm" represents the arithmetic average of the maximum and minimum diameters obtained in measuring the bearing inner diameter at two points;"Dm" represents the arithmetic average of the maximum and minimum diameters obtained in measuring the bearing Outer diameter at two points.

Note 3: For accuracy grades of the bearing diameter with no values indicated in the table, the highest value among the low accuracy grades applies.

BRB、BRE、和BX型的配合，建议选用表中的组合

Fit for models BRB/BRE and BX series

径向间隙（预压） Radial Clearance	使用条件 Service conditions		轴 Shaft	支撑座 Housing
CC0	内环旋转负荷 Inner Ring Rotational Load	普通负荷 Normal Loat	g5	H7
		大冲击和力矩 Large Impact/moment		
	外环旋转负荷 Outer Ring Rotational Load	普通负荷 Normal Loat		
		大冲击和力矩 Large Impact/moment		
C0	内环旋转负荷 Inner Ring Rotational Load	普通负荷 Normal Loat	h5	H7
		大冲击和力矩 Large Impact/moment	h5	H7
	外环旋转负荷 Outer Ring Rotational Load	普通负荷 Normal Loat	g5	Js7
		大冲击和力矩 Large Impact/moment	g5	Js7
C1	内环旋转负荷 Inner Ring Rotational Load	普通负荷 Normal Loat	j5	H7
		大冲击和力矩 Large Impact/moment	k5	Js7
	外环旋转负荷 Outer Ring Rotational Load	普通负荷 Normal Loat	g6	Js7
		大冲击和力矩 Large Impact/moment	h5	K7

注）对于用于CC0间隙的配合，要避免相互干扰，否则会导致过高的预压。当选择的间隙CC0是用于机器人的关节或旋转部位时，此时选用的配合，建议应为g5和H7的组合。

Note: For the fit for clearance CC0, avoid an interference because it will cause an excessive preload. As for the fit when you have selected clearance CC0 for the joints or swiveling unit of a robot, the combination of g5 and H7 is recommended.

螺栓数量与螺栓尺寸

Number And Size Of Bolts

外环外径D（mm） OD of outer ring	螺栓数量 Bolt Qty.	螺栓规格 Bolt Spec.
100以下	8(含)以上	M3~M5
100~200	12(含)以上	M4~M8
200~500	16(含)以上	M5~M12
500以上	24(含)以上	M12(含)以上

附螺栓锁紧扭力值

Torque Value Of Locking Bolt

螺栓规格 Bolt Spec.	扭力值（N.m） Torque	螺栓规格 Bolt Spec.	扭力值（N.m） Torque
M3	2	M10	70
M4	4	M12	120
M5	9	M16	200
M6	14	M20	390
M8	30	M22	530

交叉滚子轴承安装步骤

1.将支承座或其它安装部位彻底清洗干净，并确定是否有毛刺或毛边。

2.由于是薄壁，插入时易发生倾斜。为了防止这种现象，请一边保持水平，一边用塑料锤均匀敲打，一点一点地将轴承插入支承座内或轴上，直到通过声音确认与基准面完全紧靠时为止。

3.将固定法兰放置在交叉滚子轴承轴环上，摇动固定法兰几次，使其与螺栓孔的位置相吻合。

4.将固定螺栓插入孔内，用手转动螺栓时，确认没有因螺栓孔偏离而引起螺栓难以拧入。

5.如图1所示，固定螺栓的锁紧由不完全锁紧到全锁紧分成3~4个阶段，按对角线上的顺序反复拧紧。在拧紧分割的内环或外圈时，将一体型的外圈或内环稍微转动一些，就能修正内外环与主体的偏离。

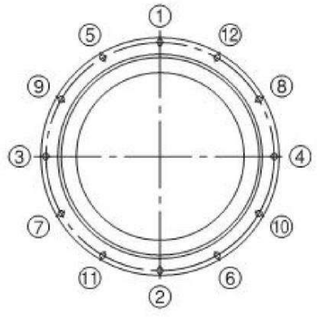


图1 锁紧顺序

Installation Procedure

1.Thoroughly clean the housing and other parts to be installed, and check to determine if deburring is required.

2.Since the Cross-Roller Ring is a thin-wall bearing type and therefore tends to misalign when it is installed, in case of this situation, gradually drive the product into the housing or onto the shaft by gently hitting it with a plastic hammer, while keeping the product horizontal. Taking care, continue to hammer until it fully contacts the reference surface.

3.Place the presser flange onto the Cross-Roller Ring. Rock the flange several times to match the bolt holes.

4.Insert the presser bolts into the holes. Manually turn the bolts and make sure they do not display skewing caused by misalignment of the holes.

5. As is shown in the figure 1:

Tighten the presser bolts in three to four steps from light to full tightening by repeatedly securing the bolts in diagonal order. When tightening the separable inner or outer ring, slightly turning the integral outer or inner ring will correct the dislocation between the ring and the body.

支承座及固定法兰的设计

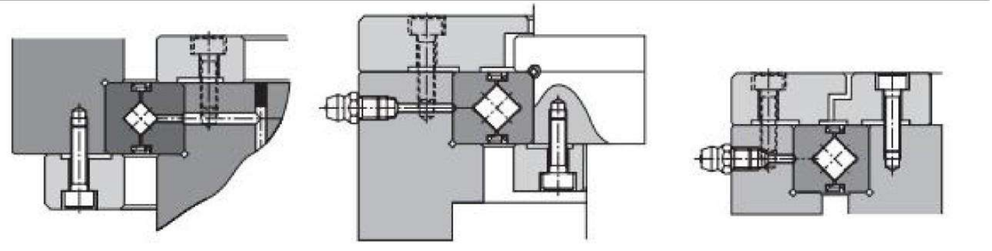
Designing the Housing and the Presser Flange

因交叉滚子轴承是薄壁小型结构，所以要充分考虑支承座或固定法兰的刚性。(如图2)

当外圈是分割型时，如果支承座或固定法兰及固定螺栓的刚性不足，就不能均等地固定内环或外环，在承受力矩负荷时轴承将产生变形，因此，滚子的接触区域会变得不均匀，轴承的性能就会显著地降低。

Since the Cross-Roller Ring is a compact, thin device, special consideration must be given to the rigidity of the housing and the presser flange. (Figure 2)

With types having a separable outer ring, insufficiency in the strength of the housing, the flange or the presser bolt will result in the inability to evenly hold the inner or outer ring, or will cause deformation of the bearing when a moment load is applied. Consequently, the contact area of the rollers will become uneven, causing the bearing`s performance to significantly deteriorate.



a. 旋转部中的外圈旋转
内外环固定后，装配重机身部的例子

a.Outer ring rotating in the swiveling Unit:
An example of mounting the heavy body paty after securing the inner and outer rings of the Cross roller bearings.

b. 旋转部中的内环旋转
（配备密封挡板）

b.Inner ring rotation with the swiveling unit(with seals attached)

c. 旋转部的内外环在同方向固定
（配备密封挡板）

c.The inner and outer rings aresecured in the same direction in the swiveling unit (with seals attached)

图2 Figure2

型号示例
Example of model number coding

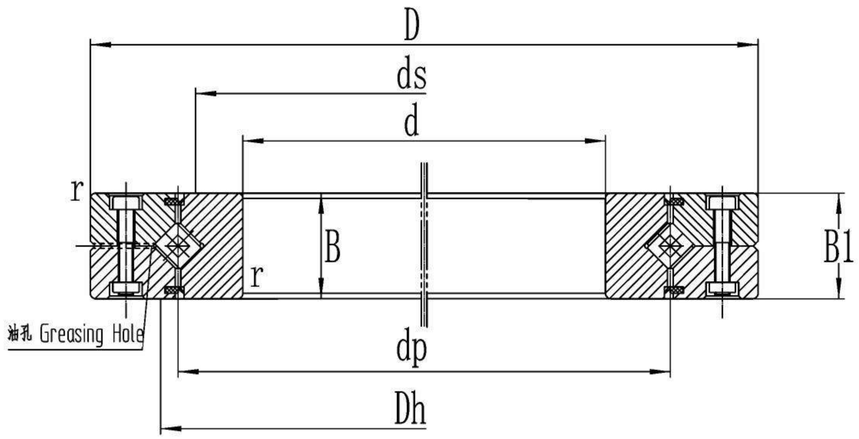
BRB 120 25 UU CC0 P2

- BRB 120 25 — 轴承系列 Bearing Series；轴承内径 Bearing Inner Diameter；轴承宽度 Bearing Width
- UU — 无标记；无密封 No Marking; No seal；UU：两端面带密封 UU:with seal attached on both sides；U：单端面密封 U:with seal attached on one sides
- CC0 — 径向游隙值符号：Radial clearance symbol；CC0:负游隙（预载）；CC0：negative clearance (preload)；C0：正游隙 C0：positive clearance；C1：较大正游隙 C1： positive clearance (greater than C0)
- P2 — 精度等级符号P5、P4、P2（无符号为P0级）Accuracy symbol (No symbol:normal grade 0)；USP：旋转精度USP级 USP: USP grade rotation accuracy

BRU 148 UU CC0 P2 G / X -N

- BRU 148 — 轴承系列 Bearing Series；节圆直径 Node diameter
- UU — 无标记；UU：两端面带密封 UU：with seal attached on both sides；U：单端面密封 U：with seal attached on one sides
- CC0 — 径向游隙值符号：Radial clearance symbol；CC0：负游隙（预载）CC0：negative clearance (preload)；C0：正游隙 C0：positive clearance；C1：较大正游隙 C1: positive clearance (greater than C0)
- P2 — 精度等级符号P5、P4、P2（无符号为P0级）Accuracy symbol (No symbol:normal grade 0)；USP：旋转精度USP级 USP: USP grade rotation accuracy
- G / X — 安装孔装配方向标记 for assembly direction of the outing hole.；无标记：内环与外环同为沉孔且方向一致 No symbol: Both the inner and outer rings are countersunk and have the same direction.；G:内环与外环同为沉孔且方向相反 G: Both the inner and outer rings are countersunk and have opposite directions.；X：外环沉孔但内环螺纹孔（通孔）X: Outer ring counterbore but inner ring threaded hole (through hole) .；适用于BRU124-445 refer to BRU124-445；另：BRU28-BRU85无标记则内环为丝孔，外环为沉孔 In addition, if BRU28-BRU85 is not marked, the inner ring is a threaded hole, and the outer ring is a countersunk hole.
- -N — 附件标记 Option symbol；无标记：无附件 No symbol: no accessory；-N：配有油嘴 -N: with grease nipple attaced

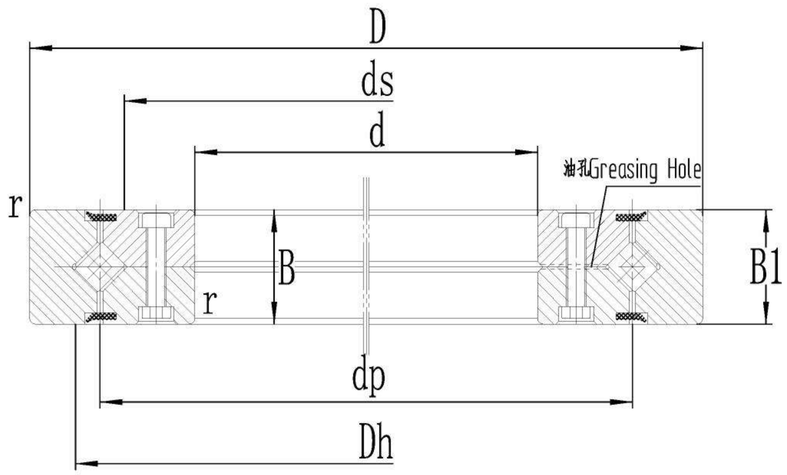
BRB系列/BRB Series



轴径 Shaft Diameter (mm)	型号 Model number	主要尺寸 Main dimensions (mm)					靠肩尺寸 Shoulder Height		基本额定负荷(径向) Basic Load Rating (radial)		重量 Weight
		内径 Inner ring (mm) d	外径 Outer ring (mm) D	滚子节圆直径 dp	宽度 width B B1	倒角 r(min)	ds (mm)	Dh (mm)	C kN	Co kN	Kg
20	BRB2008	20	36	27	8	0.5	23.5	30.5	3.23	3.1	0.04
25	BRB2508	25	41	32	8	0.5	28.5	35.5	3.63	3.83	0.05
30	BRB3010	30	55	41.2	10	0.6	37	47	7.35	8.36	0.12
35	BRB3510	35	60	46.5	10	0.6	41	51.5	7.64	9.12	0.13
40	BRB4010	40	65	51.2	10	0.6	47.5	57.5	8.33	10.6	0.16
45	BRB4510	45	70	56.5	10	0.6	51	61.5	8.62	11.3	0.17
50	BRB5013	50	80	64	13	0.6	57.4	72	16.7	20.9	0.27
60	BRB6013	60	90	74	13	0.6	68	82	18	24.3	0.3
70	BRB7013	70	100	84	13	0.6	78	92	19.4	27.7	0.35
80	BRB8013	80	110	93	13	0.6	87	104	20.5	30.2	0.58
	BRB8016		120	96.6	16	1	91	111	30.1	42.1	0.7
90	BRB9016	90	130	107	16	1.5	98	118	31.4	45.3	0.75
100	BRB10016	100	140	117	16	1.5	109	129	31.7	48.6	0.83
	BRB10020		150	122	20	1.5	113	133	33.1	50.9	1.45
110	BRB11012	110	135	120.2	12	1	117	127	12.5	24.1	0.4
	BRB11015		145	126.5	15	1	119	136	23.7	41.5	0.75
	BRB11020		160	130.5	20	1.5	120	143	34	54	1.56
120	BRB12016	120	150	132.6	16	1.5	127	141	24.2	43.2	0.72
	BRB12025		180	148.3	25	1	133	164	66.9	100	2.62
130	BRB13015	130	160	142.8	15	2	137	152	25	46.7	0.72
	BRB13025		190	158	25	1	143	174	69.5	107	2.82
140	BRB14016	140	175	154.8	16	2	147	162	25.9	50.1	1
	BRB14025		200	168	25	1.5	154	185	74.8	121	2.96
150	BRB15013	150	180	163.3	13	2	157	172	27	53.5	0.68
	BRB15025		210	178	25	1	164	194	76.8	128	3.16
	BRB15030		230	187.5	30	2	173	211	100	156	5.3
160	BRB16025	160	220	188	25	2	173	204	81.7	135	3.14
170	BRB17020	170	220	191	20	2	184	198	29	62.1	2.21
180	BRB18025	180	240	208	25	2	195	225	84	143	3.44
190	BRB19025	190	240	211.9	25	2	202	222	41.7	82.9	2.99
200	BRB20025	200	260	228	25	2.5	215	245	84.2	157	4
	BRB20030		280	237.5	30	2.5	221	258	114	200	6.7
	BRB20035		295	247.7	35	2.5	225	270	151	252	9.6
220	BRB22025	220	280	248	25	2.5	235	265	92.3	171	4.1
240	BRB24025	240	300	269	25	3	256	281	68.3	145	4.5
250	BRB25025	250	310	277.5	25	3	265	290	69.3	150	5
	BRB25030		330	287.5	30	3	269	306	126	244	8.1
	BRB25040		355	301.6	40	3	275	326	195	348	14.8
300	BRB30025	300	360	330	25	1.5	315	340	76.3	178	5.9
	BRB30035		395	347.7	35	3	322	368	183	367	13.4
	BRB30040		405	351.6	40	2.5	326	377	212	409	17.2
350	BRB35020	350	400	373	20	3.5	363	383	54.1	143	3.9
400	BRB40035	400	480	437	35	1.5	422	459	156	370	14.5
	BRB40040		510	451	40	1.5	428	479	241	531	23.5
450	BRB45025	450	500	474	25	1.5	464	484	61.7	182	6.6
500	BRB50025	500	550	524.2	25	1.5	514	534	65.5	201	7.3
	BRB50040		600	548.8	40	3.5	526	572	239	607	26
	BRB50050		625	561.6	50	3.5	536	587	267	653	41.7
600	BRB60040	600	700	647	40	4	627	673	264	721	29
700	BRB70045	700	815	753.5	45	4	731	777	281	836	46
800	BRB80070	800	950	868.1	70	5	836	900	468	1330	105
900	BRB90070	900	1050	968.1	70	5	937	1001	494	1490	120
1000	BRB1000110	1000	1250	1115	110	6	1057	1171	1220	3220	360
1250	BRB1250110	1250	1500	1365.8	110	6	1308	1423	1350	3970	440

BRE

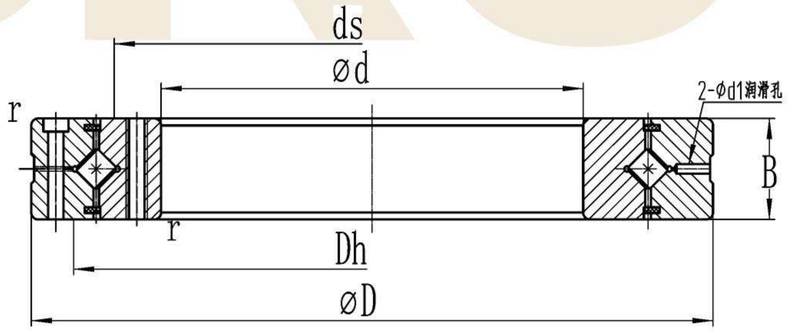
BRE系列/BRE Series

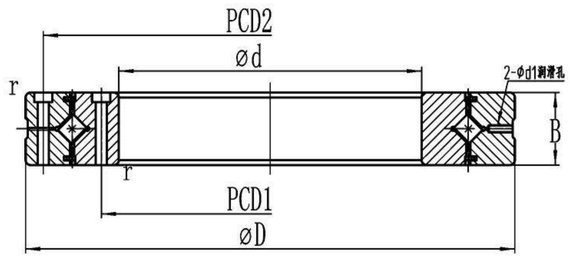


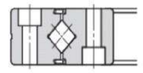
轴径 Shaft Diameter (mm)	型号 Model number	主要尺寸 Main dimensions (mm)					靠肩尺寸 Shoulder Height		基本额定负荷(径向) Basic Load Rating (radial)		重量 Weight
		内径 Inner ring (mm) d	外径 Outer ring (mm) D	滚子节圆直径 dp	宽度 width B B1	倒角 r(min)	ds (mm)	Dh (mm)	C kN	Co kN	Kg
40	BRE4010	40	65	53.5	10	1	47.5	58	8.33	10.6	0.16
45	BRE4510	45	70	58.5	10	1	51	61.5	8.62	11.3	0.17
50	BRE5013	50	80	66	13	1	57.5	72	16.7	20.9	0.27
60	BRE6013	60	90	76	13	1	68	82	18	24.3	0.3
70	BRE7013	70	100	86	13	1	78	92	19.4	27.7	0.35
80	BRE8016	80	120	101.4	16	1	91	111	30.1	42.1	0.7
90	BRE9016	90	130	112	16	1.5	98	118	31.4	45.3	0.75
100	BRE10016	100	140	121.1	16	1.5	109	129	31.7	48.6	0.83
	BRE10020		150	127	20	1.5	113	133	33.1	50.9	1.45
110	BRE11012	110	135	124.7	12	1	117	127	12.5	24.1	0.4
	BRE11015		145	129	15	1	122	136	23.7	41.5	0.75
	BRE11020		160	137.5	20	1.5	120	140	34	54	1.56
120	BRE12016	120	150	136.8	16	1	127	141	24.2	43.2	0.72
	BRE12025		180	152	25	2	133	164	66.9	100	2.62

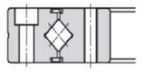
轴径 Shaft Diameter (mm)	型号 Model number	主要尺寸 Main dimensions (mm)					靠肩尺寸 Shoulder Height		基本额定负荷(径向) Basic Load Rating (radial)		重量 Weight
		内径 Inner ring (mm) d	外径 Outer ring (mm) D	滚子节圆直径 dp	宽度 width B B1	倒角 r(min)	ds (mm)	Dh (mm)	C kN	Co kN	Kg
130	BRE13015	130	160	146	15	1	137	152	25	46.7	0.72
	BRE13025		190	162	25	2	143	174	69.5	107	2.82
140	BRE14016	140	175	160	16	1.5	147	162	25.9	50.1	1
	BRE14025		200	172	25	2	154	185	74.8	121	2.96
150	BRE15013	150	180	166	13	1	158	172	27	53.5	0.68
	BRE15025		210	182	25	2	164	194	76.8	128	3.16
	BRE15030		230	192	30	2	173	210	100	156	5.3
160	BRE16025	160	220	192	25	2	173	204	81.7	135	3.14
170	BRE17020	170	220	196.1	20	2	184	198	29	62.1	2.21
180	BRE18025	180	240	210	25	2	195	225	84	143	3.44
190	BRE19025	190	240	219	25	1.5	202	222	41.7	82.9	2.99
200	BRE20025	200	260	230	25	2.5	215	245	84.2	157	4
	BRE20030		280	240	30	2.5	221	258	114	200	6.7
	BRE20035		295	247.7	35	2.5	225	270	151	252	9.6
220	BRE22025	220	280	250.1	25	2.5	235	265	92.3	171	4.1
240	BRE24025	240	300	272.5	25	3	256	281	68.3	145	4.5
250	BRE 25025	250	310	280.9	25	3	268	293	69.3	150	5
	BRE 25030		330	287.5	30	3	269	306	126	244	8.1
	BRE 25040		355	300.7	40	3	275	326	195	348	14.8
300	BRE 30025	300	360	332	25	3	319	344	75.7	178	5.9
	BRE 30035		395	345	35	3	322	368	183	367	13.4
	BRE 30040		405	351.6	40	3	326	377	212	409	17.2
350	BRE 35020	350	400	376.6	20	3	363	383	54.1	143	3.9
400	BRE 40035	400	480	440.3	35	3.5	422	459	156	370	14.5
	BRE 40040		510	453.4	40	3.5	428	479	241	531	23.5
450	BRE 45025	450	500	476.6	25	1.5	464	484	61.7	182	6.6
500	BRE 50025	500	550	526.6	25	1.5	514	534	65.5	201	7.3
	BRE 50040		600	548.8	40	3.5	526	572	239	607	26
	BRE 50050		625	561.6	50	3.5	536	587	267	653	41.7
600	BRE 60040	600	700	650	40	4	627	673	264	721	29

BRU(CRBF)系列
BRU(CRBF) Series





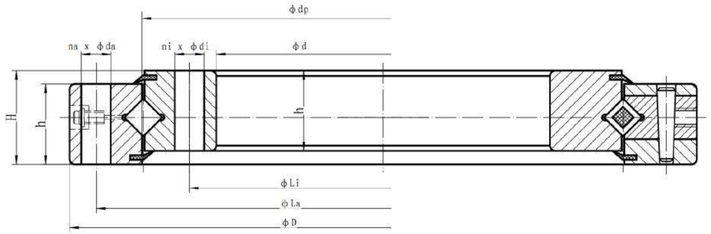

BRU124G-BRU445G


BRU124X-BRU445X

轴径 Shaft Diameter (mm)	型号 Model number	主要尺寸 Main dimensions (mm)					靠肩尺寸 Shoulder Height		基本额定负荷(径向) Basic Load Rating (radial)		重量 Weight
		内径 Inner ring (mm) d	外径 Outer ring (mm) D	滚子节圆直径 dp	宽度 width B B1	倒角 r(min)	ds (mm)	Dh (mm)	C kN	Co kN	Kg
10	BRU28	10	52	28.5	8	0.3	25	32	2.9	2.4	0.12
20	BRU42	20	70	41.5	12	0.6	37	47	7.35	8.35	0.29
35	BRU66	35	95	66	15	0.6	59	74	17.5	22.3	0.62
55	BRU85	55	120	85	15	0.6	79	93	20.3	29.5	1
80	BRU124(G)	80	165	124	22	1	114	134	33.1	50.9	2.6
	BRU124X										
90	BRU148(G)	90	210	147.5	25	1.5	133	162	49.1	76.8	4.9
	BRU148X										
115	BRU178(G)	115	240	178	28	1.5	161	195	80.3	135	6.8
	BRU178X										
160	BRU228(G)	160	295	227.5	35	2	208	246	104	173	11.4
	BRU228X										
210	BRU297(G)	210	380	297.3	40	2.5	272	320	156	281	21.3
	BRU297X										
350	BRU445(G)	350	540	445.4	45	2.5	417	473	222	473	35.4
	BRU445X										

轴径 Shaft Diameter (mm)	型号 Model Number	安装孔尺寸 Relation Between The Mounting Holes(mm)			
		内圈 Inner Ring		外圈 outer ring	
		PCD1	安装孔 Mounting Holes	PCD2	安装孔 Mounting Holes
10	BRU28	16	4-m3贯通 6-m3 Through	42	6-φ3.4贯通，沉孔Φ6.5深3.3 6-φ3.4 Through，Φ6.5 Counterbore Depth 3.3
20	BRU42	28	6-m3贯通 6-m3 Through	57	6-φ3.4贯通,φ6.5沉孔深度3.3 6-φ3.4 Through，Φ6.5 Counterbore Depth 3.3
35	BRU66	45	8-m4贯通 8-m4 Through	83	8-φ4.5贯通,φ8 沉孔深度4.4 8-φ4.5 Through，Φ8 Counterbore Depth 4.4
55	BRU85	65	8-m5贯通 8-m5 Through	105	8-φ6贯通,φ9.5沉孔深度5.5 8-φ5.5 Through，Φ9.5 Counterbore Depth 5.4
80	BRU124(G)	97	10-φ5.7贯通,φ9.5沉孔深度5.4 10-φ5.7 Through，Φ9.5 Counterbore Depth 5.4	148	10-φ5.7贯通,φ9.5沉孔深度5.4 10-φ5.7 Through，Φ9.5 Counterbore Depth 5.4
	BRU124X		10-m5贯通 10-m5 Through		
90	BRU148(G)	112	12-φ9贯通,φ14沉孔深度8.6 12-φ9 Through,φ14 Counterbore Depth 8.6	187	12-φ9贯通,φ14沉孔深度8.6 12-φ9 Through，Φ14 Counterbore Depth 8.6
	BRU148X		12-m8贯通 12-m8 Through		
115	BRU178(G)	139	12-φ9贯通,φ14沉孔深度8.6 12-φ9 Through，Φ14 Counterbore Depth 8.6	217	12-φ9贯通,φ14沉孔深度8.6 12-φ9 Through，Φ14 Counterbore Depth 8.6
	BRU178X		12-m8贯通12-m8 Through		
160	BRU228(G)	184	12-φ11贯通,φ17.5沉孔深度10.8 12-φ11 Through，Φ17.5 Counterbore Depth 10.8	270	12-φ11贯通,φ17.5沉孔深度10.8 12-φ11 Through，Φ17.5 Counterbore Depth 10.8
	BRU228X		12-m10贯通 12-m10 Through		
210	BRU297(G)	240	16-φ14贯通,φ20沉孔深度13 16-φ14 Through，Φ20 Counterbore Depth 13"	350	16-φ14贯通,φ20沉孔深度13 16-φ14 Through，Φ20 Counterbore Depth 13
	BRU297X		16-m12贯通 16-m12 Through		
350	BRU445(G)	385	24-φ14贯通,φ20沉孔深度13 24-φ14 Through，Φ20 Counterbore Depth 13	505	24-φ14贯通,φ20沉孔深度13 24-φ14 Through，Φ20 Counterbore Depth 13
	BRU445X		24-m12贯通 24-m12 Through		

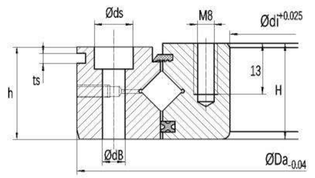
BXU系列 / BXUSeries



型号 Model number	主要尺寸 Main dimensions (mm)								基本额定负荷(轴向) Basic Load Rating(axial)		基本额定负荷(径向) Basic Load Rating(radial)		重量 Weight
	内径 inner ring d	外径 outer ring D	滚子节圆直径 dp	宽度 width	外圈孔中心距 La	安装孔 na	内圈孔中心距 Li	安装孔 ni	Ca KN	Coa KN	Cr KN	Cor KN	Kg
BXU050077	40	112	77	22	97	6-φ6.6	56	6-M8	22.4	29	14.3	14.2	1.4
BXU060094	57	140	94	26	120	6-φ9	70	6-M8	32.5	37.5	20.7	18.4	2.4
BXU060111	76.2	145.79	111	15.87	133.1	8-φ6.9	88.9	8-φ6.9	36	44.5	22.8	21.5	1.2
BXU080120	69	170	120	30	148	6-φ9	90	6-M8	56	53	35.5	26	4
BXU080149	101.6	196.85	147	22.22	177.8	16-φ6.9	115.8	16-φ6.9	63	66	40	32.5	3.6
BXU120179	124.5	234	179	35	214	12-φ11	144.5	12-φ11	105	194	75	95	7
BXU120222	140	300	222	36	270	12-M16	170	12-φ18	133	275	85	131	12
BXU160260	191	329	260	46	305	20-φ14	215	20-φ14	212	350	135	173	16
BXU080264	215.9	311	264	25.4	295.3	12-φ8.7	231.8	12-φ8.7	85	117	54	57	6.9
BXU160405	336	474	405	46	450	30-φ14	360	30-φ14	270	550	172	270	25
BXU080430	380	480	430	26	462	20-φ9	398	20-M10	110	280	70	138	12
BXU300515	384	646	515	86	598	18-φ26	432	18-φ26	720	1370	455	670	115

BXU系列 / BXUSeries

BXU050077



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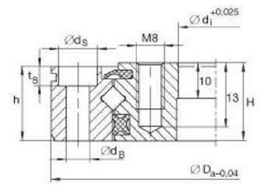

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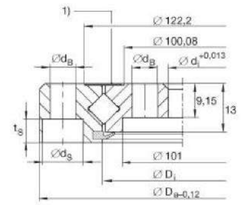

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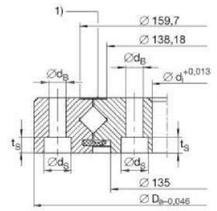

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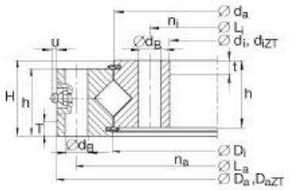

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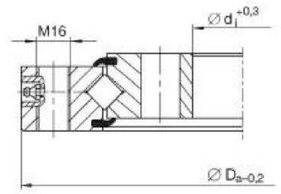

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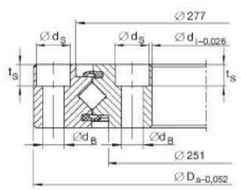

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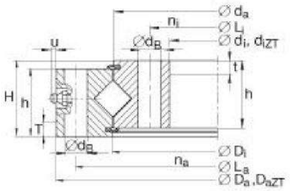

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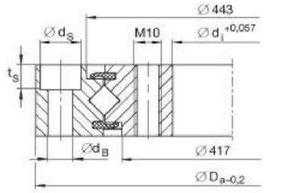

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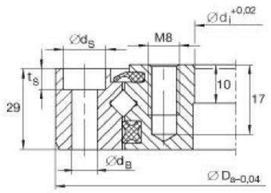

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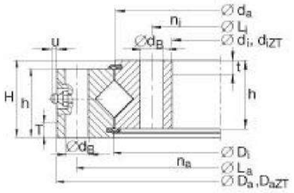

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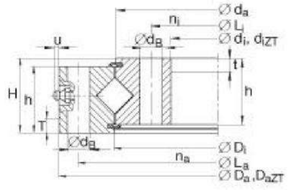
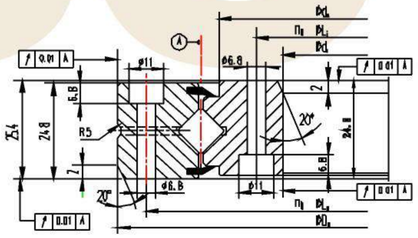
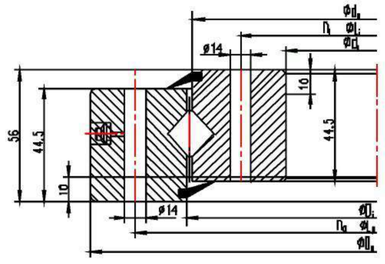


BSU系列
BSU Series

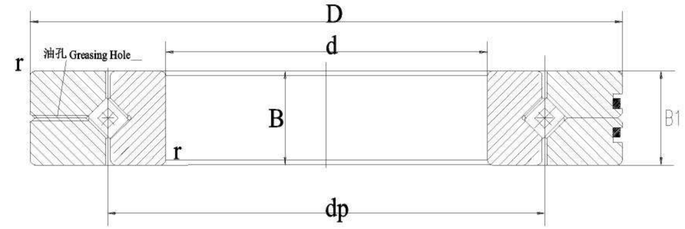


轴径 shaft diameter	型号 Model number	主要尺寸 Main dimensions (mm)							基本额定负荷(轴向) Basic Load Rating(axial)		基本额定负荷(径向 Basic Load Rating (radial)		极限转速 Limiting speed	重量 weight
		内径 inner ring d	外径 outer ring D	宽度 width B	安装孔 nB	倒角 chamfer r(min)	∅La	□ Li	Ca kN	Coa KN	Cr KN	Cor KN	r/min	Kg
130	BSU080168	130	205	25.4	12	1.1	190	145	66	240	42	96	227	3.3
150	BSU080188	150	225	25.4	16	1.1	210	165	71	275	46	110	203	3.7
180	BSU080218	180	255	25.4	20	1.1	240	195	77	315	49	127	175	4.3
220	BSU080258	220	295	25.4	24	1.5	280	235	84	375	54	151	148	5.1
280	BSU080318	280	355	25.4	28	1.5	340	295	93	465	59	185	120	6.3
360	BSU080398	360	435	25.4	36	2	420	375	106	590	68	236	96	7.8



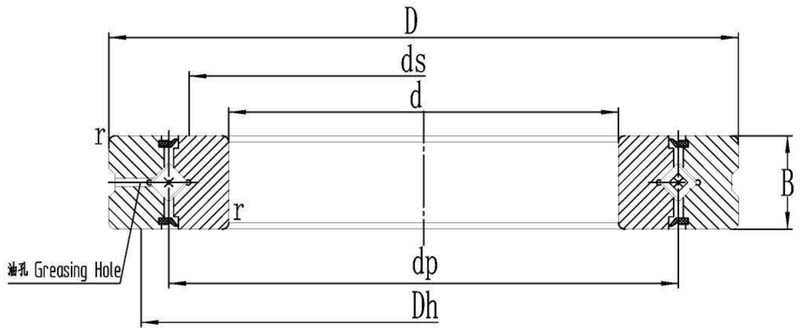
轴径 shaft diameter	型号 Model number	主要尺寸 Main dimensions (mm)							基本额定负荷(轴向) Basic Load Rating(axial)		基本额定负荷(径向) Basic Load Rating (radial)		重量 weight
		内径 inner ring d	外径 outer ring D	宽度 width B	安装孔 nB	倒角 chamfer r(min)	∅La	□ Li	Ca kN	Coa KN	Cr KN	Cor KN	Kg
344	BSU140414	344	484	56	24	2	460	368	220	520	146	225	28
474	BSU140544	474	614	56	32	2.5	590	498	270	680	170	330	38
574	BSU140644	574	714	56	36	2.5	690	598	260	830	183	405	44
674	BSU140744	674	814	56	40	3	790	698	315	930	200	455	52
774	BSU140844	774	914	56	40	3	890	798	340	1050	215	510	60
874	BSU140944	874	1014	56	44	3	990	898	360	1170	227	580	67
1024	BSU141094	1024	1164	56	48	4	1140	1048	390	1360	246	670	77

BX系列
BX Series



型号 Model number	主要尺寸 Main dimensions (mm)						靠肩尺寸 shoulder height		基本额定负荷(轴向) Basic Load Rating(axial)		基本额定负荷(径向) Basic Load Rating (radial)		重量 weight
	内径 inner ring d	外径 outer ring D	滚子节圆直径 dp	宽度 width B	油 孔 Greasing hole	倒角 chamfer r(min)	de	Di	Ca kN	Coa KN	Cr KN	Cor KN	Kg
BX011814	70	90	80	10	1.2	0.6	79.5	80.5	15.4	51	11	20	0.3
BX011818	90	115	102	13	1.2	1	101.5	102.5	26	91	18	37	0.4
BX011820	100	125	112	13	1.2	1	111.5	112.5	28	102	19	41	0.5
BX011824	120	150	135	16	1.5	1	134.4	135.6	38	146	27	59	0.8
BX011828	140	175	157	18	1.5	1.1	156.3	157.7	64	240	45	96	1.1
BX011832	160	200	180	20	1.5	1.1	179.2	180.8	69	275	49	111	1.7
BX011836	180	225	202	22	2	1.1	201.2	202.8	96	381	69	153	2.3
BX011840	200	250	225	24	2	1.5	224.2	225.8	102	425	72	170	3.1
BX011848	240	300	270	28	2	2	269.2	270.8	148	640	105	255	5.3
BX011860	300	380	340	38	2.5	2.1	339.2	340.8	243	1070	173	425	12
BX011868	340	420	380	38	2.5	2.1	379.2	380.8	260	1220	185	485	13.5
BX011880	400	500	450	46	2.5	2.5	449	451	385	1800	275	720	24
BX0118/500	500	620	560	56	2.5	3	558.8	561.2	560	2750	395	1100	44

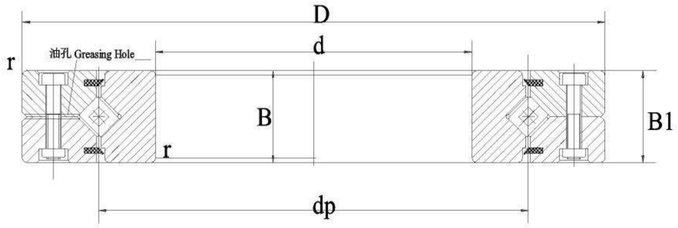
BBH系列 BBH Series



轴径 Shaft diameter (mm)	型号 Model number	主要尺寸 Main dimensions (mm)				安装尺寸 Mounting dimensions (mm)		基本额定动载荷(径向) Basic dynamic load rating(radial)		重量 weight
		内径 inner ring d	外径 outer diameter D	宽度 width B	倒角 Chamfer r(min)	ds	Dh	C (KN)	Co (KN)	Kg
20	BBH208A	20	36	8	0.3	22.8	31.2	2.9	2.4	0.04
25	BBH258A	25	41	8	0.3	27.8	36.2	3.1	2.8	0.05
30	BBH3010A	30	55	10	0.3	35.8	47.2	7.6	8.4	0.12
35	BBH3510A	35	60	10	0.3	40.8	52.2	7.9	9.1	0.13
40	BBH4010A	40	65	10	0.3	46.3	57.7	8.6	10.6	0.15
45	BBH4510A	45	70	10	0.3	51.8	63.2	8.9	11.3	0.17
50	BBH5013A	50	80	13	0.6	56	74	17.3	20.9	0.29
60	BBH6013A	60	90	13	0.6	66	84	18.8	24.3	0.33
70	BBH7013A	70	100	13	0.6	76	94	20.1	27.7	0.38
80	BBH8016A	80	120	16	0.6	88	112	32.1	43.4	0.74
90	BBH9013A	90	115	13	0.6	98	106	18	37	0.42
	BBH9016A	90	130	16	0.6	98	122	33.1	46.8	0.81
100	BBH10016A	100	140	16	0.6	111.7	128.7	31.7	48.6	0.83
	BBH10020A		150	20	0.6	110	140	50.9	72.2	1.45
110	BBH11012A	110	135	12	0.6	117	127	12.5	24.1	0.4
	BBH11015A		145	15	0.6	118	135	23.7	41.5	0.75
	BBH11020A		160	20	0.6	120	150	34	54	1.56
120	BBH12016A	120	150	16	1	127	141	24.2	43.2	0.72
	BBH12025A		180	25	1	132	168	73.4	108	2.62
130	BBH13015A	130	160	15	0.6	136	150	25	46.7	0.72
	BBH13025A		190	25	1	142	178	75.9	115	2.82
140	BBH14016A	140	175	16	1	147	162	25.9	50.1	1
	BBH14025A		200	25	1	152	188	81.9	130	2.96
150	BBH15013A	150	180	13	0.6	157	172	27	53.5	0.68
	BBH15025A		210	25	1	162	198	84.3	138	3.16
	BBH15030A		230	30	2	173	211	100	156	5.3
160	BBH16025A	160	220	25	2	173	204	81.7	135	3.14
170	BBH17020A	170	220	20	1	180.7	203.3	29	62.1	2.21
180	BBH18025A	180	240	25	2	195	225	84	143	3.44
190	BBH19025A	190	240	25	1	202	222	41.7	82.9	3
200	BBH20025A	200	260	25	1	212	248	92.3	169	4
	BBH20030A		280	30	2	218	258	114	200	6.7
	BBH20035A		295	35	2.5	225	270	151	252	9.6
220	BBH22025A	220	280	25	1	234.3	262.7	92.8	171	4.1
240	BBH24025A	240	300	25	2	256	281	68.3	145	4.5
250	BBH25025A	250	310	25	1.5	262	298	102	207	4.97
	BBH25030A		330	30	2	269	306	126	244	8.1
	BBH25040A		355	40	2.5	275	326	195	348	14.8
300	BBH30025A	300	360	25	2.0	314	342	75.5	178	5.9
	BBH30035A		395	35	2.5	322	368	183	367	13.4
	BBH30040A		405	40	2.5	326	377	212	409	17.2
350	BBH35020A	350	400	20	1	360	383	54.1	143	3.9
400	BBH40035A	400	480	35	2.5	422	459	156	370	14.5
	BBH40040A		510	40	1.5	428	479	241	531	23.5
500	BBH50040A	500	600	40	3	526	572	239	607	26
	BBH50050A		625	50	3	536	587	267	653	41.7
600	BBH60040A	600	700	40	3	625.5	668	264	721	29
700	BBH70045A	700	815	45	3	725.5	782	281	836	46
800	BBH80070A	800	950	70	4	836	900	468	1330	105

BRA

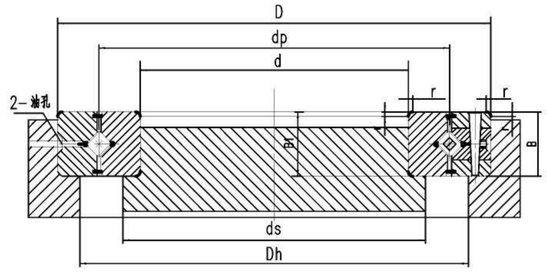
BRA系列
BRA SERIES



轴径 shaft diameter (mm)	型号 Model number	主要尺寸 Main dimensions (mm)					靠肩尺寸 Shoulder height (mm)		基本额定负荷(径向) Basic load rating (radial)		重量 weight
		内径 inner ring d	外径 outer ring D	滚子节圆直径 dp	宽度 width B B1	倒角 Chamfer r(min)	ds	Dh	C kN	Co kN	Kg
50	BRA5008	50	66	57	8	0.5	53.5	60.5	5.1	7.19	0.08
60	BRA6008	60	76	67	8	0.5	63.5	70.5	5.68	8.68	0.09
70	BRA7008	70	86	77	8	0.5	73.5	80.5	5.98	9.8	0.1
80	BRA8008	80	96	87	8	0.5	83.5	90.5	6.37	11.3	0.11
90	BRA9008	90	106	97	8	0.5	93.5	100.5	6.76	12.4	0.12
100	BRA10008	100	116	107	8	0.5	103.5	110.5	7.15	13.9	0.14
110	BRA11008	110	126	117	8	0.5	113.5	120.5	7.45	15	0.15
120	BRA12008	120	136	127	8	0.5	123.5	130.5	7.84	16.5	0.17
130	BRA13008	130	146	137	8	0.5	133.5	140.5	7.94	17.6	0.18
140	BRA14008	140	156	147	8	0.5	143.5	150.5	8.33	19.1	0.19
150	BRA15008	150	166	157	8	0.5	153.5	160.5	8.82	20.6	0.2
160	BRA16013	160	186	170	13	0.5	165	179	23.3	44.9	0.59
170	BRA17013	170	196	180	13	0.8	175	189	23.5	46.5	0.64
180	BRA18013	180	206	190	13	0.8	185	199	24.5	49.8	0.68
190	BRA19013	190	216	200	13	0.8	195	209	24.9	51.5	0.69
200	BRA20013	200	226	210	13	0.8	205	219	25.8	54.7	0.71

BBS

BBS系列
BBS SERIES



轴径 Shaft Diameter (mm)	型号 Model number	主要尺寸 Main dimensions (mm)					靠肩尺寸 Shoulder Height		基本额定负荷(径向) Basic Load Rating (radial)		重量 Weight	备注 Remarks
		内径 Inner ring (mm) d	外径 Outer ring (mm) D	滚子节圆直径 dp	宽度 width B B1	倒角 r(min)	ds (mm)	Dh (mm)	C kN	Co kN	Kg	
50	BBS508	50	66	57	8	0.5	53.5	60.5	5.1	7.19	0.08	BRAU5008
60	BBS608	60	76	67	8	0.5	63.5	70.5	5.68	8.68	0.09	BRAU6008
70	BBS708	70	86	77	8	0.5	73.5	80.5	5.98	9.8	0.1	BRAU7008
80	BBS808	80	96	87	8	0.5	83.5	90.5	6.37	11.3	0.11	BRAU8008
90	BBS908	90	106	97	8	0.5	93.5	100.5	6.76	12.4	0.12	BRAU9008
100	BBS1008	100	116	107	8	0.5	103.5	110.5	7.15	13.9	0.14	BRAU10008
110	BBS1108	110	126	117	8	0.5	113.5	120.5	7.45	15	0.15	BRAU11008
120	BBS1208	120	136	127	8	0.5	123.5	130.5	7.84	16.5	0.17	BRAU12008
130	BBS1308	130	146	137	8	0.5	133.5	140.5	7.94	17.6	0.18	BRAU13008
140	BBS1408	140	156	147	8	0.5	143.5	150.5	8.33	19.1	0.19	BRAU14008
150	BBS1508	150	166	157	8	0.5	153.5	160.5	8.82	20.6	0.2	BRAU15008
160	BBS16013	160	186	170	13	0.5	165	179	23.3	44.9	0.59	BRAU16013
170	BBS17013	170	196	180	13	0.8	175	189	23.5	46.5	0.64	BRAU17013
180	BBS18013	180	206	190	13	0.8	185	199	24.5	49.8	0.68	BRAU18013
190	BBS19013	190	216	200	13	0.8	195	209	24.9	51.5	0.69	BRAU19013
200	BBS20013	200	226	210	13	0.8	205	219	25.8	54.7	0.71	BRAU20013

BRT ROTARY TABLE BEARING

BRT转台轴承
BRT Rotary Table Bearing

高精度高承载高刚性
数控机床转台轴承

BRT转台轴承
BRT Rotary Table Bearing

轴向 / 径向轴承BRT Axial/Radial Bearing BRT

BRT转台轴承由一个推力/向心座圈、一个推力/向心轴圈、一个推力垫圈、两个滚针保持架组件和一组向心圆柱滚子组成。座圈和轴圈有均布的安装用螺钉孔。该型轴承具有高轴向和径向承载能力，高倾斜刚度和极高的精度。适用于回转工作台、卡盘和铁刀头以及测量和实验中的轴承配置。该型轴承对与之相配的设备零件的要求也较高。安装时需控制安装螺钉的扭紧力矩。

BRT Rotary table bearings are axial and radial combined cylindrical roller bearings, including two thrust needle roller bearings and a radial cylindrical roller bearing with the combination of axial and radial p reload,For the convenience of transportation and fixing, two or three symmetrical screws are fastened to the two rings in order to prevent rollers and rings generating collisions which influence bearing accuracy.

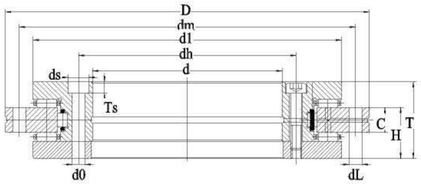
转台作为机床的重要组成部分，一直是机床设计中的重点。而作为承载工件的关键部件，转台的回转精度、刚性和复合承载能力都直接影响到机床的加工性能，其中轴承的选择起到了直接且决定性的作用。

As an important component of machine tools, the turntable has always been a key focus in machine tool design. As a key component for carrying workpieces, the rotary accuracy, rigidity, and composite bearing capacity of the turntable directly affect the machining performance of the machine tool, among which the selection of bearings plays a direct and decisive role.

转台轴承的传统解决方案一般使用两组或两组以上的径向、推力轴承组合，目的是为了使转台能同时承受轴向载荷、径向载荷和倾覆力矩，虽然这种方案成熟，但也有诸多转台结构设计复杂，轴承安装维护不便等缺点。

The traditional solution for turntable bearings generally uses two or more sets of radial and thrust bearing combinations, with the aim of enabling the turntable to simultaneously withstand axial load, radial load, and overturning torque. Although this solution is mature, it also has many drawbacks such as complex turntable structure design and inconvenient bearing installation and maintenance.

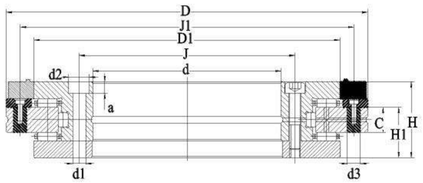
BRTS转台轴承
BRTS Rotary Table Bearing



BRTS型转台轴承和BRT转台轴承具有完全相同的外形和安装尺寸以及精度，其径向滚子加装尼龙保持架以满足轴承高速转动需要，由于BRTS轴承具有较高的极限转速和很低的稳定的摩擦力矩等特点，因此这种轴承尤其适合于带有力矩的发动机上。

Due to their high limiting speeds and very low, uniform frictional torque across the whole speed range, these bearings are particularly suitable for combination with torque motors.

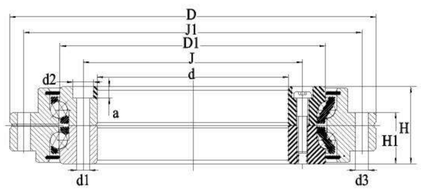
BRTM转台轴承
BRTM Rotary Table Bearing



BRTM转台轴承是一种加装钢栅尺的双向推力圆柱滚子BRT组合轴承，实现实时监控和调整双向推力圆柱滚子组合轴承的旋转精度，以保证机器高精度运转。

Axial/radial bearing BRTM: Bearing of BRTM series correspond in the double direction thrust cylindrical roller combined bearing BRT ,but are additionally fitted with a steel ruler, to control and adjust the double direction thrust cylindrical roller bearing rotation accuracy, and guarantee the machine high precision operation.

BLDF转台轴承
BLDF Rotary Table Bearing



BLDF轴向径向转台轴承具有低摩擦、高旋转精度、高极限转速等特点，可以承受较高的轴向、径向载荷并具备较高的倾斜刚度。这种轴承尤其适合应用于复合载荷和精密方面的领域，被广泛的应用于机床回转台、磨头和多种测试装备上。

BLDF are low-friction, high accuracy for very high speeds, high axial and radial loads and high demands on tilting rigidity. These bearings are particularly suitable for precision applications involving combined loads. Their preferred areas of use are bearing arrangements in rotary tables and honing heads as well as measurement and testing equipment.

设计和安装
Design & Installtion

1.轴承安装示意图

1.1 对配合结构的要求见右图1:

在安装轴承前，您必须确保安装表面和安装环境的清洁，运输时固定螺钉保护轴承零件，为了较易定心安装，安装时固定螺钉可以松开，安装后固定螺钉应再拧紧或者最好用定位螺钉替换固定螺钉。

1.2 有或无附加支撑环都可安装L-截面环1

a)无支撑环的，轴承代号BRT。

b)用L-截面环支撑环的,轴承代号BRT-VSP，L-截面环的整个表面都必须得到支撑。

1.3装配力只能通过被安装的轴承套圈进行传递，绝不能通过滚动体传递。

1.4安装和拆卸式不要分开或交换轴承零件。

1.5启动摩擦力矩是尺寸表中所列轴承摩擦力矩的3~3.5倍。

1.6定位螺钉应用扭力扳手以呈十字交叉的形式来拧紧见图2。

扭力扳手拧紧力矩参考右表:

图1 Figure 1

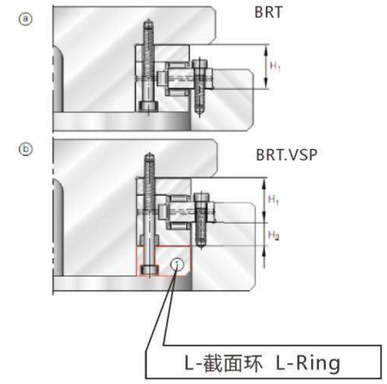


图2 Figure 2

1. Bearing installation diagram

1.1 Design & Installation Structure with the requirements shown in Figure 1

Retaining screws secure the bearing components during transport. For installing the bearing easier, the screws should be loosened before fitting, and secured again or replaced by positioning screws- after fitting.

1.2 The L-section ring can be fitted with unsupported or supported ring.

a) Without supported ring, the bearing type is BRT.

b) With supported ring, the bearing type is BRT-VSP,And the whole surface of L-section-should be supported.

1.3 Mounting forces must only be applied to the bearing ring to be fitted, never through the rolling elements.Tighten the fixing screws in crosswise using a torque wrench (shown in figure 2).

1.4 Don`t separate or interchanged bearing components during fitting and dismantling.

1.5 Starting friction torque can be 3 to 3.5 times as high as the value of friction torque in the dimension tables.

螺钉拧紧力矩 Nm	轴承代号
8.5	BRT50
8.5	BRT80
8.5	BRT100
14	BRT120
14	BRT150
14	BRT180
14	BRT200
34	BRT260
34	BRT325
34	BRT395
34	BRT460
68	BRT580
116	BRT650
284	BRT850
284	BRT950
284	BRT1030
284	BRT1200

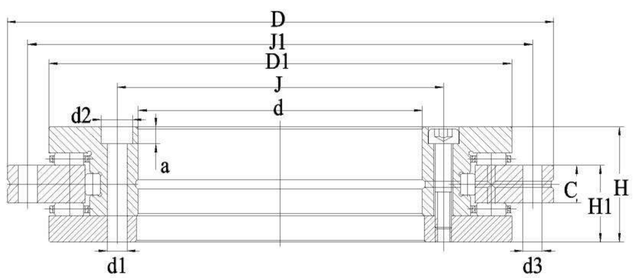
BRT 转台轴承安装示意图

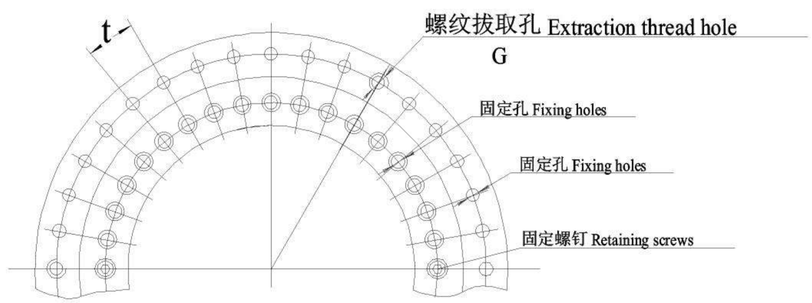
1.将轴承装入轴承座；
Put the BRT Bearing into Bearing House;
A. 外圈安装螺钉；Outer ring mounting screws;
B. BRT转台轴承；BRT Bearing
C. 轴承座; Bearing House;
2.BRT转台轴承外径与轴承座间隙配合；
BRT Bearing and Bearing House is clearance fit;
3.十字交叉方式依次拧紧外圈安装螺钉；
Tighten outer ring mounting screws in Cross way;

4.数控转台台面压在轴承端面上；
Press the Rotary Table onto the BRT Bearing;
D. 数控转台台面；Rotary Table;
5.BRT转台轴承另一端面与法兰盘配合安装；
Another side of the BRT Bearing Connect to Flange;
E. 法兰盘；Flange;
6.转台轴外径与轴承内径过渡配合安装；
Rotary Table and BRT Bearing is shrink fit;
F. 转台轴外径；Outer ring of Rotary Table;
G. 轴承内径；Inner Ring of BRT Bearing;

7.对齐法兰盘、转台轴承、转台台面安装孔；
Aligning Flange、BRT bearing、Rotary Table;
J. 法兰盘；Flange
8.十字交叉方式依次锁上内圈连接螺钉；
Tighten Inner ring mounting screws in Cross way;
k.内圈连接螺钉; Inner ring mounting screws;
9.用连接螺钉将法兰盘和轴承锁定在转台台面上；
Connect the flange and Bearings to Turntable table with Mounting screws;
L. 转台台面；Rotary Table;
M.BRT转台轴承；BRT Bearing;
N. 法兰盘；Flange;

BRT系列
BRT Series





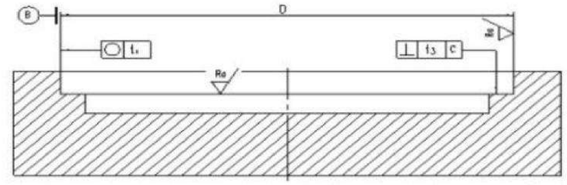
型号 Model Number	外形尺寸 boundary dimensions								基本额定载荷 Basic load rating (KN)				极限转速（脂）Limiting Speed (grease)	重量 Weight Kg
	d	D	H	H1	C	D1	J	J1	轴向 axial		径向 radial			
	单位 unit : mm								动 Ca dynamic load	静 Coa static load	动 Cr dynamic load	静 Cor static load		
BRT50	50	126	30	20	10	105	63	116	38	158	28.5	49.5	600	1.6
BRT80	80	146	35	23.35	12	130	92	138	56	255	42.5	100	530	2.4
BRT100	100	185	38	25	12	160	112	170	76.5	415	47.5	120	430	4
BRT120	120	210	40	26	12	184	135	195	102	540	52	143	340	5.3
BRT150	150	240	40	26	12	214	165	225	112	630	56	170	320	6.2
BRT180	180	280	43	29	15	244	194	260	118	710	69.5	200	280	7.7
BRT200	200	300	45	30	15	274	215	285	120	765	81.5	220	260	9.7
BRT260	260	385	55	36.5	18	345	280	365	160	1060	93	290	200	18.3
BRT325	325	450	60	40	20	415	342	430	275	1930	120	345	170	25
BRT395	395	525	65	42.5	20	486	415	505	300	2280	186	655	140	33
BRT460	460	600	70	46	22	560	482	580	355	2800	200	765	120	45
BRT580	580	750	90	60	30	700	610	720	490	4250	228	965	80	89
BRT650	650	870	122	78	34	800	680	830	1040	8000	490	1800	65	170
BRT850	850	1095	124	80.5	37	1018	890	1055	1000	8650	455	1730	50	253
BRT950	950	1200	132	86	40	1130	990	1160	1290	11400	530	2040	40	312
BRT1030	1030	1300	145	92.5	40	1215	1075	1255	1380	12000	620	2650	35	375
BRT1200	1200	1490	164	108	52	1410	1240	1445	1435	12850	745	2800	25	450

型号 Model Number	固定孔 Fixing holes									节距 Pitches	拧紧力矩 Tightening torque	摩擦力矩 Frictional torque	旋转精度 Rotation accuracy (μm)	
	内圈孔 Holes of inner ring					外圈孔 Holes of inner ring								
	固定孔Fixing holes				连接螺钉	固定孔 Fixing holes		吊装孔 Lifting hole						
	d1 mm	d2 mm	a mm	数量 quantity	数量 quantity	d3 mm	数量 quantity	G	数量 quantity	数量×t quantity×t	Nm	Nm	标准精度 P4	严格精度 P2
BRT50	5.6	9	4.2	10	2	5.6	12	/	/	12×30°	8.5	2.5	2	1
BRT80	5.6	10	5.2	10	2	4.6	12	/	/	12×30°	8.5	3	3	1.5
BRT100	5.6	10	5.4	16	2	5.6	15	M5	3	18×20°	8.5	3	3	1.5
BRT120	7	11	6.2	22	2	7	21	M8	3	24×15°	14	7	3	1.5
BRT150	7	11	6.2	34	2	7	33	M8	3	36×10°	14	10	3	1.5
BRT180	7	11	6.2	46	2	7	45	M8	3	48×7.5°	14	12	4	2
BRT200	7	11	6.2	46	2	7	45	M8	3	48×7.5°	14	14	4	2
BRT260	9.3	15	8.2	34	2	9.3	33	M12	3	36×10°	34	20	6	3
BRT325	9.3	14. 5	8.2	34	2	9.3	33	M12	3	36×10°	34	40	6	3
BRT395	9.3	15	8.2	46	2	9.3	45	M12	3	48×7.5°	34	55	6	3
BRT460	10	15	8.2	46	2	10	45	M12	3	48×7.5°	34	70	6	3
BRT580	11.4	18	11	46	2	11.4	42	M12	6	48×7.5°	68	140	10	5
BRT650	14	20	13	46	2	14	42	M12	6	48×7.5°	116	200	10	5
BRT850	18.5	26	17	57	3	18.5	54	M16	6	60×6°	284	300	12	6
BRT950	18.5	26	17	57	3	18.5	54	M16	6	60×6°	284	600	12	6
BRT1030	18.5	26	17	66	6	18.5	66	M16	6	72×5°	284	800	12	6
BRT1200	18.5	26	17	66	6	18.5	66	M16	6	72×5°	284	1000	15	8

BRT转台轴承-轴配合公差
Machining Tolerances For Shafts

型号 Model Number	配合轴径（mm）shaft diameter			圆度（O）roundness	垂直度（⊥）perpendicularity	平行度（∥）parallelism	表面粗糙度 Ra roughness
	公称尺寸 Nominal dimension	上偏差 upper	下偏差 lower	t1（μm）	t3（μm）	t4（μm）	Ra（μm）
BRT50	50	-0.005	-0.011	3	2	2	0.4
BRT80	80	-0.006	-0.013	3	2	2	0.4
BRT100	100	-0.008	-0.015	4	3	3	0.4
BRT120	120	-0.008	-0.015	4	3	3	0.4
BRT150	150	-0.009	-0.018	5	4	4	0.8
BRT180	180	-0.01	-0.018	5	4	4	0.8
BRT200	200	-0.01	-0.018	6	5	5	0.8
BRT260	260	-0.012	-0.023	7	6	6	0.8
BRT325	325	-0.015	-0.025	10	8	8	0.8
BRT395	395	-0.015	-0.025	10	8	8	0.8
BRT460	460	-0.015	-0.027	12	10	10	0.8
BRT580	580	-0.015	-0.030	13	11	11	1.6
BRT650	650	-0.02	-0.040	15	12	12	1.6
BRT850	850	-0.03	-0.045	16	14	14	1.6
BRT950	950	-0.03	-0.045	16	14	14	1.6
BRT1030	1030	-0.035	-0.050	20	16	16	1.6
BRT1200	1200	-0.045	-0.070	20	16	16	1.6

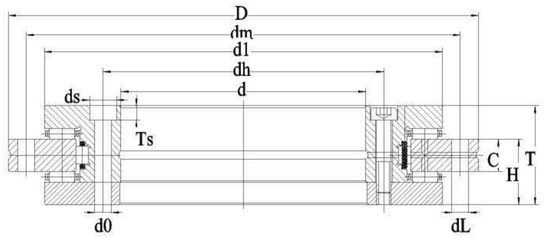
转台轴承配合座的公差
Machining Tolerances For Housings



型号 Model Number	配合座孔（mm）housing diameter			圆度（O）roundness	垂直度（⊥）perpendicularity	平行度（∥）parallelism	表面粗糙度 Ra roughness
	公称尺寸 Nominal dimension	上偏差 upper	下偏差 lower	t1（μm）	t3（μm）	t4（μm）	Ra（μm）
BRT50	126	+0.010	-0.003	3	2	2	0.8
BRT80	146	+0.010	-0.003	3	2	2	0.8
BRT100	185	+0.012	-0.004	4	3	3	0.8
BRT120	210	+0.012	-0.004	4	3	3	0.8
BRT150	240	+0.015	-0.005	5	4	4	0.8
BRT180	280	+0.015	-0.005	5	4	4	0.8
BRT200	300	+0.015	-0.007	6	5	5	0.8
BRT260	385	+0.020	-0.007	7	6	6	0.8
BRT325	450	+0.025	-0.007	10	8	8	0.8
BRT395	525	+0.025	-0.01	10	8	8	1.6
BRT460	600	+0.030	-0.01	12	10	10	1.6
BRT580	750	+0.035	-0.01	13	11	11	1.6
BRT650	870	+0.035	-0.01	15	12	12	1.6
BRT850	1095	+0.045	-0.014	16	14	14	1.6
BRT950	1200	+0.045	-0.014	16	14	14	1.6
BRT1030	1300	+0.060	-0.016	20	16	16	1.6
BRT1200	1490	+0.07	0	20	16	16	1.6

BRTS

BRTS系列
BRTS Series

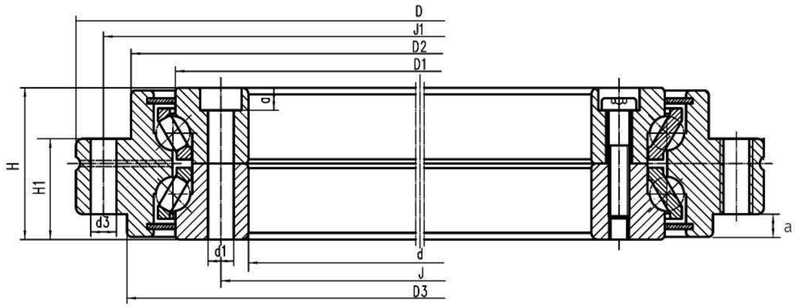


型号 Model Number	外形尺寸 boundary dimensions								基本额定载荷 Basic load rating (KN)				重量 Weight Kg
	d	D	T	H	C	d1	dn	dm	轴向 axial		径向 radial		
	单位 unit : mm								动 Ca dynamic load	静 Coa static load	动 Cr dynamic load	静 Cor static load	
BRTS200	200	300	45	30	15	274	215	285	105	635	78	202	9.7
BRTS260	260	385	55	36.5	18	345	280	365	131	840	85	275	18.3
BRTS325	325	450	60	40	20	415	342	430	191	1260	108	300	25
BRTS395	395	525	65	42.5	20	486	415	505	214	1540	121	390	33
BRTS460	460	600	70	46	22	560	482	580	221	1690	168	570	45

型号 Model Number	固定孔 fixing holes								节距 Pitches	拧紧力矩 Tightening torque	摩擦力矩 Frictional torque	极限转速 Limiting speed
	内圈孔 Holes of inner ring				外圈孔 Holes of inner ring							
	固定孔Fixing holes				固定孔 Fixing holes		螺纹拔取孔 Extraction thread hole					
	d0	ds	Ts	数量 quantity	dL mm	数量 quantity	G	数量 quantity	数量×t quantity×t	Nm	Nm	脂 greaser min
	mm											
BRTS200	7	11	6.2	46	7	45	M8	3	48×7.5°	14	14	950
BRTS260	9.3	15	8.2	34	9.3	33	M12	3	36×10°	34	20	800
BRTS325	9.3	15	8.2	34	9.3	33	M12	3	36×10°	34	40	680
BRTS395	9.3	15	8.2	46	9.3	45	M12	3	48×7.5°	34	55	600
BRTS460	10	15	8.2	46	10	45	M12	3	48×7.5°	34	70	500

BLDF

BLDF系列
BLDF Series



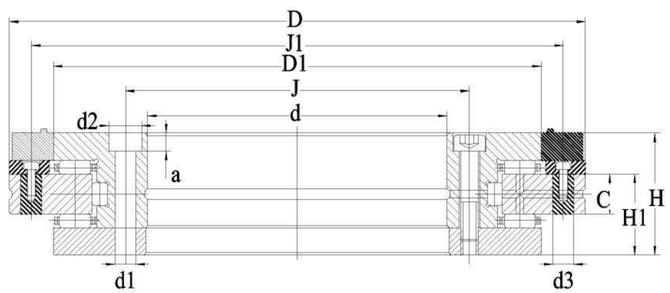
型号 Model Number	外形尺寸 boundary dimensions										基本额定载荷(轴向) Axial Basic load rating		摩擦力矩 Frictional torque	极限转速 Limiting speed	重量 Weight
	d	D	H	H1	a	D1	D2	D3	J	J1	动 dynamic load	静 static load			
	单位 unit : mm										Ca(KN)	Coa(KN)	Nm	r/min	Kg
BLDF50	50	126	30	20	4.7	83.2	105	103	63	116	26	52	1.4	3200	3.2
BLDF80	80	146	35	23.35	4.7	108	130	128	92	138	60	210	1.4	3000	3.6
BLDF100	100	185	38	25	5.4	136	161	158	112	170	71	265	1.6	2800	4.5
BLDF120	120	210	40	26	6.2	158.8	185	181	135	195	76	315	2	2400	6
BLDF150	150	240	40	26	6.2	188	214	211	165	225	81	380	3	2000	7.5
BLDF180	180	280	43	29	6.2	218.6	244	246	194	260	85	440	3	1800	8
BLDF200	200	300	45	30	6.2	243	274	271	215	285	121	610	4.5	1600	11
BLDF260	260	385	55	36.5	8.2	313	345	348	280	365	162	920	7.5	1200	22
BLDF325	325	450	60	40	8.2	380	415	413	342	430	172	1110	11	1000	28
BLDF395	395	525	65	42.5	8.2	450	486	488	415	505	241	1580	16	800	39
BLDF460	460	600	70	46	8.2	520	560	563	482	580	255	1860	21	700	50
BLDF580	580	750	90	60	11	653	700	702	610	720	395	3180	40	500	82
BLDF650	650	870	122	78	12	743.3	800	802	680	830	358	2900	60	440	168

注：
1.BLDF转台轴承具有与BRT转台轴承相同安装尺寸和精度标准；
1.Notice: BLDF Rotary table bearings has the mounting dimensions as BRT bearings ;
2.如对转速有更高要求可联系我们的技术人员。
2.If you have higher requirements for speed, please contact our technical personnel。

博盈轴承 BOYING BEARING

BRTM

BRTM系列
BRTM Series



型号 Model Number	外形尺寸 boundary dimensions								基本额定载荷 Basic load rating (KN)				重量 Weight Kg
									轴向 axial		径向 radial		
	d	D	H	H1	C	D1	J	J1	动 dynamic load	静 static load	动 dynamic load	静 static load	
	单位 unit： mm								Ca	Coa	Cr	Cor	
BRTM150	150	240	40	26	12	214	165	225	112	630	56	170	6.2
BRTM180	180	280	43	29	15	244	194	260	118	710	69.5	200	7.7
BRTM200	200	300	45	30	15	274	215	285	120	765	81.5	220	9.7
BRTM260	260	385	55	36.5	18	345	280	365	160	1060	93	290	18.3
BRTM325	325	450	60	40	20	415	342	430	275	1930	120	345	25
BRTM395	395	525	65	42.5	20	486	415	505	300	2280	186	655	33
BRTM460	460	600	70	46	22	560	482	580	355	2800	200	765	45

注：BRTM转台轴承具有与BRT转台轴承相同安装尺寸和精度标准;
Notice: BRTM Rotary table bearings has the mounting dimensions as BRT bearings;

BYC® WWW.BYBEARINGS.COM

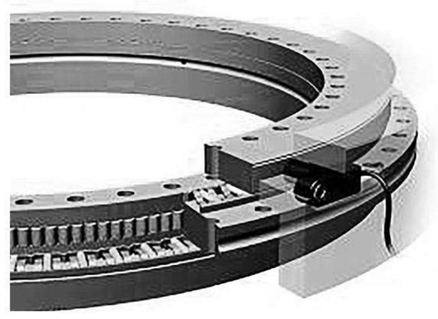
BRTM转台轴承是一种加装钢栅尺的双向推力圆柱滚子BRT组合轴承，实现实时监控和调整双向推力圆柱滚子组合轴承的旋转精度，以保证机器高精度运转。

带集成角度测量系统的转台轴承，角位移的测量在现代工业中有着十分重要的作用，特别在机床行业中，往往对加工件的旋转角度有很高要求，这就需要对角位移进行精确的测量和控制。

型号 Model Number	固定孔 Fixing holes								节距 Pitches	拧紧力矩 Tightening torque	摩擦力矩 Frictional torque
	内圈孔 Holes of inner ring				外圈孔 Holes of inner ring						
	固定孔Fixing holes				固定孔 Fixing holes		螺纹拔取孔				
	d1 mm	d2 mm	a mm	数量 quantity	d3 mm	数量 quantity	G	数量 quantity	数量×t quantity×t	Nm	Nm
BRTM150	7	11	6.2	34	7	33	M8	3	36×10°	14	10
BRTM180	7	11	6.2	46	7	45	M8	3	48×7.5°	14	12
BRTM200	7	11	6.2	46	7	45	M8	3	48×7.5°	14	14
BRTM260	9.3	15	8.2	34	9.3	33	M12	3	36×10°	34	20
BRTM325	9.3	15	8.2	34	9.3	33	M12	3	36×10°	34	40
BRTM395	9.3	15	8.2	46	9.3	45	M12	3	48×7.5°	34	55
BRTM460	10	15	8.2	46	10	45	M12	3	48×7.5°	34	70

Axial/radial bearing BRTM series correspond in the double direction thrust cylindrical roller combined bearing BRT ,but are additionally fitted with a steel ruler, to control and adjust the double direction thrust cylindrical roller bearing rotation accuracy, and guarantee the machine high precision operation.

Axial/radial bearings With magnetic dimensional scale play a very important role in modern industry, especially in the machine tool industry, the rotation angle of the workpiece tend to have high requirements, which require a diagonal move with precise measurement and control.



博盈轴承
BOYING BEARING

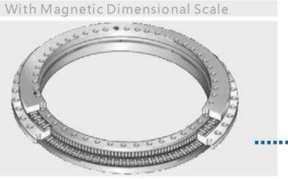
BRTM

BRTM系列
BRTM Series

结构介绍 :整个钢栅系统包括钢栅尺、读数头、电子评估器三部分。钢栅尺安装在轴承的内圈上，读数头安装在轴承外圈上。工作时轴承旋转，钢栅尺和读数头做非接触式相对运动，通过感应采集来的数据经电缆传给电子评估器。电子评估器再将数据转换为方波或正弦波信号，这些信号输入到机床的数控系统中，就能实现对角位移的测量和控制。

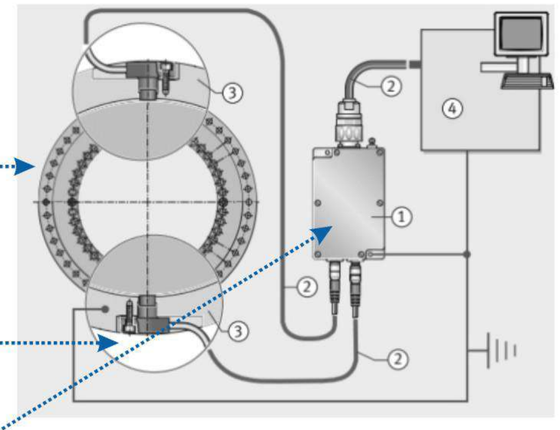
Structure description: The magnetic system includes three parts: a steel grid scale, reading head, electronic evaluator. Steel grid scale mounted on the bearing inner ring. Reading head is mounted on the bearing outer ring. When the Bearing is rotation, steel grid scale and reading head to do non-contact relative motion, by induction collected data through the cable passed the electronic evaluator. The data is converted to a square wave or sine wave signal by Electronic evaluator. These signals are input to CNC machine tool numerical control system, will be able to achieve the angular displacement measurement and control.

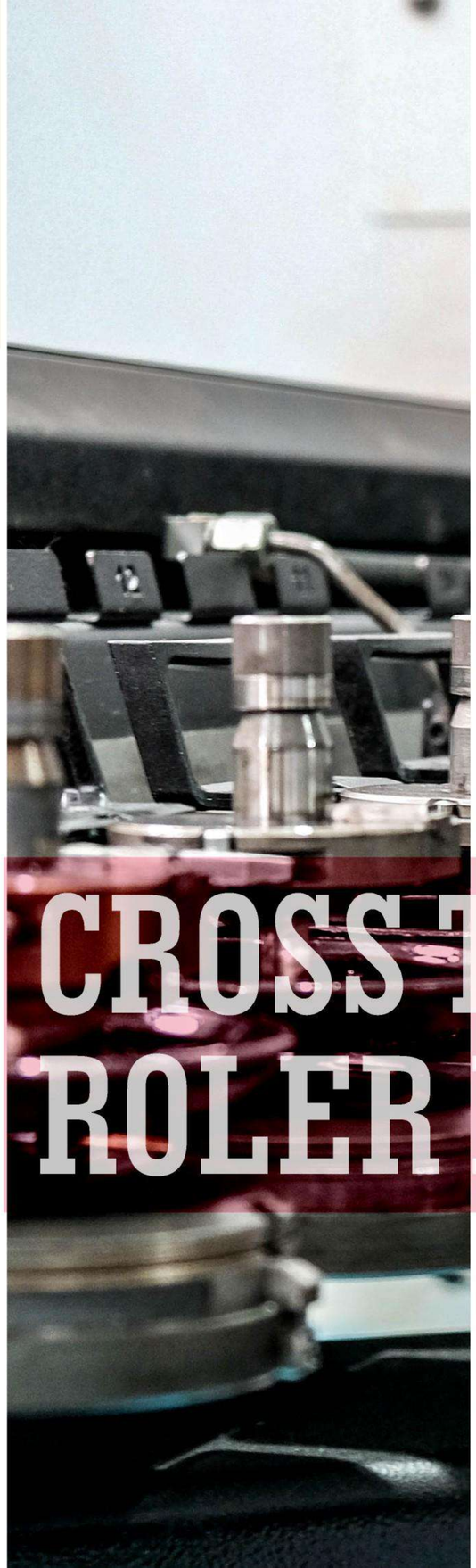
Axial/ Radial Bearings
BRTM With Magnetic Dimensional Scale



MEKO /U Electronic Measuring System
MEKO/U Measuring Heads

Electronic Evaluation System





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交叉圆锥滚子轴承
Cross Tapered Roler Bearing

高精度高转速高刚性
数控立车专用转台轴承

CROSS TAPERED ROLER BEARING

交叉圆锥滚子轴承
Cross Tapered Roller Bearings

特点:

1、高精密交叉圆锥滚子轴承主要用途是满足轴向径向多向承载下的高精度回转需求。该轴承包括一个外圈、分体内圈和交叉排布的圆锥滚子。滚子由尼龙隔离块分开。轴承滚道内的呈X排列圆锥滚子使其可以很好地承受轴向和径向载荷以及倾斜力矩，使轴承在尽量小的横截面上保持尽可能高的刚性，单个轴承可以实现对传统组合轴承设计的替代。

2、圆锥形滚子可以有效地防止滚子和滚道之间的单向滑动，从而实现更长久的轴承使用寿命。轴承的润滑是通过内圈之间的间隙进行，简单方便。

3、该轴承成品未进行装配，用户在使用时通过校准和预压，预负荷可调节设计，最大限度的保证了轴承刚性并保证了高回转精度。BYC博盈轴承采用高品质轴承钢和特殊的热处理工艺，保证轴承的质量和寿命，能满足数控立车等精密回转设备的设计需求，轴承本身带有吊装孔，安装使用方便。

Features:

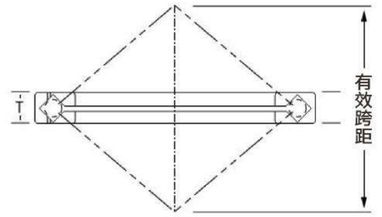
1.Precision crossed tapered roller bearings are intended for high Precision arrangements with combined axial-radial loads. A design of the bearing comprises an outer ring, split inner ring and tapered rollers in crossed position. the rollers are separated by plastic spacers. The concept of the bearing with tapered rollers in an x arrangement positioned in turns towards raceways enables to accommodate axial loads in both directions, radial loads as well as tilting moments.

2.In spite of a subtle cross section the bearings are characterized by considerable rigidity. as a result a single bearing can substitute a pair of bearings in a conventional arrangement.The tapered shape of rollers can effectively eliminate circumferential speed difference at rolling and prevent contact surfaces from skidding with further benefit of lower wearing the raceways and rollers. Ultimately a longer operational life of the bearing is achieved.lubrication of the bearings is enabled through a slot between inner rings.

3.The design of bearings assumes a fixed mounting of inner rings and rotating outer rings.the bearings are supplied unassembled after a final assembly the complete bearing adjusted with a preload ensures a clearancefree operation and high accuracy of running. the rings are manufactured from high quality steels heat treated to achieve a desired hardness. holes in the outer ring make handling, installation and fitting of the bearing into a machine easy.

交叉圆锥滚子轴承
Cross Tapered Roller Bearings

该类轴承具有两组滚道和滚子，相互呈直角组合，滚子交错相对。轴承的横截面高度与单列轴承相似，因此节省了空间和轴承座材料，大锥角和锥形几何设计使轴承总体有效跨距是轴承自身宽度的几倍。



交叉圆锥滚子能承受高倾覆力矩，适用于机床，包括立式镗床和磨床工作台、机床精密圆分度工作台、大型滚齿机、转塔、工业机器人等。

Cross Tapered roller bearing contains two sets of races and rollers brought together at high angles with alternate rollers facing in opposite directions. The height of cross section is similar to single-row bearing for conserving space and saving bearing housing material. And the steep-angle, tapered geometry results in a total effective bearing spread much greater than the width of the bearing itself.

It is able to withstand high overturning moments, and is optimal for machine tools, including vertical boring, grinding machines, precision circular dividing table, gear hobbing machine, turret and industrial robots.

设计和结构特点
Design Features

滚道和滚子构造上的线接触提供了最大旋转精度、高稳定性和更大的倾斜刚度。

预负荷的可调节设计延长了轴承寿命，在最大限度内加大了刚度并提供了最小跳动。

尼龙隔圈惯性较低，运行扭矩较小。

高的旋转精度和刚度，大幅度节省材料成本。

轴承的夹角和锥形几何形状使得轴承有效跨度要比轴承本身的实际宽度大好几倍。

The line contact of races and rollers can offer high rotation accuracy, high stability and high rigidity.

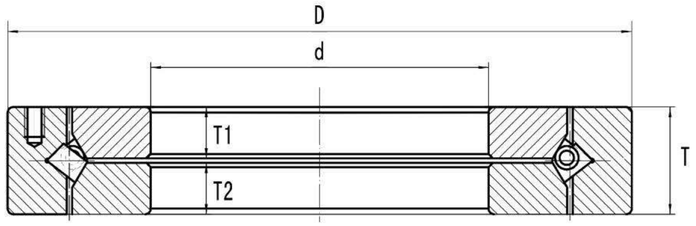
The adjustment design of pro-load extend the bearing using life , increase the rigidity and reach the smallest runout.

The nylon spacers has low inertia and small running torque.

High rotation accuracy and high rigidity , and conserving material costs.

The steep-angle, tapered geometry results in a total effective bearing spread much greater than the width of the bearing itself.

BXR、BJXR系列 / BXR、BJXR



型号 Model Number	主要尺寸 Main dimensions (mm)				基本额定动载荷 Basic dynamic load rating		极限转速 Limiting speed (油 Oil)	重量 Weight	互换型号 Exchange model			
	内径 Inner ring d(mm)	外径 Outer ring D(mm)	高度 Width T(mm)	倒角 Chamfer r(min)	径向 Radial Cr(KN)	轴向 Axial Ca(KN)	r/m	(Kg)	SKF	NACHI	URB	PSL
BXR496051	203.2	279.4	31.75	1.5	51.3	61.6	800	6.5	616093A	/	/	/
BXR678052	330.2	457.2	63.5	3	100	123	620	35	615661A	300XRN50	/	PSL912-309A
BXR766051	457.2	609.6	63.5	3	141	178	520	51	615894A	0457XRN060	XD.10.0457P5	PSL912-308A
BXR820060	580	760	80	5	240	299	300	100	615662A	580XRN76	XD.10.0580P5	PSL912-304A
BXR855053	685.8	914.4	79.375	3	270	344	260	150	615659A	0685XRN091	XD.10.0686P5	PSL912-305A
BXR882055	901.7	1117.6	82.55	3	300	396	200	185	615895A	0901XRN112	XD.10.0902P5	PSL912-306A
BXR889058	1028.7	1327.15	114.3	3	405	534	160	400	BFKB353282/ HA4	1028XRN132	XD.10.1029P5	PSL912-307A
BXR897051	1549.4	1828.8	101.6	3	518	699	80	500	615898A	/	XD.10.1549P5	/
BJXR637050	300	400	37	1.5	63	80.1	720	13	/	/	/	/
BJXR652050	310	425	45	2.5	82.2	102	640	20	/	/	/	/
BJXR699050	370	495	50	3	93.6	119	600	30	/	/	/	/

交叉圆锥滚子轴承-安装

安装检验手册

1、BXR系列交叉圆锥滚子轴承由一个外环和两个内环以及圆锥滚子和隔离块所组成，安装结构图如下图一；

2、在标准平台上依次安装零件：(1+4)→6→(2+5)→9→3→7；BYC交叉圆锥滚子轴承已用螺栓预紧，轴承可整体安装，只需依次安装6&7-法兰片，锁定法兰片时对角锁入螺丝，使用厚薄规检查法兰片还是否安置适当；

3、轴承旋转检测：安装7-轴颈法兰片前，转动4-外座圈(齿轮盘)，使滚动体和隔离块旋转到位，安装压板-F固定轴承内圈，用千分表检查轴承外圈对轴承内圈在"C"面处的平行度及轴向偏摆度，参照图二测量8-间隔片的厚度x；

4、确保轴承的正确性能及使用寿命，必须注意以下几点条件：充分及正确的润滑；定期检验润滑系统；勿超过指定的参数作业；尽量将冲击载荷的风险降至最低。

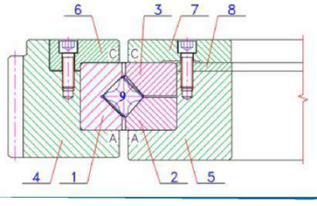
Installation And Inspection Manual

1.BXR series Tapered crossed roller bearings consist of 1 outer ring、2 separated inner ring、tapered rollers and spacers,installation drawing as figure1;

2.Install parts on a standard platform in turn of: (1+4)→6→(2+5)→9→3→7; BYC Tapered crossed roller bearings are pre-tighten by bolts,the bearing is integrated, only need to install 6&7-flange, diagonal lock the flange into the screw hole, use thickness gauge to check the flange is properly placed and locked.

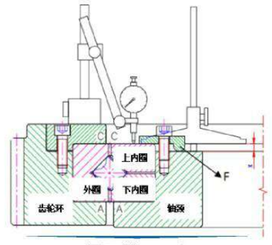
3.Bearing turning detection:force the rollers and spacers in place by rotate housing washer-4 several times before install 7-shaft washer flange, install pressure plate-F to fix the inner ring of bearing,use dial indicator to check the Parallelism and Sea(outer ring axial run out)at side"C", measure the thickness of 8-distance piece refer to figure2;

4.To ensure the best performance and working life of bearing,you must pay attention to the following conditions:full and correct lubrication;regular inspection lubrication system;Don't exceed the specified parameter of the bearing;try to avoid impact load as far as possible.



1-轴承外环	1-outer ring
2-轴承下内环 "A"	2-downside inner ring "A"
3-轴承上内环 "C"	3-upside inner ring "C"
4-外座圈	4-housing washer
5-轴颈环	5-shaft washer
6-法兰片	6-flange
7-轴颈环法兰片	7-shaft washer flange
8-间隔片	8-distance piece

图一 Figure1



图二 Figure2

专利认证
Patent Authentication

专注生产高精度转台轴承及数控机床轴承
Focus On The Production Of High-precision Rotary Bearings And CNC Machine Bearings

北京航协认证中心有限责任公司

质量管理体系认证证书

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管理体系符合： GB/T 19001-2016/ISO 9001:2015

证书覆盖范围： 滚动轴承的生产

颁 证 日 期： 2025 年 06 月 30 日　　证书有效期至： 2028 年 07 月 01 日

初次颁证日期： 2019 年 07 月 03 日

中国认可 国际互认 管理体系 MANAGEMENT SYSTEM CNAS C034–M

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武器装备质量管理体系认证证书

洛阳博盈轴承有限公司

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管理体系符合： GJB 9001C-2017

证书覆盖范围： 滚动轴承（交叉圆柱滚子轴承、转台轴承）的生产

颁 证 日 期： 2023 年 07 月 10 日　　证书有效期至： 2026 年 07 月 09 日

初次颁证日期： 2023 年 07 月 10 日

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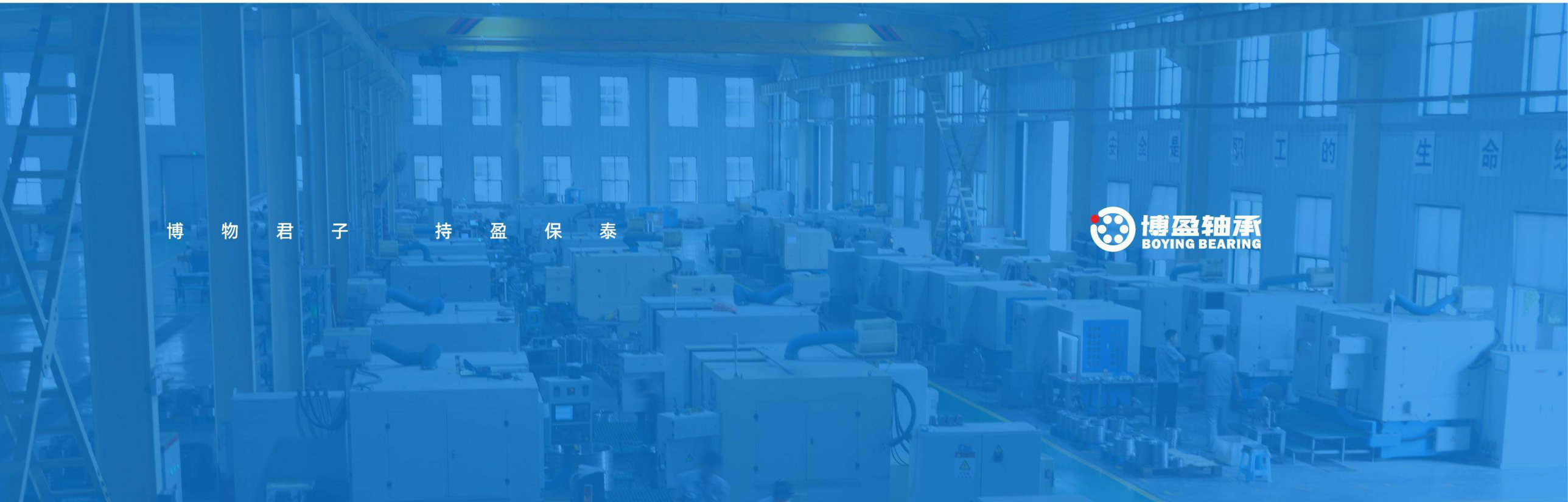

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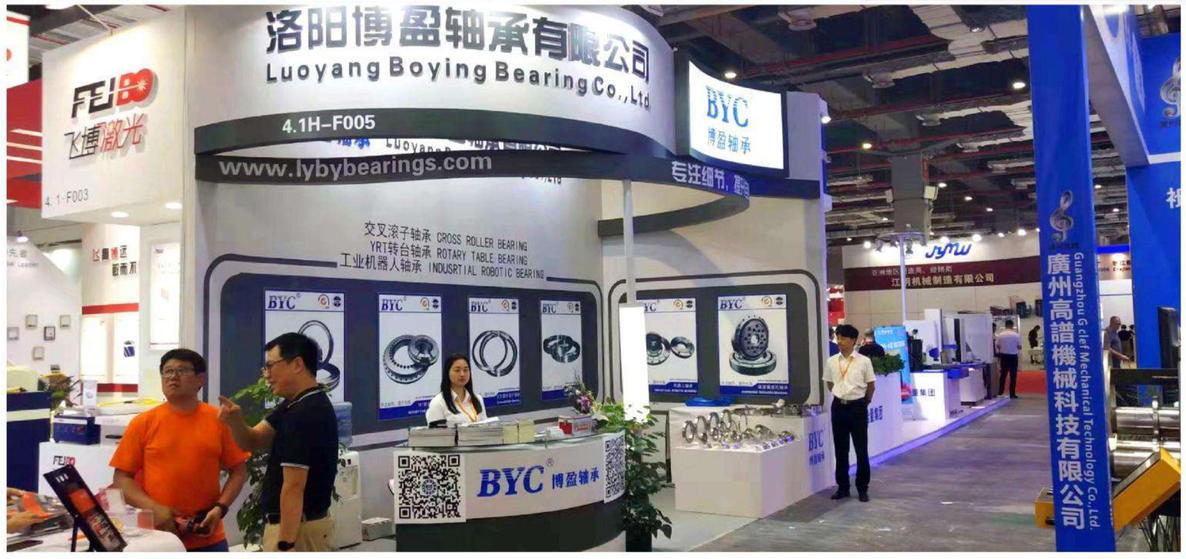

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