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慈溪市拓高轴承厂

Cixi Tuogao Bearing Factory

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TUOGAO BEARING

拓高轴承

Company Profile

公司简介



慈溪市拓高轴承厂坐落于风景秀丽的杭州湾南岸，全国轴承生产基地慈溪市横河。东靠宁波北仑港，南为杭甬高速公路，北有杭州湾跨海大桥，交通十分便利。

公司专业生产中小型深沟球系列轴承，各种英制轴承及非标轴承、薄壁轴承。目前主要生产16系列、60系列、62系列、63系列、68系列、69系列等。产品主要应用于电机、医疗器械、运动器材、机床、流水线、小家电、摩配、气泵等领域。公司本着以人为本，勇于创新的宗旨，不断发展壮大。公司拥有先进的轴承自动生产线和专业的技术人员，年产轴承2000余万套，员工50余人。面对激烈的市场竞争，新产品的开发也是公司长期的市场战略目标。

我们将继续以一流的服务水平，便捷的供货方式，最优惠的价格竭诚为新老客户提供优质品牌轴承。欢迎新老客户来公司洽谈合作。

Cixi Tuogao Bearing Factory is located in Henghe, Cixi City, on the south bank of the beautiful Hangzhou Bay, which is a national bearing production base. It is located east of Ningbo Beilun Port, south of Hangzhou-Ningbo Expressway and north of Hangzhou Bay Cross-Sea Bridge. The transportation is very convenient.

The company specializes in manufacturing small and medium-sized deep groove ball series bearings, various British standard bearings, non-standard bearings and thin-walled bearings. At present, the main products are 16 series, 60 series, 62 series, 63 series, 68 series, 69 series, etc. The products are mainly applied in fields such as motors, medical devices, sports equipment, machine tools, assembly lines, small household appliances, motorcycle parts, and air pumps. Adhering to the principle of "people-oriented and innovation-driven", the company has been continuously growing and expanding. The company is equipped with advanced automatic bearing production lines and professional technical personnel, with an annual output of over 20 million sets of bearings and more than 50 employees. Facing fierce market competition, the development of new products is also a long-term market strategic goal of the company.

We will continue to provide new and old customers with high-quality brand bearings with first-class service levels, convenient supply methods and the most favorable prices. Welcome both new and old customers to our company for business negotiations and cooperation.

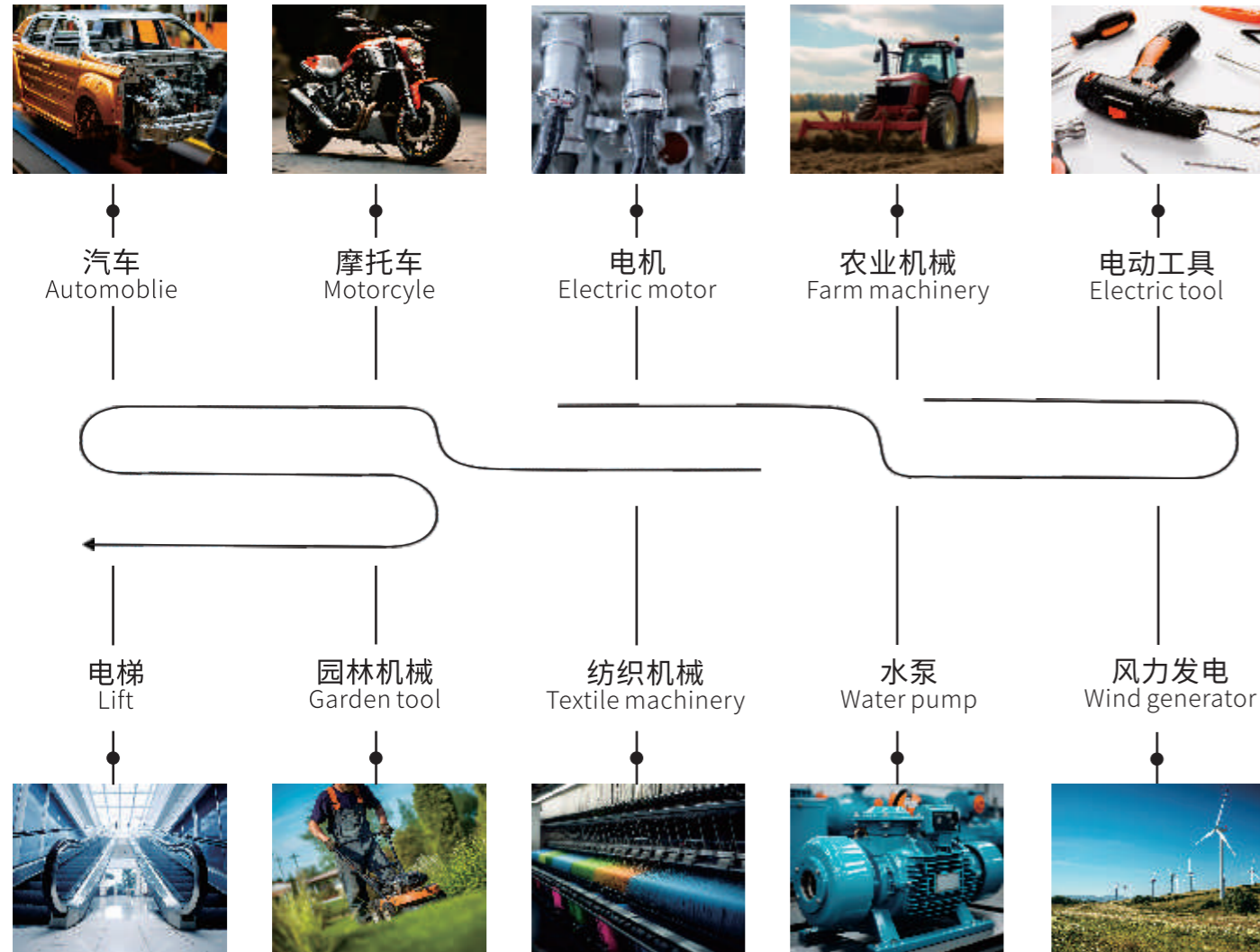


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- 05 深沟球轴承
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Bearing Applications 产品的应用领域



部分工业产品应用



拓高轴承作为工业产品零部件被广泛的应用于汽车, 摩托车、水泵、电动工具、空压机、减速机、工业电机、发电机、纺织机械、农用机械、传送设备、建筑设备、机床、电梯等等;

As parts of industrial products, Tuogao bearings are widely used in automobiles, motorcycles, water pumps, power tools, air compressors, reducer, industrial motors, generators, textile machinery, agricultural machinery, transmission equipment, construction equipment, machine tools, elevators, etc.

部分家用产品应用

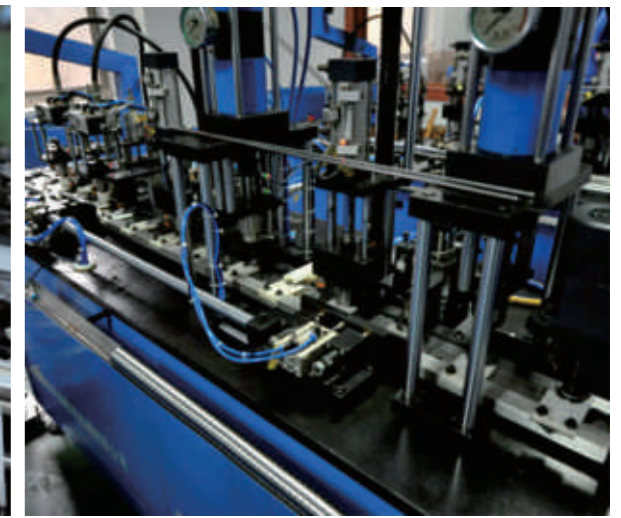
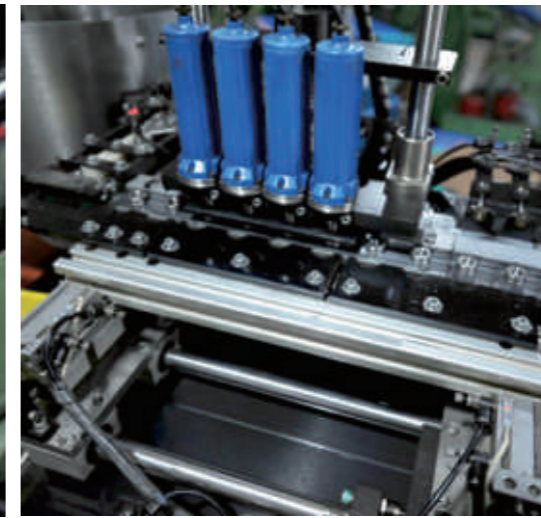
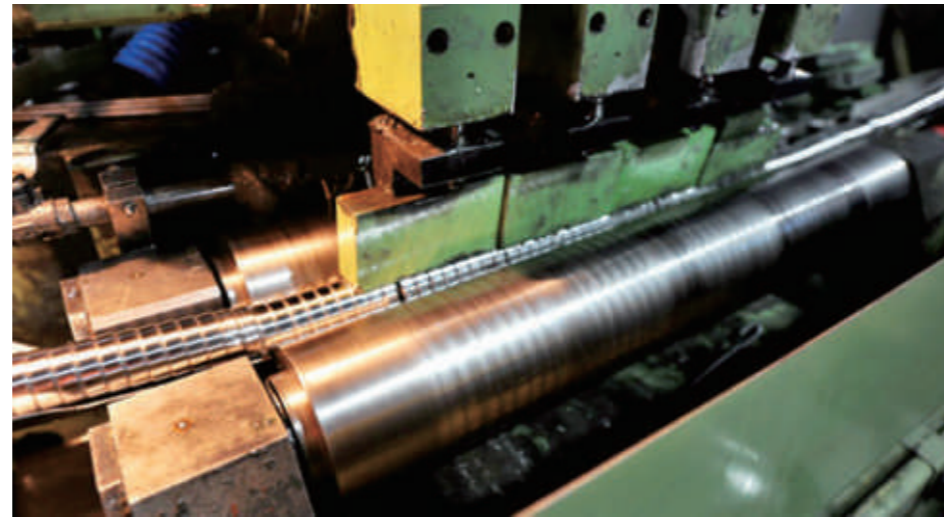
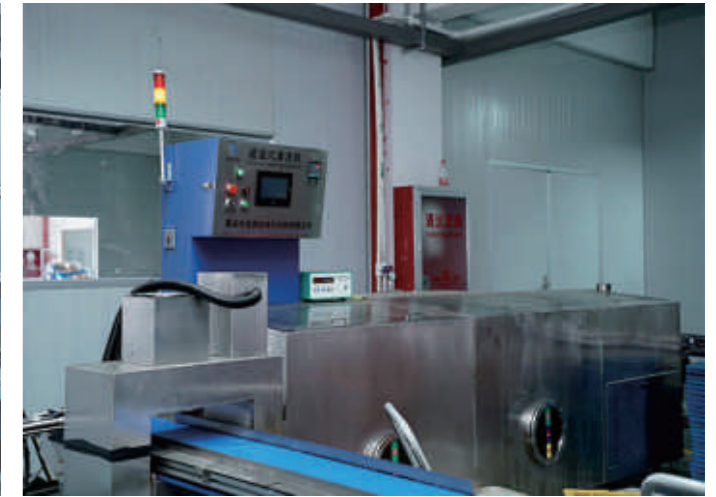


拓高轴承也被广泛地应用于家电产品和办公设备如, 空调, 洗衣机, 吸尘器, 按摩椅, 缝纫机, 油烟机, 微波炉, 复印机等等;

Tuogao bearing are also widely used in household appliance and office equipment, such as air conditioner, washer, cleaner, massage air chair, sewing machine, range hood, micro-wave oven, duplicating machine.

EQUIPMENT

多年来公司坚定不移地走吸取国际行业先进技术与自主开发相结合的道路,融贯零缺陷的过程质量控制,为提高和稳定公司的品质提供了可靠的基础,当前公司拥有国际上先进的轴承生产设备和成熟的加工工艺,采用了真空热处理淬火,全自动精密磨床生产线、全自动装球合套仪和洁洗、烘干、加脂、压盖整套生产流水线。

Manufacturing Facility
厂房设备



Marhr测量仪



测长仪



粗糙度轮廓仪



金相分析仪

Detection equipment 检测设备

拓高轴承致力于产品研究和开发,通过不断提升技术和制造,实现产品应用于长寿命、耐高温、高转速、低噪音的领域。

检测中心配备各种现代化测量设备,用于分析、评估、检测轴承。保证宏洋轴承产品的质量稳定性。

Tuogao Bearing is committed to product research and development, through continuous improvement of technology and manufacturing, to achieve the application of products in the field of long life, high temperature resistance, high speed and low noise. The testing center is equipped with a variety of modern measuring equipment for analyzing, evaluating and inspecting bearings. Ensure the quality and stability of Hongyang bearing products.



圆度测量仪



三丰圆度测量仪



石油产品运动粘度仪



直读光谱仪



投影仪



硬度仪

轴承材料 Material

套圈和滚动体材料 Rings & rolling elements

滚动轴承需要在套圈与滚动体接触面上反复承受较大力的同时,保持高精度旋转。负荷最终会使表面断裂导致轴承的失效。为推迟材料疲劳的出现,轴承套圈和滚动体材料应具备以下特性。

Because of high, repetitive stress to the rolling contact areas, fatigue phenomenon will occur to the bearing material after a duration of operation. Loading stress ultimately dislodges a surface section and the bearing fails. To delay the advent of material fatigue, bearing ring and rolling element materials should have the following properties

- 硬度高
- 抗滚动疲劳性能强
- 耐磨损
- 尺寸稳定性好
- 机械强度高
- High level of hardness
- High rolling contact fatigue resistance
- Good wear resistance
- Dimensional stability
- Good mechanical strength

如今,铬钢是滚动轴承的最佳选择,且应用范围广。由于不断对轴承寿命延续性的要求,球轴承的铬钢给制造和应用性能提供了最大限度的平衡。这种钢通常出现在马氏体或贝氏体热处理期间,硬度范围在58和65HRC之间。真空脱气,铬轴承钢GCr15是精密套圈和滚动体材料标准的材料,该材料具有统一规范AISI52100(美国)5DIN100Cr6(德国),JISSUJ2(日本)。

Today, chromium steel is one of the oldest and most intensively investigated steels; due to the continuously increasing demands for extended bearing service life. The composition of this rolling bearing steel provides an optimum balance between manufacturing and application performance. This steel is normally given a martensitic or bainitic heat treatment during which it is hardened to the range of 58 to 65 HRC. Vacuum degassed chromium-bearing steel GCr15 is the standard material for precision bearing rings and rolling elements. The material has uniform specification as SAE52100(America), DIN100Cr6(German) JISSUJ2 (Japan)!

钢材代码 Sheet Steel No.	化学成分% Chemical Composition %								
Gcr 15 SAE52100 JISSUJ2 DIN 100 Gr6	碳C	硅Si	锰Mn	磷P	硫S	铬Cr	钼Mo	铜Cu	镍Ni
	0.95-1.05	0.15-0.35	0.25-0.45	≤0.02	<0.015	1.4-1.6	0-0.08	0.06-0.02	≤0.02

因为创启有能力和设施提供多种材料、过程和加工,创启的应用工程师可以协助选择这些轴承,为特定的应用提供优越的性能。

Because Chuangqi has the competence and facilities to provide a variety of materials, processes and coatings, Chuangqi application engineers can assist in selecting those bearings that will provide superior performance for particular applications.

类型 Type	ASTM D1418 名称 Designation	温度范围 Temperature Range	硬度 (Shore A) Hardness (Shore A)	特点 Features	限制 Limitation
丁腈橡胶 Nitrile(Buna)	NBR	(-40至250华氏度)	40~90	低压缩特性,高延展性;高耐腐蚀性;优越的耐油性 Low compression set,high tensile strength,and high abrasion resistanceExcellent resistance to petroleum-based oils and fuels.	不适合超低温条件;避免阳光直射和化学品侵蚀。Not recommended for very low temperature.Not recommended for exposure to sunlight and chemicals as acid,ether and esters.
硅橡胶 Silicone	MQ/PMO/V MQ/PVMP	(-94至400华氏度)	25~80	抗高温和干燥性;抗阳光和臭氧的老化性 High temperature and dry heat resistanceHigh resistance to aging effects of both sunlight and ozone attach.	表面磨损和抗裂性能较差;比较高的耐磨性。Low abrasion and tear resistance.High friction characteristics.
氢化(丁腈橡胶) Nitrile (Hydrogenated)	HNBR/NEM	(-30至330F)	50~90	抗热、高延展性、抗化学腐蚀 The hydrogenation of Nitrile, heat resistance, tensile strength. Enhanced physical strength and chemical resistance.	不适合超低温条件;避免阳光直射和化学品侵蚀。Not recommended for very low temperature.Not recommended for exposure to sunlight and chemicals as acid,ether and esters.
氟橡胶 Fluororubber	FKM/FPM	(-20至400华氏度)	50~95	耐高温;显著的抗腐蚀性;对石油产品具有耐腐蚀性Combining high temperature resistance with outstanding chemical resistance.Highly resistance to petroleum products acids and silicone fluids.	不适合低温工作状态 Not recommended for situations requiring low temperature flexibility.
聚丙烯橡胶 Polyacrylate	ACM Rubber	(0至350F)	40-90	对热油、阳光和臭氧到蚀有较强的抵抗能力同时具有较强的抗裂性能 Excellent resistance to hot oil, sunlight and ozone degradation. Also features an enhanced ability to resist flex cracking	防水性能差,不适合超低温工作状态Water resistance is lower. No recommended for very low temperature.

在200°C以下的正常工作条件氟橡胶是安全、无害的,但是超过300°C的极限温度,即相当于切割钢管的火光,氟橡胶就会释放出烟雾。这些烟雾吸入人体是有害的,包括眼睛,另外要注意避免与皮肤接触。

Safety precautions for fluoro rubber is very stable and harmless in normal operating conditions up to +200. However, if exposed to extreme temperatures above 300, e.g. fire or the flame of a cutting torch, fluoro rubber seals give off hazardous fumes. These fumes can be harmful inhaled, as well as to the eyes. In addition, should not be in contact with the skin either.

轴承精度 Precision

根据ISO国际标准,轴承精度可分为PO、P6、P5、P4等级。公差等级根据中国国家标准GB/T307.1-2005和ISO492:2002设定。公差等级对照表请参考表3

According to ISO, the precision of bearing divides PO,P6,P5,P4.The tolerance depends on Chinese GB/T307.1-2005 and ISO492:2002 Reference FORM3.

表3/FORM3

国家 Country	标准 Standard	精度等级 Precision			
中国 China	Gb307.1	PO	P6	P5	P4
瑞典 Switzerland	SKF	PO	P6	P5	P4
德国 Germany	DIN	PO	P6	P5	P4
日本 Japan	Jis	PO	P6	P5	P4
美国 USA	ANSI	ABEC1	ABEC3	ABEC5	ABEC7

P5级公差内圈 P5 Inner Ring Tolerance

表8/FORM 8

D 毫米(mm)		Δ_{Dmp}		V _{dp2}		V _{dmp}	K _{ia}	Δ_{Bs}		V _{Bs}
				直径系列Diameter series						
				9	2,3,4					
超过 Over	包括 Include	高 High	低 Low	最大 Max	最大 Max	最大 Max	高 High	低 Low	最大 Max	
0.6 ¹⁾	2.5	0	-5	5	4	3	4	0	-40	5
2.5	10	0	-5	5	4	3	4	0	-40	5
10	18	0	-5	5	4	3	4	0	-80	5
18	30	0	-6	6	5	3	4	0	-120	5
30	50	0	-8	8	6	4	5	0	-120	5

注释:

- 1)包括0.6在内。
- 2)直径系列7,8无规定值。

Note:

- 1) Includes 0.6.
- 2) No rate value for diameter series 7,8

P5级公差外圈 P5 Outer Ring tolerance

表9/FORM 9

D 毫米(mm)		Δ_{Dmp}		V _{dp2}		V _{dmp}	K _{es}	Δ_{Cs}		V _{Cs}
				直径系列Diameter series						
				9	2,3,4					
超过 Over	包括 Include	高 High	低 Low	最大 Max	最大 Max	最大 Max	高 High	低 Low	最大 Max	
2.5 ¹⁾	6	0	-5	5	4	3	5	与同一轴承, 数值与内圈 Δ_{As} 一致。		5
6	18	0	-5	5	4	3	5			5
18	30	0	-6	6	5	3	6			5
30	50	0	-7	7	5	4	7			5
50	80	0	-9	9	7	5	8			6

注释:

- 1)包括0.6在内。
- 2)直径系列7,8无规定值。
- 3)直径系列9无规定值。

Note:

- 1) Includes 0.6.
- 2) No rate value for diameter series 7,8
- 3) No rate value for diameter series 9

P4级公差内圈 P4 Inner ring tolerance

表10/FORM10

D 毫米(mm)		Δ_{Dmp}		V _{dp2}		V _{dmp}	K _{ia}	Δ_{Bs}		V _{Bs}
				直径系列Diameter series						
				9,8,9	1,7,2,3,4					
超过 Over	包括 Include	高 High	低 Low	最大 Max	最大 Max	最大 Max	高 High	低 Low	最大 Max	
0.6 ¹⁾	2.5	0	-4	4	3	2	2.5	0	-40	2.5
2.5	10	0	-4	4	3	2	2.5	0	-40	2.5
10	18	0	-6	4	3	2	2.5	0	-80	2.5
18	30	0	-5	5	4	2.5	3	0	-120	2.5
30	50	0	-6	6	5	3	4	0	-120	3

注释:

- 1)包括0.6在内。
- 2)直径系列7,8无规定值。

Note:

- 1) Includes 0.6.
- 2) No rate value for diameter series 7,8

P4级公差内圈 P4 Inner ring tolerance

表11/FORM11

D 毫米(mm)		Δ_{Dmp}		V _{dp2}		V _{dmp}	K _{es}	Δ_{Cs}		V _{Cs}
				直径系列 Diameter series						
				7,8,9	1,7,2,3,4					
超过 Over	包括 Include	高 High	低 Low	最大 Max	最大 Max	最大 Max	高 High	低 Low	最大 Max	
2.5 ¹⁾	6	0	-4	4	3	2	3	与同一轴承, 数 值与内圈 Δ_{As} 一 致。		2.5
6	18	0	-4	4	3	2	3			2.5
18	30	0	-5	5	4	2.5	4			2.5
30	50	0	-6	6	5	3	5			2.5
50	80	0	-7	7	5	3.5	5			3

注释:

- 1)包括2.5在内。
- 2)直径系列7,8无规定值。
- 3)直径系列9无规定值。

Note:

- 1) Includes 2.5.
- 2) No rate value for diameter series 7,8
- 3) No rate value for diameter series 9

P0 级公差内圈 P0 Inner ring tolerance

表 4/FORM 4

D 毫米(mm)		Δ_{Dmp}		V_{dp^2}			V_{dmp}	K_{ia}	Δ_{Bs}		V_{Bs}
				直径系列Diameter series							
				9	0,1	2,3,4					
超过 Over	包括 Include	高 High	低 Low	最大 Max			最大 Max	最大 Max	高 High	低 Low	最大 Max
0.6 ¹⁾	2.5	0	-8	10	8	6	6	10	0	-40	12
2.5	10	0	-8	10	8	6	6	10	0	-120	15
10	18	0	-8	10	8	6	6	10	0	-120	20
18	30	0	-10	13	10	8	8	13	0	-120	20
30	50	0	-12	15	12	9	9	15	0	-120	20

注释:

- 1)包括0.6在内。
- 2)直径系列7,8无规定值。

Note:

- 1) Includes 0.6.
- 2) No rate value for diameter series 7,8

P0 级公差内圈 P4 Inner ring tolerance

表 5/FORM 5

D 毫米(mm)		Δ_{Dmp}		V_{dp^2}				V_{dmp}	K_{ia}	Δ_{Bs}		V_{Bs}
				开式系列Open Bearing		闭式轴承 ²⁾ ³⁾ Closed Bearing						
				直径系列Diameter series								
超过 Over	包括 Include	高 High	低 Low	9	0,1	2,3,4	2,3,4	最大 Max	最大 Max	高 High	低 Low	最大 Max
2.5 ¹⁾	6	0	-8	10	8	6	10	6	15	与同一轴承内圈的Abs及相同 same as the one bearing's inner ring Δ_{BS} and Δ_{BS}		
6	18	0	-8	10	8	6	10	6	15			
18	30	0	-9	12	9	7	12	7	15			
30	50	0	-11	14	11	8	16	8	20			
50	80	0	-13	16	13	10	20	10	25			

注释:

- 1)包括2.5在内。
- 2)直径系列7,8无规定值。
- 3)直径系列9,0,1无规定值。

Note:

- 1) Includes 2.5.
- 2) No rate value for diameter series 7,8
- 3) No rate value for diameter series 9,0,1

P6 级公差内圈 P4 Inner ring Tolerance

表 6/FORM 6

D 毫米(mm)		Δ_{Dmp}		V_{dp^2}			V_{dmp}	K_{ia}	Δ_{Bs}		V_{Bs}
				直径系列Diameter series							
				9	0,1	2,3,4					
超过 Over	包括 Include	高 High	低 Low	最大 Max			最大 Max	最大 Max	高 High	低 Low	最大 Max
0.6 ¹⁾	2.5	0	-7	9	7	5	5	5	0	-40	12
2.5	10	0	-7	9	7	5	5	6	0	-120	15
10	18	0	-7	9	7	5	5	7	0	-120	20
18	30	0	-8	10	8	6	6	8	0	-120	20
30	50	0	-10	13	10	8	8	10	0	-120	20

注释:

- 1)包括0.6在内。
- 2)直径系列7,8无规定值。

Note:

- 1) Includes 0.6.
- 2) No rate value for diameter series 7,8

P6 级公差内圈 P4 Inner ring tolerance

表 7/FORM 7

D 毫米(mm)		Δ_{Dmp}		V_{dp^2}				V_{dmp}	K_{ea}	Δ_{cs}		V_{cs}
				开式系列Open Bearing		闭式轴承 ²⁾ ³⁾ Closed Bearing						
				直径系列Diameter series								
超过 Over	包括 Include	高 High	低 Low	9	0,1	2,3,4	2,3,4	最大 Max	最大 Max	高 High	低 Low	最大 Max
2.5 ¹⁾	6	0	-7	9	7	7	9	5	8	与同一轴承内圈的Abs及相同 same as the one bearing's inner ring Δ_{BS} and Δ_{BS}		
6	18	0	-7	9	7	7	9	5	8			
18	30	0	-8	10	8	8	10	6	9			
30	50	0	-9	11	9	9	13	7	10			
50	80	0	-11	14	11	11	16	8	13			

注释:

- 1)包括2.5在内。
- 2)直径系列7,8无规定值。
- 3)直径系列9无规定值。

Note:

- 1) Includes 2.5.
- 2) No rate value for diameter series 7,8
- 3) No rate value for diameter series 9

润滑剂 Lubricant

轴承可以选用多种多样的油脂。根据不同的工作环境和轴承的操作情况,我们列出下列常用的油脂以方便客户挑选。除了下面列出的油脂外,还可以根据客户的要求添加其他油脂。

The various greases can be used in different kinds of bearings. According to the different work environment and bearing operation conditions, we used the following list of greases in order to be convenient for clients to choose. Besides these greases of the listed below, we can also add other greases according to the requirements of our customers.

品牌 Brand	产品 Products	基油 Base oil	使用温度范围 Range of using temperature	特征 Character
协同 KYODO YUSHI	Multemp SRL	多羟基脂+二酯 Polyol ester+Diester	-50+150	能有效抑制噪音, 延长使用寿命 Can effectively restrain the noise, prolong service life
	Multemp PS	二酯+精炼矿物油 Diester+Refined mineral oil	-50+130	适用于低温, 能有效抑制噪音 Suitable for low temperature, and restrain the noise effectively
	Multemp SM-B	合成烃 Synthetic hydrocarbon	-50+200	高温状态下作业寿命长, 宜适用于低温, 高速运转时扭矩低, 噪音低 Long life in the high temperature low torque in high speed running, low noise
	Multemp ET-K	合成醚+多羟基脂 Synthetic ether+Polyol ester	-40~+200	高温状态下延续作业寿命更长 High temperature condition continued work, having longer life
埃克森美孚 EXXON MOBILE	Polyrex EM	矿物油脂 Mineral grease	-40~+180	寿命长, 耐高温 Long life and resist to high temperature
	Beacon325	人造油脂 Synthetic grease	-54~+150	普通用途油脂 Common use grease
	Andok C	石油油脂 Petroleum oil	-27~+120	滑动顺畅, 最小滑动时寿命长 Move smoothly and when minimum sliding, has long service life.
	Mobil 28 (MIL-G-81322)	合成烃 Synthetic hydrocarbon	-54~+177	温度范围广, 扭矩低 Wide temperature range and low torque.
	Mobil HP	锂化合物 Lithium compounds	-30~+110	速度适中, 有效抑制腐蚀 Moderate speed and inhibit the corrosion effectively.
雪弗龙 CHEVRON	SRI-2	矿物油脂 Mineral grease	-30~+180	温度范围广, 防水效果好 Wide temperature range, waterproof effect is good.
壳牌 SHELL	Alvania 2	矿物油脂 Mineral grease	-35~+120	寿命长, 耐高温 Long life and resist to high temperature
	RLQ#2	矿物油脂 Mineral grease	-50~+150	噪音低, 速度快, 耐高温 Low noise, fast speed, and resistant high temperature.
杜邦 DUPONT	Krytox 240AC	氟化油脂 Fluoride grease	-35~+290	高温状态下稳定效果好, 润滑效果强 Stability effect is good in high temperature, and lubrication effect is strong.
克鲁勃 KLUBER	ASONIC	合成烃 Synthetic hydrocarbon	-50~+140	噪音低, 寿命长, 扭矩低 Low noise, long life and low torque.
津脂 JINZHI	HANGU 2#	矿物油脂 Mineral grease	-20~+120	噪音低 Low noise
	HTHS	矿物油脂 Mineral grease	-40~+180	速度快, 温度低, 扭矩小, 噪音低 Fast speed, low temperature, small torque and low noise

轴承的径向内游隙 Bearings radial internal clearance

内部游隙的确定以便在轴承过盈配合安装后, 保留合适的游隙。深沟球轴承典型内部游隙的类别有 C2, CO, C3, C4和C5, CM, MA游隙

Internal clearance is determined so that appropriate clearance will remain after the bearing is mounted to the shaft with interference fit. Typical clearance groups for the deep groove ball bearings are C2, CO, C3, C4, and C5, CM, MC (Clearance)

内径 Bore Diameter				C2		C0		C3		C4		C5	
超过 Over		包括 Include		最小值 Min.	最大值 Max.	最小值 Min.	最大值 Max.	最小值 Min.	最大值 Max.	最小值 Min.	最大值 Max.	最小值 Min.	最大值 Max.
毫米 mm	英寸 Inch	毫米 mm	英寸 Inch										
2.5	0.1	10	0.4	0	7	2	13	8	23	14	29	20	37
10	0.4	18	0.7	0	9	3	18	11	25	18	33	25	45
18	0.8	24	0.9	0	10	5	20	13	28	20	36	28	48
24	0.9	30	1.2	1	11	5	20	13	28	23	41	30	53
30	1.2	40	1.6	1	11	6	20	15	33	28	46	40	64

· ERQ轴承径向游隙 The radial clearances of bearings with electric motor quality

内径 Bore Diameter				CM	
超过 Over		包括 Include		最小值 Min.	最大值 Max.
毫米 mm	英寸 Inch	毫米 mm	英寸 Inch	公差 µm	公差 µm
10	0.3937	18	0.7087	4	11
18	0.7087	24	0.9449	5	12
24	0.9449	30	1.1811	5	12
30	1.1811	40	1.5748	9	17

· 无负荷微型深沟球轴承游隙数据 Date of the mini-deep groove ball bearing under no load.

振动和噪音 Vibration and noise

轴承的振动和噪音等级可以分为四级:Z1, Z2, Z3和Z4。可以由S0910-1仪器检测出。根据特殊要求,可用BVT-1检测,并分为VV1V2,V3和V4。具体数据列表如下。客户下订单时应注明振动和噪音等级要求。

Bearing vibration and noise level can be divided into 4 levels:Z1,Z2,Z3 and Z4.We can detect by S0910-1 instrument.According to the special requirement, we can use BVT-1 detection, and be divided into the V,V1,V2,V3 and v4.Specific data are listed below.Customer's order should be indicated the vibration and noise level requirements.

单个轴承振动公差数据 Vibration tolerance data of single bearing

公差um/s Tolerance um/s

内径 Bore Diameter r 毫米 mm	V			V1			V2			V3			V4		
	低频 L	中频 M	高频 H	低频 L	中频 M	高频 H	低频 L	中频 M	高频 H	低频 L	中频 M	高频 H	低频 L	中频 M	高频 H
3,4	80	44	44	60	35	32	48	26	22	31	16	15	28	10	10
5,6	110	72	60	74	48	40	58	36	30	35	21	18	32	11	11
7,8,9	130	96	80	92	66	54	72	48	40	44	28	24	38	12	12
10,12	160	120	100	120	80	70	90	60	50	55	35	30	45	14	15
15	210	150	120	150	100	85	110	78	60	65	46	35	52	18	18
17	210	150	120	150	100	85	110	78	60	65	46	35	52	25	25
20	260	190	150	180	125	100	130	100	75	80	60	45	60	25	25
22,25	260	190	150	180	125	100	130	100	75	80	60	45	60	30	32
28	260	190	150	180	125	100	130	100	75	80	60	45	60	35	40
30,32	300	240	190	200	150	130	150	120	100	90	75	60	70	35	40

单个轴承最大震动速度

The maximum vibration acceleration of single bearing.

内径 Bore Diameter r 毫米 mm	直径系列(0) Diameter series					直径系列(2) Diameter series(2)					直径系列(3) Diameter series(3)				
	Z	Z1	Z2	Z3	Z4	Z	Z1	Z2	Z3	Z4	Z	Z1	Z2	Z3	Z4
3	35	34	32	28	24	36	35	32	30	26	37	36	33	31	27
4	35	34	32	28	24	36	35	32	30	26	37	36	33	31	27
5	37	36	34	30	26	38	37	34	32	28	39	37	35	33	29
6	37	36	34	30	26	38	37	34	32	28	39	37	35	33	29
7	39	38	35	31	27	40	38	36	34	29	41	39	37	35	30
8	39	38	35	31	27	40	38	36	34	29	41	39	37	35	30
9	41	40	36	32	28	42	40	37	35	30	43	41	39	37	32
10	43	42	38	33	28	44	42	39	35	30	46	44	40	37	32
12	44	43	39	34	29	45	43	39	35	30	47	45	40	37	32
15	45	44	40	35	30	46	44	41	36	31	48	46	42	38	33
17	46	44	40	35	30	47	45	41	36	31	49	47	42	38	33
20	47	45	41	36	31	48	46	42	38	33	50	48	43	39	34
22	47	45	41	36	31	48	46	42	38	33	50	48	43	39	34
25	48	46	42	38	34	49	47	43	40	36	51	49	44	41	37
28	49	47	43	39	35	50	48	44	41	37	52	50	45	42	38
30	49	47	43	39	35	50	48	44	41	37	52	50	45	42	38

深沟球轴承(<10mm)

Deep Groove Ball Bearings(10mm)

轴承型号 Bearing No.	内径 Bore Diameter	孔径 Outer Diameter	宽度 Width		倒角 Radius	额定载负 Basic load Ratings		极限转速 Limiting Speed		
			开式 open	闭式 capped		动负荷 dynamic	静负荷 static	油Oil	脂Grease	
			B	B ₁					C	C ₀
			d	D		B	B ₁	~ r _{min}	C	C ₀
	mm	mm	mm	mm	Inch	N	N	1/Min	1/Min	1/Min
683	3	7	2	3	0,10	310	111	75000	6300	-
693	3	8	3	4	0,15	560	179	67000	6000	-
603	3	9	3	5	0,15	570	187	67000	56000	-
623	3	10	4	4	0,15	630	218	6000	50000	-
633	3	13	5	5	0,30	1300	485	5000	42000	-
MR63	3	6	2	2.5	0,08	206	73	8000	71000	-
MR83	3	8	2,5	-	0,15	395	141	67000	60000	-
MR93	3	9	2,5	4	0,15	634	219	67000	56000	-
684	4	9	2,5	4	0,10	640	225	63000	53000	-
694	4	11	4	4	0,15	960	345	56000	48000	-
604	4	12	4	4	0,20	960	345	54000	46000	-
624	4	13	5	5	0,20	1300	485	48000	40000	-
634	4	16	5	5	0,30	1730	670	43000	36000	33000
MR74	4	7	2	2.5	0,08	311	115	67000	60000	-
MR84	4	8	2	3	0,10	391	140	67000	56000	-
MR104	4	10	3	4	0,15	708	266	60000	50000	-
685	5	11	3	5	0,15	715	218	53000	45000	-
695	5	13	4	4	0,20	1080	430	50000	43000	38000
605	5	14	5	5	0,20	1330	505	50000	40000	-
625	5	16	5	5	0,30	1730	670	43000	36000	33000
635	5	19	6	6	0,30	2340	885	40000	32000	28000
MR85	5	8	2	2.5	0,08	218	90	63000	60000	-
MR95	5	9	2.5	3	0,10	495	207	60000	50000	-
MR105	5	10	3	4	0,10	714	276	60000	50000	-
MR115	5	11	-	4	0,15	714	276	56000	48000	-

深沟球轴承(<10mm)

Deep Groove Ball Bearings(10mm)

轴承型号 Bearing No.	内径 Bore Diameter	孔径 Outer Diameter	宽度 Width		倒角 Radius	额定载负 Basic load Ratings		极限转速 Limiting Speed		
			开式 open	闭式 capped		动负荷 dynamic	静负荷 static	油Oil	脂Grease	
			B	B ₁					C	C ₀
			d	D		B	B ₁	~ r _{min}	C	C ₀
	mm	mm	mm	mm	Inch	N	N	1/Min	1/Min	1/Min
686	6	13	3,5	5	0,15	1080	440	50000	40000	35000
696	6	15	5	5	0,20	1730	670	45000	40000	35000
606	6	17	6	6	0,30	2260	835	45000	38000	31000
626	6	19	6	6	0,30	2340	885	40000	32000	28000
636	6	22	7	7	0,30	3300	1370	37000	31000	-
MR106	6	10	2.5	3	0,10	457	194	53000	45000	-
MR126	6	12	3	4	0,15	831	363	50000	43000	-
687	7	14	3,5	5	0,15	1170	510	45000	40000	31000
697	7	17	5	5	0,30	1610	715	43000	36000	28000
607	7	19	6	6	0,30	2340	885	43000	36000	25000
627	7	22	7	7	0,30	3300	1370	36000	30000	23000
637	7	26	9	9	0,30	4050	1620	34000	29000	-
MR117	7	11	2,5	3	0,10	449	119	50000	43000	-
MR137	7	13	3	4	0,15	880	414	48000	40000	-
688	8	16	4	5	0,20	1260	590	43000	36000	27000
698	8	19	6	6	0,30	2240	910	43000	36000	26000
608	8	22	7	7	0,30	3300	1370	40000	34000	23000
628	8	24	8	8	0,30	3350	1430	34000	28000	21000
638	8	28	9	9	0,30	4550	1970	33000	28000	-
MR128	8	12	2,5	3,5	0,10	506	249	48000	40000	-
MR148	8	14	3,5	4,00	0,15	819	386	45000	38000	-
689	9	17	4	5	0,20	1330	665	43000	36000	24000
699	9	20	6	6	0,30	1720	840	40000	34000	21000
609	9	24	7	7	0,30	3350	1430	38000	32000	21000
629	9	26	8	8	0,60	4550	1970	34000	28000	19000
639	9	30	10	10	0,60	5100	2390	31000	26000	-

深沟球轴承(≤30mm)

Deep Groove Ball Bearings(30mm)

轴承型号 Bearing No.	内径 Bore Diameter r	孔径 Outer Diameter D	宽度 Width B	倒角 Radius ~r _{min}	额定载负 Basic load Ratings		极限转速 Limiting Speed		
					动负荷 dynamic C	静负荷 static C ₀	油Oil	脂Grease	
					N	N	1/Min	1/Min	1/Min
6800	10	19	5	0,30	1720	840	45000	38000	24000
6900	10	22	6	0,30	2700	1270	38000	32000	23000
6000	10	26	8	0,30	4550	1970	36000	30000	21000
6200	10	30	9	0,60	5100	2390	30000	25000	18000
6300	10	35	11	0,60	8100	3450	27000	23000	17000
6801	12	21	5	0,30	1920	1040	40000	33000	23000
6901	12	24	6	0,30	2890	1460	36000	30000	19000
6001		28	8	0,30	5100	2370	32000	28000	16000
6201	12	32	10	0,60	6800	3050	28000	22000	16000
6301	12	37	12	1,00	9700	4200	24000	20000	16000
6802	15	24	5	0,30	2080	1260	33000	28000	17000
6902	15	28	7	0,30	4350	2260	30000	26000	16000
6002	15	32	9	0,30	5600	2840	28000	23000	15000
6202	15	35	11	0,60	7650	3750	24000	20000	14000
6302	15	42	13	1,00	11400	5450	20000	17000	12000
6803	17	26	5	0,30	2630	1570	30000	26000	15000
6903	17	30	7	0,30	4600	2550	28000	24000	14000
6003	17	35	10	0,30	6000	3250	24000	21000	13000
6203	17	40	12	0,60	9550	4800	22000	17000	12000
6303	17	47	14	1,00	13300	6650	19000	16000	11000
6804	20	32	7	0,30	4000	2470	25000	21000	12000
6904	20	37	9	0,30	6400	3700	23000	19000	12000
6004	20	42	12	0,60	9400	5000	20000	18000	11000
6204	20	47	14	1,00	12800	6600	18000	15000	11000
6304	20	52	15	1,10	15900	7900	17000	14000	11000
6805	25	37	7	0,3	4500	3150	21000	18000	9800
6905	25	42	9	0,3	7050	4450	19000	16000	9700
6005	25	47	12	0,6	10100	5850	18000	15000	9500
6205	25	52	15	1,0	14000	7850	15000	13000	9000
6305	25	62	17	1,1	20600	11200	14000	11000	8000
6806	30	42	7	0,3	4700	3650	18000	15000	8300
6906	30	47	9	0,3	7250	5000	17000	14000	8200
6006	30	55	13	1,1	13200	8300	15000	13000	8000
6206	30	62	16	1,0	19500	11300	13000	10000	7500
6306	30	72	19	1,1	26700	15000	12000	10000	6700

英制系列轴承

Inch series ball bearings

轴承型号 Bearing No.	内径 Bore Diameter		孔径 Outer Diameter		宽度 Width				倒角 Radius ~r _{min}	额定载负 Basic load Ratings		极限转速 Limiting Speed		
					开式 open		闭式 capped			动负荷 dynamic C	静负荷 static C ₀	油Oil	脂Grease	
	mm	Inch	mm	Inch	mm	Inch	mm	Inch		N	N	1/Min	1/Min	1/Min
R144	3,175	0,1250	6,35	0,2500	2,38	0,0937	2,779	0,1094	0,004	283	95	8000	67000	67000
R2-5	3,175	0,1250	7,938	0,3125	2,779	0,1094	3,571	0,1406	0,004	560	179	67000	60000	60000
R2-6	3,175	0,1250	9,525	0,3750	2,779	0,1094	3,571	0,1406	0,006	640	225	63000	53000	53000
R2	3,175	0,1250	9,525	0,3750	3,967	0,1562	3,967	0,1562	0,012	630	218	67000	56000	56000
R2A	3,175	0,1250	12,7	0,5000	4,366	0,1719	4,336	0,1719	0,012	640	225	63000	53000	53000
R155	3,967	0,1562	7,938	0,3125	2,779	0,1094	3,175	0,1250	0,004	360	149	63000	53000	53000
R156	4,762	0,1875	7,938	0,3125	2,778	0,1094	3,175	0,1250	0,004	360	149	63000	53000	53000
R166	4,762	0,1875	9,525	0,3750	3,175	0,1250	3,175	0,1250	0,004	710	270	60000	50000	50000
R3	4,762	0,1875	12,7	0,5000	3,967	0,1562	4,978	0,1960	0,012	1300	485	53000	43000	43000
R3A	4,762	0,1875	15,875	0,6250	4,978	0,1960	4,978	0,1960	0,012	1300	485	53000	43000	43000
R168	6,35	0,2500	0,3750	0,3750	3,175	0,1250	3,175	0,1250	0,004	375	173	56000	48000	48000
R188	6,35	0,2501	0,5000	0,5000	3,175	0,1250	4,762	0,1875	0,006	1080	440	50000	40000	40000
R4	6,35	0,2502	0,6250	0,6250	4,978	0,1960	4,978	0,1960	0,012	1480	615	45000	38000	38000
R4A	6,35	0,2503	0,7500	0,7500	5,558	0,2188	7,142	0,2812	0,016	2340	885	43000	36000	36000
R6	9,525	0,3750	0,8750	0,8750	5,558	0,2188	7,142	0,2812	0,016	3350	1410	40000	34000	32000
R8	12,7	0,5000	11,250	11,250	6,35	0,2500	7,938	0,3125	0,016	5100	2400	32000	28000	18000
R10	15,875	0,6250	13,750	13,750	7,144	0,2812	8,733	0,3438	0,031	5980	3300	26000	22000	13000
R12	19,05	0,7500	16,250	16,250	7,938	0,3125	11,112	0,4375	0,031	7900	4500	20000	18000	11000