

B-STAR
Baostar Bearings

宁波宝思达轴承有限公司
Ningbo Baostar Bearings Co.,Ltd.

地址:宁波市镇海区蛟川街道俞范东路697号
电话:86-574-86360573 邮编:315200
传真:86-574-86360573
邮件(E-mail):sales@bsbearings.com
网址:www.bsbearings.com

B-STAR
Baostar Bearings
宁波宝思达轴承有限公司



B-STAR
Baostar Bearings
宁波宝思达轴承有限公司

CORPORATE CULTURE

企业文化

宝思达轴承 - 打造精品，创民族品牌

Baostar bearings - Create fine products and create national brands

核心价值观

合力同行、创新共赢

Joint efforts, innovation and win-win

经营理念

以客户需求为中心，打造精品轴承，树立宝思达品牌。

Focusing on customers' needs, we should create high-quality bearings and build up Baosida brand.

经营宗旨

以结果为导向，打造一流团队，开拓创新，携手共赢。

Results oriented, create a first-class team, innovation and win-win cooperation.



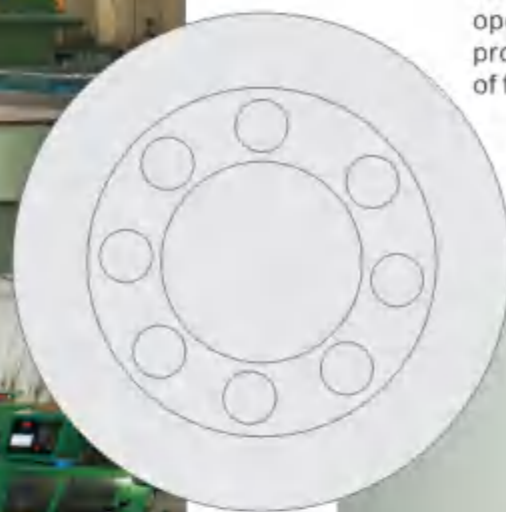
关于宝思达

宁波宝思达轴承有限公司位于浙江省宁波市镇海区，是一家专业生产微型静音滚珠轴承及法兰薄壁轴承的生产制造企业，公司从原材料钢管到成品轴承层层把关品质和工艺，经历50多道工序，对产品噪音和尺寸精度严格控制，高品质的产品获得了国内外客户的一致好评，产品主要应用于各类微特电机，打印机复印机，银行金融设备（ATM机，点钞机），无人机，照相稳定器等，是多家世界知名企业的合作轴承供应商。

about BAOSTAR

Ningbo Baostar Bearing Co., Ltd. which is a specialized miniature ball bearing and flange bearing manufacturer located in Zhenhai, Ningbo, Zhejiang province. From the raw material-steel tube to final bearing product, the company controls quality standard tightly in every process and aspect. Material, noise and dimensional tolerance are always carefully monitored and controlled. High quality products have achieved rewards from national and overseas customers. The products are mainly used in electric motors, electric tools, printers, copiers, ATM machines, cash counters, drone, gimbal steady camera etc. Already cooperated with worldwide famous enterprises for years.



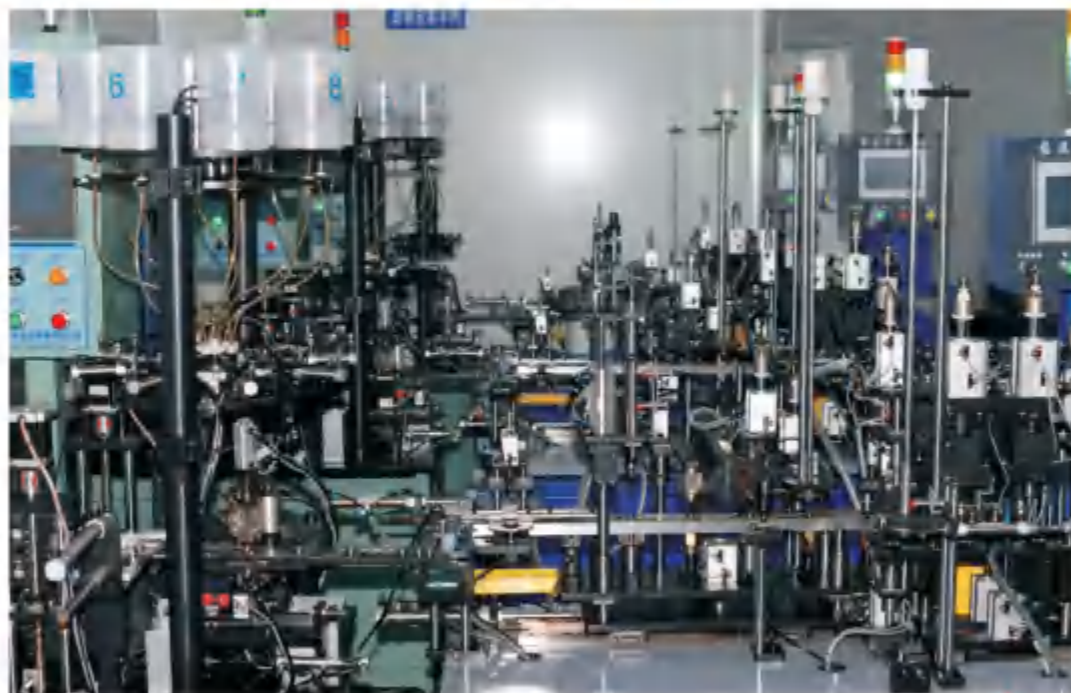


严格,于细微之处见真品

宝思达轴承建立了完善的质量管理体系,为产品质量提供了强有力的保证,以客户需求为导向,我们每年生产数亿轴承,在整个生产过程中严格按照质量体系的规定和程序进行操作,在每道工序严格把关,细微之处见精品的意识使每一个轴承的品质得到客户的高度认可。

Baostar Bearings has established a perfect quality management system, which provides a strong guarantee for product quality. With customer demand as the guide, we produce hundreds of millions of bearings every year. During the whole production process, we strictly operate in accordance with the quality system and procedures. We strictly control each process. The quality of each bearing is highly valued by customers because of the awareness of fine products.





不断引进国内外先进生产设备，
不断改善加工工艺、降低生产成本，
不断提高员工的自身素质，使我们在激烈的市场竞争中走得更快、更高、更远。

我们牢记：持续改进是我们的使命。

We would like to make ourselves more competitive by introducing new advanced equipment, improving production process & worker's skills. Continuous improvement is our mission.

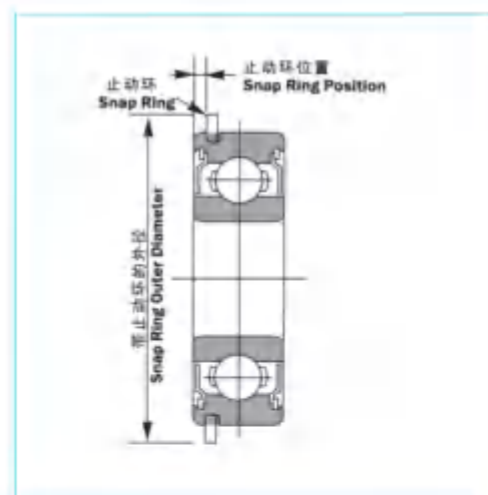
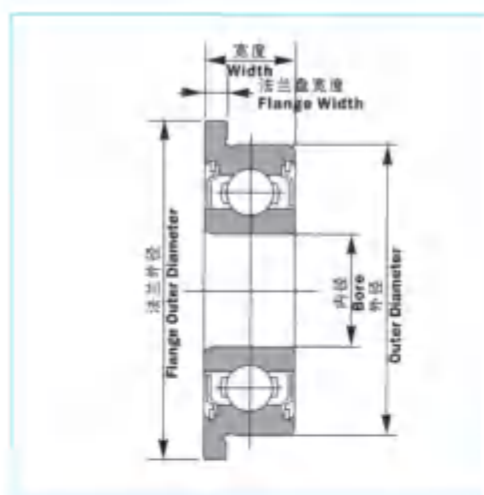
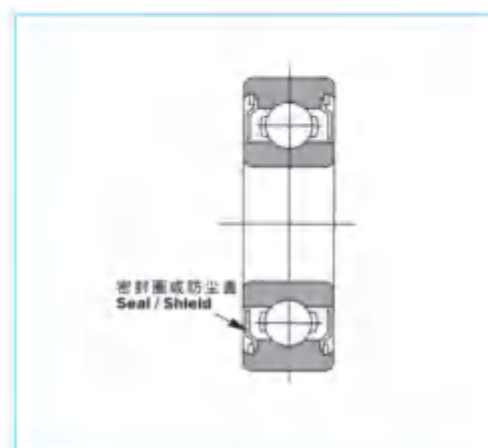
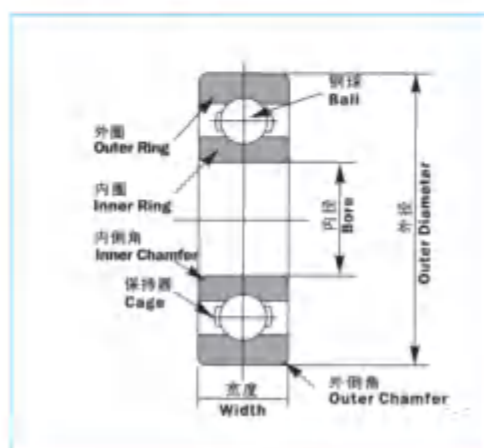




■ 组件和材料 Components and Material

单列深沟球轴承的零件通常包括内圈、外圈、钢球、保持器、防尘盖（密封圈）和止动环。应客户的具体要求，轴承的组件有所不同。如下图所示

single-row deep groove ball bearing is made up of inner ring, outer ring, ball, cage, shield (seal) and snap ring. As specific demand from customers, the components are more or less. As indicated in the diagram below.



■ 内圈和外圈 Inner Ring & Outer Ring

轴承内圈和外圈材料通常采用高碳铬轴承或同等材料，高碳铬轴承钢的化学成分如下表所示，如客户要求轴承使用于特殊环境，可采用不锈钢等材料。

GCr15 or equivalent steel is the material for the inner ring and outer ring. The chemical composition of GCr15 is as indicated in the chart below. if required for specific application, stainless steel is available for rings.

国别 Country	钢号 Steel Number	化学成分 Chemical composition%							
		C	Si	Mn	P	S	Cr	Cu	Ni
China	GB GCr15								
ISO	683/xv11	0.95	0.15	0.25	<	<	1.40	<	<
Japan	JIS SUJ2	~	~	~	0.025	0.025	~	0.25	0.30
USA	AISI 52100	1.05	0.35	0.45			1.65		
Germany	DIN100Cr6								

■ 滚动体 Rolling Ball

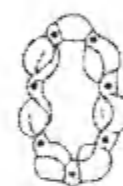
轴承的滚动体的材料如同轴承的内外圈一样通常采用高碳铬轴承钢：如客户要求，可采用陶瓷球或其它材料的滚珠。

The material of rolling ball is usually GCr15, same as the material of the inner ring and outer ring. Required by customers, rolling ball may be made of ceramic or other materials.

■ 保持器 Cage

轴承的保持器有如下表所列的四种类型，针对轴承的不同用途而采用不同的类型。所用的材料取决于所采用的保持器的类型。

There are four types available for the cage of bearing. each type is applied for specific purpose. The material of each type is kind of difference.



铆钉保持架
Rivet-type cage

由冷轧碳钢做成的，用于中小型深沟球轴承。
Made from cold rolled carbon steel, for small, medium deep groove ball bearing



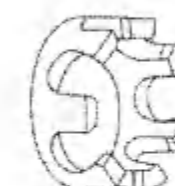
爪式保持架
Tongue-type cage

由高精度带钢做成的，用于微型深沟球轴承。
Made from high precision strip steel, for miniature ball bearings



冠式保持架
Crown-type Cage

由硬化高精度带钢做成的，用于特小型深沟球轴承。
Made from hardened high precision strip steel, for extra-small bearings.



尼龙保持架
Nylon-type Cage

由尼龙或酚醛树脂做成的，用于超低噪音轴承。
Made from Nylon or phenolic resins, for lower noise



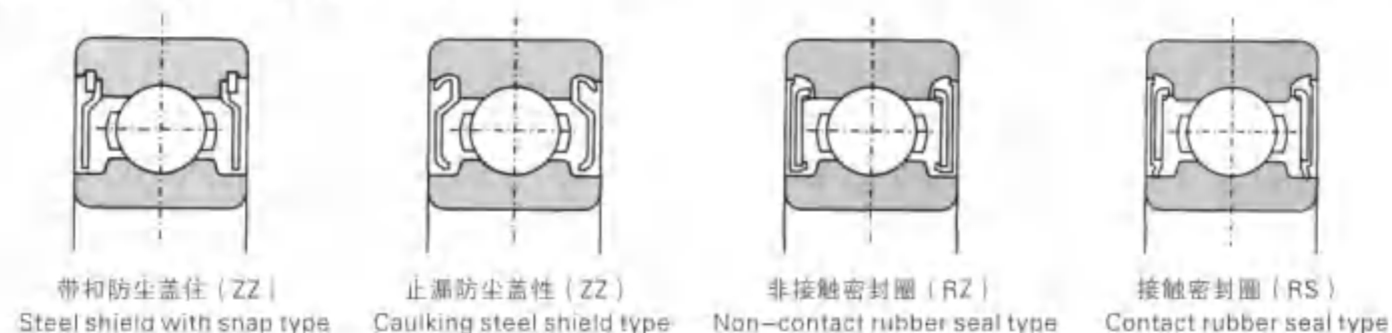
■ 密封 Shields and Seals

轴承的密封有如下表所列的四种类型可用，针对轴承的不同用途而采用不同的类型的密封方式。

There are four types available for seal or shield of bearing, each type is applied for specific purpose.

轴承的防尘盖以碳钢为标准材料，有必要时也可以选用SUS-304不锈钢。轴承采用不同种类的密封圈材料来实现对高温操作的要求和和润滑脂的兼容。丁睛橡胶是我们使用的标准材料，而在高温作业下则经常采用碳氟化合物，硅树脂，聚四氟乙烯材料的密封圈。

Bearing's shields adopt carbon steel as standard material and the option of SUS-304 stainless steel is available when needed. bearing uses a variety of sealing materials to meet the requirements of high temperature operation and compatibility with greases. Buna-N rubber is the standard material used, while fluouocarbon, silicone, and teflon seals are commonly specified for high temperatures.



带扣防尘盖住 (ZZ) | 止漏防尘盖性 (ZZ) | 非接触密封圈 (RZ) | 接触密封圈 (RS)

Steel shield with snap type | Caulking steel shield type | Non-contact rubber seal type | Contact rubber seal type



■ 游隙选择 SELECTION OF BEARING CLEARANCE

轴承的径向游隙按ISO5753标准分为五组。无预负荷的径向游隙值见表，产品一般按基本组游隙制造装配，用户所需的径向游隙，除基本组外，应在合同中注明要求。

The radial clearance of bearing might be divided into five groups according to ISO 5753. The radial clearance without pre-load is shown on the table. Normally, the products are assembled as C0 clearance. Please note the special requirement in your order sheet if you prefer another clearance.

● 深沟球轴承的径向游隙 Radial Clearance Standard Data

轴承内径 Bore diameter d(mm)		第2组(C2) Group 2 (um)		基本组(C0) Standard group (um)		第3组(C3) Group 3 (um)		第4组(C4) Group 4 (um)		第5组(C5) Group 5 (um)	
超过 Over	到 TO	最小 Min.	最大 Max.	最小 Min.	最大 Max.	最小 Min.	最大 Max.	最小 Min.	最大 Max.	最小 Min.	最大 Max.
2.5	6	0	7	2	13	8	23	14	29	20	37
6	10	0	7	2	13	8	23	14	29	20	37
10	18	0	9	3	18	11	25	18	33	25	45
18	24	0	10	5	20	13	28	20	36	28	48
24	30	1	11	5	20	13	28	23	41	30	53
30	40	1	11	6	20	15	33	28	46	40	64

使用场合 Operating Condition

游隙 Clearance

内、外圈间隙配合；轴向承受轻载；不要求承受轴向载荷；要求低振动、低噪音场、低转速。
Clearance fit for inner and outer ring; Low axial load; No axial carrying requirement; Lower vibration and noise; Low speeds.

0-5, 3-8, C2

低摩擦力矩；轴向承受标准载荷；要求承受中等轴向载荷；内圈过渡配合，外圈间隙配合；中速或低速运转。
Lower frictional torque. Standard axial load. Average axial load carrying requirements. Slight interference fit for inner ring. Clearance fit for outer ring. Average/low speeds.

5-10, 6-12, C0

要求极低的摩擦力矩；轴向承受重载；要求承受高轴向载荷；过盈配合以承受重载或冲击载荷；自内圈到外圈间温度梯度；轴倾斜度大。

extremely low frictional torque; High axial load; High axial load carrying requirements; Heavy interference fit to support high loads or shock loads; Large temperature gradient from inner ring to outer ring; High degree of shaft deflection.

13-20, 20-28, C3, C4, C5



■ 振动和噪音 Vibration&Noise



轴承的振动和噪音由使用加速度进行测试的仪器 (S0910) 可分为Z、Z1、Z2、Z3、Z4组, 使用速度测试的仪器 (BVT-1) 可分为V、V1、V2、V3和V4组。具体数据如下表所示。

The vibration and noise of bearing are classified dB as Z、Z1、Z2、Z3、Z4. It is measured by the instrument of S0910. For special requirement, it is measured by BVT-1 and classified as V,V1,V2,V3 and V4. The data are shown as below.

■ 轴承振动加速度级限值 Specification Of Vibration(acceleration)for Deep Groove Ball Bearing

内径 ID mm	0直径系列 Diameter Series(0)					2直径系列 Diameter Series(2)					3直径系列 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
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

■ 轴承振动 (速度) 限值 Specification Of Vibration (velocity) for Deep Groove Ball Bearing



内径 ID mm	V			V1			V2			V3			V4		
	低频 Low Band	中频 Medium Band	高频 High Band	低频 Low Band	中频 Medium Band	高频 High Band	低频 Low Band	中频 Medium Band	高频 High Band	低频 Low Band	中频 Medium Band	高频 High Band	低频 Low Band	中频 Medium Band	高频 High Band
	3	80	44	44	60	35	32	48	26	22	22	16	15	28	10
4	80	44	44	60	35	32	48	26	22	22	16	15	28	10	10
5	110	72	60	74	48	40	58	36	30	30	21	18	32	11	11
6	110	72	60	74	48	40	58	36	30	30	21	18	32	11	11
7	130	96	80	92	66	54	72	48	40	40	28	24	38	12	12
8	130	96	80	92	66	54	72	48	40	40	28	24	38	12	12
9	130	96	80	92	66	54	72	48	40	40	28	24	38	12	12
10	160	120	100	120	80	70	90	60	50	50	35	30	45	14	15
12	160	120	100	120	80	70	90	60	50	50	35	30	45	14	15
15	210	150	120	150	100	85	110	78	60	60	46	35	52	18	18
17	210	150	120	150	100	85	110	78	60	60	46	35	52	25	25
20	260	190	150	180	125	100	130	100	75	75	60	45	60	25	25
22	260	190	150	180	125	100	130	100	75	75	60	45	60	30	32
25	260	190	150	180	125	100	130	100	75	75	60	45	60	30	32
28	260	190	150	180	125	100	130	100	75	75	60	45	60	35	40



轴承的精度，是指尺寸精度和旋转精度。国标轴承精度等级分为0级、6级、5级、4级、2级，等效采用ISO标准。不同标准精度等级对比如下：

According to Chinese national standard, the bearing accuracy is divided into five classes: Class 0, Class 6, Class 5, Class 4 and Class 2. All of them are equivalent to ISO standard. The comparison of different accuracy classes are shown as follows:

● 精度等级对照表 Comparison Table of Accuracy Grade

标准代号	精度等级 Accuracy Grade				
GB	0	6	5	4	2
ISO	0	6	5	4	2
ANSI	ABEC1	ABEC3	ABEC5	ABEC7	ABEC9
SKF	P0	P6	P5	P4	P2
DIN	P0	P6	P5	P4	P2
JIS	0	6	5	4	2

■ 向心轴承公差 (外圈) Allowable Tolerance of Radial Bearing (outer ring)

精度等级 Accuracy class	d mm From To		Δdmp		Vdsp 直径系列 Diameter Series				Vdmp	Kea	Sea	Sd	ΔCs		Vcs max
			上偏差 Upper deviation	下偏差 Lower deviation	开式轴承 open bearing		闭式轴承 capped bearing						上偏差 Upper deviation	下偏差 Lower deviation	
					9	0.1	2.3.4	2.3.4							
P0	2.5	6	0	-8	10	8	6	10	6	15	/	/	0	-40	12
	6	18	0	-8	10	8	6	10	6	15	/	/	0	-120	15
	18	30	0	-9	12	9	7	12	7	15	/	/	0	-120	20
	30	50	0	-11	14	11	8	16	8	20	/	/	0	-120	20
P6	2.5	6	0	-7	9	7	5	9	5	8	/	/	0	-40	12
	6	18	0	-7	9	7	5	9	5	8	/	/	0	-120	15
	18	30	0	-8	10	8	6	10	6	9	/	/	0	-120	20
	30	50	0	-9	11	9	7	13	7	10	/	/	0	-120	20
P5	2.5	6	0	-5	5	4	4	/	3	5	8	8	0	-40	5
	6	18	0	-5	5	4	4	/	3	5	8	8	0	-40	5
	18	30	0	-6	6	5	5	/	3	6	8	8	0	-80	5
	30	50	0	-7	7	5	5	/	4	7	8	8	0	-120	5
P4	2.5	6	0	-4	4	3	3	3	2	3	5	4	0	-40	2.5
	6	18	0	-4	4	3	3	3	2	3	5	4	0	-40	2.5
	18	30	0	-5	5	4	4	4	2.5	4	5	4	0	-80	2.5
	30	50	0	-6	6	5	5	5	3	5	5	4	0	-120	2.5

■ 向心轴承公差 (内圈) Allowable Tolerance of Radial Bearing (Inner ring)



精度等级 Accuracy class	d mm From To		Δdmp		Vdsp 直径系列 Diameter Series			Vdmp	Kia	Sd	Sia	ΔBs		Vbs max
			上偏差 Upper deviation	下偏差 Lower deviation	9	0.1	2.3.4					上偏差 Upper deviation	下偏差 Lower deviation	
P0	0.6	2.5	0	-8	10	8	6	6	10	/	20	0	-40	12
	2.5	10	0	-8	10	8	6	6	10	/	20	0	-120	15
	10	18	0	-8	10	8	6	6	10	/	20	0	-120	20
	18	30	0	-10	13	10	8	8	13	/	24	0	-120	20
P6	30	50	0	-12	15	12	9	9	15	/	24	0	-120	20
	0.6	2.5	0	-7	9	7	5	5	5	/	10	0	-40	12
	2.5	10	0	-7	9	7	5	5	6	/	10	0	-120	15
	10	18	0	-7	9	7	5	5	7	/	12	0	-120	20
P5	18	30	0	-8	10	8	6	6	8	/	12	0	-120	20
	30	50	0	-10	13	10	8	8	10	/	12	0	-120	20
	0.6	2.5	0	-5	5	4	4	3	4	7	7	0	-40	5
	2.5	10	0	-5	5	4	4	3	4	7	7	0	-40	5
P4	10	18	0	-5	5	4	4	3	4	7	7	0	-80	5
	18	30	0	-6	6	5	5	3	4	8	8	0	-120	5
	30	50	0	-8	8	6	6	4	5	8	8	0	-120	5
	0.6	2.5	0	-4	4	3	3	2	2.5	3	3	0	-40	2.5
P4	2.5	10	0	-4	4	3	3	2	2.5	3	3	0	-40	2.5
	10	18	0	-4	4	3	3	2	2.5	3	3	0	-80	2.5
	18	30	0	-5	5	4	4	2.5	3	4	4	0	-120	2.5
	30	50	0	-6	6	5	5	3	4	4	4	0	-120	3



常用润滑脂的明细表 A DETAIL LIST OF THE COMMONLY-USED LUBRICATING GREASE

制造厂 Manufacturer	牌号 Brand	增稠剂 Viscosity	基油 Base oil	使用温度范围 Operating Temperature range °C	选用原则 Selection Criteria	NMB 代码 Code
Kyodo Yushi	Multemp PS-2	锂基(Lithium)	双酯(Diester)	-50~+130	低温脂 low-temperature grease	LY72
	Multemp SB-M	双脲基(Diurine)	合成油 (Synthetic oil)	-40~+200	高温高速脂 high temperature high speed grease	LY551
	Multemp SRL	锂基(Lithium)	酯(Ester)	-40~+150	低噪合脂 low noise grease	LY121
Exxon	ET-K	双脲基(Diurea)	合成油 (Synthetic oil)	-40~+200	高温高速交流发电机脂 high temperature high speed alternators grease	/
	RAREMAX SUPERN	锂基(Lithium)	双酯(Diester)	-40~+180	常温脂 normal-temperature grease	/
	Polyex EM	尿素(Urea)	合成油 (Synthetic oil)	-40~+200	高温长寿命脂 high temperature longevity grease	/
Mobil	Beacon325	双脲基(Diurine)	矿物(Mineral)	-40~+180	高温低噪音 high temperature low noise	/
	Andak B	锂基(Lithium)	双酯(Diester)	-60~+120	低温脂 low-temperature grease	LG20
Castrol	Mobil 28	钠基(Natrium)	矿物(Mineral)	-40~+120	常温脂 normal-temperature grease	LG38
	Mobil 22	膨润土(Bentonite)	合成磺酸 (Synthetic Sulfonate)	-60~+180	低温脂 high-low temperature grease	LY48
Shell	chevron SRI-2	锂基(Lithium)	双酯矿物 (Diester Mineral)	-50~+140	低温脂 low-temperature grease	/
	Alvania RA	尿素(Urea)	矿物(Mineral)	-30~+150	高温脂 high temperature grease	LY75
	Alvania EP2	锂基(Lithium)	矿物(Mineral)	-25~+120	常温脂 normal-temperature grease	/
Klüber	Alvasia RLQ2	锂基(Lithium)	矿物(Mineral)	-10~+100	常温脂 normal-temperature grease	/
	Dolum R	锂基(Lithium)	矿物(Mineral)	-50~+150	低噪音高速脂 low noise high speed grease	/
	Asonic GLY32	锂基(Lithium)	矿物(Mineral)	-20~+140	常温脂 normal-temperature grease	/
Du Pont	Asonic GHY72	锂基(Lithium)	合成油 (Synthetic oil)	-50~+140	低温脂 low-temperature grease	/
	Asonic HQ72-102	Polghamstoff	酯-矿物 (Ester Mineral)	-40~+180	高温低噪音 high temperature low noise	/
	Staburags NBU12	尿素(Urea)	酯(Ester)	-40~+180	高温和低噪音脂 high temperature and low noise grease	/
Du Pont	Looflex NBU15	钡基(Barium)	矿物(Mineral)	-35~+150	常温脂 normal-temperature grease	/
	Patamo GHY133	锂基(Lithium)	双酯矿物 (Diester Mineral)	-30~+130	常温脂 normal-temperature grease	/
	Patamo GHY133	尿素(Urea)	合成矿物油 (Synthetic Mineral oil)	-25~+150	常温脂 normal-temperature grease	/
Du Pont	Patamo GHY443	尿素(Urea)	酯(Ester)	-20~+180	高温长寿命脂 high temperature longevity grease	/
	Barnerta L55/2	聚四氟乙烯(PTFE)	氟化油(FLUORINATED)	-35~+260	高温长寿命脂 high temperature longevity grease	/
	Krytox GPL226	聚四氟乙烯(PTFE)	氟化油(FLUORINATED)	-35~+260	高温抗蚀脂 high temperature corrosion resisting grease	/
Du Pont	Krytox GPL227	聚四氟乙烯(PTFE)	氟化油(FLUORINATED)	-30~+288	高温抗蚀脂 high temperature corrosion resisting grease	/

轴承作为高精度组件，对生产条件有着严格的要求，我公司以自动化的生产设备，严格的品质管理，大批量生产值得客户信赖的产品，获得了政府及生产业界的一致推崇。
Bearings are high precision unit. We have full automatic lines and strict management in large scales, which are highly recommended by both government and manufacturing industry





METRIC SERIES

Bore Diameter d	Outer Diameter D		Radius rs(min)		Open Bearings		Bearings With Shields		Basic Dynamic Load Rating (kgf) Cr	Basic Dynamic Load Rating (kgf) Cor	Max.Speed		Ball Complement		Weight (Ref.)					
					Bearing Reference						Width B1	Grease	Oil	Qty.	Size	Open	ZZ			
					Width B	Open	Double Shielded	Width B												
mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	X1000rpm	pcs	mm	inch	g						
3	0.1181	6	0.2362	0.10	0.004	2	0.0787	MR63	MR63ZZ	2.5	0.0984	21	7.5	71	80	8	0.8	0.0315	0.20	0.28
		7	0.2756	0.10	0.004	2	0.0787	683	683ZZ	3	0.1181	32	11	63	75	8	1	0.0394	0.32	0.45
		8	0.3150	0.15	0.006	2.5	0.0984	MR83	MR83ZZ	3	0.1181	40	14	60	67	7	1.2	0.0472	0.51	0.67
		8	0.3150	0.15	0.006	3	0.1181	693	693ZZ	4	0.1575	57	18	60	67	6	1.588	0.0625	0.60	0.80
		9	0.3543	0.20	0.008	2.5	0.0984	MR93	MR93ZZ	4	0.1575	58	19	56	67	6	1.588	0.0625	0.75	1.15
		9	0.3543	0.15	0.006	3	0.1181	603	603ZZ	5	0.1969	58	19	56	67	6	1.588	0.0625	0.84	1.43
		10	0.3937	0.15	0.006	4	0.1575	623	623ZZ	4	0.1575	64	22	50	60	7	1.588	0.0625	1.45	1.65
13	0.5118	0.20	0.008	5	0.1969	633	633ZZ	5	0.1969	133	50	40	48	7	2.381	0.0937	3.27	3.43		
4	0.1575	7	0.2756	0.10	0.004	2	0.0787	MR74	-	-	-	32	12	60	67	8	1	0.0394	0.23	-
		7	0.2756	0.10	0.004	-	-	-	MR74ZZS	2.5	0.0984	26	11	60	67	11	0.8	0.0315	-	0.33
		8	0.3150	0.15	0.006	2	0.0787	MR84	MR84ZZ	3	0.1181	40	14	56	67	7	1.2	0.0472	0.39	0.56
		9	0.3543	0.10	0.004	2.5	0.0984	684	684ZZ	4	0.1575	65	23	53	63	7	1.588	0.0625	0.65	1.00
		10	0.3937	0.20	0.008	3	0.1181	MR104	MR104ZZ	4	0.1575	60	21	48	56	6	1.588	0.0625	0.95	1.33
		11	0.4331	0.15	0.006	4	0.1575	694	694ZZ	4	0.1575	98	36	48	56	7	2	0.0787	1.69	1.75
		12	0.4724	0.20	0.008	4	0.1575	604	604ZZ	4	0.1575	98	36	48	56	7	2	0.0787	2.19	2.34
13	0.5118	0.20	0.008	5	0.1969	624	624ZZ	5	0.1969	133	50	40	48	7	2.381	0.0937	3.10	3.20		
5	0.1969	16	0.6299	0.30	0.012	5	0.1969	634	634ZZ	5	0.1969	137	53	36	43	7	2.381	0.0937	5.24	5.44
		8	0.3150	0.10	0.004	2	0.0787	MR85	-	-	-	31	12	53	63	8	1	0.0394	0.25	--
		8	0.3150	0.10	0.004	-	-	-	MR85ZZS	2.5	0.0984	22	9	53	63	9	0.8	0.0315	--	0.34
		9	0.3543	0.15	0.006	2.5	0.0984	MR95	MR95ZZS	3	0.1181	44	17	50	60	8	1.2	0.0472	0.54	0.58
		10	0.3937	0.15	0.006	3	0.1181	MR105	MR105ZZS	4	0.1575	44	17	50	60	8	1.2	0.0472	0.91	1.26
		11	0.4331	0.15	0.006	-	-	-	MR115ZZS	4	0.1575	73	30	45	53	8	1.588	0.0625	--	0.62
		11	0.4331	0.15	0.006	3	0.1181	685	685ZZ	5	0.1969	73	30	45	53	8	1.588	0.0625	1.16	1.93
		13	0.5118	0.20	0.008	4	0.1575	695	695ZZ	4	0.1575	110	44	43	50	8	2	0.0787	2.39	2.31
		14	0.5512	0.20	0.008	5	0.1969	605	605ZZ	5	0.1969	136	52	40	50	7	2.381	0.0937	3.46	3.75
		16	0.6299	0.30	0.012	5	0.1969	625	625ZZ	5	0.1969	176	69	36	43	7	2.778	0.1094	4.95	5.10
19	7480	0.30	0.012	6	0.2362	635	635ZZ	6	0.2362	238	91	32	40	6	3.5	0.1378	8.50	8.89		





METRIC SERIES

Bore Diameter d	Outer Diameter D	Radius rs(min)		Open Bearings		Bearings With Shields		Bearing Reference		Width B1	Basic Dynamic Load Rating (kgf) Cr	Basic Dynamic Load Rating (kgf) Cor	Max.Speed		Ball Complement		Weight (Ref.)			
				Width B		Open	Double Shielded	Grease	Oil				Qty.	Size		Open	ZZ			
				mm	inch									mm	inch			X1000rpm	pcs	mm
6	0.2362	10	0.8268	0.15	0.006	2.5	0.0984	MR106	MR106ZZS	3	0.1181	51	22	45	53	10	1.2	0.0472	0.55	0.70
				0.20	0.008	3	0.1181	Mr126	Mr126ZZ	4	0.1575	73	30	43	50	8	1.588	0.0625	1.25	1.66
				0.15	0.006	3.5	0.1378	686	686ZZ	5	0.1969	110	45	40	50	8	2	0.0787	1.87	2.68
				0.20	0.008	5	0.1969	696	696ZZ	5	0.1969	137	53	40	45	7	2.381	0.0937	3.85	3.65
				0.30	0.012	6	0.2362	606	606ZZ	6	0.2362	231	86	38	45	6	3.5	0.1378	5.94	6.89
				0.30	0.012	6	0.2362	626	626ZZ	6	0.2362	238	91	32	40	6	3.5	0.1378	8.12	8.65
				0.30	0.012	7	0.2756	636	636ZZ	7	0.2756	340	145	30	36	7	3.969	0.1563	13.9	14.5
7	0.2756	13	0.9055	0.15	0.006	2.5	0.0984	MR117	MR117ZZS	3	0.1181	46	21	43	50	9	1.2	0.0472	0.59	0.71
				0.20	0.008	3	0.1181	MR137	MR137ZZ	4	0.1575	55	28	40	48	12	1.2	0.0472	1.52	2.01
				0.15	0.006	3.5	0.1378	687	687ZZ	5	0.1969	120	52	40	50	9	2	0.0787	2.03	2.95
				0.30	0.012	5	0.1969	697	697ZZ	5	0.1969	164	73	36	43	9	2.381	0.0937	5.26	5.01
				0.30	0.012	6	0.2362	607	607ZZ	6	0.2362	238	91	36	43	6	3.5	0.1378	7.80	8.24
				0.30	0.012	7	0.2362	627	627ZZ	6	0.2362	335	141	30	36	7	3.969	0.1563	12.7	13.1
				0.30	0.012	9	0.3543	637	637ZZ	9	0.3543	466	202	28	34	7	4.762	0.1875	24.2	25.8
8	0.3150	14	0.20	0.15	0.006	2.5	0.0984	MR128	MR128ZZS	3.5	0.1378	55	28	40	48	12	1.2	0.0472	0.70	0.99
				0.20	0.008	3.5	0.1378	MR148	MR148ZZ	4	0.1575	83	39	38	45	10	1.588	0.0625	1.90	2.19
				0.20	0.008	4	0.1575	688	688ZZ	5	0.1969	128	60	36	43	10	2	0.0787	3.11	4.05
				0.30	0.012	6	0.2362	698	698ZZ	6	0.2362	228	94	36	43	7	3.175	0.1250	7.12	7.57
				0.30	0.012	7	0.2756	608	608ZZ	7	0.2756	336	141	34	40	7	3.969	0.1563	11.8	12.9
				0.30	0.012	8	0.3150	628	628ZZ	8	0.3150	340	145	28	34	7	3.969	0.1563	17.1	18.5
				0.30	0.012	9	0.3543	638	638ZZ	9	0.3543	466	202	28	34	7	4.762	0.1875	28.1	30.3
9	0.3543	24	0.30	0.10	0.004	3	0.1181	679	679ZZS	4.5	0.1772	93	47	36	42	12	1.588	0.0625	1.35	1.98
				0.20	0.008	4	0.1575	689	689ZZ	5	0.1969	135	68	36	43	11	2	0.0787	3.41	4.38
				0.35	0.012	6	0.2362	699	699ZZ	6	0.2362	252	110	34	40	8	3.175	0.1250	3.38	8.54
9	0.3543	26	0.30	0.30	0.012	7	0.2756	609	609ZZ	7	0.2756	340	145	32	38	7	3.969	0.1563	14.7	16.0
				0.30	0.012	8	0.3150	629	629ZZ	8	0.3150	466	202	28	34	7	4.762	0.1875	19.0	21.8
				0.60	0.024	10	0.3937	639	639ZZ	10	0.3937	475	212	24	30	7	4.762	0.1875	36.2	37.1





METRIC-6000,6200,6300 SERIES

Bore Diameter		Outer Diameter		Width		Radius		Bearing Reference				Basic Load		Max.Speed		Ball Complement			Weight (Ref.)
d		D		B		rs(min)						Rating		Grease	Oil	Size		Qty.	ZZ
mm	inch	mm	inch	mm	inch	mm	inch	Open	Shield	Seal	Cr	Cor	X1000rpm		mm	inch	pcs		
10	0.3937	26	1.0236	8	0.3150	0.3	0.0118	6000	ZZ	RS	463	200	31	36	4.762	0.1875	7	19	
		30	1.1811	9	0.3543	0.6	0.0236	6200	ZZ	RS	521	245	24	29	4.762	0.1875	8	32	
		35	1.3780	11	0.4331	0.6	0.0236	6300	ZZ	RS	825	351	22	27	7.144	0.2813	6	53	
12	0.4724	28	1.1024	8	0.3150	0.3	0.0118	6001	ZZ	RS	521	244	27	32	4.762	0.1875	8	22	
		32	1.2598	10	0.3937	0.6	0.0236	6201	ZZ	RS	693	313	22	27	5.953	0.2344	7	37	
		37	1.4567	12	0.4724	1.0	0.0394	6301	ZZ	RS	989	429	20	25	7.938	0.3125	6	60	
15	0.5906	32	1.2598	9	0.3543	0.3	0.0118	6002	ZZ	RS	570	290	23	27	4.762	0.1875	9	30	
		35	1.3780	11	0.4331	0.6	0.0236	6202	ZZ	RS	779	383	20	24	5.953	0.2344	8	45	
		42	1.6535	13	0.5118	1.0	0.0394	6302	ZZ	RS	1166	557	17	20	7.938	0.3175	7	82	
17	0.6693	35	1.3780	10	0.3937	0.3	0.0118	6003	ZZ	RS	611	335	21	25	4.762	0.1875	10	39	
		40	1.5748	12	0.4724	0.6	0.0236	6203	ZZ	RS	976	491	17	21	6.747	0.2656	8	65	
		47	1.8504	14	0.5512	1.0	0.0394	6303	ZZ	RS	1387	680	15	18	8.731	0.3437	7	115	
20	0.7874	42	1.6535	12	0.4724	0.6	0.0236	6004	ZZ	RS	956	517	17	21	6.350	0.2500	9	69	
		47	1.8504	14	0.5512	1.0	0.0394	6204	ZZ	RS	1310	684	15	17	7.938	0.3125	8	106	
		52	2.0472	15	0.5906	1.1	0.0433	6304	ZZ	RS	1619	805	14	17	9.525	0.3750	7	144	
25	0.9843	47	1.8504	12	0.4724	0.6	0.0236	6005	ZZ	RS	1026	598	15	18	6.350	0.2500	10	80	
		52	2.0472	15	0.5906	1.0	0.0394	6205	ZZ	RS	1429	804	13	15	7.938	0.3125	8	128	
		62	2.4409	17	0.6693	1.1	0.0433	6305	ZZ	RS	2100	1156	11	13	10.319	0.4063	7	232	
30	1.1811	55	2.1654	13	0.5118	1.0	0.0394	6006	ZZ	RS	1349	843	13	15	7.144	0.2813	11	116	
		62	2.4409	16	0.6299	1.0	0.0394	6206	ZZ	RS	1984	1158	11	13	9.525	0.3750	9	199	
		72	2.8346	19	0.7480	1.1	0.0433	6306	ZZ	RS	2717	1541	9.6	12	11.906	0.4687	8	346	





EXTRA THIN METRIC -6700,6800,6900 SERIES

Bore Diameter d	Outer Diameter D		Width B		Radius rs(min)		Open	Shield	Bearing Reference		N	NR	Basic Load Rating (kgt)		Max.Speed		Ball Complement			Weight (Ref.)
	mm	inch	mm	inch	mm	inch			Cr	Cor			Grease	Oil	Size	Qty.	zz			
10	0.3937	15	0.5906	3	0.1181	0.15	0.0059	6700	-	2RS	-	-	87	44	15	17	1.588	0.0625	11	1.4
		15	0.5906	4	0.1575	0.15	0.0059	-	6700ZZS	2RS	-	-	87	44	15	17	1.588	0.0625	11	1.9
	19	0.7480	5	0.1969	0.3	0.0118	6800	ZZ	2RS	-	-	175	85	37	43	2.381	0.0937	10	5.6	
	19	0.7480	7	0.2756	0.3	0.0118	63800	ZZ	2RS	-	-	175	85	37	43	2.381	0.0937	10	7.4	
	22	0.8661	6	0.2362	0.3	0.0118	6900	ZZ	2RS	N	NR	275	130	34	41	3.175	0.1250	9	10	
12	0.4724	18	0.7087	4	0.1575	0.2	0.0079	6701	ZZS	2RS	-	-	94	54	13	15	1.588	0.0625	13	3.1
		21	0.8268	5	0.1969	0.3	0.0118	6801	ZZ	2RS	N	NR	195	106	33	39	2.381	0.0937	12	6.5
	21	0.8268	7	0.2756	0.3	0.0118	63801	ZZ	2RS	N	NR	195	106	33	39	2.381	0.0937	12	8.5	
	24	0.9449	6	0.2362	0.3	0.0118	6901	ZZ	2RS	N	NR	294	150	31	36	3.175	0.1250	10	12	
15	0.5906	21	0.8268	4	0.1575	0.2	0.0079	6702	ZZS	2RS	-	-	96	59	11	13	1.588	0.0625	14	3.6
		24	0.9449	5	0.1969	0.3	0.0118	6802	ZZ	2RS	N	NR	211	128	28	33	2.381	0.0937	14	7.6
	24	0.9449	7	0.2756	0.3	0.0118	63802	ZZ	2RS	N	NR	211	128	28	33	2.381	0.0937	14	10	
	28	1.1024	7	0.2756	0.3	0.0118	6902	ZZ	2RS	N	NR	441	231	26	30	3.969	0.1563	10	19	
17	0.6693	23	0.9055	4	0.1575	0.2	0.0079	6703	ZZS	2RS	-	-	102	67	9.5	11	1.588	0.0625	16	4.0
		26	1.0236	5	0.1969	0.3	0.0118	6803	ZZ	2RS	N	NR	228	149	26	30	2.381	0.0937	16	8.2
	26	1.0236	7	0.2756	0.3	0.0118	63803	ZZ	2RS	N	NR	228	149	26	30	2.381	0.0937	16	11	
	30	1.1811	7	0.2756	0.3	0.0118	6903	ZZ	2RS	N	NR	468	262	23	28	3.969	0.1563	11	20	
20	0.7874	27	1.0630	4	0.1575	0.2	0.0079	6704	ZZS	2RS	-	-	106	74	8.5	10.0	1.588	0.0625	18	5.9
		32	1.2598	7	0.2756	0.3	0.0118	6804	ZZ	2RS	N	NR	410	251	21.0	25.0	3.500	0.1378	13	18.0
	32	1.2598	10	0.3937	0.3	0.0118	63804	ZZ	2RS	N	NR	410	251	21.0	25.0	3.500	0.1378	13	24.0	
	37	1.4567	9	0.3543	0.3	0.0118	6904	ZZ	2RS	N	NR	651	376	19.0	230	4.762	0.1875	11	40.0	
25	0.9843	32	1.2598	4	0.1575	0.2	0.0079	6705	-	2RS	-	-	111	86	7.0	8.0	1.588	0.0625	21	7.1
		37	1.4567	7	0.2756	0.3	0.0118	6805	ZZ	2RS	N	NR	439	299	18.0	21.0	3.500	0.1378	15	24.0
	37	1.4567	10	0.3937	0.3	0.0118	63805	ZZ	2RS	N	NR	439	299	18.0	21.0	3.500	0.1378	15	32.0	
	42	1.6535	9	0.3543	0.3	0.0118	6905	ZZ	2RS	N	NR	714	463	16.0	19.0	4.762	0.1875	13	47.0	





INCH SERIES

Bore Diameter d	Outer Diameter D		Radius rs(min)		Width B		Open Bearings		Bearings With Shields		Basic Dynamic Load Rating (kgf) Cr	Basic Static Load Rating (kgf) Cor	Max.Speed		Ball Complement		Weight (Ref.)			
							Bearing Reference						Width B1	Grease	Oil	Qty.	Size		Open	ZZ
							Open	Double Shielded	inch	mm							inch	mm		
0.0125	3.175	0.2500	6.350	0.0039	0.1	0.0937	2.380	R144J	R144JZZS	0.1094	2.779	32	11	67	80	8	0.0394	1	0.27	0.32
		0.2500	6.350	0.0039	0.1	0.0937	2.380	R144	R144ZZS	0.1094	2.779	29	10	67	80	7	0.0394	1	0.27	0.40
		0.3125	7.938	0.0039	0.1	0.1094	2.779	R2-5	R2-5ZZ	0.1406	3.571	57	18	60	67	6	0.0625	1.588	0.50	0.74
		0.3750	9.525	0.0059	0.15	0.1094	2.779	R2-6	R2-6ZZ	0.1406	3.571	65	23	53	63	7	0.0625	1.588	0.96	1.23
		0.3750	9.525	0.0018	0.3	0.1562	3.967	R2	R2ZZ	0.1562	3.967	64	22	56	67	7	0.0625	1.588	1.04	1.37
		0.5000	12.700	0.0018	0.3	0.1719	4.366	R2A	R2AZZ	0.1719	4.366	65	23	53	63	7	0.0625	1.588	3.30	3.30
0.1562	3.967	0.3125	7.938	0.0039	0.1	0.1094	2.779	R155	R155ZZS	0.1250	3.175	37	15	53	63	10	0.0394	1	0.51	0.61
0.1875	4.762	0.3125	7.938	0.0039	0.1	0.1094	2.779	R156	R156ZZS	0.1250	3.175	37	15	53	63	10	0.0394	1	0.40	0.45
		0.3750	9.525	0.0039	0.1	0.1250	3.175	R166	R166ZZ	0.1250	3.175	72	28	50	60	8	0.0625	1.588	0.81	0.85
		0.5000	12.700	0.0018	0.3	0.1562	3.967	R3	R3ZZ	0.1960	4.978	133	50	43	53	7	0.0937	2.381	2.21	2.95
		0.6250	15.875	0.0018	0.3	0.1960	4.978	R3A	R3AZZ	0.1960	4.978	151	63	38	45	8	0.0937	2.381	4.75	5.08
0.2500	6.350	0.3750	9.525	0.0039	0.1	0.1250	3.175	R168	R168ZZS	0.1250	3.175	38	18	48	56	11	0.0394	1	0.57	0.60
		0.5000	12.700	0.0059	0.15	0.1250	3.175	R188	R188ZZ	0.1875	4.762	110	45	40	50	8	0.0787	2	1.60	2.32
		0.6250	15.875	0.0018	0.3	0.1960	4.978	R4	R4ZZ	0.1960	4.978	151	63	38	45	8	0.0937	2.381	4.46	4.54
		0.7500	19.050	0.0157	0.4	0.2188	5.558	R4A	R4AZZ	0.2812	7.142	238	91	36	43	6	0.1378	3.5	7.48	10.00
0.3125	7.938	0.5000	12.700	0.0059	0.15	0.1562	3.967	R1810	R1810ZZS	0.1562	3.967	55	28	40	48	12	0.0472	1.2	1.39	1.57
0.3750	9.525	0.8750	22.225	0.0157	0.4	0.2188	5.558	R6	R6ZZ	0.2812	7.142	340	145	32	38	7	0.1563	3.969	9.02	11.70
0.5000	12.700	1.1250	28.575	0.0157	0.4	0.2500	6.350	R8	R8ZZ	0.3125	7.938	521	246	27	32	8	0.1875	4.762	11.60	24.10
0.6250	15.875	1.3750	34.925	0.0315	0.8	0.2812	7.142	R10	R10ZZ	0.3438	8.733	611	335	21	25	10	0.1875	4.762	23.50	38.10
0.7500	19.050	1.6250	41.275	0.0315	0.8	0.3125	7.938	R12	R12ZZ	0.4375	11.113	806	457	17	21	10	0.2187	5.5566	53.10	69.30

