



浙江嘉善海丰轴承厂
JIASHAN HAIFENG BEARING FACTORY



公司简介 INTRODUCTION

嘉善海丰轴承厂（HFB）是一家专业从事轴承设计生产的实体企业，位于浙江嘉善县，地处长三角都市经济圈，与上海、苏州、杭州接壤，地理位置优越，交通便利。

公司生产的产品主要产品SF-1系列无油润滑轴承，SF-2系列边界润滑轴承，FZ系列钢球保持架，JDB系列固体润滑轴承，JF系列双金属轴承，FB系列青铜卷制轴承系列等多个系列产品。

产品广泛应用于冶金、汽车、矿山、石油、化工、电机电器、船舶、印刷、机械、水利、模具、铁路机车等领域。

欢迎广大海内外客户与我们洽谈业务，我们将竭诚为您提供一流的产品，一流的服务。

Jiashan Haifeng bearings Co., Ltd, is specialized in manufacturing sliding bearing. Our main products are: SF-1(DU) self-lubricating bearings, SF-2(DX) boundary self-lubricating bearings, JF bi-metal bearings, JDB cast bronze with solid lubricants bearings, FB090 bronze bearings, FZ ball retainer, FR PTFE tape, FD bronze powder with PTFE tape, FU sintered bronze bearings etc.

We can supply products with stable quality, and has won the trophy and certificate authorities. It is widely used in hydraulic elements, automobile, Metallurgical Mines, Ocean Station Vessel, Industrial Machinery, Petroleum Industry Machinery, Textile machine, lifting appliance, Printing, foods and Construction Machinery etc.

We are committed to supplying products of the highest quality and providing a comprehensive and professional service.



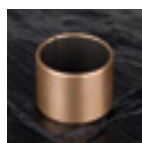
SF-1

碳钢基自润滑轴承 P 02
Carbon Steel Self-lubricating bearing



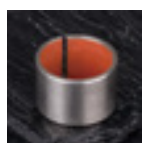
SF-1W

碳钢基无铅自润滑轴承 P 02
Carbon Steel Pb-free Self-lubricating bearing



SF-1B

铜基无铅自润滑轴承 P 03
Bronze Pb-free Self-lubricating bearing



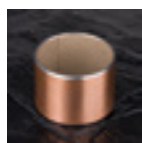
SF-1S

不锈钢基自润滑轴承 P 03
Stainless Steel Self-lubricating bearing



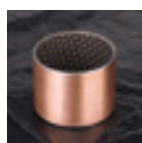
SF-1T

碳钢基自润滑轴承 P 04
Carbon Steel Self-lubricating bearing



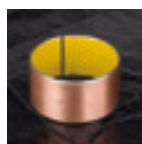
SF-1P

碳钢基无铅自润滑轴承 P 04
Carbon Steel Pb-free Self-lubricating bearing



SF-2

碳钢基边界无铅自润滑轴承 P 10
Marginal Pb-free Self-lubricating bearing



SF-2Y

碳钢基边界无铅自润滑轴承 P 10
Marginal Pb-free Self-lubricating bearing



JF-800/720/700/20/930

双金属自润滑轴承 P 15
Bimetallic Self-lubricating bearing



FB090

青铜自润滑轴承 P 20
Bronze self-lubricating bearing



FB092

青铜自润滑轴承 P 20
Bronze self-lubricating bearing



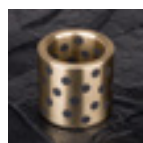
FB09G

青铜自润滑轴承 P 21
Bronze self-lubricating bearing



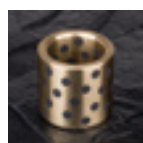
FB08G

青铜自润滑轴承 P 21
Bronze self-lubricating bearing



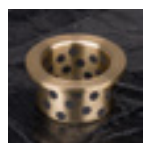
JDB-1/2/3/4/5/6

镶嵌式固体润滑轴承 P 26
Solid-lubricant inlaid bearing



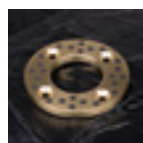
JDB

镶嵌式固体润滑轴承 P 28
Cast Bronze Solid-lubricant bearing with graphites



JFB

翻边镶嵌式固体润滑轴承 P 30
Cast Bronze Flanged Solid-lubricant-inlaid bearing



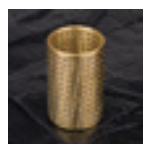
JTW

止推垫片 P 31
Oilless Thrust Washers



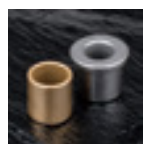
JMWP

滑块 P 32
Wear Plate



FZ

钢球保持架 P 33
Retainer bearing



FU-1/2/3/4

粉末冶金轴承 P 36
Bronze self-lubricating bearing



FD

含铜四氟软带 P 37
Copper PTFE soft strip



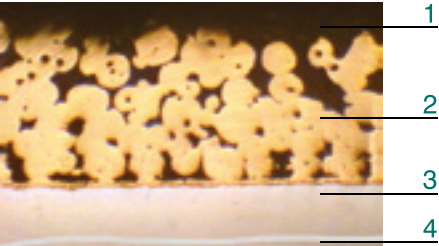
SF-1 碳钢基自润滑轴承
Carbon Steel self-lubricating bearing

该产品以优质低碳钢为基体，中间烧结球形青铜层，表面轧制聚四氟乙烯和铅的混合物。它具有较好的自润滑、耐磨损、摩擦系数低、走合性能好、低噪音等性能，产品广泛应用于各种机械的滑动部位，如纺织机、印刷机、液压搬运车、烟草机、健身器、农业机械等。

SF-1 Carbon Steel self-lubricating bearings used high quality low-carbon steel plate as base, sintered porous bronze as its interlayer and the Compound of PTFE and Lead as its surface. It offers the property of good self-lubrication, low wear, low friction good sliding characteristics, low noise. It has been widely applied to various mechanical sliding positions, such as textile machinery, printing machinery, hydraulic pressure transit vehicle, tobacco machinery, gymnastic instrument and agricultural machinery etc.

※技术参数：Technical Data

性能指标 Performance index		数据 Data
最大承载 P Max Load Capacity	静载 Static load	250N/mm ²
	动载 Dynamic load	140N/mm ²
最高线速度 V Max Sliding Speed	干摩擦 Dry friction	2.5m/s
	油润滑 Oil lubrication	5.0m/s
最高PV值 Max PV Value Limit	干摩擦 Dry friction	3.6N/mm ² · m/s
	油润滑 Oil lubrication	50N/mm ² · m/s
摩擦系数 μ Friction coefficient	干摩擦 Dry friction	0.08 ~ 0.20
	油润滑 Oil lubrication	0.02 ~ 0.07
使用温度 Working temperature		-195℃ ~ +280℃
导热系数 Thermal conductivity		42W/m · K
热膨胀系数 Coefficient of thermal expansion		11 × 10 ⁻⁶ /K



1. 聚四氟乙烯与铅的混合物 2. 球形青铜粉
3. 钢背 4. 电镀层
1. PTFE with lead 2. Porous bronze
3. Steel backing 4. Tin-plating



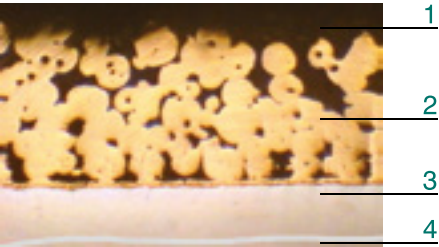
SF-1W 碳钢基无铅自润滑轴承
Carbon Steel Pb-free self-lubricating bearing

该产品与SF-1具有相同结构和使用性能，同时它具有环保的特点。产品广泛应用于汽车、食品工业机械、制药机械、饮料机械、医疗设备等绿色工业场合。

Carbon Steel Pb-free self-lubricating bearing which is in the same structure and properties as SF-1. Meanwhile it is characterized by environmental protection. It has been widely applied to automobile, food-processing machinery, pharmacy machinery, beverage machinery, medical equipment etc. On green industry occasions.

※技术参数：Technical Data

性能指标 Performance index		数据 Data
最大承载 P Max Load Capacity	静载 Static load	250N/mm ²
	动载 Dynamic load	140N/mm ²
最高线速度 V Max Sliding Speed	干摩擦 Dry friction	2.5m/s
	油润滑 Oil lubrication	5.0m/s
最高PV值 Max PV Value Limit	干摩擦 Dry friction	3.6N/mm ² · m/s
	油润滑 Oil lubrication	50N/mm ² · m/s
摩擦系数 μ Friction coefficient	干摩擦 Dry friction	0.08 ~ 0.20
	油润滑 Oil lubrication	0.02 ~ 0.07
使用温度 Working temperature		-195℃ ~ +280℃
导热系数 Thermal conductivity		42W/m · K
热膨胀系数 Coefficient of thermal expansion		11 × 10 ⁻⁶ /K



1. 聚四氟乙烯与纤维混合物 2. 球形青铜粉
3. 钢背 4. 电镀层
1. PTFE with bronze 2. Porous bronze
3. Steel backing 4. Tin-plating



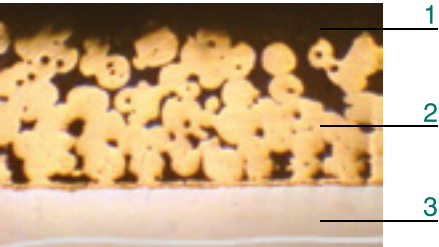
SF-1B 铜基无铅自润滑轴承
Bronze Pb-free self-lubricating bearings

该产品以特殊配方铜合金为基体，中间烧结球形青铜层，表面轧制聚四氟乙烯和亲油性纤维的混合物。它具有较好的自润滑、耐磨损、摩擦系数低、耐腐蚀等性能，产品广泛应用于冶金机械、连铸轧机、水泥灌浆机械、螺旋式输送机等。

SF-1B Bronze Pb-free self-lubricating bearing used bronze alloy as base with special formulation, sintered porous bronze as its interlayer and the Compound of PTFE and lipophilicity fiber as its surface. It offers the property of good self-lubricating, low wear, low friction, corrosion resistance. It has been widely applied to metallurgy steel machinery, joined casting machinery, cement grout pump and spiral conveyer machinery etc.

※技术参数：Technical Data

性能指标 Performance index		数据 Data
最大承载 P Max Load Capacity	静载 Static load	250N/mm ²
	动载 Dynamic load	140N/mm ²
最高线速度 V Max Sliding Speed	干摩擦 Dry friction	2.5m/s
	油润滑 Oil lubrication	5.0m/s
最高PV值 Max PV Value Limit	干摩擦 Dry friction	3.6N/mm ² · m/s
	油润滑 Oil lubrication	50N/mm ² · m/s
摩擦系数 μ Friction coefficient	干摩擦 Dry friction	0.08 ~ 0.20
	油润滑 Oil lubrication	0.02 ~ 0.07
使用温度 Working temperature		-195℃ ~ +280℃
导热系数 Thermal conductivity		70W/m · K
热膨胀系数 Coefficient of thermal expansion		17 × 10 ⁻⁶ /K



1.聚四氟乙烯与亲油性纤维混合物
2.球形青铜粉 3.铜背
1.PTFE with Fiber 2.Porous bronze
3.Bronze backing



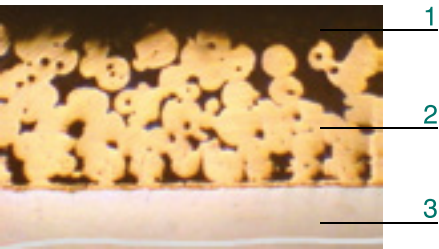
SF-1S 不锈钢基自润滑轴承
Stainless steel self-lubricating bearing

该产品以不锈钢为基体，中间烧结球形青铜层，表面轧制聚四氟乙烯和铅的混合物。它具有较好的自润滑、耐磨损、摩擦系数低、耐腐蚀等性能。产品广泛应用于印染机械、化工机械、海洋工业耐腐蚀部位等。

SF-1S Stainless steel self-lubricating bearing uses stainless steel as base, sintered porous bronze as its interlayer and the Compound of PTFE and Lead as its surface. It offer the property of good self-lubrication, low wear, low friction, corrosion resistance. It has been widely applied to dyeing machinery, chemical engineering machinery and marine industry etc.

※技术参数：Technical Data

性能指标 Performance index		数据 Data
最大承载 P Max Load Capacity	静载 Static load	250N/mm ²
	动载 Dynamic load	140N/mm ²
最高线速度 V Max Sliding Speed	干摩擦 Dry friction	2.0m/s
	油润滑 Oil lubrication	5.0m/s
最高PV值 Max PV Value Limit	干摩擦 Dry friction	3.6N/mm ² · m/s
	油润滑 Oil lubrication	50N/mm ² · m/s
摩擦系数 μ Friction coefficient	干摩擦 Dry friction	0.08 ~ 0.20
	油润滑 Oil lubrication	0.02 ~ 0.07
使用温度 Working temperature		-195℃ ~ +280℃
导热系数 Thermal conductivity		42W/m · K
热膨胀系数 Coefficient of thermal expansion		15 × 10 ⁻⁶ /K



1.聚四氟乙烯与亲油性纤维混合物
2.球形青铜粉 3.不锈钢背
1.PTFE with Fiber 2.Porous bronze
3.Stainless steel backing



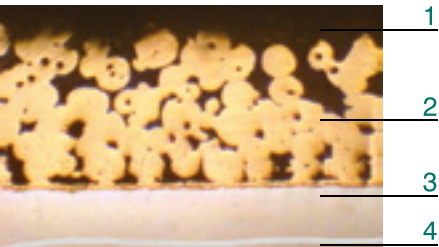
SF-1T 碳钢基自润滑轴承（齿轮油泵）
Carbon Steel self-lubricating bearing (Gear pump)

该产品与SF-1具有相同结构，是齿轮油泵专用轴承。根据齿轮油泵的高PV值条件而设计的特殊配方产品。它具有摩擦系数小而稳定，耐磨性能好，抗冲击的特点，产品广泛应用于齿轮油泵、柱塞泵、叶片泵等。

SF-1T Carbon Steel self-lubricating bearing (Gear pump) has the same structure as SF-1, it is special for gear pump. It is a special formula product devised by high PV value operational mode conditions of gear oil pump. Characterized by low friction factor, stability, well wearing performance and impact resistance, it has been widely applied to gear pumps, radial piston pumps and vane pumps etc.

※技术参数：Technical Data

性能指标 Performance index		数据 Data
最大承载 P Max Load Capacity	静载 Static load	250N/mm ²
	动载 Dynamic load	140N/mm ²
最高线速度 V Max Sliding Speed	干摩擦 Dry friction	2.5m/s
	油润滑 Oil lubrication	5.0m/s
最高PV值 Max PV Value Limit	干摩擦 Dry friction	4.3N/mm ² · m/s
	油润滑 Oil lubrication	60N/mm ² · m/s
摩擦系数 μ Friction coefficient		0.03 ~ 0.20
使用温度 Working temperature		-195℃ ~ +280℃
导热系数 Thermal conductivity		42W/m · K



1.聚四氟乙烯与铅及其他填充混合物
2.球形青铜粉 3.钢背 4.电镀层
1.PTFE with lead 2.Porous bronze
3.Steel backing 4.Tin-plating

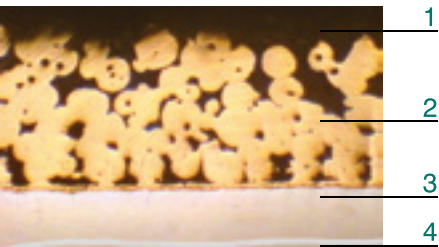
SF-1P 碳钢基无铅自润滑轴承（减震器）
Carbon Steel Pb-free self-lubricating bearing (absorber)

该产品与SF-1具有相同结构，是根据往复运动的特殊工况条件而设计的特殊配方产品，具有断油条件下润滑能力强，耐磨性能好，保持油膜的特点。产品广泛应用于汽车减震器、摩托车减震器、液压马达、气动元件等。

SF-1P Carbon Steel Pb-free self-lubricating bearing has the same structure as SF-1, particularly suitable for intermittent operation, reciprocating or oscillating movements. Characterized by good lubrication and wear performance in the conditions of dry operation of oil. It is applied to shock absorber of automobile, motorcycles and various hydraulic motors and pneumatic elements etc.

※技术参数：Technical Data

性能指标 Performance index		数据 Data
最大承载 P Max Load Capacity	静载 Static load	250N/mm ²
	动载 Dynamic load	140N/mm ²
最高线速度 V Max Sliding Speed	干摩擦 Dry friction	2.5m/s
	油润滑 Oil lubrication	5.0m/s
最高PV值 Max PV Value Limit	干摩擦 Dry friction	3.6N/mm ² · m/s
	油润滑 Oil lubrication	50N/mm ² · m/s
摩擦系数 μ Friction coefficient		0.04 ~ 0.20
使用温度 Working temperature		-195℃ ~ +270℃
导热系数 Thermal conductivity		42W/m · K



1.聚四氟乙烯与铜的混合物 2.球形青铜粉
3.钢背 4.电镀层
1.PTFE with bronze 2.Porous bronze
3.Steel backing 4.Tin-plating

SF-1/1W/1B/1S/1T/1P 标准公制轴套

Metric Standard Bushing



轴套外径公差表
Bushing O.D.Tolerances Table

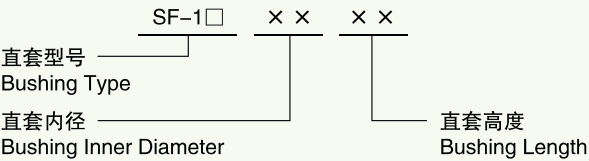
外径 ϕD Outer Diameter ϕD	外径公差 Outer Diameter Tolerance
$\phi D \leq 10$	+0.055 +0.025
$10 < \phi D \leq 18$	+0.065 +0.030
$18 < \phi D \leq 30$	+0.075 +0.035
$30 < \phi D \leq 50$	+0.085 +0.045
$50 < \phi D \leq 80$	+0.100 +0.055
$80 < \phi D \leq 120$	+0.120 +0.070
$120 < \phi D \leq 180$	+0.170 +0.100
$180 < \phi D \leq 250$	+0.210 +0.130
$250 < \phi D \leq 305$	+0.260 +0.170

轴套壁厚公差
Bushing Wall Thickness Tolerances Table

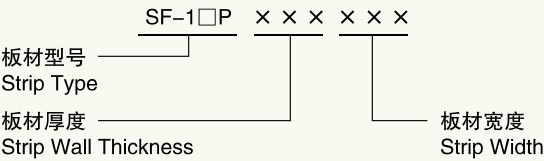
内径 ϕd Inner Diameter ϕd	壁厚公差 t Wall Thickness Tolerance
$\phi d < 5$	0.75 $\begin{smallmatrix} 0 \\ -0.020 \end{smallmatrix}$
$5 \leq \phi d \leq 18$	1.0 $\begin{smallmatrix} +0.005 \\ -0.020 \end{smallmatrix}$
$18 < \phi d \leq 25$	1.5 $\begin{smallmatrix} +0.005 \\ -0.025 \end{smallmatrix}$
$25 < \phi d < 45$	2.0 $\begin{smallmatrix} +0.005 \\ -0.030 \end{smallmatrix}$
$45 \leq \phi d < 80$	2.5 $\begin{smallmatrix} +0.005 \\ -0.040 \end{smallmatrix}$
$80 \leq \phi d < 120$	2.5 $\begin{smallmatrix} -0.010 \\ -0.060 \end{smallmatrix}$
$\phi d \geq 120$	2.5 $\begin{smallmatrix} -0.035 \\ -0.085 \end{smallmatrix}$

可供标准产品的标注方式
Standard Bushing Label Mode

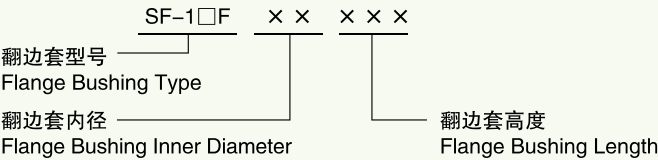
直套标注方式 Bushing Label Mode



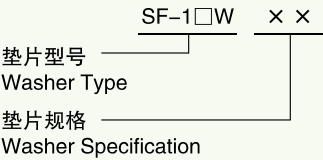
板材标注方式 Strip Label Mode



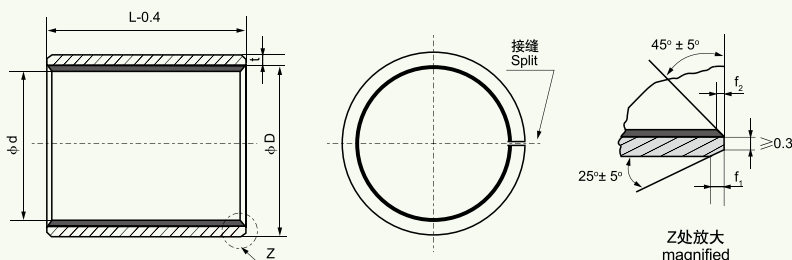
翻边套标注方式 Flange Bushing Label Mode



垫片标注方式 Washer Label Mode



SF-1/1W/1B/1S/1T/1P 标准公制直套 Metric Standard Bushing



※标准直套标注方式：Standard Bushing Label Mode SF-1□ 0408

单位Unit: mm

型号 Type	外径 φ D	内径 φ d	相配轴径 Axle	相配座孔 Housing H7	f ₁	f ₂	L - 0.4						
							8	10	15	20	25	30	40
SF-1□	5.5	4	4 ⁰ _{-0.008}	5.5 ^{+0.008} ₀	0.4	0.3	0408	0410					
SF-1□	7	5	5 ^{-0.010} _{-0.022}	7 ^{+0.015} ₀	0.6	0.3	0508	0510					
SF-1□	8	6	6 ^{-0.010} _{-0.022}	8 ^{+0.015} ₀			0608	0610	0615				
SF-1□	10	8	8 ^{-0.013} _{-0.028}	10 ^{+0.015} ₀			0808	0810	0815				
SF-1□	12	10	10 ^{-0.013} _{-0.028}	12 ^{+0.018} ₀			1008	1010	1015	1020			
SF-1□	14	12	12 ^{-0.016} _{-0.034}	14 ^{+0.018} ₀			1208	1210	1215	1220			
SF-1□	15	13	13 ^{-0.016} _{-0.034}	15 ^{+0.018} ₀				1310	1315	1320			
SF-1□	16	14	14 ^{-0.016} _{-0.034}	16 ^{+0.018} ₀				1410	1415	1420			
SF-1□	17	15	15 ^{-0.016} _{-0.034}	17 ^{+0.018} ₀				1510	1515	1520	1525		
SF-1□	18	16	16 ^{-0.016} _{-0.034}	18 ^{+0.018} ₀					1615	1620	1625		
SF-1□	19	17	17 ^{-0.016} _{-0.034}	19 ^{+0.021} ₀					1715	1720	1725		
SF-1□	20	18	18 ^{-0.016} _{-0.034}	20 ^{+0.021} ₀	0.8	0.4			1815	1820	1825		
SF-1□	23	20	20 ^{-0.020} _{-0.041}	23 ^{+0.021} ₀					2015	2020	2025	2030	
SF-1□	25	22	22 ^{-0.020} _{-0.041}	25 ^{+0.021} ₀						2220	2225	2230	
SF-1□	27	24	24 ^{-0.020} _{-0.041}	27 ^{+0.021} ₀						2420	2425	2430	
SF-1□	28	25	25 ^{-0.020} _{-0.041}	28 ^{+0.021} ₀	1.2	0.6				2520	2525	2530	2540
SF-1□	32	28	28 ^{-0.020} _{-0.041}	32 ^{+0.025} ₀						2820	2825	2830	2840
SF-1□	34	30	30 ^{-0.020} _{-0.041}	34 ^{+0.025} ₀						3020	3025	3030	3040
SF-1□	36	32	32 ^{-0.025} _{-0.050}	36 ^{+0.025} ₀						3220	3225	3230	3240
SF-1□	39	35	35 ^{-0.025} _{-0.050}	39 ^{+0.025} ₀						3520	3525	3530	3540
SF-1□	42	38	38 ^{-0.025} _{-0.050}	42 ^{+0.025} ₀						3820	3825	3830	3840
SF-1□	44	40	40 ^{-0.025} _{-0.050}	44 ^{+0.025} ₀	1.6	0.8				4020	4025	4030	4040
SF-1□	50	45	45 ^{-0.025} _{-0.050}	50 ^{+0.025} ₀						4520	4525	4530	4540
SF-1□	55	50	50 ^{-0.025} _{-0.050}	55 ^{+0.030} ₀								5030	5040
SF-1□	60	55	55 ^{-0.030} _{-0.060}	60 ^{+0.030} ₀								5530	5540

SF-1/1W/1B/1S/1T/1P 标准公制直套

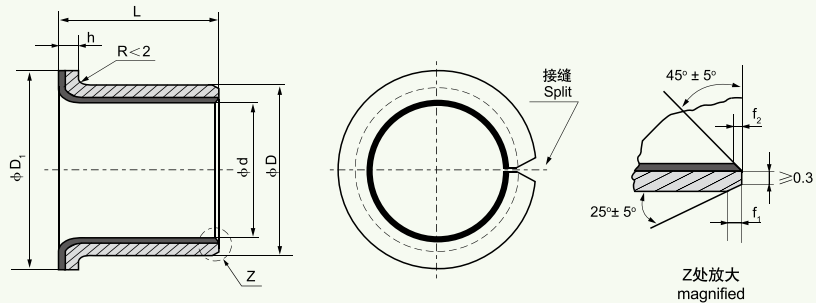
Metric Standard Bushing



型号 Type	外径 ϕD	内径 ϕd	相配轴径 Axle	相配座孔 Housing H7	f_1	f_2	L - 0.4					
							40	50	60	70	80	100
SF-1□	65	60	60 ^{-0.030} _{-0.060}	65 ^{+0.030} ₀	1.6	0.8	6040	6050	6060			
SF-1□	70	65	65 ^{-0.030} _{-0.060}	70 ^{+0.030} ₀			6540	6550	6560			
SF-1□	75	70	70 ^{-0.030} _{-0.060}	75 ^{+0.030} ₀			7040	7050	7060	7070		
SF-1□	80	75	75 ^{-0.030} _{-0.060}	80 ^{+0.030} ₀				7550	7560	7570		
SF-1□	85	80	80 ⁰ _{-0.045}	85 ^{+0.035} ₀			8040	8050	8060	8070		
SF-1□	90	85	85 ⁰ _{-0.054}	90 ^{+0.035} ₀				8550	8560	8570	8580	
SF-1□	95	90	90 ⁰ _{-0.054}	95 ^{+0.035} ₀				9050	9060	9070	9080	
SF-1□	100	95	95 ⁰ _{-0.054}	100 ^{+0.035} ₀				9550	9560	9570	9580	
SF-1□	105	100	100 ⁰ _{-0.054}	105 ^{+0.035} ₀				10050	10060	10070	10080	
SF-1□	110	105	105 ⁰ _{-0.054}	110 ^{+0.035} ₀				10550	10560	10570	10580	
SF-1□	115	110	110 ⁰ _{-0.054}	115 ^{+0.035} ₀				11050	11060	11070	11080	
SF-1□	120	115	115 ⁰ _{-0.054}	120 ^{+0.035} ₀				11550	11560	11570	11580	
SF-1□	125	120	120 ⁰ _{-0.054}	125 ^{+0.040} ₀					12060	12070	12080	
SF-1□	130	125	125 ⁰ _{-0.063}	130 ^{+0.040} ₀					12560	12570	12580	
SF-1□	135	130	130 ⁰ _{-0.063}	135 ^{+0.040} ₀					13060	13070	13080	
SF-1□	140	135	135 ⁰ _{-0.063}	140 ^{+0.040} ₀					13560	13570	13580	
SF-1□	145	140	140 ⁰ _{-0.063}	145 ^{+0.040} ₀					14060	14070	14080	
SF-1□	150	145	145 ⁰ _{-0.063}	150 ^{+0.040} ₀					14560	14570	14580	
SF-1□	155	150	150 ⁰ _{-0.063}	155 ^{+0.040} ₀					15060	15070	15080	
SF-1□	160	155	155 ⁰ _{-0.063}	160 ^{+0.040} ₀					15560	15570	15580	
SF-1□	165	160	160 ⁰ _{-0.063}	165 ^{+0.040} ₀					16060	16070	16080	160100
SF-1□	180	175	175 ⁰ _{-0.063}	180 ^{+0.040} ₀						17570	17580	175100
SF-1□	190	185	185 ⁰ _{-0.072}	190 ^{+0.046} ₀						18570	18580	185100
SF-1□	200	195	195 ⁰ _{-0.072}	200 ^{+0.046} ₀						19570	19580	195100
SF-1□	210	205	205 ⁰ _{-0.072}	210 ^{+0.046} ₀						20570	20580	205100
SF-1□	220	215	215 ⁰ _{-0.072}	220 ^{+0.046} ₀						21570	21580	215100
SF-1□	230	225	225 ⁰ _{-0.072}	230 ^{+0.046} ₀							22580	225100
SF-1□	240	235	235 ⁰ _{-0.072}	240 ^{+0.046} ₀							23580	235100
SF-1□	250	245	245 ⁰ _{-0.072}	250 ^{+0.046} ₀							24580	245100
SF-1□	260	255	255 ⁰ _{-0.081}	260 ^{+0.052} ₀							25580	255100
SF-1□	280	275	275 ⁰ _{-0.081}	280 ^{+0.052} ₀							27580	275100
SF-1□	305	300	300 ⁰ _{-0.081}	305 ^{+0.052} ₀							30080	300100

SF-1/1W/1B/1S/1T/1P标准公制翻边轴套

Metric Standard Flange Bushing



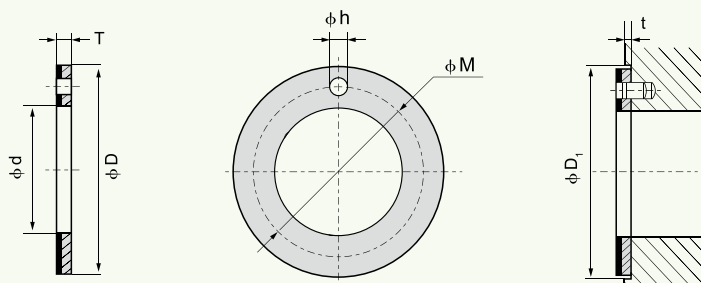
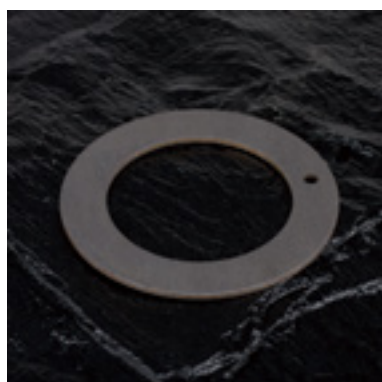
※标准翻边套标注方式: Standard Flange Bushing Label Mode SF-1□F 06040

单位Unit: mm

型号规格 Designation	内径 φ d	外径 φ D	法兰外径 φ D ₁ ± 0.5	法兰壁厚 h ⁰ _{-0.20}	高度 L ± 0.25	f ₁	f ₂	相配轴径 Axle	相配座孔 Housing
SF-1□F 06040	6	8	12	1.0	4	0.6	0.3	6 ^{-0.010} _{-0.022}	8 ^{+0.015} ₀
SF-1□F 06070					7				
SF-1□F 08055	8	10	15		5.5			8 ^{-0.013} _{-0.028}	10 ^{+0.015} ₀
SF-1□F 08075					7.5				
SF-1□F 10070	10	12	18		7			10 ^{-0.013} _{-0.028}	12 ^{+0.018} ₀
SF-1□F 10090					9				
SF-1□F 10120					12				
SF-1□F 12070					7				
SF-1□F 12090	12	14	20		9			12 ^{-0.016} _{-0.034}	14 ^{+0.018} ₀
SF-1□F 12120					12				
SF-1□F 14120	14	16	22		12			14 ^{-0.016} _{-0.034}	16 ^{+0.018} ₀
SF-1□F 14170					17				
SF-1□F 15090	15	17	23		9			15 ^{-0.016} _{-0.034}	17 ^{+0.018} ₀
SF-1□F 15120					12				
SF-1□F 15170					17				
SF-1□F 16120					12				
SF-1□F 16170	16	18	24		17			16 ^{-0.016} _{-0.034}	18 ^{+0.018} ₀
SF-1□F 18120					12				
SF-1□F 18170	18	20	26		17			18 ^{-0.016} _{-0.034}	20 ^{+0.021} ₀
SF-1□F 18200					20				
SF-1□F 20115	20	23	30	1.5	11.5	0.8	0.4	20 ^{-0.020} _{-0.041}	23 ^{+0.021} ₀
SF-1□F 20165					16.5				
SF-1□F 20215					21.5				
SF-1□F 22150	22	25	32		15			22 ^{-0.020} _{-0.041}	25 ^{+0.021} ₀
SF-1□F 22200					20				
SF-1□F 25115	25	28	35		11.5			25 ^{-0.020} _{-0.041}	28 ^{+0.021} ₀
SF-1□F 25165					16.5				
SF-1□F 25215					21.5				
SF-1□F 30160	30	34	42	2.0	16	1.2	0.6	30 ^{-0.020} _{-0.041}	34 ^{+0.025} ₀
SF-1□F 30260					26				
SF-1□F 35160	35	39	47		16			35 ^{-0.025} _{-0.050}	39 ^{+0.025} ₀
SF-1□F 35260					26				
SF-1□F 40260	40	44	53		26			40 ^{-0.025} _{-0.050}	44 ^{+0.025} ₀
SF-1□F 40400					40				

SF-1/1W/1B/1S/1T/1P 标准公制垫片

Metric Standard Washer



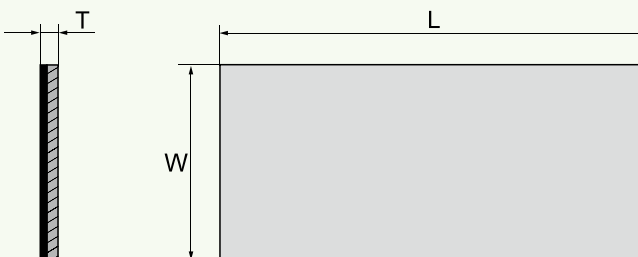
※标准垫片标注方式: Standard Washer Label Mode SF-1□WC 10

单位Unit: mm

相配轴径 Axle	型号规格 Designation	垫片尺寸 Washer Dimension				安装尺寸 Installation Size		
		$\phi D \begin{smallmatrix} 0 \\ -0.25 \end{smallmatrix}$	$\phi d \begin{smallmatrix} +0.25 \\ 0 \end{smallmatrix}$	$T \begin{smallmatrix} 0 \\ -0.050 \end{smallmatrix}$	$\phi M \pm 0.125$	$\phi h \begin{smallmatrix} +0.40 \\ +0.10 \end{smallmatrix}$	$t \pm 0.20$	$\phi D_1 \begin{smallmatrix} +0.12 \\ 0 \end{smallmatrix}$
8	SF-1□WC 10	20	10	1.5	15	1.5	1.0	20
10	SF-1□WC 12	24	12		18			24
12	SF-1□WC 14	26	14		20	2.0		26
14	SF-1□WC 16	30	16		23			30
16	SF-1□WC 18	32	18		25	32		
18	SF-1□WC 20	36	20		28	36		
20	SF-1□WC 22	38	22		30	3.0		38
22	SF-1□WC 24	42	24		33			42
24	SF-1□WC 26	44	26		35	44		
26	SF-1□WC 28	48	28		38	4.0		48
30	SF-1□WC 32	54	32		43			54
36	SF-1□WC 38	62	38		50			62
40	SF-1□WC 42	66	42		54			66
46	SF-1□WC 48	74	48	2.0	61			1.5
50	SF-1□WC 52	78	52		65	78		
60	SF-1□WC 62	90	62		76	90		

SF-1/1W/1B/1S/1T/1P 标准公制滑板

Metric Standard Strip



※标准板材标注方式: Standard Strip Label Mode SF-1□SP 010130

单位Unit: mm

型号规格 Designation	长度 Length $L \begin{smallmatrix} +5.0 \\ 0 \end{smallmatrix}$	宽度 Width $W \begin{smallmatrix} +2.0 \\ 0 \end{smallmatrix}$	厚度 Thickness $T \begin{smallmatrix} 0 \\ -0.050 \end{smallmatrix}$
SF-1□SP 010130	500	130	1.0
SF-1□SP 015130	500	130	1.5
SF-1□SP 020130	500	130	2.0
SF-1□SP 025130	500	130	2.5



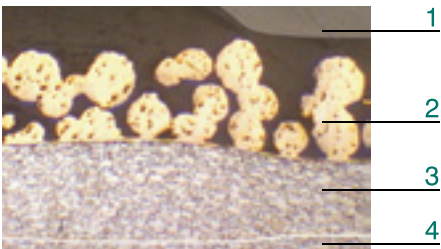
SF-2 碳钢基边界无铅自润滑轴承
Marginal Pb-free self-lubricating bearing

该产品以优质低碳钢为基体，中间烧结球形青铜层，表面轧制改性聚甲醛。在边界润滑条件下可长期使用而不加油，耐磨层表面有储油坑。产品广泛应用于冶金机械、矿山机械、水利机械、汽机车、建筑机械、农用机械、轧钢行业等。

SF-2 Marginal Pb-free self-lubricating bearing is used steel-backing as its structure, sintered porous bronze as its interlayer, surface inlaid the modified POM. Suitable for marginally lubricated and dry operation on the conditions of lubrication indents grease. It has been widely applied to metallurgical machinery, Mine machinery, water conservancy machinery, vapor locomotive, building machinery, agriculture machinery, steel rolling industry etc.

※技术参数：Technical Data

性能指标 Performance index		数据 Data
最大承载 P Max Load Capacity	静载 Static load	250N/mm ²
	动载 Dynamic load	140N/mm ²
最高线速度 V Max Sliding Speed	脂润滑 Grease lubrication	2.5m/s
最高PV值 Max PV Value Limit	脂润滑 Grease lubrication	2.8N/mm ² · m/s
摩擦系数 μ Friction coefficient	脂润滑 Grease lubrication	0.05 ~ 0.25
使用温度 Working temperature		-40℃ ~ +130℃
导热系数 Thermal conductivity		4W/m · K
热膨胀系数 Coefficient of thermal expansion		11 × 10 ⁻⁶ /K



1.聚甲醛与纤维混合物 2.球形青铜粉
3.钢背 4.电镀层
1.POM with fiber 2.Porous bronze
3.Steel backing 4.Tin-plating



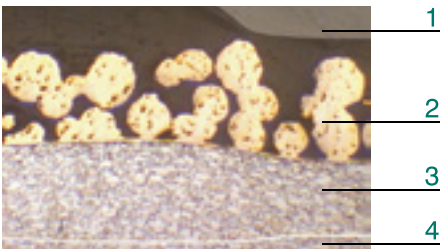
SF-2Y 碳钢基边界无铅自润滑轴承
Marginal Pb-free self-lubricating bearing

该产品与SF-2具有相同结构和使用性能，在边界润滑条件下可长期使用而不加油，耐磨层表面有储油坑。产品广泛应用于冶金机械、矿山机械、水利机械、汽机车、建筑机械、农用机械、轧钢行业等。

SF-2Y has the same structure and functional performance with SF-2. It can work long time without oil in the condition of prelubricated with lubrication indents. Widely applied to metallurgy machinery, Mining machinery, water conservancy machinery, automobile, building machinery, agriculture machinery, rolling steel industry etc.

※技术参数：Technical Data

性能指标 Performance index		数据 Data
最大承载 P Max Load Capacity	静载 Static load	250N/mm ²
	动载 Dynamic load	140N/mm ²
最高线速度 V Max Sliding Speed	脂润滑 Grease lubrication	2.5m/s
最高PV值 Max PV Value Limit	脂润滑 Grease lubrication	2.8N/mm ² · m/s
摩擦系数 μ Friction coefficient	脂润滑 Grease lubrication	0.05 ~ 0.25
使用温度 Working temperature		-40℃ ~ +130℃
导热系数 Thermal conductivity		4W/m · K
热膨胀系数 Coefficient of thermal expansion		11 × 10 ⁻⁶ /K



1.聚甲醛与纤维混合物 2.球形青铜粉
3.钢背 4.电镀层
1.POM with fiber 2.Porous bronze
3.Steel backing 4.Tin-plating

SF-2/2Y 标准公制轴套

Metric Standard Bushing



轴套外径公差表

Bushing O.D.Tolerances Table

外径 ϕD Outer Diameter ϕD	外径公差 Outer Diameter Tolerance
$\phi D \leq 10$	+0.055 +0.025
$10 < \phi D \leq 18$	+0.065 +0.030
$18 < \phi D \leq 30$	+0.075 +0.035
$30 < \phi D \leq 50$	+0.085 +0.045
$50 < \phi D \leq 80$	+0.100 +0.055
$80 < \phi D \leq 120$	+0.120 +0.070
$120 < \phi D \leq 180$	+0.170 +0.100
$180 < \phi D \leq 250$	+0.210 +0.130
$250 < \phi D \leq 305$	+0.260 +0.170

轴套壁厚公差

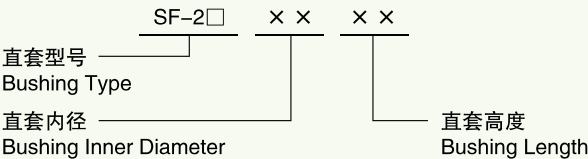
Bushing Wall Thickness Tolerances Table

内径 ϕd Inner Diameter ϕd	壁厚公差 t Wall Thickness Tolerance
$8 \leq \phi d \leq 18$	1.0 $\begin{matrix} -0.020 \\ -0.045 \end{matrix}$
$18 < \phi d \leq 25$	1.5 $\begin{matrix} -0.025 \\ -0.055 \end{matrix}$
$25 < \phi d < 45$	2.0 $\begin{matrix} -0.030 \\ -0.065 \end{matrix}$
$45 \leq \phi d < 80$	2.5 $\begin{matrix} -0.040 \\ -0.085 \end{matrix}$
$\phi d \geq 80$	2.5 $\begin{matrix} -0.055 \\ -0.115 \end{matrix}$

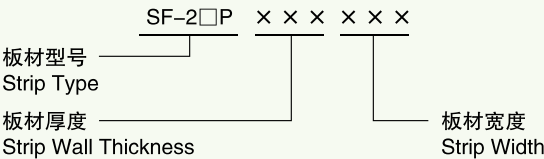
可供标准产品的标注方式

Standard Bushing Label Mode

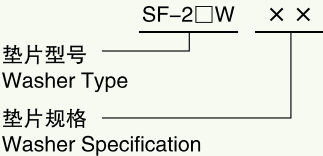
直套标注方式 Bushing Label Mode



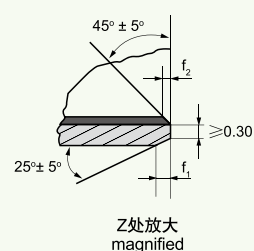
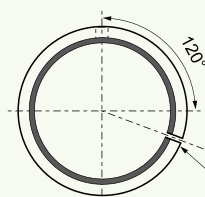
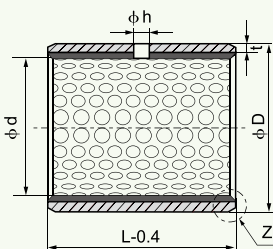
板材标注方式 Strip Label Mode



垫片标注方式 Washer Label Mode



SF-2/2Y 标准公制轴承 Metric Standard bearings



※标准直套标注方式：Standard Bushing Label Mode SF-2□ 1010

单位Unit: mm

型号 Type	外径 ϕD	内径 ϕd	相配轴径 Axle	相配座孔 Housing H7	ϕh	f_1	f_2	L - 0.4						
								10	15	20	25	30	40	50
SF-2□	12	10	10 ⁰ _{-0.022}	12 ^{+0.008} ₀	$\phi 4$	0.6	0.3	1010	1015	1020				
SF-2□	14	12	12 ⁰ _{-0.027}	14 ^{+0.015} ₀				1210	1215	1220				
SF-2□	16	14	14 ⁰ _{-0.027}	16 ^{+0.015} ₀					1415	1420				
SF-2□	17	15	15 ⁰ _{-0.027}	17 ^{+0.015} ₀					1515	1520	1525			
SF-2□	18	16	16 ⁰ _{-0.027}	18 ^{+0.018} ₀					1615	1620	1625			
SF-2□	19	17	17 ⁰ _{-0.027}	19 ^{+0.018} ₀					1715	1720	1725			
SF-2□	20	18	18 ⁰ _{-0.027}	20 ^{+0.018} ₀					1815	1820	1825			
SF-2□	23	20	20 ⁰ _{-0.033}	23 ^{+0.018} ₀	$\phi 6$	0.8	0.4		2015	2020	2025	2030		
SF-2□	25	22	22 ⁰ _{-0.033}	25 ^{+0.018} ₀					2215	2220	2225	2230		
SF-2□	27	24	24 ⁰ _{-0.033}	27 ^{+0.018} ₀						2420	2425	2430		
SF-2□	28	25	25 ⁰ _{-0.033}	28 ^{+0.021} ₀						2520	2525	2530		
SF-2□	32	28	28 ⁰ _{-0.033}	32 ^{+0.021} ₀	$\phi 6$	1.2	0.6			2820	2825	2830		
SF-2□	34	30	30 ⁰ _{-0.033}	34 ^{+0.021} ₀						3020	3025	3030	3040	
SF-2□	36	32	32 ⁰ _{-0.039}	36 ^{+0.021} ₀						3220	3225	3230	3240	
SF-2□	39	35	35 ⁰ _{-0.039}	39 ^{+0.021} ₀						3520	3525	3530	3540	
SF-2□	44	40	40 ⁰ _{-0.039}	44 ^{+0.021} ₀	$\phi 8$	1.6	0.8			4020	4025	4030	4040	
SF-2□	50	45	45 ⁰ _{-0.039}	50 ^{+0.025} ₀						4520	4525	4530	4540	
SF-2□	55	50	50 ⁰ _{-0.039}	55 ^{+0.025} ₀								5030	5040	5050
SF-2□	60	55	55 ⁰ _{-0.045}	60 ^{+0.025} ₀								5530	5540	5550
SF-2□	65	60	60 ⁰ _{-0.045}	65 ^{+0.025} ₀								6030	6040	6050
SF-2□	70	65	65 ⁰ _{-0.045}	70 ^{+0.025} ₀								6530	6540	6550
SF-2□	75	70	70 ⁰ _{-0.045}	75 ^{+0.025} ₀								7030	7040	7050
SF-2□	80	75	75 ⁰ _{-0.045}	80 ^{+0.025} ₀								7530	7540	7550

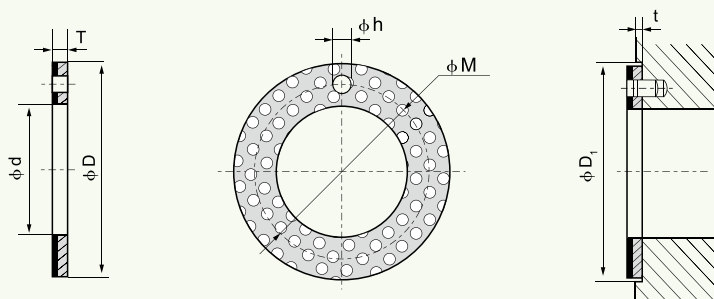
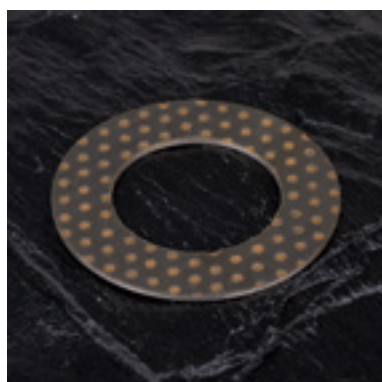
SF-2/2Y 标准公制轴承

Metric Standard bearings



型号 Type	外径 ϕD	内径 ϕd	相配轴径 Axle	相配座孔 Housing H7	Hole ϕh	f_1	f_2	L – 0.4					
								40	50	60	80	100	120
SF-2□	85	80	80 ⁰ _{-0.045}	85 ^{+0.035} ₀	$\phi 9.5$	1.6	0.8	8040	8050	8060			
SF-2□	90	85	85 ⁰ _{-0.054}	90 ^{+0.035} ₀				8540	8550	8560			
SF-2□	95	90	90 ⁰ _{-0.054}	95 ^{+0.035} ₀					9050	9060	9080		
SF-2□	100	95	95 ⁰ _{-0.054}	100 ^{+0.035} ₀					9550	9560	9580		
SF-2□	105	100	100 ⁰ _{-0.054}	105 ^{+0.035} ₀					10050	10060	10080	100100	
SF-2□	110	105	105 ⁰ _{-0.054}	110 ^{+0.035} ₀					10550	10560	10580	105100	
SF-2□	115	110	110 ⁰ _{-0.054}	115 ^{+0.035} ₀					11050	11060	11080	110100	
SF-2□	120	115	115 ⁰ _{-0.054}	120 ^{+0.035} ₀					11550	11560	11580	115100	
SF-2□	125	120	120 ⁰ _{-0.054}	125 ^{+0.040} ₀						12060	12080	120100	
SF-2□	130	125	125 ⁰ _{-0.063}	130 ^{+0.040} ₀						12560	12580	125100	
SF-2□	135	130	130 ⁰ _{-0.063}	135 ^{+0.040} ₀						13060	13080	130100	
SF-2□	140	135	135 ⁰ _{-0.063}	140 ^{+0.040} ₀						13560	13580	135100	
SF-2□	145	140	140 ⁰ _{-0.063}	145 ^{+0.040} ₀						14060	14080	140100	
SF-2□	150	145	145 ⁰ _{-0.063}	150 ^{+0.040} ₀						14560	14580	145100	
SF-2□	160	155	155 ⁰ _{-0.063}	160 ^{+0.040} ₀							15580	155100	155120
SF-2□	170	165	165 ⁰ _{-0.063}	170 ^{+0.040} ₀							16580	165100	165120
SF-2□	180	175	175 ⁰ _{-0.063}	180 ^{+0.040} ₀							17580	175100	175120
SF-2□	190	185	185 ⁰ _{-0.072}	190 ^{+0.046} ₀							18580	185100	185120
SF-2□	200	195	195 ⁰ _{-0.072}	200 ^{+0.046} ₀							19580	195100	195120
SF-2□	210	205	205 ⁰ _{-0.072}	210 ^{+0.046} ₀							20580	205100	205120
SF-2□	220	215	215 ⁰ _{-0.072}	220 ^{+0.046} ₀							21580	215100	215120
SF-2□	230	225	225 ⁰ _{-0.072}	230 ^{+0.046} ₀							22580	225100	225120
SF-2□	240	235	235 ⁰ _{-0.072}	240 ^{+0.046} ₀							23580	235100	235120
SF-2□	250	245	245 ⁰ _{-0.072}	250 ^{+0.046} ₀							24580	245100	245120
SF-2□	260	255	255 ⁰ _{-0.081}	260 ^{+0.052} ₀							25580	255100	255120
SF-2□	270	265	265 ⁰ _{-0.081}	270 ^{+0.052} ₀							26580	265100	265120
SF-2□	280	275	275 ⁰ _{-0.081}	280 ^{+0.052} ₀								275100	275120
SF-2□	290	285	285 ⁰ _{-0.081}	290 ^{+0.052} ₀								285100	285120
SF-2□	300	295	295 ⁰ _{-0.081}	300 ^{+0.052} ₀								295100	295120
SF-2□	305	300	300 ⁰ _{-0.081}	305 ^{+0.052} ₀								300100	300120

SF-2/2Y 标准公制垫片 Metric Standard Washer

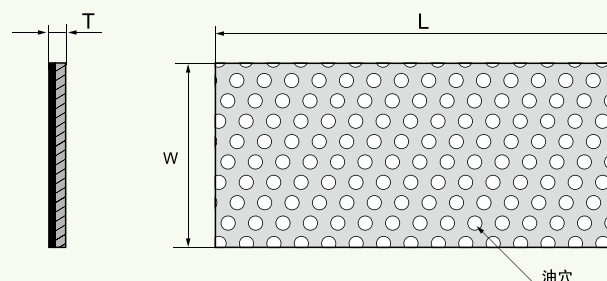


※标准垫片标注方式: Standard Washer Label Mode SF-2□ WC 10

单位Unit: mm

相配轴径 Axle	型号规格 Designation	垫片尺寸 Washer Dimension				安装尺寸 Installation Size		
		$\phi D_{-0.25}^0$	$\phi d_{0}^{+0.25}$	$T_{-0.050}^0$	$\phi M \pm 0.125$	$\phi h_{+0.10}^{+0.40}$	$t \pm 0.20$	$\phi D_1^{+0.12}_0$
8	SF-2□WC 10	20	10	1.5	15	1.5	1.0	20
10	SF-2□WC 12	24	12		18			24
12	SF-2□WC 14	26	14		20	2.0		26
14	SF-2□WC 16	30	16		23			30
16	SF-2□WC 18	32	18	2.0	25	3.0		32
18	SF-2□WC 20	36	20		28			36
20	SF-2□WC 22	38	22		30			38
22	SF-2□WC 24	42	24		33	42		
24	SF-2□WC 26	44	26		35	44		
26	SF-2□WC 28	48	28		38	4.0		48
30	SF-2□WC 32	54	32		43			54
36	SF-2□WC 38	62	38		50			62
40	SF-2□WC 42	66	42		54			66
46	SF-2□WC 48	74	48		61		1.5	74
50	SF-2□WC 52	78	52		65			78
60	SF-2□WC 62	90	62		76	90		

SF-2PS 标准公制滑板 Metric Standard Strip

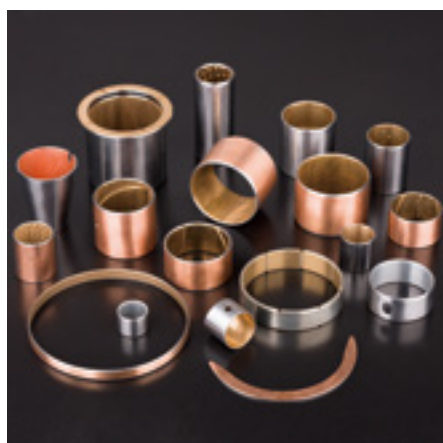


※标准滑板标注方式: Standard Strip Label Mode SF-2□ SP 010130

单位Unit: mm

相配轴径 Axle	长度 Length $L \begin{smallmatrix} +5.0 \\ 0 \end{smallmatrix}$	宽度 Width $W \begin{smallmatrix} +2.0 \\ 0 \end{smallmatrix}$	厚度 Thickness $T \begin{smallmatrix} 0 \\ -0.050 \end{smallmatrix}$
SF-2□ SP 010130	500	130	1.0
SF-2□ SP 015130	500	130	1.5
SF-2□ SP 020130	500	130	2.0
SF-2□ SP 025130	500	130	2.5

JF-800/720/700/20/930 双金属自润滑轴承 Bimetallic self-lubricating bearing



该产品以优质低碳钢为基体，表面烧结青铜粉，适用于高载低速下的旋转，摇摆运动。具有摩擦系数低、耐磨性能好、使用寿命长、抗咬合性能好等特点，铜合金层可根据要求加工出各种类型的油穴、油槽。产品被广泛应用于矿山机械、汽机车、建筑机械、农用机械、轧钢机械等。

JF-800/720/700/20/930 Bimetallic self-lubricating bearing used high quality low-carbon steel plate as base, sintered porous bronze as its surface, suitable for rotatory oscillating, reciprocating movements on the conditions of high load, low speed, low friction, well wear resistance, long lifetime and better prevent from holding-on. The bronze layer surface can be machined with various of grooves, oil pockets in terms of different work condition. The product is widely used in mining machinery, automobile, building machinery, agriculture equipment, rolling steel industry etc.

※材料特性：Material Characteristic

材料牌号 Material Trademark	合金成份 Alloy Composition	合金硬度 Alloy Hardness	国际标准 International Standard
JF-800	CuPb10Sn10	70 ~ 100HB	美国SAE-797/德国GLYCO 66/日本JIS-LBC3
JF-720	CuPb24Sn4	45 ~ 70HB	美国SAE-797/德国GLYCO 68/日本JIS-LBC6
JF-700	CuPb30	40 ~ 60HB	美国SAE-48/日本JIS-KJ3
JF-20	AlSn20Cu	30 ~ 45HB	美国SAE-783/德国GLYCO 74/日本JIS-AJL
JF-930	CuPb6.5P0.1	69 ~ 90HB	

※技术参数：Technical Data

性能指标 Performance index		型号 Type	JF-800	JF-720	JF-700	JF-20	JF-930
最大承载 P(N/mm ²) Max Load Capacity			150	130	120	100	150
拉伸强度 (N/mm ²) Tensile Strength			185	150	200	200	185
最大线速度 (油润滑) V(m/s) Max Sliding Speed (Oil Lubrication)			5	10	10	25	5
摩擦系数 μ Friction coefficient			0.06 ~ 0.14	0.06 ~ 0.16	0.08 ~ 0.16	0.08 ~ 0.17	0.06 ~ 0.16
最高PV值 N/mm ² · m/s Max PV Value Limit	脂润滑 Grease lubrication		2.8	2.8	2.5	—	2.8
	油润滑 Oil lubrication		20	10	8	6	—

JF-800/720/700/20/930 双金属自润滑轴承 Bimetallic self-lubricating bearing



※应用特性: Application Characteristics

材料牌号 Material Trademark	适用条件	适用场合
JF-800	很高的耐疲劳强度和承载能力, 抗冲击能力强, 耐磨性、耐腐蚀性好 Very good resistance to fatigue strength, with high shock resistance and good corrosion resistance.	中速、高冲击载荷的衬套, 内燃机连杆活塞销衬套 Fit for middle load, high speed, bushes, washer and connecting rod bearing in internal combustion engine used in mechanical equipment and high shock bushing.
JF-720	较高的耐疲劳强度和承载能力、较好的滑动性能, 易受润滑油腐蚀 Good resistance to fatigue strength and high load capacity, good performance of sliding, liable to be corrupted by lubricating oil.	中载中速、高速内燃机主轴套和连杆轴套 middle load middle speed, principle axis of internal combustion engine.
JF-700	较高的耐疲劳强度、承载能力、抗冲击能力 Good resistance to fatigue strength, load capacity, shock resistance and corrosion.	用于内燃机主轴和连杆轴承、止推垫片 Principle axis of internal combustion engine, connecting rod bushing.
JF-20	良好的抗咬性、异物埋没性, 工作表面镀软合金层 Good performance of anti-seizing, covering eyewinker, soft alloy be plated on working surface.	高速中低载荷的内燃机主轴套, 连杆轴套 High speed, middle or low load, principle axis internal combustion engine
JF-930	中等的耐疲劳强度和承载能力, 良好的抗腐蚀性能, 较好轴承滑动性能。 Moderate fatigue strength, and load capacity, good performance of bearing sliding.	高速低载的内燃机轴瓦、气压机、制冷机轴套 High speed, low load, internal combustion engine half bearing, bushing used in compressing and refrigerating machine.

JF-800/720/700/20/930 标准公制轴套 Metric Standard Bushing

轴套外径公差表

Bushing O.D.Tolerances Table

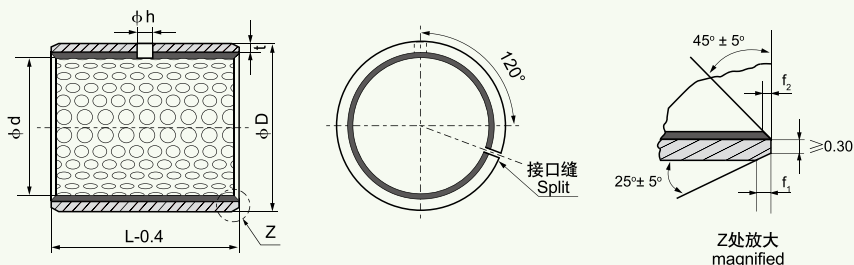
外径 ϕD Outer Diameter ϕD	外径公差 Outer Diameter Tolerance
$\phi D \leq 10$	+0.055 +0.025
$10 < \phi D \leq 18$	+0.065 +0.030
$18 < \phi D \leq 30$	+0.075 +0.035
$30 < \phi D \leq 50$	+0.085 +0.045
$50 < \phi D \leq 80$	+0.100 +0.055
$80 < \phi D \leq 120$	+0.120 +0.070
$120 < \phi D \leq 180$	+0.170 +0.100

轴套壁厚公差

Bushing Wall Thickness Tolerances Table

内径 ϕd Inner Diameter ϕd	壁厚公差 t Wall Thickness Tolerance
$8 < \phi d \leq 18$	$1.0 \begin{smallmatrix} 0 \\ -0.030 \end{smallmatrix}$
$18 < \phi d \leq 25$	$1.5 \begin{smallmatrix} 0 \\ -0.030 \end{smallmatrix}$
$25 < \phi d < 45$	$2.0 \begin{smallmatrix} 0 \\ -0.035 \end{smallmatrix}$
$45 \leq \phi d \leq 150$	$2.5 \begin{smallmatrix} 0 \\ -0.050 \end{smallmatrix}$

JF-800/720/700/20/930标准公制轴承 Metric Standard Bushing



※标准直套标注方式: Standard Bushing Label Mode JF □ 1015

单位Unit: mm

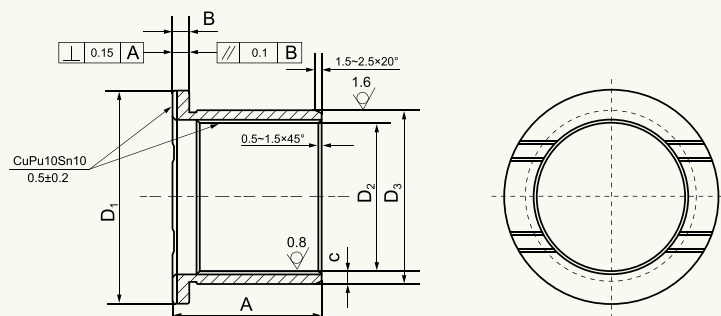
型号 Type	外径 ϕD	内径 ϕd	相配轴径 Axle	相配座孔 Housing H7	Hole ϕh	f_1	f_2	L - 0.4					
								15	20	25	30	40	50
JF □	12	10	10 ^{-0.013 -0.028}	12 ^{+0.018 0}	$\phi 4$	0.6	0.3	1015	1020				
JF □	14	12	12 ^{-0.016 -0.034}	12 ^{+0.018 0}				1215	1220				
JF □	16	14	14 ^{-0.016 -0.034}	16 ^{+0.018 0}				1415	1420				
JF □	17	15	15 ^{-0.016 -0.034}	17 ^{+0.018 0}				1515	1520	1525			
JF □	18	16	16 ^{-0.016 -0.034}	18 ^{+0.018 0}				1615	1620	1625			
JF □	19	17	17 ^{-0.016 -0.034}	19 ^{+0.021 0}				1715	1720	1725			
JF □	20	18	18 ^{-0.016 -0.034}	20 ^{+0.021 0}				1815	1820	1825			
JF □	23	20	20 ^{-0.020 -0.041}	23 ^{+0.021 0}	$\phi 6$	0.8	0.4	2015	2020	2025			
JF □	25	22	22 ^{-0.020 -0.041}	25 ^{+0.021 0}					2220	2225	2230		
JF □	27	24	24 ^{-0.020 -0.041}	27 ^{+0.021 0}					2420	2425	2430		
JF □	28	25	25 ^{-0.020 -0.041}	28 ^{+0.021 0}					2520	2525	2530		
JF □	30	26	26 ^{-0.020 -0.041}	30 ^{+0.021 0}					2620	2625	2630		
JF □	32	28	28 ^{-0.020 -0.041}	32 ^{+0.025 0}					2820	2825	2830		
JF □	34	30	30 ^{-0.020 -0.041}	34 ^{+0.025 0}					3020	3025	3030		
JF □	36	32	32 ^{-0.025 -0.050}	36 ^{+0.025 0}	$\phi 8$	1.2	0.6		3220	3225	3230	3240	
JF □	39	35	35 ^{-0.025 -0.050}	39 ^{+0.025 0}					3520	3525	3530	3540	
JF □	42	38	38 ^{-0.025 -0.050}	42 ^{+0.025 0}					3820	3825	3830	3840	
JF □	44	40	40 ^{-0.025 -0.050}	44 ^{+0.025 0}						4025	4030	4040	
JF □	50	45	45 ^{-0.025 -0.050}	50 ^{+0.025 0}						4525	4530	4540	
JF □	55	50	50 ^{-0.025 -0.050}	55 ^{+0.025 0}							5030	5040	5050
JF □	60	55	55 ^{-0.030 -0.060}	60 ^{+0.030 0}							5530	5540	5550

JF-800/720/700/20/930标准公制轴承 Metric Standard Bushing



型号 Type	外径 φ D	内径 φ d	相配轴径 Axle	相配座孔 Housing H7	Hole φ h ₁	f ₁	f ₂	L – 0.4					
								40	50	60	70	80	100
JF □	65	60	60 ^{-0.030 -0.060}	65 ^{+0.030 0}	φ 8	1.6	0.8	6040	6050	6060			
JF □	70	65	65 ^{-0.030 -0.060}	70 ^{+0.030 0}				6540	6550	6560			
JF □	80	75	75 ^{-0.030 -0.060}	80 ^{+0.030 0}	φ 9.5			7540	7550	7560			
JF □	85	80	80 ^{-0.030 -0.060}	85 ^{+0.035 0}				8040	8050	8060			
JF □	90	85	85 ^{-0.036 -0.071}	90 ^{+0.035 0}					8550	8560	8570		
JF □	95	90	90 ^{-0.036 -0.071}	95 ^{+0.035 0}					9050	9060	9070		
JF □	100	95	95 ^{-0.036 -0.071}	100 ^{+0.035 0}					9550	9560	9570		
JF □	105	100	100 ^{-0.036 -0.071}	105 ^{+0.035 0}					10050	10060	10070		
JF □	110	105	105 ^{-0.036 -0.071}	110 ^{+0.035 0}					10550	10560	10570		
JF □	115	110	110 ^{-0.036 -0.071}	115 ^{+0.035 0}					11050	11060	11070		
JF □	120	115	115 ^{-0.036 -0.071}	120 ^{+0.035 0}						11560	11570	11580	
JF □	125	120	120 ^{-0.036 -0.071}	125 ^{+0.040 0}						12060	12070	12080	
JF □	130	125	125 ^{-0.043 -0.083}	130 ^{+0.040 0}						12560	12570	12580	
JF □	135	130	130 ^{-0.043 -0.083}	135 ^{+0.040 0}						13060	13070	13080	
JF □	145	135	135 ^{-0.043 -0.083}	145 ^{+0.040 0}								13580	135100
JF □	150	145	145 ^{-0.043 -0.083}	150 ^{+0.040 0}								14580	145100
JF □	155	150	150 ^{-0.043 -0.083}	155 ^{+0.040 0}								15080	150100

JF-800/720/700/20/930 双金属翻边轴承 Metric Standard Bushing



D_1	B	D_3	D_2	A	C
42	3.5	37	30	30	3.5
43	2	34	30	28	2
44	3.5	39	32	35	3.5
47	3.5	39	32	50	3.5
48	2	39	35	37	2
52	3	41	35	35	3
55	3.5	42	35	35	3.5
55	3.5	45	38	35	3.5
55	3.5	45	38	40	3.5
60	3	41	35	42	3
60	3	46	40	62	3
63	3.5	47	40	40	3.5
65	3.5	52	45	40	3.5
68	3.5	54	47	35	3.5
70	3.5	54	47	40	3.5
70	3.5	57	50	48	3.5
72	3.5	57	50	45	3.5
72	3.5	57	50	50	3.5
75	3.5	57	50	50	3.5
77	3	60	54	55	3
83	3.5	66	59	53	3.5
85	3.5	65	58	60	3.5
87	3.5	67	60	53	3.5
87	3.5	67	60	60	3.5

D_1	B	D_3	D_2	A	C
87	3.5	67	60	65	3.5
87	4	68	60	60	4
94	3.5	72	65	60	3.5
87	3.5	72	65	65	3.5
87.5	1.95	69.12	65.22	64.5	2
88	3.5	67	60	60	3.5
88	3.5	72	65	65	3.5
92	3.5	77	70	67	3.5
93	3.5	75	68	60	3.5
94	3.5	77	70	70	3.5
95	3.5	77	70	65	3.5
95	4	78	70	70	4
97	3.48	77.14	70.18	62	3.5
97	3.5	82	75	74	3.5
100	5	85	75	70	5
103	3.525	70.8	63.75	73	3.5
105	3.5	82	75	75	3.5
105	3.5	87	80	70	3.5
107	4	83	75	74	4
115	5	100	90	75	5
128	3.8	92.6	85	103	4
108	3.5	72	65	75	3.5
108	3.5	77	70	98	3.5
108	5	80	70	90	5

以上规格外径推荐公差 (+0.12 ~ +0.16)，配合轮体内孔 (+0.03 ~ +0.05)；
内孔推荐公差 (+0.20 ~ +0.25)，配合轴 (-0.14 ~ -0.16)。

□ 基材特性 Material Features

该产品以优质低碳钢为基体，表面烧结锡青铜合金，经多次烧结轧制而成，具有很高的疲劳强度和承载能力，高的抗冲击力。经过技术人员的进一步优化工艺，广泛应用到工程机械底盘四轮，空调压缩机等部位。特别在挖掘机四轮部位已广泛替代离心浇铸式双金属轴套，改善了原工艺材料不稳定，合金层偏心，材料浪费严重等缺点，在满足客户性能要求的前提下，进一步提高性价比，降低采购成本。

It is made of high quality low-carbon steel, and sintered and rolled copper alloy as its surface. It has high fatigue strength, load capacity and impact strength. The product is applies to con-rod of automobile engines, transmission gearbox, engineering and agriculture machinery, etc.



FB090 青铜自润滑轴承
Bronze self-lubricating bearing

该产品以特殊配方的高密度铜合金带材为基体，表面轧制菱形油穴或半球形的油穴，具有密度高，承载压力大，耐磨性能好，使用寿命长。产品被广泛应用于起重机械、建筑机械、机床工业、采矿机械等领域。

FB090 Bronze self-lubricating bearings used a kind of high density broze alloy of special compositions as base, surface of alloy is rolled diamond type of the oil indents or half ball oil indents, this kind of bearing has higher density, load capacity, well wearing performance, longer lifetime. It has been widely used in many fields, such as hoist machines, building machinery, machine tool industry and mining machinery.

※技术参数：Technical Data

性能指标 Performance index		数据 Data
最大承载 P Max Load Capacity	静载 Static load	120N/mm ²
	动载 Dynamic load	40N/mm ²
最高线速度 V Max Sliding Speed		2.0m/s
最高PV值 Max PV Value Limit		2.8N/mm ² · m/s
摩擦系数 μ Friction coefficient		0.08 ~ 0.25
使用温度 Working TEMP		-100℃ ~ +200℃
导热系数 Thermal conductivity		60W/m · K
热膨胀系数 Coefficient of thermal expansion		15 × 10 ⁻⁶ /K

※材料特性：Material Characterisitc

材料 Material	化学成份 Chemical Composition			机械性能 Machine Performance		
	Cu%	Sn%	P%	抗拉强度 Tensile Strength	屈服强度 Yield Point	延伸率 Elongation
CuSn8	Rest	7.0 ~ 9.0	0.03 ~ 0.45	450N/mm ²	250N/mm ²	40%



FB092 青铜冲孔自润滑轴承
Bronze self-lubricating bearing with through holes

该产品CuSn8为基体，工作表面布满有规则油孔，具有承载高、耐磨性能好、摩擦系数低。产品被广泛应用于输送机、升降机、卷扬机、农用机械等。

FB092 Bronze punch hole self-lubricating bearing used CuSn8 as base, designed regular oil holes bestrewn working surface, it has high load capacity, well wearing resistance and low friction coefficient, it has been widely applied to transportation machinery, elevator, coiling machinery and agriculture equipment.

※技术参数：Technical Data

性能指标 Performance index		数据 Data
最大承载 P Max Load Capacity	静载 Static load	250N/mm ²
	动载 Dynamic load	140N/mm ²
最高线速度 V Max Sliding Speed		2.5m/s
最高PV值 Max PV Value Limit		2.8N/mm ² · m/s
摩擦系数 μ Friction coefficient		0.05 ~ 0.25
使用温度 Working temperature		-40℃ ~ +130℃
导热系数 Thermal conductivity		4W/m · K
热膨胀系数 Coefficient of thermal expansion		11 × 10 ⁻⁶ /K



FB09G 青铜固体自润滑轴承
Bronze with graphite solid-lubricating bearing

该产品CuSn8为基体，表面轧制螺旋角度菱形油穴，内嵌石墨或二硫化钼，润滑面积25%。具有摩擦系数小，良好的润滑性和抗磨性。产品被广泛应用于汽车起动电机，发电机，汽机车离合器等。

FB09G bronze solid self-lubricating bearing used CuSn8 as base, agglomerated by porous bronze powder, surface of alloy is rolled the spirally diamond type of the oil hole, embedded lead and molybdenum disulfide, the lubrication area of the bearing surface is being about 25%. Characterized by low friction coefficient, good lubricating action and wear resistant action. This type of bearing is particularly applied in starting motor for automobiles, generators, automotive clutch parts etc.

※技术参数：Technical Data

性能指标 Performance index		数据 Data
最大承载 P Max Load Capacity	静载 Static load	120N/mm ²
	动载 Dynamic load	40N/mm ²
最高线速度 V Max Sliding Speed		2.5m/s
最高PV值 Max PV Value Limit		2.8N/mm ² · m/s
摩擦系数 μ Friction coefficient		0.05 ~ 0.25
使用温度 Working TEMP		-100℃ ~ +200℃
导热系数 Thermal conductivity		60W/m · K
热膨胀系数 Coefficient of thermal expansion		15 × 10 ⁻⁶ /K



FB08G 双金属固体自润滑轴承
Bimetallic solid self-lubricating bearing

该产品以优质低碳钢为基体，表面烧结青铜粉，适用于高载低速下的旋转，摇摆运动。具有摩擦系数低、耐磨性能好、使用寿命长、抗咬合性能好等特点，铜合金层可根据要求加工出各种类型的油穴、油槽。产品被广泛应用于矿山机械、汽机车、建筑机械、农用机械、轧钢机械等。

FB08G Bimetallic solid self-lubricating bearing based on high quality low-carbon steel backing, sintered porous bronze as its surface. Surface of alloy is rolled the spirally diamond type of the oil pockets, embedded lead and molybdenum disulfide, the lubrication area of the bearing surface is being about 25%. Performed well by low friction coefficient, good lubricating action and wear resistant action. Particularly suit for starting motor for automobiles, generators, hoisting machines and metallurgical machinery.

※技术参数：Technical Data

性能指标 Performance index		数据 Data
最大承载 P Max Load Capacity	干摩擦 Dry friction	70N/mm ²
	油润滑 Oil lubrication	90N/mm ²
最高线速度 V Max Sliding Speed	干摩擦 Dry friction	0.4m/s
	油润滑 Oil lubrication	2.0m/s
最高PV值 Max PV Value Limit	干摩擦 Dry friction	2.6N/mm ² · m/s
	油润滑 Oil lubrication	15N/mm ² · m/s
摩擦系数 μ Friction coefficient	干摩擦 Dry friction	< 0.22
	油润滑 Oil lubrication	< 0.08
使用温度 Working temperature	干摩擦 Dry friction	250℃
	油润滑 Oil lubrication	200℃
导热系数 Thermal conductivity		76W/m · K
热膨胀系数 Coefficient of thermal expansion		22 × 10 ⁻⁶ /K

轴套外径公差表
Bushing O.D.Tolerances Table

外径 ϕD Outer Diameter ϕD	外径公差 Outer Diameter Tolerance
$\phi D \leq 10$	+0.055 +0.025
$10 < \phi D \leq 18$	+0.065 +0.030
$18 < \phi D \leq 30$	+0.075 +0.035
$30 < \phi D \leq 50$	+0.085 +0.045
$50 < \phi D \leq 80$	+0.100 +0.055
$80 < \phi D \leq 120$	+0.120 +0.070
$120 < \phi D \leq 180$	+0.170 +0.100
$180 < \phi D \leq 250$	+0.210 +0.130
$250 < \phi D \leq 305$	+0.260 +0.170

轴套内径公差
Bushing Inner Diameter Tolerances Table

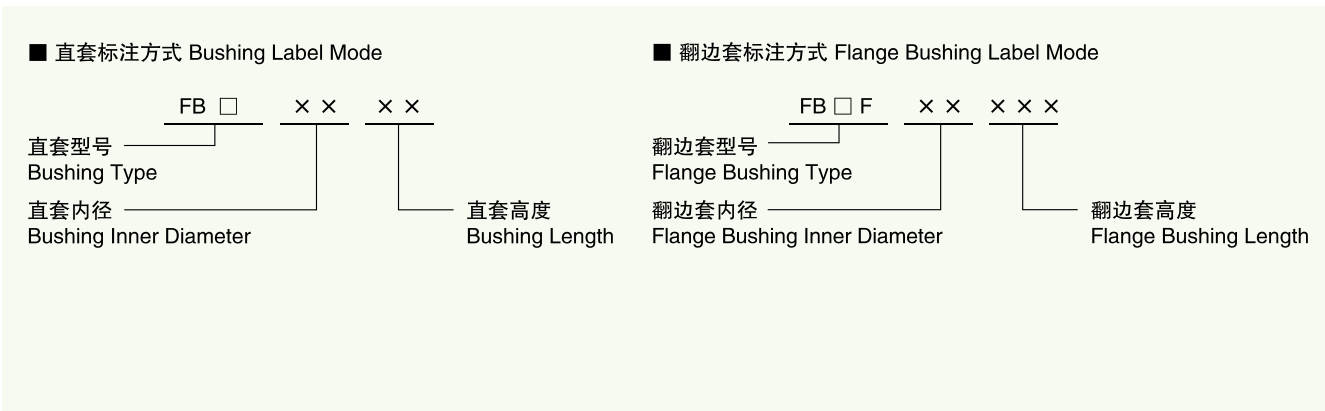
内径 ϕd Inner Diameter ϕd	安装后内径公差H9 Inner Diameter Tolerance
$\phi d \leq 10$	+0.036 0
$10 < \phi d \leq 18$	+0.043 0
$18 < \phi d \leq 30$	+0.052 0
$30 < \phi d \leq 50$	+0.062 0
$50 < \phi d \leq 80$	+0.074 0
$80 < \phi d \leq 120$	+0.087 0
$120 < \phi d \leq 180$	+0.100 0
$180 < \phi d \leq 250$	+0.115 0
$250 < \phi d \leq 350$	+0.130 0

※材料特性: Material Characterisitc

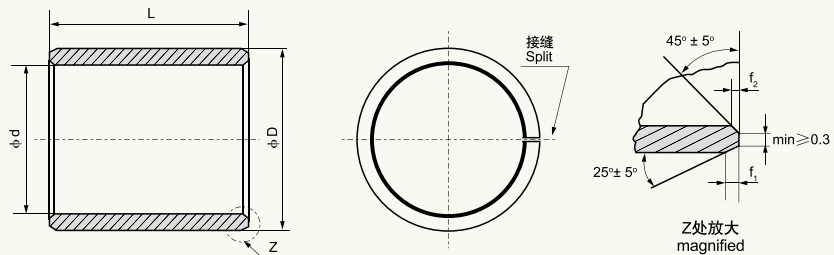
外径 ϕD Out Diameter ϕD	0 ~ 10	10 ~ 18	18 ~ 30	30 ~ 50	50 ~ 80	80 ~ 120	120 ~ 180	180 ~ 250
坐孔H7中值 Housing H7 Middle	D+0.008	D+0.009	D+0.011	D+0.013	D+0.015	D+0.018	D+0.020	D+0.023

FB090/092/09G/08G 系列产品压入座孔H7中值, 内孔精度达到H9
FB090/092/09G/08G Series products press into Housing H7 Middle, accuracy of inner diameter can reach H9.

可供标准产品的标注方式
Standard Bushing Label Mode



FB090/092/09G/08G 标准公制轴承 Metric Standard Bushing



※标准直套标注方式: Standard Bushing Label Mode FB □ 1010

单位Unit: mm

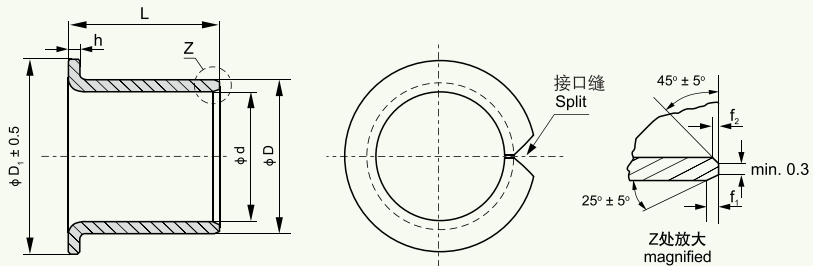
型号 Type	外径 φ D	内径 φ d	相配轴径 Axle	相配座孔 Housing	f ₁	f ₂	L ± 0.25						
							10	15	20	25	30	40	50
FB □	12	10	10 ^{-0.013 -0.028}	12 ^{+0.018 0}	0.6	0.3	1010	1015	1020				
FB □	14	12	12 ^{-0.016 -0.034}	14 ^{+0.018 0}			1210	1215	1220				
FB □	16	14	14 ^{-0.016 -0.034}	16 ^{+0.018 0}				1415	1420				
FB □	17	15	15 ^{-0.016 -0.034}	17 ^{+0.018 0}				1515	1520	1525			
FB □	18	16	16 ^{-0.016 -0.034}	18 ^{+0.018 0}				1615	1620	1625			
FB □	19	17	17 ^{-0.016 -0.034}	19 ^{+0.021 0}				1715	1720	1725			
FB □	20	18	18 ^{-0.016 -0.034}	20 ^{+0.021 0}	0.8	0.4		1815	1820	1825			
FB □	23	20	20 ^{-0.020 -0.041}	23 ^{+0.021 0}				2015	2020	2025	2030		
FB □	25	22	22 ^{-0.020 -0.041}	25 ^{+0.021 0}				2215	2220	2225	2230		
FB □	27	24	24 ^{-0.020 -0.041}	27 ^{+0.021 0}					2420	2425	2430		
FB □	28	25	25 ^{-0.020 -0.041}	28 ^{+0.021 0}	1.2	0.6			2520	2525	2530		
FB □	32	28	28 ^{-0.020 -0.041}	32 ^{+0.025 0}					2820	2825	2830		
FB □	34	30	30 ^{-0.020 -0.041}	34 ^{+0.025 0}					3020	3025	3030	3040	
FB □	36	32	35 ^{-0.025 -0.050}	36 ^{+0.025 0}					3220	3225	3230	3240	
FB □	39	35	35 ^{-0.030 -0.060}	39 ^{+0.025 0}					3520	3525	3530	3540	
FB □	44	40	40 ^{-0.025 -0.050}	44 ^{+0.025 0}	1.6	0.8			4020	4025	4030	4040	
FB □	50	45	45 ^{-0.025 -0.050}	50 ^{+0.025 0}					4520	4525	4530	4540	
FB □	55	50	50 ^{-0.025 -0.050}	55 ^{+0.030 0}							5030	5040	5050
FB □	60	55	55 ^{-0.030 -0.060}	60 ^{+0.030 0}							5530	5540	5550
FB □	65	60	60 ^{-0.030 -0.060}	65 ^{+0.030 0}							6030	6040	6050
FB □	70	65	65 ^{-0.030 -0.060}	70 ^{+0.030 0}							6530	6540	6550
FB □	75	70	70 ^{-0.030 -0.060}	75 ^{+0.030 0}							7030	7040	7050

FB090/092/09G/08G 标准公制轴承 Metric Standard Bushing



型号 Type	外径 φ D	内径 φ d	相配轴径 Axle	相配座孔 Housing	f1	f2	L ± 0.25					
							40	50	60	80	100	120
FB □	80	75	75 $\begin{smallmatrix} -0.030 \\ -0.060 \end{smallmatrix}$	80 $\begin{smallmatrix} +0.030 \\ 0 \end{smallmatrix}$	1.6	0.8	7540	7550	7560			
FB □	85	80	80 $\begin{smallmatrix} -0.030 \\ -0.060 \end{smallmatrix}$	85 $\begin{smallmatrix} +0.035 \\ 0 \end{smallmatrix}$			8040	8050	8060			
FB □	90	85	85 $\begin{smallmatrix} -0.036 \\ -0.071 \end{smallmatrix}$	90 $\begin{smallmatrix} +0.035 \\ 0 \end{smallmatrix}$			8540	8550	8560			
FB □	95	90	90 $\begin{smallmatrix} -0.036 \\ -0.071 \end{smallmatrix}$	95 $\begin{smallmatrix} +0.035 \\ 0 \end{smallmatrix}$				9050	9560	9580		
FB □	100	95	95 $\begin{smallmatrix} -0.036 \\ -0.071 \end{smallmatrix}$	100 $\begin{smallmatrix} +0.035 \\ 0 \end{smallmatrix}$				9550	9560	9580		
FB □	105	100	100 $\begin{smallmatrix} -0.036 \\ -0.071 \end{smallmatrix}$	105 $\begin{smallmatrix} +0.035 \\ 0 \end{smallmatrix}$				10050	10060	10080	100100	
FB □	110	105	105 $\begin{smallmatrix} -0.036 \\ -0.071 \end{smallmatrix}$	110 $\begin{smallmatrix} +0.035 \\ 0 \end{smallmatrix}$				10550	10560	10580	105100	
FB □	115	110	110 $\begin{smallmatrix} -0.036 \\ -0.071 \end{smallmatrix}$	115 $\begin{smallmatrix} +0.035 \\ 0 \end{smallmatrix}$				11050	11060	11080	110100	
FB □	120	115	115 $\begin{smallmatrix} -0.036 \\ -0.071 \end{smallmatrix}$	120 $\begin{smallmatrix} +0.035 \\ 0 \end{smallmatrix}$				11550	11560	11580	115100	
FB □	125	120	120 $\begin{smallmatrix} -0.036 \\ -0.071 \end{smallmatrix}$	125 $\begin{smallmatrix} +0.040 \\ 0 \end{smallmatrix}$					12060	12080	12100	
FB □	130	125	125 $\begin{smallmatrix} -0.043 \\ -0.083 \end{smallmatrix}$	130 $\begin{smallmatrix} +0.040 \\ 0 \end{smallmatrix}$					12560	12580	125100	
FB □	135	130	130 $\begin{smallmatrix} -0.043 \\ -0.083 \end{smallmatrix}$	135 $\begin{smallmatrix} +0.040 \\ 0 \end{smallmatrix}$					13060	13080	130100	
FB □	140	135	135 $\begin{smallmatrix} -0.043 \\ -0.083 \end{smallmatrix}$	140 $\begin{smallmatrix} +0.040 \\ 0 \end{smallmatrix}$					13560	13580	135100	
FB □	145	140	140 $\begin{smallmatrix} -0.043 \\ -0.083 \end{smallmatrix}$	145 $\begin{smallmatrix} +0.040 \\ 0 \end{smallmatrix}$					14060	14080	140100	
FB □	150	145	145 $\begin{smallmatrix} -0.043 \\ -0.083 \end{smallmatrix}$	150 $\begin{smallmatrix} +0.040 \\ 0 \end{smallmatrix}$					14560	14580	145100	
FB □	160	155	155 $\begin{smallmatrix} -0.043 \\ -0.083 \end{smallmatrix}$	160 $\begin{smallmatrix} +0.040 \\ 0 \end{smallmatrix}$						15580	155100	155120
FB □	170	165	165 $\begin{smallmatrix} -0.043 \\ -0.083 \end{smallmatrix}$	170 $\begin{smallmatrix} +0.040 \\ 0 \end{smallmatrix}$						16580	165100	165120
FB □	180	175	175 $\begin{smallmatrix} -0.043 \\ -0.083 \end{smallmatrix}$	180 $\begin{smallmatrix} +0.040 \\ 0 \end{smallmatrix}$						17580	175100	175120
FB □	190	185	185 $\begin{smallmatrix} -0.050 \\ -0.096 \end{smallmatrix}$	190 $\begin{smallmatrix} +0.046 \\ 0 \end{smallmatrix}$						18580	185100	185120
FB □	200	195	195 $\begin{smallmatrix} -0.050 \\ -0.096 \end{smallmatrix}$	200 $\begin{smallmatrix} +0.046 \\ 0 \end{smallmatrix}$						19580	195100	195120
FB □	210	205	205 $\begin{smallmatrix} -0.050 \\ -0.096 \end{smallmatrix}$	210 $\begin{smallmatrix} +0.046 \\ 0 \end{smallmatrix}$						20580	205100	205120
FB □	220	215	215 $\begin{smallmatrix} -0.050 \\ -0.096 \end{smallmatrix}$	220 $\begin{smallmatrix} +0.046 \\ 0 \end{smallmatrix}$						21580	215100	215120
FB □	230	225	225 $\begin{smallmatrix} -0.050 \\ -0.096 \end{smallmatrix}$	230 $\begin{smallmatrix} +0.046 \\ 0 \end{smallmatrix}$						22580	225100	225120
FB □	240	235	235 $\begin{smallmatrix} -0.050 \\ -0.096 \end{smallmatrix}$	240 $\begin{smallmatrix} +0.046 \\ 0 \end{smallmatrix}$						23580	235100	235120
FB □	250	245	245 $\begin{smallmatrix} -0.050 \\ -0.096 \end{smallmatrix}$	250 $\begin{smallmatrix} +0.046 \\ 0 \end{smallmatrix}$						24580	245100	245120
FB □	265	260	260 $\begin{smallmatrix} -0.056 \\ -0.108 \end{smallmatrix}$	265 $\begin{smallmatrix} +0.052 \\ 0 \end{smallmatrix}$						26080	260100	260120
FB □	285	280	280 $\begin{smallmatrix} -0.056 \\ -0.108 \end{smallmatrix}$	285 $\begin{smallmatrix} +0.052 \\ 0 \end{smallmatrix}$						28080	280100	280120
FB □	305	300	300 $\begin{smallmatrix} -0.056 \\ -0.108 \end{smallmatrix}$	305 $\begin{smallmatrix} +0.052 \\ 0 \end{smallmatrix}$						30080	300100	300120

FB090/092 标准公制轴承 Metric Standard Bushing



※标准直套标注方式: Standard Bushing Label Mode SF-4 □ 1010

单位Unit: mm

型号 Type	内径 φ d	外径 φ D	法兰外径 φ D ₁ ± 0.5	法兰壁厚 h ⁰ _{-0.20}	高度 L ± 0.25	f ₁	f ₂	相配轴径 Axle		相配座孔 Housing	
FB □ F 2520	25	28	35	1.5	20	0.8	0.4	25	-0.020 -0.041	28	+0.021 0
FB □ F 2525					25						
FB □ F 3020	30	34	45	2.0	20	1.2	0.6		-0.020 -0.041	34	+0.025 0
FB □ F 3025					25						
FB □ F 3030					30						
FB □ F 3530	35	39	50		30				-0.025 -0.050	39	+0.025 0
FB □ F 3540					40						
FB □ F 3550					50						
FB □ F 4030	40	44	55		30				-0.025 -0.050	44	+0.025 0
FB □ F 4040					40						
FB □ F 4050					50						
FB □ F 5030	50	55	65	2.5	30	1.6	0.8		-0.025 -0.050	55	+0.030 0
FB □ F 5040					40						
FB □ F 5050					50						
FB □ F 5530	55	60	70		30				-0.030 -0.060	60	+0.030 0
FB □ F 5540					40						
FB □ F 5550					50						
FB □ F 6040	60	65	75		40				-0.030 -0.060	65	+0.030 0
FB □ F 6050					50						
FB □ F 6060					60						
FB □ F 8050	80	85	100		50				-0.030 -0.060	85	+0.035 0
FB □ F 8060					60						
FB □ F 8080					80						
FB □ F 10050	100	105	120		50				-0.036 -0.071	105	+0.035 0
FB □ F 10060					60						
FB □ F 10080					80						
FB □ F 16060	160	165	190		60				-0.043 -0.083	165	+0.040 0
FB □ F 16080					80						
FB □ F 20060	200	205	235		60				-0.050 -0.096	205	+0.046 0
FB □ F 20080					80						



JDB 镶嵌式固体润滑轴承 Solid-lubricant inlaid bearing

该产品以高强度铜合金为基体，镶嵌特殊配方的固体润滑剂和润滑油，在摩擦过程中逐步释放润滑油和固体润滑剂。产品被广泛应用于注塑机，汽车模具、工程机械、食品机械、水轮机轴承等。

JDB Solid-lubricant inlaid bearing use high grade metal alloys as their base material, inlaid graphite and grease during the process of friction, it will release solidlubricant and lubricant oil automatically. The products are widely used in injection molding, automobile mold, engineering machine, food machinery and water turbines, etc.

※合金材料：Metal Material

对应牌号 Corresponding brands	型号 Type	JDB-1	JDB-2	JDB-3	JDB-4	JDB-5	JDB-6
国际牌号 GB1776-87 China Brands GB1776-87		ZCuZn25 Al6Fe3Mn3	ZCuZn25 Al6Fe3Mn3	ZCuAl9Fe4 Ni4Mn2	GCr15	HT250	ZCuSn10 Zn2
国际ISO1338 International ISO1338		GCuZn25 Al6Fe3Mn3	GCuZn25 Al6Fe3Mn3	GCuAl10 Fe3Ni5	B1	-	GCuSn10 Zn2
德国 DIN Germany DIN		G-CuZn25 Al5	G-CuZn25 Al5	G-CuAl10 Ni	100Cr6	-	G-CuSn10 Zn
日本JIS Japan JIS		HBsC4	HBsC4	AIBC3	SUJ2	FC250	BC3
美国 ASTM/UNS America ASTM/UNS		C86300	C86300	C95500	52100	Class40	C90500
英国标准 (BS) England Standard		HTB2	HTB2	AB2	-	-	G1

※技术参数：Technical Data

性能指标 Performance index	型号 Type	JDB-1	JDB-2	JDB-3	JDB-4	JDB-5	JDB-6
最大动承载 P(N/mm ²) Max Move Load Capacity		100	150	50	200	15	70
最大线速度 V(m/min) Max Sliding Speed		15	10	20	5	15	10
最高PV值 (N/mm ² · m/min) Max PV Value Limit		200	200	200	150	40	200
密度 ρ (g/cm ³) Density		8.0	8.0	7.6	7.8	7.3	8.8
抗拉强度 (N/mm ²) Tensile Strength		> 750	> 780	> 500	> 1500	> 250	> 350
延伸率(%) Elongation		> 12	> 4	> 10	-	-	> 8
硬度(HB) Hardness		> 210	> 250	> 150	HRC > 55	> 160	> 80
最高使用温度℃ Max Working Temperature		300	300	400	300	400	400
摩擦系数 μ Friction coefficient		油润滑：0.03 Oil Lubrication:0.03			干摩擦：0.16 Dry Friction:0.16		

JDB 铜基镶嵌式固体润滑轴承

Cast Bronze Solid-lubricant inlaid bearing



※材料合金化学成份：Alloy Chemical Compositions

化学元素 Chemical elements	JDB-1	JDB-2	JDB-3	JDB-4	JDB-5	JDB-6
Cu(%)	Rest	Rest	Rest	—	—	Rest
Sn(%)	—	—	—	—	—	10
Zn(%)	25	25	—	—	—	2
Ni(%)	—	—	4	—	—	—
Al(%)	6	6	9	—	—	—
Fe(%)	3	3	4	Rest	—	—
Mn(%)	3	3	2	0.20 ~ 0.40	—	—
Cr(%)	—	—	—	1.30 ~ 1.65	—	—
C(%)	—	—	—	0.95 ~ 1.05	—	—
Si(%)	—	—	—	0.15 ~ 0.35	—	—

※固体润滑剂：Solid Lubricants

固体润滑剂代号 Codes Of Solid Lubricants	SM01	SM02	SM03
主要成份 Main Compositions	石墨 Graphite	石墨+二硫化钼 Graphite+MoS2	聚四氟乙烯+石墨+石蜡 PTFE+Graphite+Olefin
特性 Features	很好的化学稳定性， 使用温度 < 250℃ Good chemical stability, temperature < 250℃	很好的耐磨性和化学稳定性， 使用温度 < 400℃ Good wear performance and chemical stability, temperature < 400℃	极低的摩擦系数和很好的水润滑性， 使用温度范围-40 ~ 80℃ Lowest friction coefficient and good water lubrication, temperature Rang -40 ~ 80℃
适用场合 Application Place	一般用(大气) General(atmosphere)	高温、高载荷 High temperature high load capacity	海(水)用，高压用 Seawater use, high pressure use

镶嵌式固体润滑轴承的特性

The Advantages of The Solid-lubricant Inlaid Bushing

1、无给油可使用

Dry operation.

2、高载荷、低转速的情况，仍可发挥优越的性能

Can be Performed well with high load and low speed.

3、往返运动、摇摆运动、起动停止频繁等油膜形成困难的场所，仍可发挥优越的耐磨性

Reciprocating motion, wagging motion, start and stop frequently are difficulty for keeping oil surface. It still may play advantageous of wear-resistance.

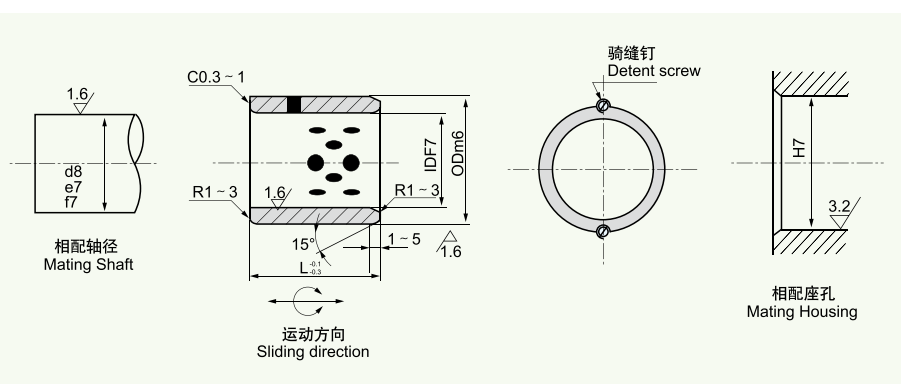
4、优越的耐药品性及耐蚀性

Excellent chemical resistance and low wear.

5、设计灵活、简单、方便，丰富的标准品，可配标准轴心使用

Flexible, simple, convenient and abundant designing of standard, can be choosed by standard axes.

JDB 铜基镶嵌式固体润滑轴承 Cast Bronze Solid-lubricant inlaid bearing



※标准产品标注方式：Standard Bushing Label Mode JDB □ 081208

单位Unit: mm

d	D	ID F7		OD m6		L ^{-0.10} / _{-0.30}												
						8	10	15	20	25	30	35	40	50	60			
8	12	8	+0.028 +0.013	12	+0.018 +0.007	081208	081210	081215										
10	14	10		14		101408	101410	101415	101420									
12	18	12	+0.034 +0.016	18	+0.021 +0.008		121810	121815	121820	121825								
13	19	13		19			131910	131915	131920									
14	20	14		20			142010	142015	142020	142025								
15	21	15		21			152110	152115	152120	152125								
16	22	16		22			162210	162215	162220	162225								
18	24	18		24				182415	182420	182425	182430							
20	28	20	+0.041 +0.020	28	+0.025 +0.009			202815	202820	202825	202830							
20	30	20		30					203020	203025	203030	203035						
22	32	22		32				223215	223220	223225	223230							
25	33	25		33				253315	253320	253325	253330	253335						
25	35	25		35				253515	253520	253525	253530	253535						
28	38	28		38					283820	283825	283830	283835						
30	38	30	+0.050 +0.025	38					303820	303825	303830	303835	303840					
30	40	30		40					304020	304025	304030	304035	304040					
32	42	32		42							324230	324235	324240					
35	45	35		45							354530	354535	354540	354550				
38	48	38		48							384830	384835	384840	384850				
40	50	40		50							405030	405035	405040	405050	405060			

JDB 铜基镶嵌式固体润滑轴承

Cast Bronze Solid-lubricant inlaid bearing

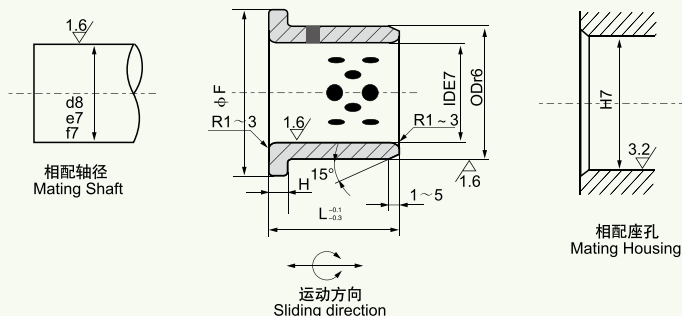


d	D	ID F7		OD m6		L $\begin{smallmatrix} -0.10 \\ -0.30 \end{smallmatrix}$							
						30	35	40	50	60	70	80	100
40	55	40	+0.050 +0.025	55	+0.030 +0.011	405530	405535	405540	405550	405560			
45	60	45		60			456035	456040	456050	456060			
50	60	50		60			506035	506040	506050	506060	506070		
50	62	50		62			506235	506240	506250	506260	506270		
50	65	50		65				506540	506550	506560	506570		
55	70	55	+0.060 +0.030	70				557040	557050	557060	557070		
60	74	60		74				607440	607450	607460	607470		
60	75	60		75				607540	607550	607560	607570		
63	75	63		75					637550	637560	637570		
65	80	65		80					658050	658060	658070	658080	
70	85	70		85	+0.035 +0.013				708550	708560	708570	708580	
70	90	70		90					709050	709060	709070	709080	
75	90	75		90						759060	759070	759080	
80	96	80		96					809650	809660	809670	809680	
80	100	80		100					8010050	8010060	8010070	8010080	
100	120	100		120						10012060	10012070	10012080	100120100
110	130	110	+0.071 +0.036	130	+0.040 +0.015						11013070	11013080	110130100
120	140	120		140							12014070	12014080	120140100
125	145	125	+0.083 +0.043	145								12514580	125145100
130	150	130		150								13015080	130150100
140	160	140		160								14016080	140160100
150	170	150		170								15017080	150170100
160	180	160		180								16018080	160180100

※推荐座孔公差H7，轴径公差d8(高承载)、e7(低承载)、f7(高精度)

Note: recommended tolerance of the housing is H7 and the diameter tolerance of the shaft is d8 (High Load).
e7 (Low Load) or f7 (High Precision)

JFB 铜基翻边镶嵌式固体润滑轴承 Cast Bronze Flanged Solid-lubricant inlaid bearing



※标准产品标注方式：Standard Bushing Label Mode JDB □ 1015

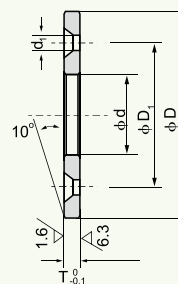
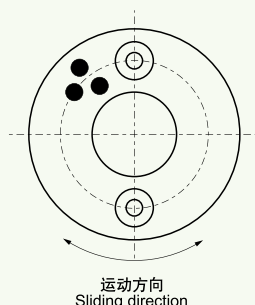
单位Unit: mm

ID F7		OD r6		F	H ⁰ _{-0.10}	L ^{-0.10} _{-0.30}									
						15	20	25	30	35	40	50	60	80	100
10	+0.040 +0.025	14	+0.034 +0.023	22	2	1015	1020								
12	+0.050 +0.032	18	+0.041 +0.028	25	3	1215	1220								
13		19		26		1315	1320								
14		20		27		1415	1420								
15		21		28		1515	1520	1525	1530						
16		22		29		1615	1620	1625	1630						
20	+0.061 +0.040	30		40	5		2020	2025	2030	2035					
25		35		45			2520	2525	2530	2535					
30		40		50			3020	3025	3030	3035	3040	3050			
35	45	60				3525	3530	3535	3540	3550					
40	50	65					4030	4035	4040	4050					
45	+0.075 +0.050	55	70				4530	4535	4540	4550	4560				
50		60	75						5050	5050	5060				
55		65	80						5540	5550	5560				
60	+0.090 +0.060	75	+0.062 +0.043	90		7.5					6040	6050	6060	6080	
70		85	+0.073 +0.051	105						7050	7060	7080			
75		90		110						7550	7560				
80		100		120	10							8060	8080	80100	
100	+0.107 +0.072	120	+0.076 +0.054	150							10060	10080	100100		
120		140	+0.088 +0.063	170								12060	12080	120100	

※推荐座孔公差H7，轴径公差d8(高承载)、e7(低承载)、f7(高精度)

Note: recommended tolerance of the housing is H7 and the diameter tolerance of the shaft is d8 (High Load).
e7 (Low Load) or f7 (High Precision)

JTW 止推垫片 Oilless Thrust Washers

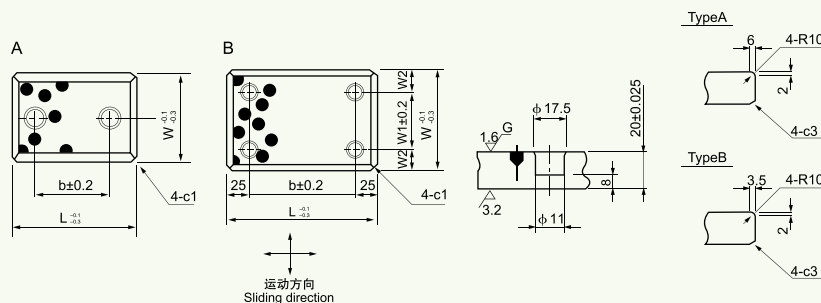


※标准产品标注方式: Standard Bushing Label Mode JFB □ 10

单位Unit: mm

型号规格 Designation	φ d	φ D	T ⁰ _{-0.10}	螺孔 Bolt Hole					
				φ D ₁	平头螺钉 Crop Bolt	孔数 Bore Number	φ d ₁		
JTW 10	10.2	30	3	20	M3	2	3.5		
JTW 12	12.2	40		28	M3	2	3.5		
JTW 13	13.2								
JTW 14	14.2			50	35	M3	2	3.5	
JTW 15	15.2								
JTW 16	16.2	-			-	-	-		
JTW 16A									
JTW 18	18.2	35	M3		2	3.5			
JTW 20	20.2		M5			6.0			
JTW 20A		25.2	55		5	-	-	-	-
JTW 25	40			M5		2	6		
JTW 25A	-			-		-	-		
JTW 30	30.2			60		45	M5	2	6
JTW 35	35.2			70		50			
JTW 40	40.2	80	7	60	M6	2	7		
JTW 45	45.3	90		67.5					
JTW 50	50.3	100	8	75	M6	4	7		
JTW 55	55.3	110		85					
JTW 60	60.3	120		90	M8	4	9		
JTW 70	70.3	130	10	100	M8	4	9		
JTW 75	75.3	140		110					
JTW 80	80.3	150		120					
JTW 90	90.5	170		140	M10	4	11		
JTW 100	100.5	190		160					
JTW 120	120.5	200		175					

JTWP 滑块 Wear Plate



※标准产品标注方式：Standard Bushing Label Mode JTWP □ 2875

单位Unit: mm

型号规格 Designation	W _{-0.10 -0.30}	L _{-0.10 -0.30}	W1	W2	b	类型 Type
JTWP 2875	28	75	-	-	45	A
JTWP 28100		100			50	
JTWP 28150		150			100	
JTWP 3875	38	75	-	-	45	
JTWP 38100		100			50	
JTWP 38150		150			100	
JTWP 4875	48	75	-	-	45	
JTWP 48100		100			50	
JTWP 48150		150			100	
JTWP 48200		200			150	
JTWP 5875	58	75	-	-	45	
JTWP 58100		100			50	
JTWP 58150		150			100	
JTWP 7575	75	75	-	-	25	
JTWP 75100		100			50	
JTWP 75125		125			75	
JTWP 75150		150			100	
JTWP 75200		200			150	
JTWP 100100	100	100	50	25	50	B
JTWP 100125		125			75	
JTWP 100150		150			100	
JTWP 100200		200			150	
JTWP 125125	125	125	50	37.5	75	
JTWP 125150		150			100	
JTWP 125200		200			150	
JTWP 150150	150	150	100	25	100	
JTWP 150200		200			150	
JTWP 150250		250			200	
JTWP 200200	200	200	150	25	150	
JTWP 200250		250			200	



钢球保持架 Retainer bearing

该产品是以铜合金(FZH)、铝合金 (FZL)、POM树脂(FZP)为保持架，表面加工有规则的孔穴，在其孔穴中镶嵌入滚动钢球，孔口用油槽圆周锁球工艺。产品被广泛应用冷冲模滚动模架、高精度机床、机床附件，以及高精度轴向或轴径向同时运动场合。

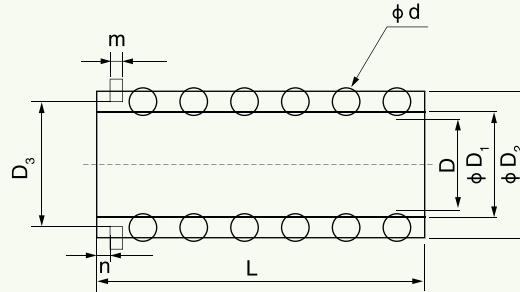
Retainer bearing made copper alloy, hard alloy and POM colophony as holding frame, the surface was processed some well-regulated holes, and embed the rolling steel balls in the holes, orifice used technics of oil groove circle locked ball. The products are widely used in punching machine, die machine, high precision machine which need rotation and vertical motion.

※标准产品标注方式：Standard Bushing Label Mode FZ □ 1950 × 3

单位Unit: mm

型号规格 Designation	φ D	H	φ d	E _N	M _N	Balls	t	T	
FZ □ 1950	19	50	3	12	8	96	5.5	5.75	
FZ □ 1960		60			10	120		5.25	
FZ □ 2050	20	50			8	96		5.75	
FZ □ 2060		60			10	120		5.25	
FZ □ 2250	22	50		14	8	112		5.75	
FZ □ 2260		60			10	140		5.25	
FZ □ 2360	23	60			10	140		5.25	
FZ □ 2475	24	75		16	13	208	5.45	4.80	
FZ □ 2550	25	50			8	128	5.5	5.75	
FZ □ 2560		60			10	160		5.25	
FZ □ 2775	27	75			13	208	5.45	4.80	
FZ □ 2860	28	60	4	14	8	112	6.5	7.25	
FZ □ 2875		75			11	154		5.0	
FZ □ 3060	30	60			8	112		7.25	
FZ □ 3075		75			11	154		5.0	
FZ □ 3260	32	60		16	8	128		7.25	
FZ □ 3275		75			11	176		5.0	
FZ □ 3685	36	85			12	192		6.75	
FZ □ 3690		90			13	208		6.0	
FZ □ 3870	38	70	5		18	8	128	8.0	7.0
FZ □ 3890		90				11	176	7.9	5.5
FZ □ 4090	40	90				11	176		5.5
FZ □ 4590	45	90		20	11	195	5.5		
FZ □ 45110		110			13	234	8.0	7.0	
FZ □ 5090	50	90		22	11	220	7.9	5.5	
FZ □ 50110		110			13	260	8.0	7.0	
FZ □ 6090	60	90		28	11	242	7.9	5.5	
FZ □ 60110		110			13	286	8.0	7.0	
FZ □ 80130	80	130		15	420	9.0			

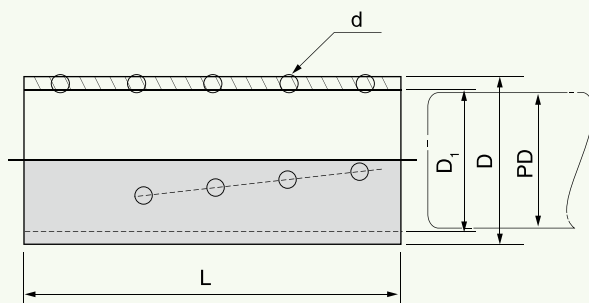
带卡簧密珠型钢球保持架 Retainer bearing



※标准产品标注方式：Standard Bushing Label Mode FZH 1848 × 3

单位Unit: mm

D	D ₁	D ₂	D ₃	d	m	n	L	钢球数量
12	12.4	15.6	14	2	1.1	2.5	40	132
							56	192
12	12.5	16.5	15	2.5	1.1	2.5	36	80
							48	110
							60	140
							72	180
16	16.5	21.5	20	3	1.3	2.8	34	70
							48	110
							63	150
18	18.5	23.5	22	3	1.3	2.8	48	120
							56	144
	20.5	25.5	24	3	1.3	2.8	60	156
							71	192
							76	204
20	20.5	25.5	24	3	1.3	2.8	48	120
							56	144
							71	192
							76	204
24	24.5	29.5	28	3	1.3	2.8	52	198
							70	270
							84	342
25	25.5	30.5	29	3	1.3	2.8	52	198
							70	270
							84	342
30	30.5	37.5	35	4	1.8	4.8	56	162
							70	216
							75	234
							90	288
							95	306
							110	360
32	32.5	39.4	37	4	1.8	4.8	56	162
							75	234
							95	306
							110	360

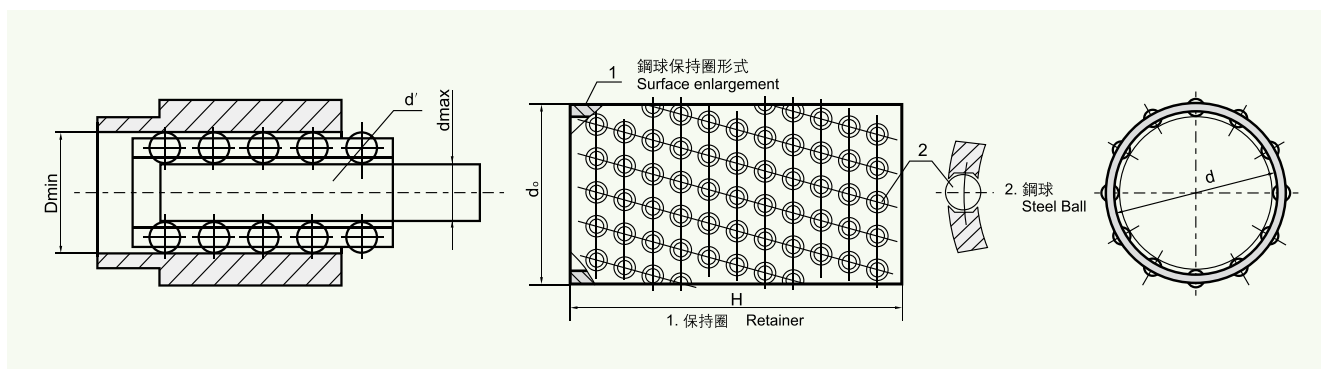


※标准产品标注方式：Standard Bushing Label Mode FZH 0815 × 1

单位Unit: mm

导向轴径	外径 ϕD	内径 ϕD_1	钢球直径 ϕd	PD	L
3	4.8	3.2	1	3	10
					15
					20
4	5.8	4.2	1	4	10
					15
					20
5	6.8	5.2	1	5	10
					15
					20
6	7.8	6.2	1	6	15
					20
					30
8	9.8	8.2	1	8	15
					20
					30
10	11.8	10.2	1	10	20
					30
					40
12	13.8	12.2	1	12	20
					30
					40

钢球保持架装配图





FU-1/2/3/4 粉末冶金轴承

Bronze self-lubricating bearing

该产品是以铜粉、铁粉为原料，经过模具压制，高温烧结后整形，真空吸油后而成。适用于中速，低载荷的场所。产品被广泛应用于家用电器、电动工具、纺织机械、化工机械、汽车工业和办公设备等。

FU-1/2/3/4 Powder metallurgy bearings as material is copper powder, iron powder. It is though a combination of mold pressing and sintering, inhale oil in vacuum. It is applied for middle speed, low load location. This is widely used in domestic electric and electronic machines, spinning and weaving machinery, chemical engineering machinery, automobiles and official business machines.

※技术参数: Technical Data

性能指标 Performance index		数据 Data
最大承载 P Max Load Capacity	静载 Static load	120N/mm ²
	动载 Dynamic load	40N/mm ²
最高线速度 V Max Sliding Speed		2.0m/s
最高PV值 Max PV Value Limit		2.8N/mm ² · m/s
摩擦系数 μ Friction coefficient		0.05 ~ 0.22
使用温度 Working temperature		-100℃ ~ +200℃
导热系数 Thermal conductivity		60W/m · K
热膨胀系数 Coefficient of thermal expansion		15 × 10 ⁻⁶ /K

※化学成分和机械性能:

Chemical Compositions and Mechanical Properties

型号 Material Type	化学成分 Chemical Compositions							机械性能 Mechanical Properties			
	Fe	C	Cu	Sn	Zn	Pb	Other	Density g/cm ³	Oil%	Press kgf/mm ²	HB
FU-1	Rest	—	18.0 ~ 22.0	—	—	—	< 3.0	6.0	≥ 18	> 30	30 ~ 60
FU-2	< 0.5	0.5 ~ 2.0	Rest	5.0 ~ 7.0	5.0 ~ 7.0	2.0 ~ 4.0	< 1.5	6.4	≥ 18	> 15	20 ~ 50
FU-3	Rest	< 1.0	—	—	—	—	< 3.0	6.0	≥ 18	> 15	30 ~ 60
FU-4	< 0.5	0.5 ~ 2.0	Rest	8.0 ~ 11.0	—	—	—	6.0	≥ 25	> 15	25 ~ 55

※产品公差 Tolerance of Product

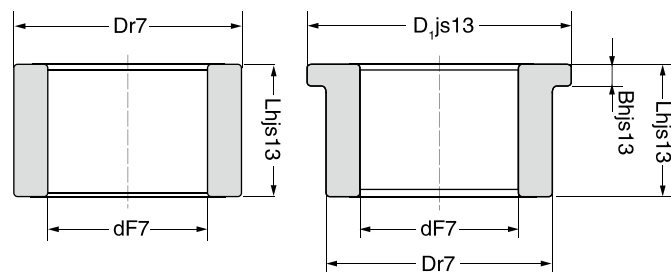
内径公差 Tolerance of Inside Diameter: dF7

外径公差 Tolerance of Outerside: Dr7

高度公差 Tolerance of Length: Lhjs13

法兰直径公差 Tolerance of Flange Diameter: D1js13

法兰厚度公差 Tolerance of Flange Thickness: Bhjs13



FD-1 含铜四氟软带

Copper PTFE soft strip

该产品是以聚四氟乙烯为主要原料，填充铜粉等耐磨材料，经模具压制烧结而成，具有良好的耐磨性，摩擦系数低，在有润滑油和无油润滑条件下都能正常使用。产品被广泛应用于汽车减震器，汽车活塞环。

FD-1 Copper PTFE soft strip as main material is made of filling copper powder and wear resistance material pressing and agglomeration, it has low wear resistance and low friction, it can work with or without oil. The products have been widely used in automobile shake absorber and piston rings.



※技术参数：Technical Data

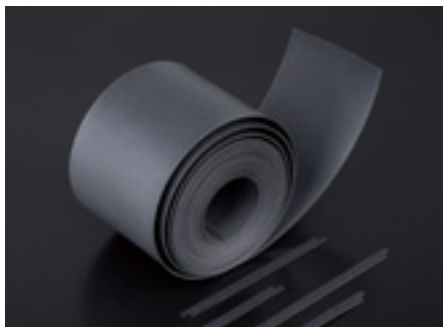
性能指标 Performance index		数据 Data
最大承载 P Max Load Capacity	静载 Static load	80N/mm ²
	动载 Dynamic load	40N/mm ²
最高线速度 V Max Sliding Speed		1.5m/s
抗拉强度 Tensile Strength		18N/mm ²
延伸率 Extension Rate		100%
摩擦系数 μ Friction coefficient		≤ 0.25
使用温度 Working temperature		-100℃ ~ +250℃
热膨胀系数 Coefficient of thermal expansion		$8 \times 10^{-5}/K$

FD-2 含石墨四氟软带

Graphite PTFE soft strip

该产品是以聚四氟乙烯为主要原料，填充石墨等耐磨材料，经模具压制烧结而成，具有良好的韧性，耐磨性。产品被广泛应用于汽车减震器。

Graphite PTFE soft strip with PTFE as main material is made though filling wear proof material such as graphite though polishing, pressing and agglomeration, it has good tenacity and wearing performance. The products have been widely used in automobile absorber.



※技术参数：Technical Data

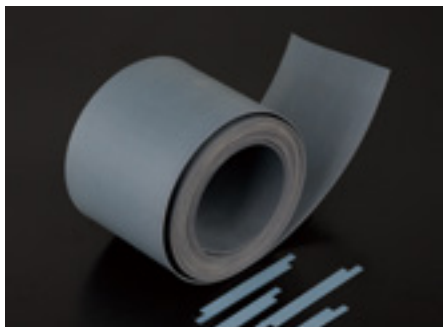
性能指标 Performance index		数据 Data
最大承载 P Max Load Capacity	静载 Static load	80N/mm ²
	动载 Dynamic load	40N/mm ²
最高线速度 V Max Sliding Speed		1.5m/s
抗拉强度 Tensile Strength		13.2N/mm ²
延伸率 Extension Rate		200%
摩擦系数 μ Friction coefficient		≤ 0.25
使用温度 Working temperature		-100℃ ~ +250℃
热膨胀系数 Coefficient of thermal expansion		$8 \times 10^{-5}/K$

FD-3 改性四氟软带

Modified PTFE soft strip

该产品是以聚四氟乙烯为主要原料，填充特殊的耐磨材料，经模具压制烧结而成，具有良好的耐磨性，耐冲击性及密封性能。产品被广泛应用于加油机流量泵，或密封环使用。

FD-3 modified soft strip is based on PTFE and filled into specific lubricant through a combination of mold pressing and sintering. It is of high wear resistance; good anti impact ness and good performance in airproof. at present it is widely applied in flow pump of the greasing machinery and ring seal etc.



※技术参数：Technical Data

性能指标 Performance index		数据 Data
最大承载 P Max Load Capacity	静载 Static load	80N/mm ²
	动载 Dynamic load	40N/mm ²
最高线速度 V Max Sliding Speed		1.5m/s
抗拉强度 Tensile Strength		20N/mm ²
延伸率 Extension Rate		250%
摩擦系数 μ Friction coefficient		≤ 0.25
使用温度 Working temperature		-100℃ ~ +250℃
热膨胀系数 Coefficient of thermal expansion		$8 \times 10^{-5}/K$



※ 通用外径检验方法 (ISO3547-2: 1999 Test B) :

Common test method of outside diameter (ISO3547-2: 1999 Test B:

轴套用手压入环规通端 (最大用力250N) , 通过

Press the bushes into the GO ring gauge and then push them through with hand pressure

(maximum force 250N)

轴套用同样方法与同样力, 压入环规止端, 不通过

On the other hand with the same force, It shall not be possible for them to go into the

NOGO ring gauge



※ 通用的内径检验方法 (ISO3547-2: 1999 Test C) :

Common test method of inner diameter test (ISO3547-2: 1999 Test C) :

检验内径, 轴承压入环规, 塞规通端通过用较小力, 塞规止端通不过用力最大不超过250N。

To check the inner diameter, the bush is to be press into a ring gauge. The GO plug gauge shall be inserted by a minimum effort. The NOGO Plug gauge shall not be insert by mutual pressure (maximum force 250N)

(注意: 当轴承压入环规, 轴承外径可能会被永久减小)

Note: When the bush is pressed into the ring gauge, It is possible that There will be a permanent reduction in the outside diameter)

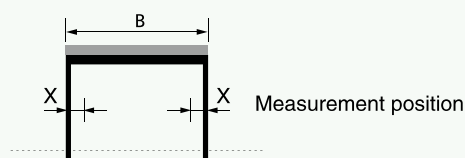


※ 通用的壁厚测量方法:

Common method of wall thickness measurement:

轴承的壁厚测量一点、二点、三点, 在轴向上依据轴承高度尺寸

The wall thickness is measured at one, two or three positions axially according to the bearing dimensions.



B[mm]	X[mm]	measurement position
$B \leq 15$	$B/2$	1
$15 < B \leq 50$	4	2
$50 < B \leq 90$	6 and $B/2$	3
$B > 90$	8 and $B/2$	3

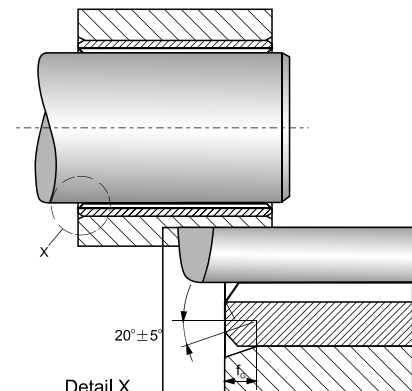
轴承安装设计 Design of Bearing Arrangement

※直套 Cylindrical Bushes

座孔被倒角 $f_G \times 20^\circ \pm 5^\circ$ ，使衬套压入座孔变的更加容易。

The housing bore should have a chamfer $f_G \times 20^\circ \pm 5^\circ$, The chamfer makes it easier to press the bushes into the housing.

座孔直径 Housing bore diameter d_G	座孔倒角 Chamfer of housing f_G
$d_G \leq 30$	$0.8 \pm 0.3 \times 20^\circ \pm 5^\circ$
$30 < d_G \leq 80$	$1.2 \pm 0.4 \times 20^\circ \pm 5^\circ$
$80 < d_G \leq 180$	$1.8 \pm 0.8 \times 20^\circ \pm 5^\circ$
$d_G > 180$	$2.5 \pm 1.0 \times 20^\circ \pm 5^\circ$

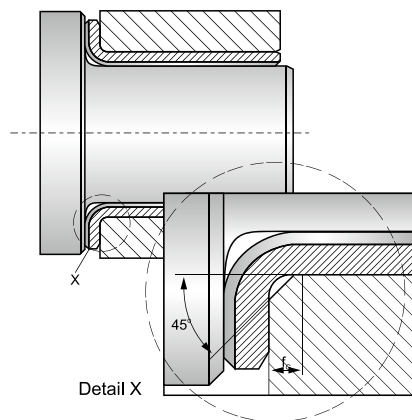


※翻边套 Flange Bushes

关于翻边套，从翻边套口到轴向转换组件必须考虑半径的转变，切面要有一个足够大的倒角。以防翻边套口聚集污垢后仍然可以支持轴向载荷部件的边缘。

The radius at the transition from the radial to the axial Component must be taken into consideration for flange bushes A sufficiently large chamfer must be provided on the housing to prevent the flanged bushes fouling in the area of the radius Sufficient support must be provided for the flange in applications With axial loading.

座孔直径 Housing bore diameter d_G	座孔倒角 Chamfer of housing f_G
$d_G \leq 10$	$1.2 \pm 0.2 \times 45^\circ \pm 5^\circ$
$d_G > 10$	$1.7 \pm 0.2 \times 45^\circ \pm 5^\circ$

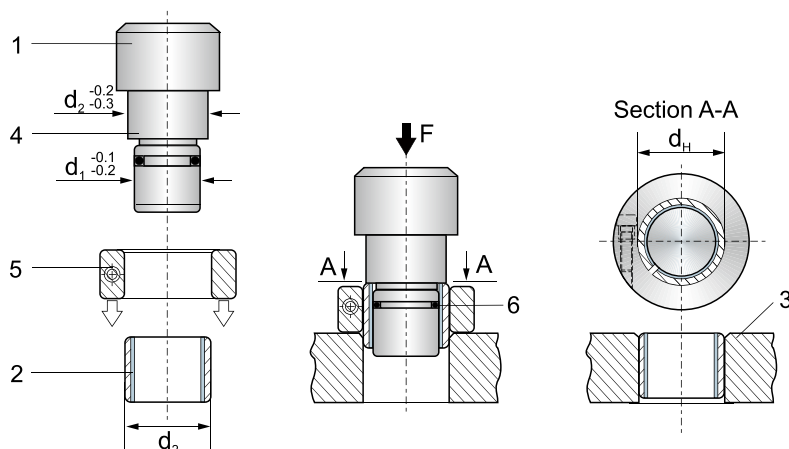


滑动轴承与座孔的装配

The installation of the sliding bushing and the housing

滑动轴承与座孔装配时，要保证轴承在座孔内不发生转动和轴向移动，又要使轴承外表面和座孔充分接触，一般应保证接触面大于85%，有利于承受载荷和传导摩擦热，采用较轻级的过盈配合，既要保证使用时，轴承不会在座孔内发生相对移动，又不会使轴承外径过盈量过大致使轴承内孔变形过大为有利于装配，轴承内外表面应涂以少量油或油脂，再将轴承均匀压入。

When installing the sliding bushing and the housing, make sure the bushing doesn't roate or move. The outside surface of the bushing must have a through contact with the housing, in peneral the connecting part must be over 85%, and this will be poood for the load pressure and the conduction of friction heat. Using surplus quantity loosely, that is when it is used the bushing does not move relatively and also the surplus quantity of the bushing outside diameter, will not be too big to cause serious distortion of the bushing inside hole, when installing, it is poood to lay a little lubricant, such as oil on the inside and outside surface of the bushing. then press bushing slowly.



$d \geq 55\text{mm}$

1. 芯轴 Pressing-in arbor
2. 轴承 Bushes
3. 座孔 Housing
4. 档边尺寸 Shoulder diameter
5. 辅助套 Auxiliary ring
6. O型圈 O ring

轴承 d_2	d_H
>55到100	$d_2 \begin{matrix} +0.28 \\ +0.25 \end{matrix}$
>100到200	$d_2 \begin{matrix} +0.40 \\ +0.36 \end{matrix}$
>200到305	$d_2 \begin{matrix} +0.50 \\ +0.40 \end{matrix}$



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