HDB-80/90 系列

双金属轴承 / 青铜卷制轴承

Bimetal Bushings / Warpped Bronze Bearing

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Bimetal Bushings

青铜卷制轴承
Warpped Bronze Bearing

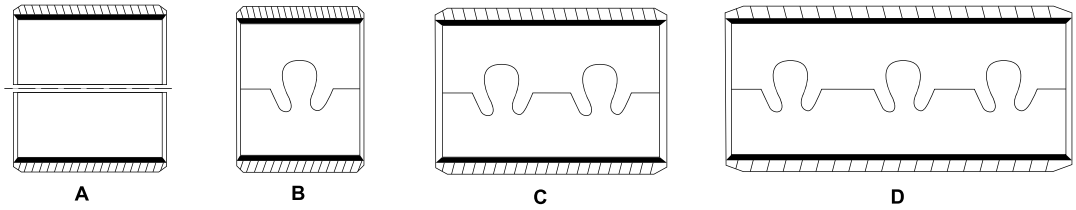
5620

Bimetallic Self-lubricating Bushes
双金属自润滑轴套

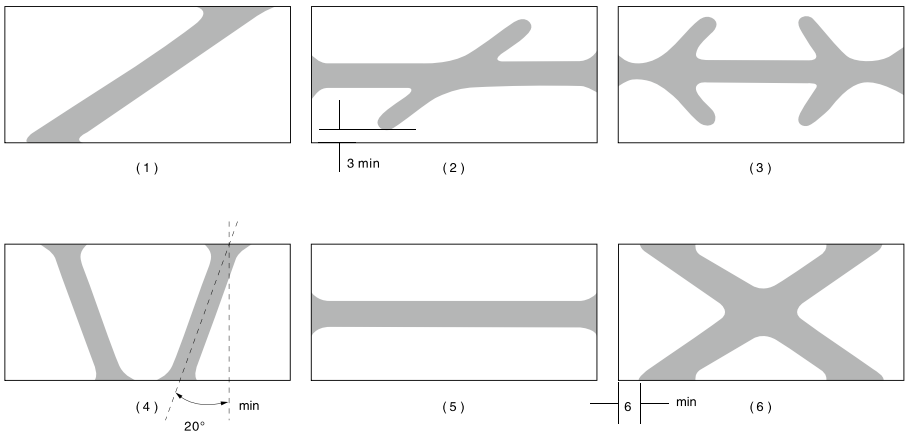
5620 Bimetallic self-lubricating bearing used high quality low-carbon steel plate as base, sintered porous bronze as its surface, suitable for rotatory oscillating, reciprocating movements on the conditions of high load.low speed, low friction, well wear resistance, long lifetime and better prevent from 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.

5620系列双金属轴套、轴瓦、止推垫片，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。

卷制轴承搭口形式
Material Characterisitc

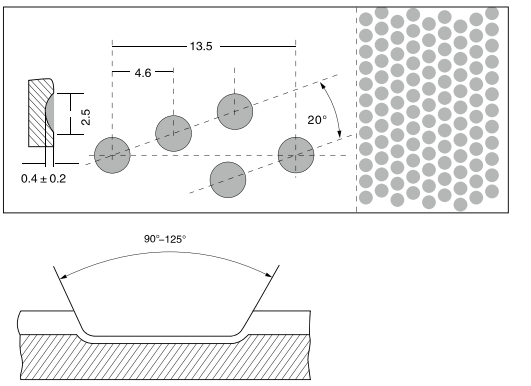


双金属自润滑轴承的油槽形状
Bi-metal self lubricating bearings tank shape



5620

Bimetallic Self-lubricating Bushes
双金属自润滑轴套



技术参数 Technical Data

项目 Project / 型号 Type		5620	5622
国际标准 International Standard		SAE-797. DIN CuPb10Sn. JIS-LBC3. UNS C93700. Clevite F100. Daido L10. D. A. B. D57. Federal Mogul HF2. Glacier SY. Glyco66. Miba2. 1010.Taiho HF2. Kar l Schmiat KS940SSAE-797. DIN CuPb10Sn. JIS-LBC3. UNS C93700. Clevite F100. Daido L10. D. A. B D57. Federal Mogul HF2 Glacier SY. Glyco66. Miba2. 1010. Taiho HF2. Karl Schmiat Ks940s	SAE=799. GLYCO 68. JIS-LBC6. DAIDO L23. Claciersx. ACLF250
合金成份 Alloy Composition		CuPb10Sn10	CuPb24Sn4
合金硬度 Alloy Hardness		70～100HB	45～70HB
最大承载 P (N/mm^2) Max Load Capacity		150	130
拉伸强度（N/mm^2） Tensile Strength		185	150
最大线速度（油润滑）V(m/s) Max Sliding Speed (Oil Lubrication)		5	10
摩擦系数μ Friction coefficient		0.05～0.20	0.06～0.16
最高PV值 $N/mm^2 \cdot m/s$ Max PV Value Limit	脂润滑 Grease lubrication	2.8	2.8
	油润滑 Oil lubrication	10	10
适用条件 Using Conditions		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 High resistance to fatigue strenth and load capacity, with high shock resistance good wearing and good corrosion resisitance.	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 lubricationg oil.
适用场合 Use Occasions		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 machinical equipment and high shock bushing.	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.

5621 Solid-lubricant Bushes 固体润滑轴套

5622 Bimetal Bearing 双金属轴承

Standard Size:
Stright Bearing , Flange Bearing .

Non-Standard Size:
Stright Bearing, Flange Bearing, Thrust washer, Strip, Bearing bushing, Wear strips,

Steel combine units.

可供标准产品:
直套，翻边轴套。

可供非标产品:
直套，翻边轴套，止推垫片，板材，轴瓦，滑板，钢套组合件。

5621 is a kind of steel-lead bronze alloys based bearing, which is embedded with particular formulation of solid lubricants. Owing to the high strength, high load capacity and the spirally distributed diamond type of the embedded solid lubricant, the high temperature resistant action as extraordinary exploited. The lubrication area of the bearing surface is being about 25%. This type of bearing is particularly applied in starting motor for automobiles, generators cranes and those machines inmetallurgical industry.

5621固体润滑轴承是以5620双金属材料为基体，再埋入特殊固体润滑剂制作成的新型滑动轴承。由于高强度承载的合金材料作基体，并经过严格选择的高分子填充材料为耐磨剂，合理的螺旋角度菱形块状均布的润滑面，润滑面积达25%，因此，能发挥超群的低摩擦，良好的润滑性和抗磨耗性免除加油。该产品已广泛应用于起重起、微型电机、升降机、吊车及冶金机械等行业。

Technical Data 技术参数

最大承载 Max.load	静承载 Static	150N/mm^2
	动承载 Dynamic	40N/mm^2
最大PV值（干摩擦） Max. PV (dry running)		2.8N/mm^2·m/s
使用温度 Temp. limit		-100°C~+200°C
摩擦系数 Friction coefficient		0.06~0.25μ
最大线速度 Max. speed	脂润滑 Grease Lubrication	1.5m/s
导热系数 Thermal conductivity		58W(m·k)$^{-1}$
线胀系数 Coefficient of thermal expansion		18×10^{-6}·K^{-1}
硬度 Hardness		HB110-150
抗拉强度 Tensile strength		450N/mm^2
伸长 Elongation		40%

Standard Size:
Stright Bearing , Flange Bearing .

Non-Standard Size:
Stright Bearing, Flange Bearing, Thrust washer, Strip, Bearing bushing, Wear strips,

Steel combine units.

可供标准产品:
直套，翻边轴套。

可供非标产品:
直套，翻边轴套，止推垫片，板材，轴瓦，滑板，钢套组合件。

5622 is a bimetal bearing with steel as backing and sintered CuPb24Sn24 as lining layer. This type has fairly good performance in anti-fatigue and load capacity. It is suitable for middle speed and middle load. When over plated certain soft alloy, it can be applied in high-speed internal combustion engine and as connect rod.

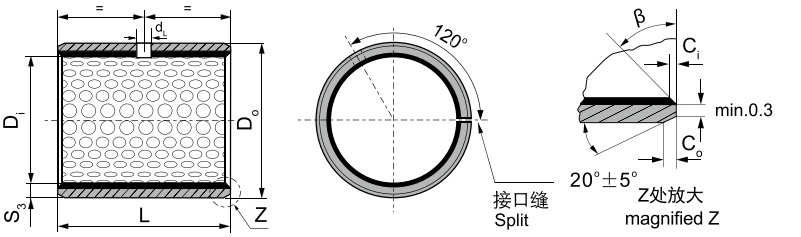
5622双金属轴承，是以钢板为基体,表面烧结CuPb24Sn4材料的产品。该产品具有较好的疲劳强度和承载能力。适用于中速中载，有油润滑的场合表面镀软合金时，可用作高速内燃机轴承、连杆衬套，达到良好的耐磨、耐疲劳效果。

Technical Data 技术参数

最大承载 Max.load		130N/mm^2
允许最大PV值 PV Limit V max(oil)	脂 Greses	2.8N/mm^2·m/s
	油 Oil	10N/mm^2·m/s
最高使用温度 Temperature Max		170°C
摩擦系数 Friction coefficient		0.06~0.16μ
最大线速度 Max. speed	油 Oil	10m/s
合金层硬度 Liner hardness		HB45~70
抗拉强度 Tensile strength		150N/mm^2

5620
5621
5622

Bimetal Sleeve Bushing Specification & Tolerance
双金属轴承规格及公差



内外倒角 ID and OD chamfers

S_3	C_o	C_i	β
0.75	0.5±0.3	0.25±0.2	35°±5°
1.00	0.6±0.3	0.30±0.2	35°±5°
1.50	0.7±0.3	0.50±0.3	35°±5°

S_3	C_o	C_i	β
2.00	1.2±0.4	0.50±0.3	35°±5°
2.50	1.8±0.6	0.60±0.3	45°±5°

单位unit:mm

5620 Bimetal Sleeve Bushing Specification & Tolerance
5620 双金属轴承规格及公差

内径 D_i ϕd	10	12	14	15	16	18	20	22	14	15	16	18	30	32	35	38	40	
外径 D_O ϕD	12	14	16	17	18	20	23	25	27	28	30	32	34	36	39	42	44	
轴径(h8) Shaft D_s	10	12	14	15	16	18	20	22	14	15	16	18	30	32	35	38	40	
	-0.000 -0.022			-0.000 -0.027						-0.000 -0.033					-0.000 -0.039			
座孔(H7) Housing D_H	12	14	16	17	18	20	23	25	27	28	30	32	34	36	39	42	44	
			+0.018 +0.000					+0.021 +0.000						+0.025 +0.000				
压装后 内孔公差 Arter fixed $D_{i,a}$			+0.148 +0.010					+0.161 +0.020						+0.185 +0.040				
壁厚 Wall thickness S_3			1.0 -0.005 -0.065					1.5 -0.010 -0.070						2.0 -0.020 -0.080				
配合间隙 Clearance C_D	0.170 0.010			0.175 0.010				0.194 0.020				0.218 0.040			0.224 0.040			
油孔 Oil hole d_L				4						6						8		
10	●	●	●	●	●	●	●	●	●									
15	●	●	●	●	●	●	●	●	●	●	●	●	●	●				
20	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
25						●	●	●	●	●	●	●	●	●	●	●	●	
30									●	●	●	●	●	●	●	●	●	
40												●	●	●	●	●	●	
50															●	●	●	

Bimetal Sleeve Bushing Specification & Tolerance
双金属轴承规格及公差

HDB

5620 Bimetal Sleeve Bushing Specification & Tolerance
5620 双金属轴承规格及公差

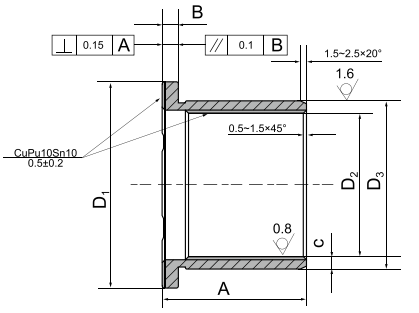
内径 D_i φd	45	50	55	60	65	70	75	80	85	90	95	100	105	110	115	120	125	130	135	140	150
外径 D_O φD	50	55	60	65	70	75	80	85	90	95	100	105	110	115	120	125	130	135	140	145	155
轴径(h8) Shaft D_s	45	50	55	60	65	70	75	80	85	90	95	100	105	110	115	120	125	130	135	140	150
	-0.000 -0.039			-0.000 -0.046				-0.000 -0.054									-0.000 -0.063				
座孔(H7) Housing D_H	50	55	60	65	70	75	80	85	90	95	100	105	110	115	120	125	130	135	140	145	155
	+0.025 +0.000			+0.030 +0.000				+0.035 +0.000									+0.040 +0.000				
压装后内孔公差 Arter fixed $D_{i,a}$	+0.225 +0.080			+0.230 +0.080				+0.235 +0.080									+0.240 +0.080				
壁厚 Wall thickness S_3	2.5 -0.040 -0.100																				
配合间隙 Clearance C_D	0.264 0.080	0.269 0.080	0.276 0.080					0.281 0.080	0.281 0.080								0.303 0.080				
油孔 Oil hole d_L	8							9.5													
25	●																				
30	●	●	●	●	●	●	●	●	●												
40	●	●	●	●	●	●	●	●	●	●											
50	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●					
60		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
80						●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
90								●	●	●	●	●	●	●	●	●	●	●	●	●	●
100									●	●	●	●	●	●	●	●	●	●	●	●	●

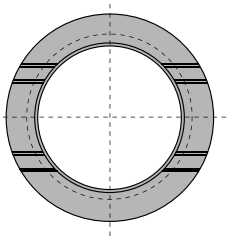
Order 订购

Catalog No. 目录号	.	D_i	.	D_O	.	L
5620	.	020	.	023	.	020
5621	.	020	.	023	.	020
5622	.	020	.	023	.	020

5640

Bimetal Flange Bushing Specification & Tolerance
双金属翻边轴承规格及公差





单位unit:mm

5640 Bimetal Flange Bushing Specification & Tolerance 5640 双金属翻边轴承规格及公差																								
D_1	42	43	44	47	48	52	55	55	55	60	60	63	65	68	70	70	72	72	75	77	83	85	87	87
B	3.5	2	3.5	3.5	2	3	3.5	3.5	3.5	3	3	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3	3.5	3.5	3.5	3.5
D_3	37	34	39	39	39	41	42	45	45	41	46	47	52	54	54	57	57	57	57	60	66	65	67	67
D_2	30	30	32	32	35	35	35	38	38	35	40	40	45	47	47	50	50	50	50	54	59	58	60	60
A	30	28	35	50	37	35	35	35	40	42	62	40	40	35	40	48	45	50	50	55	53	60	53	60
C	3.5	2	3.5	3.5	2	3	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3	3.5	3.5	3.5	3.5

单位unit:mm

5640 Bimetal Flange Bushing Specification & Tolerance 5640 双金属翻边轴承规格及公差																								
D_1	87	87	94	87	87.5	88	88	92	93	94	95	95	97	97	100	103	105	105	107	115	128	108	108	108
B	3.5	4	3.5	3.5	1.95	3.5	3.5	3.5	3.5	3.5	3.5	4	3.48	3.5	5	3.525	3.5	3.5	4	5	3.8	3.5	3.5	5
D_3	67	68	72	72	69.12	67	72	77	75	77	77	78	77.14	82	85	70.8	82	87	83	100	92.6	72	77	80
D_2	60	60	65	65	65.22	60	65	70	68	70	70	70	70.18	75	75	63.75	75	80	75	90	85	65	70	70
A	65	60	60	65	64.5	60	65	67	60	70	65	70	62	74	70	73	75	70	74	75	103	75	98	90
C	3.5	4	3.5	3.5	2	3.5	3.5	3.5	3.5	3.5	3.5	4	3.5	3.5	5	3.5	3.5	3.5	4	5	4	3.5	3.5	5

Order 订购

Catalog No. 目录号	.	D_2	.	A
5640	.	030	.	030

5120

Bronze-Wrapped Bushes
青铜卷制轴套

Standard Size:
Stright Bearing P20, Flange Bearing P22.

Non-Standard Size:
Stright Bearing, Flange Bearing, Thrust washer, Strip, Bearing bushing, Wear strips, Steel combine units.

可供标准产品：
直套，翻边轴套。

可供非标产品：
直套，翻边轴套，止推垫片，板材，轴瓦，滑板，钢套组合件。

5120 serie bronze rolled bushing is our new generation bushing based upon steel-bronze lead double metal bushings. This product is widely applied overseas. With the increase of our country's bring-in of foreign machineries, designers requirement on new abrasive materials and bushings are accordingly increasing. Therefore, our products have a wide application scope and practical value in machinery production.

The major feature of 5120 serie bushing is their thin-wall structure, which doesn't take up too large assembly space. Specially formulated high-density bronze alloy bands are used for the building of the bushing, which compared with traditional bushings, is featured in the high density, no shrinkage blowholes, high load sustainability and anti-wearing and anti-fatigue. The production of the bushing is by means of advanced fixture and molds, able to make oil holes, hole dents and grooves on the frication surfaces of the bands to suit various engineering applications, making it possible for the bushing to store large amount of lubricating grease when working. Therefore, the lubrication interval is prolonged and the service hours are effectively lengthened.

5120 serie bearings are widely used in applications such as agricultural machineries, construction machineries, engineering machineries and automobile industry.

5120 系列青铜卷制轴承套是我公司在钢-铜铅双金属轴套产品基础上开发设计的新一代轴套。该产品在国外应用十分普遍，随着我国引进机械的设备新机种的日益增多，设计师们寻找新型摩擦材料、轴套的要求也日益需要，因此该产品在我们机械制造中有着宽广应用领域和实用价值。

5120系列轴套最大特点是薄壁结构，不占据很大的装配空间。轴套材料采用特殊配方高密度铜合金带材。它与传统的铺型铜套相比，具有密度高，无气缩孔、承载能力大，又有耐磨耐疲劳等优点。轴套制造采用先进的工装模具，可在带材摩擦面上加工出适用各种工程条件的油穴、油坑、油槽，从而使轴套在使用可储存大量润滑油脂，延长加油间隔时间，有效的提高了使用寿命。

5120系列轴承广泛应用于农业机械、建筑机械、工程机械、汽车行业等。

Product Benefits 产品优点

1. Saving large amount of bronze material and save the working hours normally spent for lathing the bronze bushing.
2. Compared with lathed bushings and roller bearings, it is light in weight and more cost-effective.
3. Various holes and dents can be made on the frication surface for grease storage, prolonging the lubrication interval to 5 times as long as required by the bronze bushing.
4. Extremely high load sustainability, especially suitable for coarse abrasion surfaces.

1. 节约大量铜材、节省车制铜套工时：
2. 与车制轴套、滚动轴承相比其重量轻、成本低；
3. 可在摩擦面加工出各种有穴、有坑、储存一定油脂，延长加油的时间是铜套的5倍；
4. 极高的承载能力，特别是适用于粗糙的摩擦面；

5120

Bronze-Wrapped Bushes
青铜卷制轴套

Application scope 应用范围

此系列轴承广泛应用于农用、建设机械以及工程机械等。

This serie of bearing is widely applied to agricultural, construction and engineering machineries, etc.

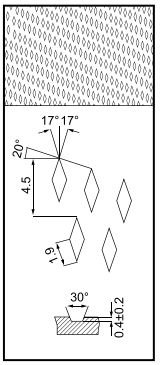
油穴类别(依据 DIW1494/ISO3457)。

Categories of oil holes (As per to DIW1494/ISO3457)。

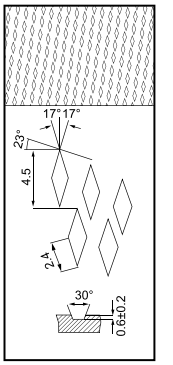
Material Structure 材料结构

High-density bronze is rolled into shape or oil bags and oil holes specially integrated into the inner surface to reduce the wearing and prolong the service hours. Besides, it has excellent anti-corrosion functions.

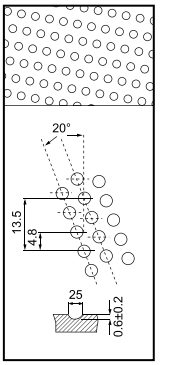
采用高密度青铜卷制成形或球形油袋、油穴特殊合成内部表面以减少磨损延长使用时间并且很好的做到防腐功能。



轴衬套内
Inside the bush of the shaft
菱形油穴r≤φ22
Rhomb oil holes r≤φ22



轴衬套内
Inside the bush of the shaft
菱形油穴r>φ22
Rhomb oil holes r>φ22



形成圆形
Forming a circle

Chemical Composition 化学成分

材料 Material: CuSn8P	铜 Cu	锡 Sn	磷 P
	余量	7-8	0.1-0.4

Physical Property 物理特性

型号 Type	密度 Density	散热热涨 Heat Emission and Expansion	热传导 Heat Conducting	硬度 Hardness	抗压强度 Compression strength	延伸率 Extensile
5120	8.8g/cm^3	18.5×10^{-6}×K^{-1}	58W(m·k)	90~150HB	470N/mm^2	40%

Standard tolerance for bushes (As per to DIW W91/1503547)
标准衬套公差 (依据 DIW W91/1503547)

标准直径 Standard Dia.	衬套外径尺寸 O.D.Size	相配座孔 Housing Bore	衬套内径尺寸 I.D.Size	相配轴径 Axle
10~18	+0.065 +0.030	+0.018 0	+0.046 0	- 0.016 - 0.043
18~30	+0.075 +0.035	+0.021 0	+0.052 0	- 0.020 - 0.020
30~50	+0.085 +0.045	+0.025 0	+0.062 0	- 0.025 - 0.064
50~80	+0.100 +0.055	+0.030 0	+0.074 0	- 0.030 - 0.076
80~120	+0.120 +0.070	+0.035 0	+0.087 0	- 0.036 - 0.090
120~180	+0.170 +0.100	+0.400 0	+0.100 0	- 0.043 - 0.106
180~250	+0.210 +0.130	+0.046 0	+0.115 0	- 0.050 - 0.122
250~315	+0.260 +0.170	+0.052 0	+0.130 0	- 0.056 - 0.137

5131

Bronze-Wrapped Bushes
青铜卷制轴套

Standard Size:
Stright Bearing , Flange Bearing .

Non-Standard Size:
Stright Bearing, Flange Bearing, Thrust washer, Strip, Bearing bushing, Wear strips, Steel combine units.

可供标准产品:
直套，翻边轴套。

可供非标产品:
直套，翻边轴套，止推垫片，板材，轴瓦，滑板，钢套组合件。

5131 serie bronze rolled bushing is our new generation bushing based upon steel-bronze lead double metal bushings. It has same structure with 5120. We based on the same type of overseas products and make further development to produce. The design has be improved and can make a replacement of original one and cut down the cost. Therefore, our products have a wide application scope and practical value in machinery production.

The major feature of 5131 serie bushing is their thin-wall structure, which doesn't take up too large assembly space. Specially formulated high-density bronze alloy bands are used for the building of the bushing, which compared with traditional bushings, is featured in the high density, no shrinkage blowholes, high load sustainability and anti-wearing and anti-fatigue. The production of the bushing is by means of advanced fixture and molds, able to make oil holes, hole dents and grooves on the frication surfaces of the bands to suit various engineering applications, making it possible for the bushing to store large amount of lubricating grease when working. Therefore, the lubrication interval is prolonged and the service hours are effectively lengthened.

5131 serie bearings are widely used in applications, such as agricultural machineries, construction machineries, engineering machineries and automobile industry.

5131系列青铜卷制轴承是与5120材料结构相同，我单位根据国外同类产品基础上开发出的新一代产品轴套，能改良产品设计、替代原有铜套,能降低采购成本，因此产品在我们机械制造中有着广泛实用价值和应用领域。

5131系列轴套最大特点是薄壁结构，不占据很大的装配空间。轴套材料采用特殊配方高密度铜合金带材。它与传统的铺型铜套相比，可在带材摩擦面上加工出适用各种工程条件的油穴、油坑、油槽，排列润滑通孔，从而使轴套在使用可储存大量润滑油脂，延长加油间隔时间，有效的提高了使用寿命。

5131系列轴承广泛应用于农业机械、建筑机械、工程机械、高载低速场合等。

Product Benefits 产品优点

1. Saving large amount of bronze material and save the working hours normally spent for lathing the bronze bushing.
2. Compared with lathed bushings and roller bearings, it is lights and more cost-effective.
3. Various holes and dents can be made on the frication surface for grease storage, prolonging the lubrication interval to 5 times as long as required by the bronze bushing.
4. Extremely high load sustainability, especially suitable for coarse abrasion surfaces.

1. 节约大量铜材、节省车制铜套工时：
2. 与车制轴套、滚动轴承相比其重量轻、成本低；
3. 可在摩擦面加工出各种有穴、有坑、储存一定油脂，延长加油的时间是铜套的5倍；
4. 极高的承载能力，特别是适用于粗糙的摩擦面；

5131

Bronze-Wrapped Bushes
青铜卷制轴套

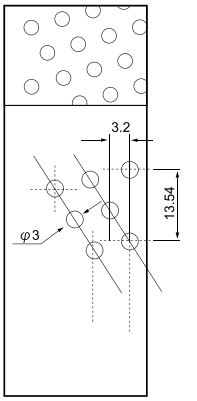
Material Structure 材料结构

High-density bronze is rolled into shape or oil bags and oil holes, specially integrated into the inner surface to reduce the wearing and prolong the service hours. Besides, it has excellent anti-corrosion functions.

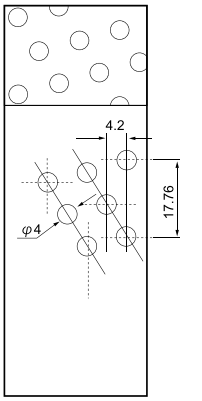
采用高密度青铜卷制成形或球形油袋、油穴特殊合成内部表面以减少磨损延长使用时间并且很好的做到防腐功能。

Application scope 应用范围

This series of bearing is widely applied to agricultural, construction and engineering machineries, etc.此系列轴承广泛应用于农用、建设机械以及工程机械等。



轴承内径r≤φ25
Inside Dia r≤φ25



轴承内径r＞φ25
Inside Dia r＞φ25

Chemical Composition 化学成分

材料 Material: CuSn8P	铜 Cu	锡 Sn	磷 P
	余量	7-8	0.1-0.4

Physical Property 物理特性

型号 Type	密度 Density	散热热涨 Heat Emission and Expansion	热传导 Heat Conducting	硬度 Hardness	抗压强度 Compression strength	延伸率 Extensile
5131	8.8g/cm^3	18.5×10^{-6}×K^{-1}	58W(m·k)	90~150HB	470N/mm^2	40%

Standard tolerance for bushes (As per to DIW W91/1503547)
标准衬套公差 (依据 DIW W91/1503547)

标准直径 Standard Dia.	衬套外径尺寸 O.D.Size	相配座孔 Housing Bore	衬套内径尺寸 I.D.Size	相配轴径 Axle
10~18	+0.065 +0.030	+0.018 0	+0.046 0	- 0.016 - 0.043
18~30	+0.075 +0.035	+0.021 0	+0.052 0	- 0.020 - 0.020
30~50	+0.085 +0.045	+0.025 0	+0.062 0	- 0.025 - 0.064
50~80	+0.100 +0.055	+0.030 0	+0.074 0	- 0.030 - 0.076
80~120	+0.120 +0.070	+0.035 0	+0.087 0	- 0.036 - 0.090
120~180	+0.170 +0.100	+0.400 0	+0.100 0	- 0.043 - 0.106
180~250	+0.210 +0.130	+0.046 0	+0.115 0	- 0.050 - 0.122
250~315	+0.260 +0.170	+0.052 0	+0.130 0	- 0.056 - 0.137

5135

Bronze-Wrapped Bushes
青铜卷制轴套

The same produce process and application with 5120, except overlay the solid lubricants into the diamond shaped lubrication indents on the bearing surface, which will offer good friction at the start and process works and keep good condition even no oil giving at short time. So it can be used in construction machines, gears, automotive clutch pads etc.

与5120具有相同的生产工艺及使用场合，其基体为青铜基板，在其菱形油穴内填充了以石墨为主的固体润滑剂，使产品在起始运用阶段及过程中能有更低的摩擦系数，在短时间断油的情况下任能保持良好的工作状态。因此被广泛使用在工程机械、齿轮箱传动部件、汽机车离合器等高载中速部位、户外高空设备的转动部位。

最大承载 Max.load	静承载 Static	120N/mm^2
	动承载 Dynamic	40N/mm^2
最大PV值（干摩擦） Max. PV (dry running)		2.8N/mm^2·m/s
使用温度 Temp. limit		-100°C~+200°C
摩擦系数 Friction coefficient		0.05~0.25μ
最大线速度 Max. speed	脂润滑 Grease Lubrication	2.5m/s
导热系数 Thermal conductivity		58W(m·k)$^{-1}$
线胀系数 Coefficient of thermal expansion		18.5×10^{-6}·K^{-1}
硬度 Hardness		HB＞110
抗拉强度 Tensile strength		450N/mm^2
伸长 Elongation		40%

公差 Tolerance

一般推荐座孔公差为H7，轴径公差为f7。

Recommend housing tolerance H7 and the shaft as f7.

Standard Size:

Stright Bearing , Flange Bearing .

Non-Standard Size:

Stright Bearing, Flange Bearing, Thrust washer, Strip, Bearing bushing, Wear strips, Steel combine units.

可供标准产品：

直套，翻边轴套。

可供非标产品：

直套，翻边轴套，止推垫片，板材，轴瓦，滑板，钢套组合件。

5130

Brass Bushing
黄铜卷制轴承

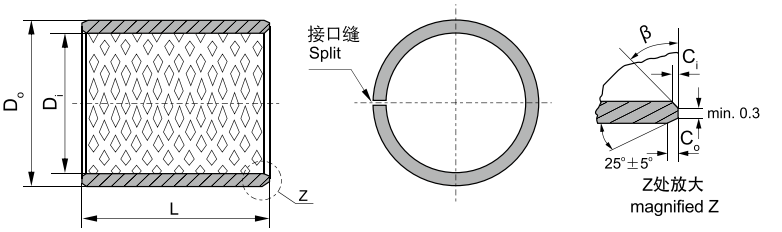
It is based on high density bronze material of special formula. The alloy surface is rolled to oil grooves or hole according to customer require. It has good load capacity and wear-resistant. The product is applied to vehicle, construction machinery and machine tool etc.

该产品是以特殊配方的黄铜材料为基体，表面可根据客户要求轧制油穴或油槽等，它有较高的承载压力，很好的耐磨性，产品运用于汽车、建筑机械、机床工业等。

性能指标 Performance Index	有关数据 Data
密度 Y Density Y	8.4 g/cm^3
抗压强度α_c Compression Strength	440N/mm^2
导热系数 Coefficient of Heat Conduction	71W/m·K
线膨胀系数α_1 Coefficient of Linear Expansion	19.2×10^{-6}/K
硬度 Hardness	80~110HB
延伸率 Elongation	30%
材料名称 Alloy Material	CuZn31Si

5120

Bronze Sleeve Bushing Specification & Tolerance
青铜轴套规格及公差



内外倒角 ID and OD chamfers

S_3	C_o	C_i	β
0.75	0.5±0.3	0.25±0.2	35°±5°
1.00	0.6±0.3	0.30±0.2	35°±5°
1.50	0.7±0.3	0.50±0.3	35°±5°

S_3	C_o	C_i	β
2.00	1.2±0.4	0.50±0.3	35°±5°
2.50	1.8±0.6	0.60±0.3	45°±5°

单位Unit: mm

5120 Bronze Sleeve Bushing Specification & Tolerance
5120 青铜轴套规格及公差

内径 D_i φd	10	12	14	15	16	18	20	22	24	25	28	30	32	35	40	45	50	55	60	65	70	75	80	85	90	95	100	105	110	115
外径 D_o φD	12	14	16	17	18	20	23	25	27	28	31	34	36	39	44	50	55	60	65	70	75	80	85	90	95	100	105	110	115	120
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15	●	●	●	●	●	●	●	●	●	●	●	●	●	●																
20	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●												
25			●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●											
30								●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●					
35												●	●	●	●	●	●	●	●	●	●	●	●	●	●					
40												●	●	●	●	●	●	●	●	●	●	●	●	●	●	●				
50															●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
60																	●	●	●	●	●	●	●	●	●	●	●	●	●	●
70																			●	●	●	●	●	●	●	●	●	●	●	●
80																					●	●	●	●	●	●	●	●	●	●
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100																										●	●	●	●	●

Bronze Sleeve Bushing Specification & Tolerance
青铜轴套规格及公差

HDB®

5120 Bronze Sleeve Bushing Specification & Tolerance
5120 青铜轴套规格及公差

内径 D_i φd	120	125	130	135	140	145	150	155	160	165	170	175	180	185	190	195	200	205	215	225	230	240	250	260	270	280	290	300
外径 D_O φD	125	130	135	140	145	150	155	160	165	170	175	180	185	190	195	200	205	210	220	230	235	245	255	265	275	285	295	305
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60	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
70	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
80	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
90	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
100	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●

Order 订购

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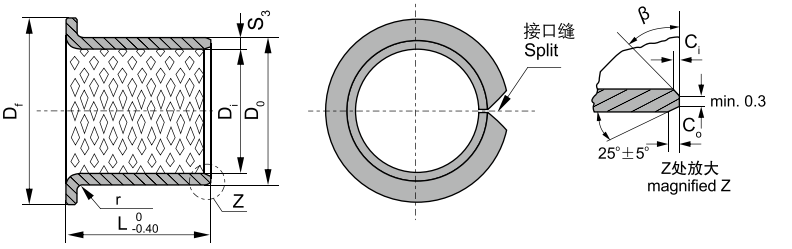
5141

Bronze Flange Bushing Specification & Tolerance
青铜翻边轴套规格及公差



S_3	1.0	1.5	2.0	2.5
r	$1^{-0.5}$	1±0.5	1.5±0.5	2±0.5

单位Unit: mm

5141 Bronze Flange Bushing Specification & Tolerance
5141 青铜翻边轴套规格及公差

内径 D_i φd	25	30	35	40	45	50	55	60	65	70	75	80	90	100	110	120	130	140	150	160	170	180	190	200	225	250	265	285	300
外径 D_o φd	28	34	39	44	50	55	60	65	70	75	80	85	95	105	115	125	135	145	155	165	175	185	195	205	230	255	270	290	305
法兰外径 D_{fl}	35	45	50	55	60	65	70	75	80	85	90	100	110	120	130	140	155	165	180	190	200	215	225	135	260	290	305	325	340
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30		●	●	●	●	●	●	●	●																				
35			●	●	●	●	●	●	●	●	●	●																	
40				●	●	●	●	●	●	●	●	●																	
50					●	●	●	●	●	●	●	●	●	●	●	●													
60								●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
70										●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
80												●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
90													●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●

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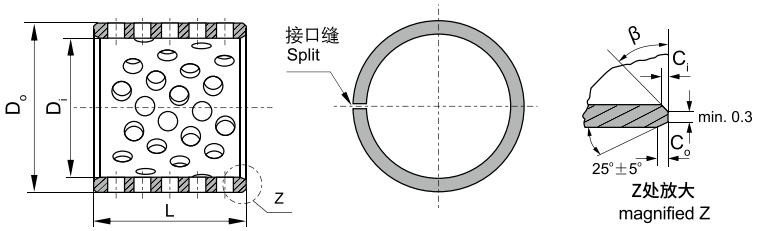
5131

Bronze Sleeve Bushing Specification & Tolerance
青铜轴套规格及公差



内外倒角 ID and OD chamfers

S_3	C_o	C_i	β
0.75	0.5±0.3	0.25±0.2	35°±5°
1.00	0.6±0.3	0.30±0.2	35°±5°
1.50	0.7±0.3	0.50±0.3	35°±5°

S_3	C_o	C_i	β
2.00	1.2±0.4	0.50±0.3	35°±5°
2.50	1.8±0.6	0.60±0.3	45°±5°

单位Unit: mm

5131 Bronze Sleeve Bushing Specification & Tolerance
5131 青铜轴套规格及公差

内径 D_i φd	10	12	14	15	16	18	20	22	24	25	28	30	32	25	40	45	50	55	60	65	70	75	80	85	90	95	100	105
外径 D_o φd	12	14	16	17	18	20	23	25	27	28	31	34	36	39	44	50	55	60	65	70	75	80	85	90	95	100	105	110
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15	●	●	●	●	●	●	●	●	●	●	●	●	●	●														
20	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●										
25			●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●									
30								●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●			
35												●	●	●	●	●	●	●	●	●	●	●	●	●	●			
40												●	●	●	●	●	●	●	●	●	●	●	●	●	●	●		
50															●	●	●	●	●	●	●	●	●	●	●	●	●	●
60																	●	●	●	●	●	●	●	●	●	●	●	●
70																			●	●	●	●	●	●	●	●	●	●
80																					●	●	●	●	●	●	●	●
90																								●	●	●	●	●
100																										●	●	●

Bronze Sleeve Bushing Specification & Tolerance
青铜轴套规格及公差

5131 Bronze Sleeve Bushing Specification & Tolerance
5131 青铜轴套规格及公差

内径 D_i Φd	110	115	120	125	130	135	140	145	150	155	160	165	170	175	185	185	190	195	200	205	215	225	230	240	250	260	270	280	290	300
外径 D_o Φd	115	120	125	130	135	140	145	150	155	160	165	170	175	180	185	190	195	200	205	210	220	230	235	245	255	265	275	285	295	305
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50	●	●																												
60	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
70	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
80	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
90	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
100	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●

Order 订购

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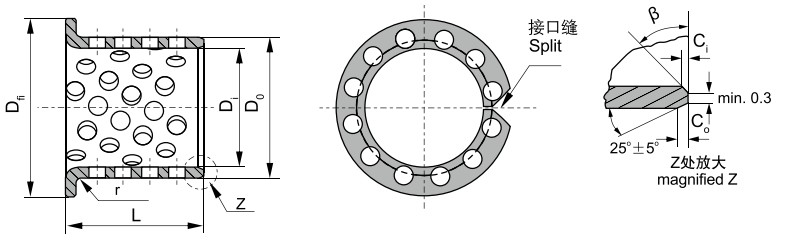
5141

Bronze Flange Bushing Specification & Tolerance
青铜翻边轴套规格及公差



S_3	1.0	1.5	2.0	2.5
r	$1^{-0.5}$	1±0.5	1.5±0.5	2±0.5

单位Unit: mm

5141 Bronze Flange Bushing Specification & Tolerance
5141 青铜翻边轴套规格及公差

内径 D_i φd	25	30	35	40	45	50	55	60	65	70	75	80	90	100	110	120	130	140	150	160	170	180	190	200	225	250	265	285	300
外径 D_o φd	28	34	39	44	50	55	60	65	70	75	80	85	95	105	115	125	135	145	155	165	175	185	195	205	230	255	270	290	305
法兰外径 D_{fl}	35	45	50	55	60	65	70	75	80	85	90	95	110	120	130	140	165	165	180	190	200	215	225	235	260	290	305	325	340
15	●																												
20	●	●	●																										
25	●	●	●	●																									
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35			●	●	●	●	●	●	●	●	●	●																	
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50					●	●	●	●	●	●	●	●	●	●	●	●													
60								●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
70										●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
80												●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
90													●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●

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