SRI09
青铜卷制轴套
BRONZE WRAPPED BUSHING

SRI090 青铜卷制轴套
SRI090 Bronze Wrapped Bushing

青铜
CuSn8P

SRI090 青铜轴承，采用特殊配方的高密度铜合金带材为基体，表面可以按用户要求轧制菱形或半球形油穴和油槽。具有密度高、承载压力大、耐磨性能好、使用寿命长等优点，以取代传统的铸造铜套，可以缩小机械体积，降低成本。SRI090 已广泛应用于起重机械、建筑机械、汽车拖拉机底盘、机床工业及采矿机械中，还可以制成轴瓦、翻边轴套、止推垫片和球碗等形式。

SRI090 is a kind of bushes wrapped by bronze strip. The bronze is made as the particular formulation with high specific and gravity, and on its surface may be incorporated with spherical or diamond shaped indentations or/and oil grooves as required by customers. It is of high load capacity and long life, in place of traditional casting bronze bush. It is more cheap and more compact. It is widely applied in hoisting machines and other construction machines, automobiles, tractors, trucks, machine tools and some mineral engines.

密度 Density	8.9 g/cm^3	硬度 Hardness	90~120 HB
抗压强度 Pressure resistance strength	470 N/mm^2	延伸率 Elongation	55%
导热系数 Coefficient of heat conduction	60 W/m.K	材料名称 Alloy material	CuSn8P
线膨胀系数 Linear expansion coefficient	18.5 x 10^{-6}/K	其它可选材料 Other material	CuSn6.5P

SRI091 黄铜卷制轴套
SRI091 Copper Wrapped Bushing

黄铜
CuZn31Si

SRI091 黄铜卷制轴套，是以特殊配方的高密度合金为基体，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，产品运用于汽车工业、建筑机械、机床工业等。

SRI091 is based in high density copper alloy of special formula. The alloy surface is rolled to oil holes and grooves according to client requires. It has good load capacity and wear–resistant. The product is applied to construction machinery and machine tool, etc.

密度 Density	8.9 g/cm^3	硬度 Hardness	80~110 HB
抗压强度 Pressure resistance strength	440 N/mm^2	延伸率 Elongation	30%
导热系数 Coefficient of heat conduction	71 W/m.K	材料名称 Alloy material	CuZn31Si
线膨胀系数 Linear expansion coefficient	19.2 x 10^{-6}/K		

SRI09 青铜卷制轴套
SRI09 Bronze Wrapped Bushing

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SRI092 青铜布孔轴套
SRI092 Bronze Wrapped Bushing

青铜
CuSn8P

SRI092 青铜轴承，以青铜材料为基体，加工均匀有序的注油孔，经卷制而成的薄壁轴承，在装配后注入润滑油脂。该轴承具有存油量大、安装方便、设计机子小的优点，而且可以取代铜套使用，能大大地降低成本。目前该产品已应用于输送机、升降机、卷扬机、校平机等中载、低速的场合。

SRI092 bronze bushing is based on bronze of CuSn8.0P0.3 and evenly distributed drilling oil holes on the body. When in assembly, oil or grease should be stored in the holes before bushing is sealed from both ends. SRI092 has the advantages of abundant oil storage, easy–to–assembly, machine compactness etc. It can replace the conventional whole copper sleeves, thus to save much cost. It is mostly applied under middle load, low speed such as in convey machine, hoisting machine, windlass, aligning machine etc.

密度 Density	8.9 g/cm^3	硬度 Hardness	90~120 HB
抗压强度 Pressure resistance strength	470 N/mm^2	延伸率 Elongation	55%
导热系数 Coefficient of heat conduction	60 W/m.K	材料名称 Alloy material	CuSn8P
线膨胀系数 Linear expansion coefficient	18.5 x 10^{-6}/K	其它可选材料 Other material	CuSn6.5P

SRI094 青铜布孔轴套带密封圈
SRI094 Bronze Wrapped Bushing with Seals

青铜
CuSn8P

该产品是在 SRI092 为基础上，在轴套高度两端配置密封圈而成。它具有防止油脂倒漏，延长润滑时间，防止灰尘、沙等物质的渗透等优点。

The product is improved from SRI092. It is configured airproof ring in the bushing height. It can prevent grease leaking and dirt penetrating, so as to delay lubricating time.

密度 Density	8.9 g/cm^3	硬度 Hardness	90~120 HB
抗压强度 Pressure resistance strength	470 N/mm^2	延伸率 Elongation	55%
导热系数 Coefficient of heat conduction	60 W/m.K	材料名称 Alloy material	CuSn8P
线膨胀系数 Linear expansion coefficient	18.5 x 10^{-6}/K	其它可选材料 Other material	CuSn6.5P

SRI09G 青铜嵌石墨卷制轴套
SRI09G Bronze Wrapped Bushing

青铜 + 石墨
CuSn8P+Graphite

SRI09G 青铜固体润滑轴承，是以青铜材料为基体，表面埋入固体润滑剂制作而成。由于以延伸率较高的铜合金材料作为基体，所以可以制成特薄的卷制轴套，再加上理想的填充材料为耐磨剂，因此适用于汽车传动轴内作为耐磨的轴套使用，也可以在无油润滑的其它场合使用。

SRI09G is based bronze material and embedded with solid lubricants in its diamond or round shape pockets which are evenly distributed on its inside layers. Due to the higher elongation of the copper alloy material as the substrate, can be made extra thin wrapped bushes, plus on the ideal filler material for anti–wear agent for automotive transmission as a wear–resistant sleeve use can also be other occasions in the oil–free lubrication.

密度 Density	8.3 g/cm^3	硬度 Hardness	90~120 HB
抗压强度 Pressure resistance strength	470 N/mm^2	延伸率 Elongation	55%
导热系数 Coefficient of heat conduction	58 W/m.K	材料名称 Alloy material	CuSn8P
线膨胀系数 Linear expansion coefficient	18.5 x 10^{-6}/K	其它可选材料 Other material	CuSn6.5P

SRI09 青铜卷制轴套
SRI09 Bronze Wrapped Bushing

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SRI07G 钢基嵌石墨轴套
SRI07G Steel+Graphite Wrapped Bushing

钢 + 烧结铜合金 + 石墨
Steel+Porous bronze sinter+Graphite

SRI07G 固体润滑轴承，是以 SRI03–800 双金属材料为基体，合金层埋入特殊固体润滑剂制作而成的新颖薄壁固体润滑轴承。由于采用高强度承载的合金材料作基体，理想的填充材料为耐磨剂，合理的菱形块状润滑设计，润滑面积达 25% 以上，因此，能发挥良好的润滑性和抗磨耗性能。

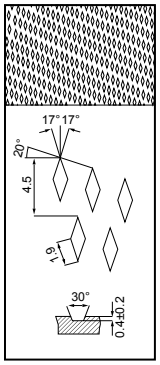
SRI07G embedded with solid lubricating bushing, it is based on SRI03–800 bi–metal material, embedding special solid lubricant in the alloy layer. Owing to the high strength, high load capacity and the spirally distributed diamond embedded with solid lubricant, with a lubrication area of 25% on the bushing surface, the bushing shows good performance in lubricating property and anti–wear.

最大承载压力 P Load capacity P		90N/mm²	摩擦系数 Friction coef μ	干摩擦 Dry friction	<0.22
合金硬度 Alloy hardness		60~90HB		脂润滑 Grease lubrication	<0.08
最大线速度 Max line speed V	干摩擦 Dry friction	0.4m/s	最高 PV 值 Maximum PV value	干摩擦 Dry friction	1.8N/mm².m/s
	脂润滑 Grease lubrication	2m/s			

油穴形式(根据DIN1494/ISO3547)
Type of oil pockets (according to DIN1494/ISO3547)

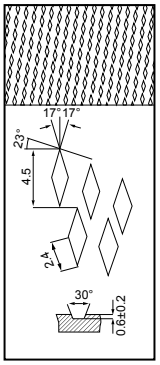
采用高密度青铜卷制成形或球形油袋、油穴特殊合成内部表面以减少磨损延长使用时间并且很好的做到防腐功能。

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.



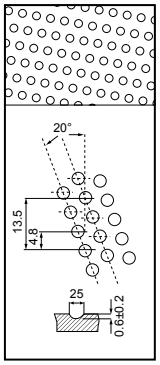
轴衬套内
Inside the bush of the shaft
菱形油穴r≤ φ22
Rhomb oil holes r≤φ22

SRI09 油穴
SRI09G 油穴
SRI07G 油穴



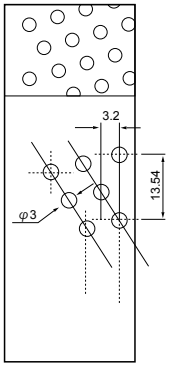
轴衬套内
Inside the bush of the shaft
菱形油穴r> φ22
Rhomb oil holes r> φ22

SRI09 油穴



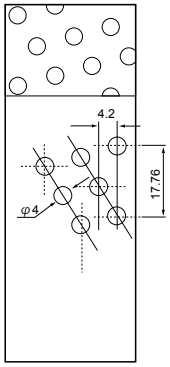
形成圆形
Forming a circle

SRI09 油穴



轴承内径r≤ φ25
Inside Dia r≤ φ25

SRI09 油穴



轴承内径r > φ25
Inside Dia r > φ25

SRI09 油穴

化学成分
Chemical composition

材料 Material	Cu	Sn	P	Pb	Zn
CuSn8	91.3%	8.0%	0.3%		

SRI090 标准公制轴套
SRI090 Normal Metric Bushing

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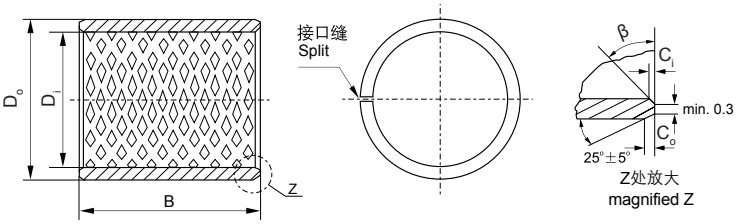

ID and OD chamfers

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	30° ± 5°
2.50	1.8 ± 0.6	0.60 ± 0.3	45° ± 5°

单位unit:mm

压入H7座孔内径 Installed Bushing I.D.		外径 O.D.		f_1	f_2	B $^{0}_{-0.40}$										
						10	15	20	25	30	35	40	50	60	70	80
10	+0.060 -0.005	12	+0.065 +0.030	0.5	0.3	1010	1015	1020								
12		14				1210	1215	1220								
14		16				1410	1415	1420	1425							
15		17				1510	1515	1520	1525							
16		18				1610	1615	1620	1625							
18		20				1810	1815	1820	1825							
20	+0.070 -0.005	23	+0.075 +0.035	0.8	0.4	2010	2015	2020	2025							
22		25				2210	2215	2220	2225	2230						
24		27					2415	2420	2425	2430						
25		28					2515	2520	2525	2530						
28	+0.070 -0.010	32	+0.085 +0.045	1.0	0.6		2815	2820	2825	2830						
30		34					3015	3020	3025	3030	3035	3040				
32		36					3215	3220	3225	3230	3235	3240				
35		39					3515	3520	3525	3530	3535	3540				
40		44						4020	4025	4030	4035	4040	4050			
45		50		1.2	0.8			4520	4525	4530	4535	4540	4550			
50	+0.090 -0.015	55	+0.100 +0.055					5020	5025	5030	5035	5040	5050	5060		
55		60						5520	5525	5530	5535	5540	5550	5560		
60		65							6025	6030	6035	6040	6050	6060	6070	
65		70								6530	6535	6540	6550	6560	6570	
70		75								7030	7035	7040	7050	7060	7070	7080
75		80								7530	7535	7540	7550	7560	7570	7580
80	+0.130 0	85	+0.120 +0.070	1.4						8030	8035	8040	8050	8060	8070	8080

SRI090 标准公制轴套
SRI090 Normal Metric Bushing

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单位unit:mm

压入H7座孔内径 Installed Bushing I.D.		外径 O.D.		f_1	f_2	B $^{0}_{-0.40}$								
						30	35	40	50	60	70	80	90	100
85	+0.130 0	90	+0.120 +0.070	1.4	0.8	8530	8535	8540	8550	8560	8570	8580	8590	85100
90		95				9030	9035	9040	9050	9060	9070	9080	9090	90100
95		100						9540	9550	9560	9570	9580	9590	95100
100		105							10050	10060	10070	10080	10090	100100
105		110							10550	10560	10570	10580	10590	105100
110		115							11050	11060	11070	11080	11090	110100
115		120							11550	11560	11570	11580	11590	115100
120	+0.140 0	125	+0.170 +0.070							12060	12070	12080	12090	120100
125		130								12560	12570	12580	12590	125100
130		135								13060	13070	13080	13090	130100
135		140								13560	13570	13580	13590	135100
140		145								14060	14070	14080	14090	140100
145		150								14560	14570	14580	14590	145100
150		155								15060	15070	15080	15090	150100
155		160								15560	15570	15580	15590	155100
160		165								16060	16070	16080	16090	160100
165		170								16560	16570	16580	16590	165100
170		175								17060	17070	17080	17090	170100
175		180								17560	17570	17580	17590	175100
180		185	+0.210 +0.130							18060	18070	18080	18090	180100
185		190								18560	18570	18580	18590	185100
190		195								19060	19070	19080	19090	190100
195		200								19560	19570	19580	19590	195100
200		205								20060	20070	20080	20090	200100
205		210								20560	20570	20580	20590	205100
215		220								21560	21570	21580	21590	215100
225		230								22560	22570	22580	22590	225100
230		235								23060	23070	23080	23090	230100
240		245								24060	24070	24080	24090	240100
250		255	+0.260 +0.170							25060	25070	25080	25090	250100
260		265								26060	26070	26080	26090	260100
270		275								27060	27070	27080	27090	270100
280		285								28060	28070	28080	28090	280100
290		395								29060	29070	29080	29090	290100
300		305								30060	30070	30080	30090	300100

SRI090 标准公制翻边轴套
SRI090 Normal Metric Flange Bushing

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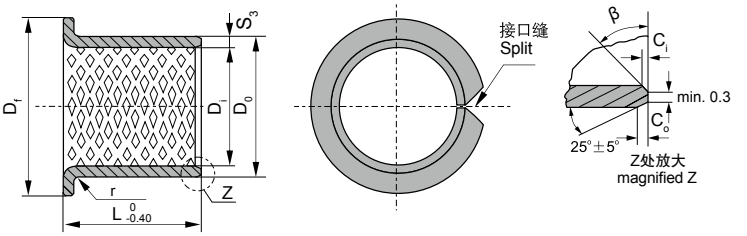

S_3	1.0	1.5	2.0	2.5
r	$1^{-0.5}$	1 ± 0.5	1.5 ± 0.5	2 ± 0.5

单位unit:mm

内径 D_i ϕ d	外径 D_O ϕ D	法兰外径 D_{fl}	长度 L $^{0}_{-0.40}$										
			15	20	25	30	35	40	50	60	70	80	90
25	28	35	2515	2520	2525								
30	34	45		3020	3025	3030							
35	39	50		3520	3525	3530	3535						
40	44	55			4025	4030	4035	4040					
45	50	60				4530	4535	4540	4550				
50	55	65				5030	5035	5040	5050				
55	60	70				5530	5535	5540	5550				
60	65	75				6030	6035	6040	6050	6060			
65	70	80				6530	6535	6540	6550	6560			
70	75	85					7035	7040	7050	7060	7070		
75	80	90					7535	7540	7550	7560	7570		
80	85	100					8035	8040	8050	8060	8070	8080	
90	95	110							9050	9060	9070	9080	9090
100	105	120							10050	10060	10070	10080	10090
110	115	130							11050	11060	11070	11080	11090
120	125	140							12050	12060	12070	12080	12090
130	135	155								13060	13070	13080	13090
140	145	165								14060	14070	14080	14090
150	155	180								15060	15070	15080	15090
160	165	190								16060	16070	16080	16090
170	175	200								17060	17070	17080	17090
180	185	215								18060	18070	18080	18090
190	195	225								19060	19070	19080	19090
200	205	235								20060	20070	20080	20090
225	230	260								22560	22570	22580	22590
250	255	290								25060	25070	25580	25590
265	270	305								26560	26570	26580	26590
285	290	325								28560	28570	28580	28590
300	305	340								30060	30070	30080	30090