

SB-DB Casting Bronze with PTFE Plugs 铜基镶嵌型固体润滑轴承



Material Structure 材料组织



Sinobronze SB-DB bearings consist of a support structure casting from one of five available high quality bronze alloys.

Embedded in this structure are solid lubricant inserts or plugs, providing continuous lubrication for low friction and wear rates and long service life.

The inserts, supplemented with an applied running-in film, are arranged for optimal distribution of the lubricant over the life of the bearing.

This structure provides an ultra-low coefficient of friction, maximum wear resistance, extended service and corrosion resistance, even in wet, dirty environments and exposure to seawater.

The bronze alloys and lubricant selected for a particular bearing are based on the requirements of the specific application and operating conditions.



Cylindrical bushes



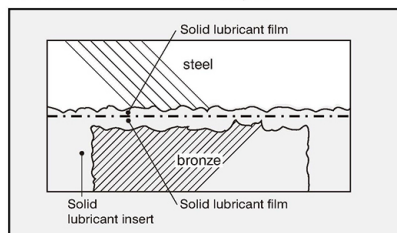
Flanged bushes



Thrust washers



Slide plates



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材料成份和性能 Material Composition and Properties

SinoBronze Code	SB-DB	SB-DB1	SB-DB2	SB-DB3	SB-DB4
材料牌号 Code	CuZn25Al6Fe3Mn3	CuSn5Pb5Zn5	CuAl9Fe4Ni4Mn2	CuSn12	CuZn32Al5Ni3
密度 Density	8.0	8.9	8.5	9.05	8.0
硬度 Hardness HB	>190	>70	>150	>80	>280
抗拉强度 N/mm ² Tensile strength	>750	>200	>800	>260	>540
伸长率 Elongation%	>12	>10	>15	>8	>0.3
热胀系数 Coefficient of linear expansion 10 ⁻⁶ /°C	1.9	1.8	1.9	1.8	1.8
温度 Limit Temp °C	-40~+300	-40~+400	-40~+400	-40~+400	-40~+150
最大动承载 Max.load N/mm ²	100	60	150	70	150
最大线速度 m/min Max.speed (Dry)	15	10	20	10	15
Max.PV最大PV N/mm ² *m/min	200	60	60	60	200
压缩永久变形量 300N/mm ²	<0.01	<0.05	<0.04	<0.05	<0.005

材料对应表 Base Material Interchange

材料代号 SB Material Codes	中国 China Brands GB1176-87	国际 International ISO 1338	德国 Germany DIN	日本 Japan JIS	美国 America ASTM(UNS)	英国 England BS	法国 France NF	适用情况 Applicable conditions
SB-DB 高力合金铜	CuZn25Al6 Fe3Mn3	GCuZn25Al6 Fe3Mn3	DIN1709 G-CuZn25Al5	H5102 CAC304	B30-92 C86300	HTB2		高载荷，低速，一般用 High-load, low speed Commonly used
SB-DB1 铸造锡青铜	ZCuSn5 Pb5Zn5	G-CuPb5 Sn5Zn5	DIN1705 G-CuSn5ZnPb	H5111 BC6	B30-92 C83600	LG2	CuPb5 Sn5Zn5	中载荷，低速 Mid-load, low speed
SB-DB2 铸造铝青铜	ZCuAl9Fe4 Ni4Mn2	GCuAl10 FeNi5	DIN17656 G-CuAl10Ni	H5114 AlBC3	B30-92 C95500	AB2	CuAl10 Fe5Ni5	中载荷，中速，一般用 Mid-load, mid-speed, Commonly used

固体润滑剂 Solid Lubricant

固体润滑剂 Lubricant	特性 Features	典型用途 Typical application
SL1 高纯石墨+添加剂 Graphite + Additives	很好的耐磨性和化学稳定性，使用温度<400°C Excellent resistance against chemical attacks and low friction, Temp limit 400°C	应用于一般机械，在大气中使用 Suit for general machines and under atmosphere
SL4 PTFE+添加剂 PTFE + Additives	极低的摩擦系数和很好的水润性，使用温度<300°C Lowest in friction and good of water Lubrication, Temp limit 300°C	应用于水、海水润滑、船舶、水工阀门、水轮机、制 药饮料机械等。 Ship, hydraulic turbine, gas turbine etc.



Solid lubricant plug
固体润滑剂(Graphite)

Bronze backing
铜合金基体



Solid lubricant plug
固体润滑剂(PTFE)

Bronze backing
铜合金基体