MQ-800 系列双金属轴承
MQ-800 Series Bi-Metal Bushings

MQ-800 双金属复合轴承以优质低碳钢为基体，表面烧结具有低摩擦特性的铜合金（CuPb10Sn10、CuPb6Sn6Zn3、CuPb24Sn4、AlSn20Cu、CuSn10、CuSn6.5P）作为轴承的耐磨层，铜合金表面可以根据使用工况需要加工出各种类型的油槽、油孔、油穴等，以适合于无法持续加油或者难以加油的场合。材料通过二次烧结二次挤压可以得到很好的接合强度和最佳的承载能力。（也称呼为JF-800;SJ）

合金材料 Composition analysis of alloy

内层材料成分 Inner sintered layer	MQ-800 CuPb10Sn10	MQ-810 CuPb24Sn4	MQ-820 CuPb6Sn6Zn3	MQ-830 CuSn10	MQ-840 CuSn6.5P	MQ-850 AlSn20Cu
Cu	余量Remainder	余量Remainder	余量Remainder	余量Remainder	余量Remainder	0.7~1.3
Pb	9.0~11.0	21.0~27.0	2.0~4.0	0.1	0.1	——
Sn	9.0~11.0	3.0~4.5	5.0~7.0	9.0~10.0	6.0~6.8	17.5~22.5
Zn	0.5	0.5	5.0~7.0	0.3	0.3	——
P	0.1	0.1	0.1	0.1	0.1~0.3	——
Fe	0.5	0.7	0.6	0.5	0.6	0.7
Ni	0.5	0.3	0.3	0.5	0.5	0.1
Al	——	——	——	——	—	余量Remainder
Other	0.5	0.5	0.5	0.5	0.5	0.5

材料标准对照 Referance Material Standard Code.

材料 Material	合金成分 Alloy composition	合金硬度 Alloy hardness	国际标准 International standard
MQ-800	CuPb10Sn10	80~120HB	JIS-LBC3. JIS-LBC3. SAE-797. DIN CuPb10Sn. UNS C93700. CLEVITE F100. CC495KDAIDO L10. D. A. B. D57. Federal Mogul HF2. Glacier SY. GLYCO66. ACL F100
MQ-810	CuPb24Sn4	45~70HB	JIS-LBC6. JIS-LBC6. SAE-799. GLYCO 68. DAIDO L23. Clacie rsx. ACL F250
MQ-820	CuPb6Sn6Zn3	70-100HB	Din17670
MQ-830	CuSn10	70-100HB	Din G-CuSn10 ;BS PB1
MQ-840	CuSn6.5P	70-100HB	DIN CuSn6(2.1020); JIS H3110
MQ-850	AlSn20Cu	30~40HB	JIS-AJL. SAE-783. GLYCO74. Glacier AS15. ACL820

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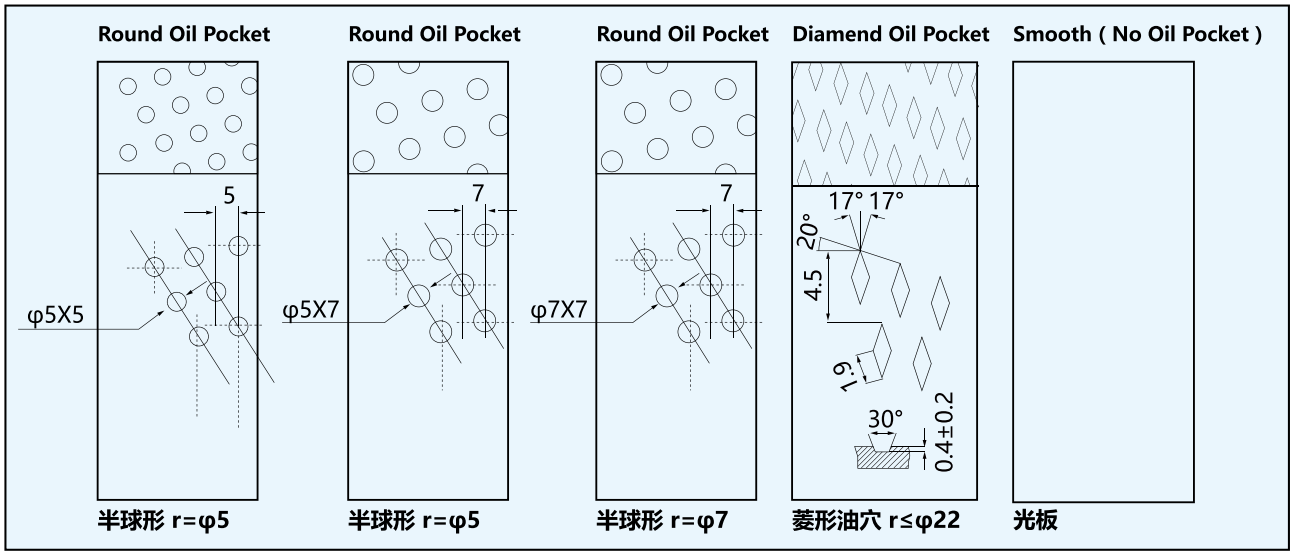
实际运用中根据使用工况的不同，表面可以烧结不同牌号的合金，产品范围包括：MQ-800、MQ-810、MQ-820、MQ-830、MQ-840、MQ-850。
According to the different working conditions, different alloy material (CuPb10Sn10、CuPb24Sn4、CuPb6Sn6Zn3、CuSn10、CuSn6.5P、AlSn20Cu) can be sintered on steel backing.

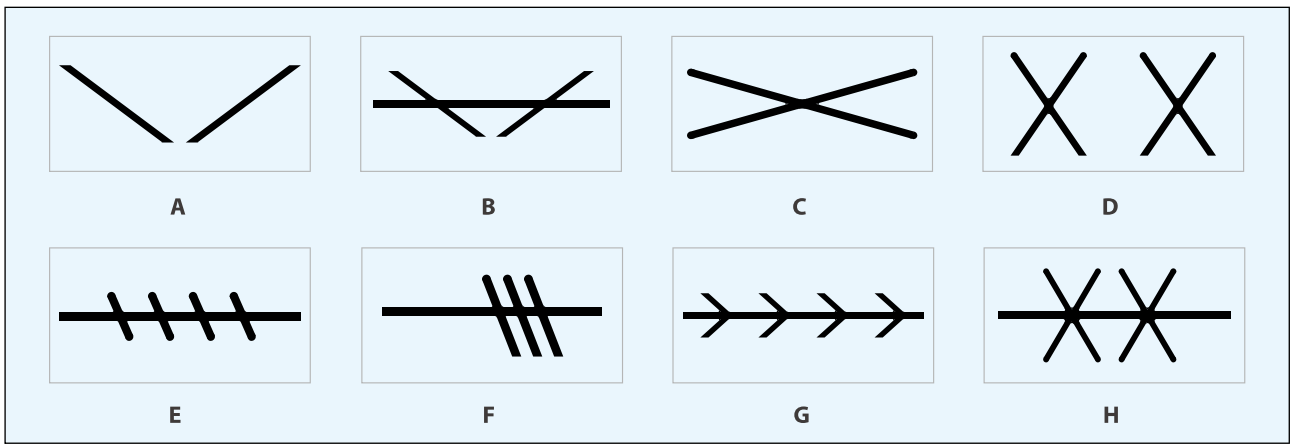
有关数据 Data	代号 Grade	MQ-800	MQ-810	MQ-820	MQ-830	MQ-840	MQ-850
	材料 Materiai	碳钢/Steel CuPb10Sn10	碳钢/Steel CuPb24Sn4	碳钢/Steel CuPb6Sn6Zn3	碳钢/Steel CuSn10	碳钢/Steel CuSn6.5P	碳钢/Steel AlSn20Cu
除了目录中显示的标准产品外，还可以提供非标产品或根据客户要求订购。 We can also develop according to customers special request while out of this table.							
合金层硬度 HB Alloy layer hardness		80~120	45~70	70~100	70~100	70~100	30~40
最大动载 P N/mm^2 Max dynamic Load P		150	130	130	130	130	100
最大线速度 V m/s Max line speed V	脂润滑 Greaes lubrication	3.5	2.5	2.5	2.5	——	——
最高PV值 $N/mm^2 \cdot m/s$ Max PV value		2.8	2.8	2.8	2.8	2.8	——
摩擦系数u Friction coef u		0.05~0.10	0.05~0.15	0.05~0.15	0.05~0.15	0.05~0.15	——
最大线速度 V m/s Max line speed V		8	10	5	5	5	15
最高PV值 $N/mm^2 \cdot m/s$ Max PV value	油润滑 Oil lubrication	10	10	10	10	10	8
摩擦系数u Friction coef u		0.04~0.12	0.04~0.12	0.04~0.12	0.04~0.12	0.04~0.12	0.05~0.02
最高温度 ℃ Max Working temperature	油脂润滑 Greaes lubrication	150	150	150	150	150	150
	油润滑 Oil lub.	250	250	250	250	250	250
导热系数 W/mk Thermal conductivity		60	60	60	60	60	47
线膨胀系数（轴向） Coefficient of linear expansion		$18 \times 10^{-6}/K^{-1}$	$19 \times 10^{-6}/K$	$18 \times 10^{-6}/K$	$18 \times 10^{-6}/K$	$19 \times 10^{-6}/K$	$18 \times 10^{-6}/K$
相配轴径 Mating Axis	硬度 HRC Hardness	≥53	≥45	≥53	≥53	≥53	≥270
	粗糙度 Ra Roughness	0.32~0.63	0.32~0.63	0.16~0.63	0.32~0.63	0.16~0.63	0.16~0.63
主要特点 Main Features							
①滑动性 Sliding		★★★★★	★★★★★	★★★★	★★★★★	★★★★	★★★★
②耐磨性 Abrasion Resistance		★★★★★	★★★	★★★★	★★★★	★★★★	★★★★
③硬度 Hardness		★★★★★	★★	★★★★	★★★	★★★★	★★
④防咬轴 Anti-bite Shaft		★★★★	★★★★★	★★★	★★★★	★★★	★★★★
⑤耐腐蚀 Corrosion-resistant		★★★★★	★★	★★★★	★★★★	★★★★	★★★
⑥高负荷 High loading		★★★★★	★★	★★★★	★★★★	★★★★	★★★
⑦抗疲劳 Anti-fatigue		★★★★★	★★★	★★★★	★★★★	★★★★	★★★
⑧环保 Environmental protection		×	×	×	★★	★★	★

*装配时强烈建议加润滑油脂！

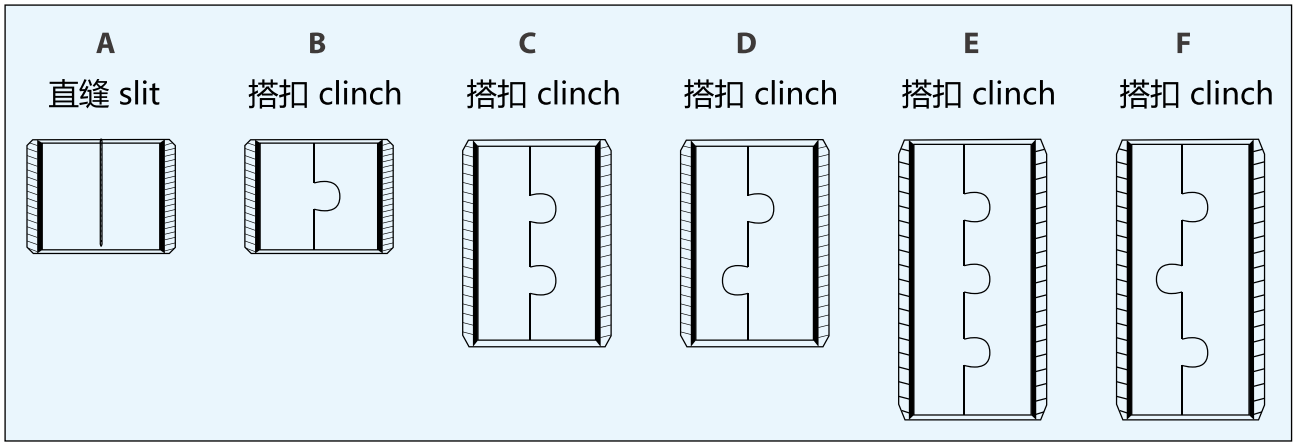
双金属自润滑轴承的部分油穴形式Parts types for Bi-Metal Bushing Oil Indents



双金属自润滑轴承的部分油槽油穴形式Parts types for Bi-Metal Bushing Oil Grooves



双金属轴承的接扣形式 Parts types for Butt Jiont Types for Bi-Metal Bushing



特殊设计可以定制 *Special designs are available*

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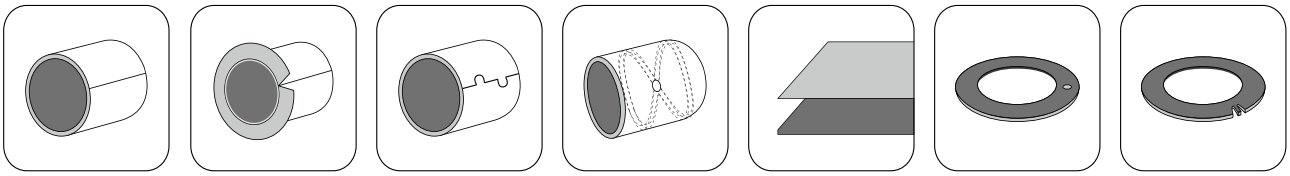
MQ-800 双金属壁厚公差：不可加工与装配后可加工
Wall Thickness of No-machinable and Allow-machinable Bore of Bushing and Their Tolerances

公制壁厚厚度 Norminal Wall Thickness	内孔不可加工的壁厚公差 Tolerances of Wall thickness (non-machinable)	内孔可加工的壁厚公差 Tolerances of Wall thickness (allow-machinable)
1.0	-0.025	+0.25 +0.15
1.5	-0.030	+0.25 +0.15
2.0	-0.035	+0.25 +0.15
2.5	-0.040	+0.30 +0.15
3.0	-0.045	+0.30 +0.15
3.5	-0.050	+0.30 +0.15

可供形式 Available type



双金属轴套定单所需信息 Order Informations for Bimetal Bushing

1.品种 Type：	**尺寸(Dimensions):内径ID_____x 外径OD_____x (翻边F)_____x 高度L_____mm**	
2.轴套内层 Inner Layer：	(合金层材料Sintered Metal Material)	
A.烧结层厚度 Thickness of inner Sintered layer (0.05-1.50mm): mm		
B. ☐ 圆油穴Round Oil Pocket	☐ 菱形油穴 Diamond Oil Pocket	☐ 油穴嵌石墨 Oil Pocket with Graphites
☐ 光板(无油穴)Smooth(No oil Pockets)		
C. ☐ 油槽(按图纸或者样品)With oil Grooves as the drawing or samples		☐ 无油槽 Non-oil Grooves
D. ☐ 整形(不内车) No-machined(Just Extrusion-moulding)	☐ 内车和内车后烧结层厚度 Machined and final thickness of inner Sintered layer: mm	☐ 预留内车余量 Allowance for machining: mm
3.轴承外部 Outer Surface		
A. ☐ 钢本色 Natural Steel Colour	☐ 发黑 Black Coating	☐ 镀雾锡 Tin Coating(Gray)
☐ 镀铜 Cu-coating	☐ 外磨 Grinded	
B. ☐ 外环油槽(图纸或样品)Ring groove as the drawing/sample		
C. ☐ 油孔(图纸或样品) Oil Hole as the drawing/sample	☐ 定位孔、定位缺口 Fixation holes/dents as the drawing/sample	☐ 其它Other
D. ☐ 直缝 Slit Type	☐ 搭扣 Clinch Butt Joint as MQ No.：	or as the drawing/samples
E. ☐ 直套 Cylinder Type	☐ 翻边轴套 Flange Type (翻边处合金层车掉 Cut off the inner layers in the areas of flange angle)	