








FB 青铜卷制轴套 Bronze Wrapped Bushing

产品介绍 Product introduction

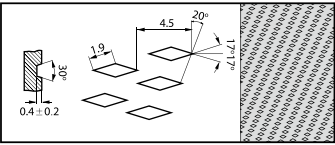
该系列轴套以CuSn8青铜为基材卷制而成的一种具有承载高，耐磨性能好的经济型轴承。FB090产品工作表面布满规则的菱形油穴，FB092产品工作表面布满规则的油孔，起到储油的作用，在起始运动时能较容易的形成油膜从而降低起始摩擦系数。主要运用于农用机械、森林机械、建筑机械等高载低速场合。

Bronze wrapped bushing, it is made of a cold formable homogenous bronze (CuSn8), which will obtain excellent material properties. FB090 is fitted with diamond shaped lubrication indents inside, and FB092 is fitted with regular holes on the bushing surface. These indents and holes serve as lubricant reservoirs to rapidly build up a lubrication film in the start movement and therewith reduce the start friction. FB series bushings can be used in hoisting machines and other construction machines, automobile, tractor, truck, harvest machine, forest machine so on.

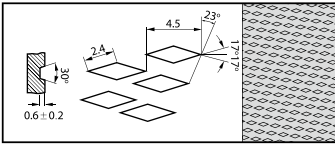
使用参数 The use of parameters

| | FB090 青铜卷制轴套 Bronze Wrapped Bushing | FB091 黄铜卷制轴套 Copper Wrapped Bushing | FB092 青铜布孔轴套 Bronze Wrapped Bushing | FB094 青铜布孔轴套带密封圈 Bronze Wrapped Bushing with Seals | FB09G 青铜嵌石墨卷制轴套 Bronze +Graphite Wrapped Bushing |
|--|---|---|---|---|---|
| 参数 Parameters |  |  |  |  |  |
| 密度 Density | 8.9g/cm ³ | 8.4g/cm ³ | 8.9g/cm ³ | 8.9g/cm ³ | 8.3g/cm ³ |
| 抗压强度 Pressure resistance strength | 470N/mm ² | 440N/mm ² | 470N/mm ² | 470N/mm ² | 470N/mm ² |
| 导热系数 Coefficient of heat conduction | 60W/m.k | 71W/m.k | 60W/m.k | 60W/m.k | 58W/m.k |
| 线膨胀系数 Linear expansion coefficient | 18.5 × 10 ⁻⁶ /K | 19.2 × 10 ⁻⁶ /K | 18.5 × 10 ⁻⁶ /K | 18.5 × 10 ⁻⁶ /K | 18.5 × 10 ⁻⁶ /K |
| 硬度 Hardness | 90~120 HB | 80~110 HB | 90~120 HB | 90~120 HB | 90~120 HB |
| 延伸率 Elongation | 55% | 30% | 55% | 55% | 55% |
| 材料名称 Alloy material | CuSn8P | CuZn31Si | CuSn8P | CuSn8P | CuSn8P |
| 其它可选材料 Other material | CuSn6.5P | | CuSn6.5P | CuSn6.5P | CuSn6.5P |

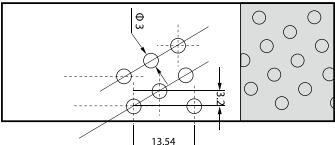
油穴设计 Types of oil pockets



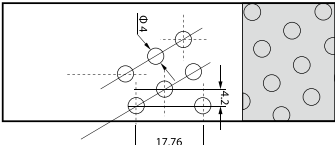
FB090油穴 (oil pockets)
适用内径 ≤ φ22 的轴承 (ID ≤ φ22)



FB092油穴 (oil pockets)
适用内径 > φ22 的轴承 (ID > φ22)



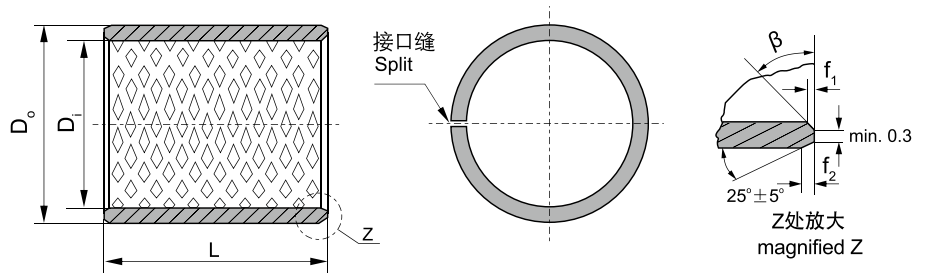
FB090球形油孔形式 (oil holes)
适用内径 ≤ φ25 的轴承 (ID ≤ φ25)



FB092球形油孔形式 (oil holes)
适用内径 > φ25 的轴承 (ID > φ25)

FB 系列青铜卷制轴套
FB Bronze Wrapped Bushing

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内外倒角 ID and OD chamfers

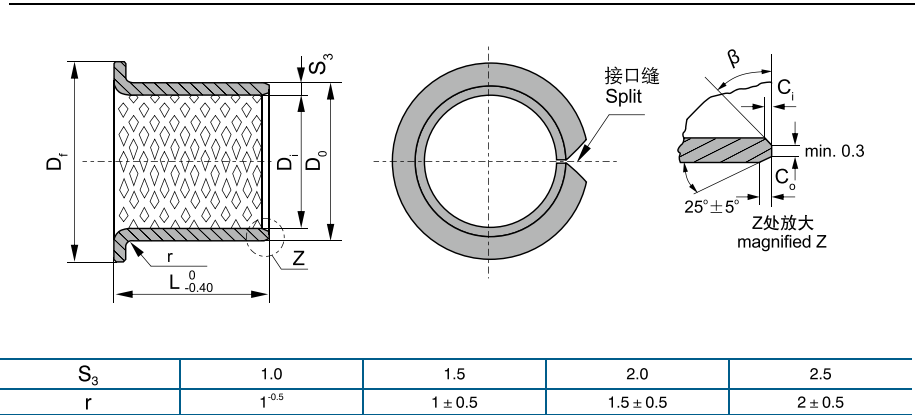
| S ₃ | f ₁ | f ₂ | β |
|----------------|----------------|----------------|----------|
| 0.75 | 0.5 ± 0.3 | 0.25 ± 0.2 | 35° ± 5° |
| 1.00 | 0.6 ± 0.3 | 0.30 ± 0.2 | 35° ± 5° |
| 1.50 | 0.7 ± 0.3 | 0.50 ± 0.3 | 35° ± 5° |

| S ₃ | f ₁ | f ₂ | 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° |

| 外径 D | 座孔 Housing Bore (H7) | 压入座孔后的 内径 I.D. after fixed | 壁厚 Wall Thickness | 轴径 Shaft Dia. f7 | L | | | | | | | | | | | | | | | |
|---------|----------------------------|----------------------------------|-------------------------|------------------------|-----|----|----|----|----|----|----|----|----|----|----|----|-----|---|---|---|
| | | | | | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 50 | 60 | 70 | 80 | 90 | 100 | | | |
| 12 | +0.065 +0.030 | 12+0.018 | 10 | +0.043 0 | 10 | ● | ● | ● | | | | | | | | | | | | |
| 14 | +0.065 +0.030 | 14+0.018 | 12 | +0.043 0 | 12 | ● | ● | ● | | | | | | | | | | | | |
| 16 | +0.065 +0.030 | 16+0.018 | 14 | +0.043 0 | 14 | ● | ● | ● | ● | | | | | | | | | | | |
| 17 | +0.065 +0.030 | 17+0.018 | 15 | +0.043 0 | 15 | ● | ● | ● | ● | | | | | | | | | | | |
| 18 | +0.065 +0.030 | 18+0.018 | 16 | +0.043 0 | 16 | ● | ● | ● | ● | | | | | | | | | | | |
| 20 | +0.065 +0.030 | 20+0.021 | 18 | +0.043 0 | 18 | ● | ● | ● | ● | | | | | | | | | | | |
| 23 | +0.075 +0.035 | 23+0.021 | 20 | +0.052 0 | 20 | ● | ● | ● | ● | | | | | | | | | | | |
| 25 | +0.075 +0.035 | 25+0.021 | 22 | +0.052 0 | 22 | ● | ● | ● | ● | | | | | | | | | | | |
| 27 | +0.075 +0.035 | 27+0.021 | 24 | +0.052 0 | 24 | | ● | ● | ● | ● | | | | | | | | | | |
| 28 | +0.075 +0.035 | 28+0.021 | 25 | +0.052 0 | 25 | | ● | ● | ● | ● | | | | | | | | | | |
| 32 | +0.075 +0.035 | 32+0.021 | 28 | +0.052 0 | 28 | | ● | ● | ● | ● | | | | | | | | | | |
| 34 | +0.075 +0.035 | 34+0.025 | 30 | +0.052 0 | 30 | | ● | ● | ● | ● | ● | | | | | | | | | |
| 36 | +0.085 +0.045 | 36+0.025 | 32 | +0.062 0 | 32 | | ● | ● | ● | ● | ● | ● | | | | | | | | |
| 39 | +0.085 +0.045 | 39+0.025 | 35 | +0.062 0 | 35 | | ● | ● | ● | ● | ● | ● | | | | | | | | |
| 44 | +0.085 +0.045 | 44+0.025 | 40 | +0.062 0 | 40 | | | ● | ● | ● | ● | ● | ● | | | | | | | |
| 50 | +0.085 +0.045 | 50+0.025 | 45 | +0.062 0 | 45 | | | ● | ● | ● | ● | ● | ● | | | | | | | |
| 55 | +0.085 +0.045 | 55+0.025 | 50 | +0.062 0 | 50 | | | ● | ● | ● | ● | ● | ● | ● | | | | | | |
| 60 | +0.100 +0.055 | 60+0.025 | 55 | +0.074 0 | 55 | | | ● | ● | ● | ● | ● | ● | ● | | | | | | |
| 65 | +0.100 +0.055 | 65+0.030 | 60 | +0.074 0 | 60 | | | ● | ● | ● | ● | ● | ● | ● | ● | | | | | |
| 70 | +0.100 +0.055 | 70+0.030 | 65 | +0.074 0 | 65 | | | ● | ● | ● | ● | ● | ● | ● | ● | | | | | |
| 75 | +0.100 +0.055 | 75+0.030 | 70 | +0.074 0 | 70 | | | ● | ● | ● | ● | ● | ● | ● | ● | ● | | | | |
| 80 | +0.100 +0.055 | 80+0.030 | 75 | +0.074 0 | 75 | | | ● | ● | ● | ● | ● | ● | ● | ● | ● | | | | |
| 85 | +0.100 +0.055 | 85+0.030 | 80 | +0.074 0 | 80 | | | ● | ● | ● | ● | ● | ● | ● | ● | ● | | | | |
| 90 | +0.120 +0.070 | 90+0.035 | 85 | +0.087 0 | 85 | | | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | | | |
| 95 | +0.120 +0.070 | 95+0.035 | 90 | +0.087 0 | 90 | | | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | | |
| 100 | +0.120 +0.070 | 100+0.035 | 95 | +0.087 0 | 95 | | | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | |
| 105 | +0.120 +0.070 | 105+0.035 | 100 | +0.087 0 | 100 | | | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| 110 | +0.120 +0.070 | 110+0.035 | 105 | +0.087 0 | 105 | | | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| 115 | +0.120 +0.070 | 115+0.035 | 110 | +0.087 0 | 110 | | | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| 120 | +0.120 +0.070 | 120+0.035 | 115 | +0.087 0 | 115 | | | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| 125 | +0.120 +0.070 | 125+0.035 | 120 | +0.087 0 | 120 | | | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| 130 | +0.170 +0.100 | 130+0.040 | 125 | +0.100 0 | 125 | | | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| 135 | +0.170 +0.100 | 135+0.040 | 130 | +0.100 0 | 130 | | | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| 140 | +0.170 +0.100 | 140+0.040 | 135 | +0.100 0 | 135 | | | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| 145 | +0.170 +0.100 | 145+0.040 | 140 | +0.100 0 | 140 | | | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| 150 | +0.170 +0.100 | 150+0.040 | 145 | +0.100 0 | 145 | | | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| 155 | +0.170 +0.100 | 155+0.040 | 150 | +0.100 0 | 150 | | | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| 160 | +0.170 +0.100 | 160+0.040 | 155 | +0.100 0 | 155 | | | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |

FB 青铜翻边轴套 FB Bronze Flange Bushing

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| 内径 D_1 ϕd | 外径 D_0 ϕD | 法兰外径 D_{fl} | 长度 L _{-0.40} ⁰ | | | | | | | | | | | |
|-------------------------|-------------------------|------------------|--------------------------------------|-------|-------|-------|-------|-------|--------|--------|--------|--------|--------|--|
| | | | 15 | 20 | 25 | 30 | 35 | 40 | 50 | 60 | 70 | 80 | 90 | |
| 25 | 28 | 35 | 25150 | 25200 | 25250 | | | | | | | | | |
| 30 | 34 | 45 | | 30200 | 30250 | 30300 | | | | | | | | |
| 35 | 39 | 50 | | 35200 | 35250 | 35300 | 35350 | | | | | | | |
| 40 | 44 | 55 | | | 40250 | 40300 | 40350 | 40400 | | | | | | |
| 45 | 50 | 60 | | | | 45300 | 45350 | 45400 | 45500 | | | | | |
| 50 | 55 | 65 | | | | 50300 | 50350 | 50400 | 50500 | | | | | |
| 55 | 60 | 70 | | | | 55300 | 55350 | 55400 | 55500 | | | | | |
| 60 | 65 | 75 | | | | 60300 | 60350 | 60400 | 60500 | 60600 | | | | |
| 65 | 70 | 80 | | | | 65300 | 65350 | 65400 | 65500 | 65600 | | | | |
| 70 | 75 | 85 | | | | | 70350 | 70400 | 70500 | 70600 | 70700 | | | |
| 75 | 80 | 90 | | | | | 75350 | 75400 | 75500 | 75600 | 75700 | | | |
| 80 | 85 | 100 | | | | | 80350 | 80400 | 80500 | 80600 | 80700 | 80800 | | |
| 90 | 95 | 110 | | | | | | | 90500 | 90600 | 90700 | 90800 | 90900 | |
| 100 | 105 | 120 | | | | | | | 100500 | 100600 | 100700 | 100800 | 100900 | |
| 110 | 115 | 130 | | | | | | | 110500 | 110600 | 110700 | 110800 | 110900 | |
| 120 | 125 | 140 | | | | | | | 120500 | 120600 | 120700 | 120800 | 120900 | |
| 130 | 135 | 155 | | | | | | | | 130600 | 130700 | 130800 | 130900 | |
| 140 | 145 | 165 | | | | | | | | 140600 | 140700 | 140800 | 140900 | |
| 150 | 155 | 180 | | | | | | | | 150600 | 150700 | 150800 | 150900 | |
| 160 | 165 | 190 | | | | | | | | 160600 | 160700 | 160800 | 160900 | |
| 170 | 175 | 200 | | | | | | | | 170600 | 170700 | 170800 | 170900 | |
| 180 | 185 | 215 | | | | | | | | 180600 | 180700 | 180800 | 180900 | |
| 190 | 195 | 225 | | | | | | | | 190600 | 190700 | 190800 | 190900 | |
| 200 | 205 | 235 | | | | | | | | 200600 | 200700 | 200800 | 200900 | |
| 225 | 230 | 260 | | | | | | | | 225600 | 225700 | 225800 | 225900 | |
| 250 | 255 | 290 | | | | | | | | 250600 | 250700 | 250800 | 250900 | |
| 265 | 270 | 305 | | | | | | | | 265600 | 265700 | 265800 | 265900 | |
| 285 | 290 | 325 | | | | | | | | 285600 | 285700 | 285800 | 285900 | |
| 300 | 305 | 340 | | | | | | | | 300600 | 300700 | 300800 | 300900 | |