

**JHW** 钢铜复合自润滑版  
Steel-Copper Composite Self-Lubricating Plate

应用领域 / Application



# JHW 钢铜复合自润滑版 Steel-Copper Composite Self-Lubricating Plate

## 材料介绍 / Material Introduction

1. 结合了铜合金的耐磨性和钢的高机械强度性能；
2. 可以根据工况要求铸造不同的铜合金材料包括低摩擦性能的铅铜合金；
3. 由于内外层材料具有的不同摩擦系数，可以防止轴承在高载低速工况下的窜动和走外圆；
4. 可以根据需要在工作面覆盖或镶嵌固体润滑剂以达到自我润滑的目的；
5. 相比纯铜套更具有成本优势，节约利用资源；
6. 可以进行后期加工，比如钢基体的热处理、合金层车加工等；
7. 可以根据设计需要在不同的面或者复杂的面上进行一层或多层的铜合金铸造；
8. 与传统的铜套在使用特性上具有类似的特性，可以适合于不同温度下不同润滑条件下的工况；
9. 相比纯铜套具有更好的机械承载性能，特别是抗冲击强度。

## 基材特征 / Structure

以优质碳钢板为基材表面烧结或浇铸高强度铜合金，根据使用工况在其工作面弥散型烧结或镶嵌固体润滑剂。这种制造工艺使得铜和钢结合面达到完全的冶金结合，相对比传统整体铜合金的产品具有更强的耐磨性和润滑性且成本更低，底部钢基体稳定性更强，整体使用寿命更长。在降低了材料成本的同时也提高了其承载能力。

Using high-quality carbon steel plates as the base material, high-strength copper alloys are sintered or cast on the surface. Solid lubricants are dispersed or embedded on the working surface according to operational conditions. This manufacturing process achieves complete metallurgical bonding at the copper-steel interface, offering superior wear resistance and lubricity compared to traditional solid copper alloy products, while also reducing costs. The steel base provides enhanced stability, resulting in longer overall service life. By lowering material costs, the load-bearing capacity is also improved.

1. Combined with the resistance of copper alloy and high mechanical strength properties of steel;
2. Different cast copper alloy material is available according to work condition, including lower friction lead bronze;
3. The different coefficient of friction of the inner and outer material can protect the axial and rotating movement of the bearing in the housing under extremely high load with low speed;
4. The solid lubricant plug can be embedded to achieve the self-lubricating performance;
5. Compare with pure bronze bearing, the cost is reduced obviously;
6. The steel backing allowed to heat treatment to get high hardness, meanwhile the in layer can be re-machined if necessary;
7. The bronze layer can be casted on one or more layers to complex structure;
8. This material have same characteristic as pure bronze bearing, suitable for wide temperature range, different oil condition;
9. The JF850 have better mechanical load performance compare with bronze material, especially the impact strength.

## 4 大优势 / Advantages

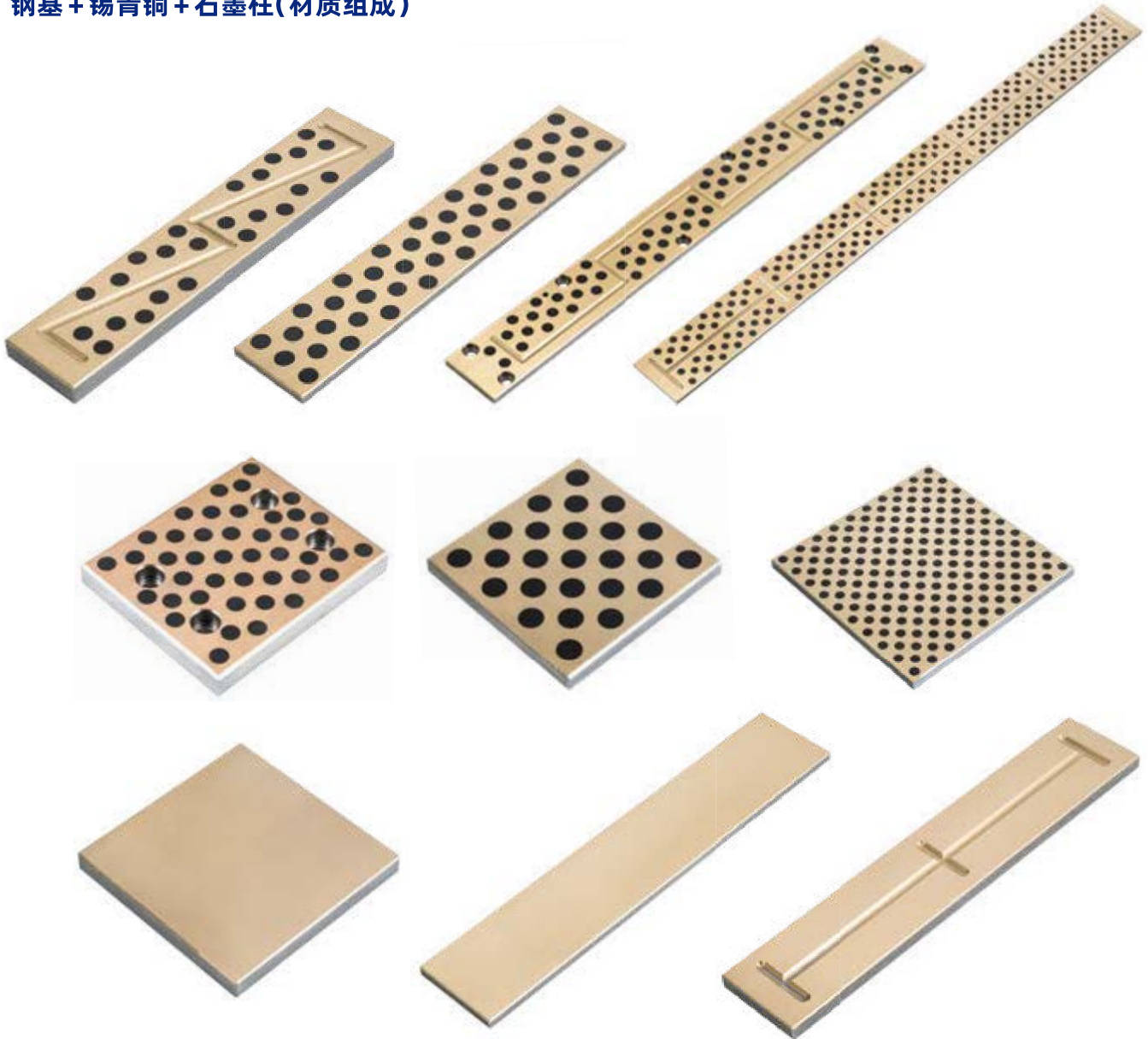
1. 采用钢基体、工作面为高强度铜合金的双合金新型导板，节约成本 35% 以上！
2. 嵌入优质石墨柱，应用自主研发的独特石墨排列技术和石墨孔加工方式，配合先进的真空浸油技术，使其自润滑导向性能发挥的淋漓尽致。
3. 均和双合金导板采用多次烧结复合工艺，能够让原子紧密结合，增加了产品强度，使用时更加耐磨。
4. 铜合金表面硬度检测达标，HB80~100 以上；平行度、平面度可以保证；耐热试验，证明形状无任何改变，膨胀系数极小；抗弯试验，正面、反面均无剥落现象发生；可以根据客户来图定制。



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Steel-Copper Composite Self-Lubricating Plate

钢基 + 锡青铜 + 石墨柱 (材质组成)



铜基 + 锡青铜 + 喷涂式耐磨层 (材质组成)

铜基 + 锡青铜 + 石墨粉 (材质组成)



## 侧板 / 滑盘 / 斜盘 Side Plate / Slide Plate / Inclined Plate

### 侧板 / Side Plate



### 滑盘 / Sliding Plate



### 斜盘 / Swing Vane

