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# 复合系列自润滑轴承 Composite Self-lubricating Bearings



浙江禾田滑动轴承股份有限公司  
ZHEJIANG HTB SLIDING BEARING CO.,LTD.

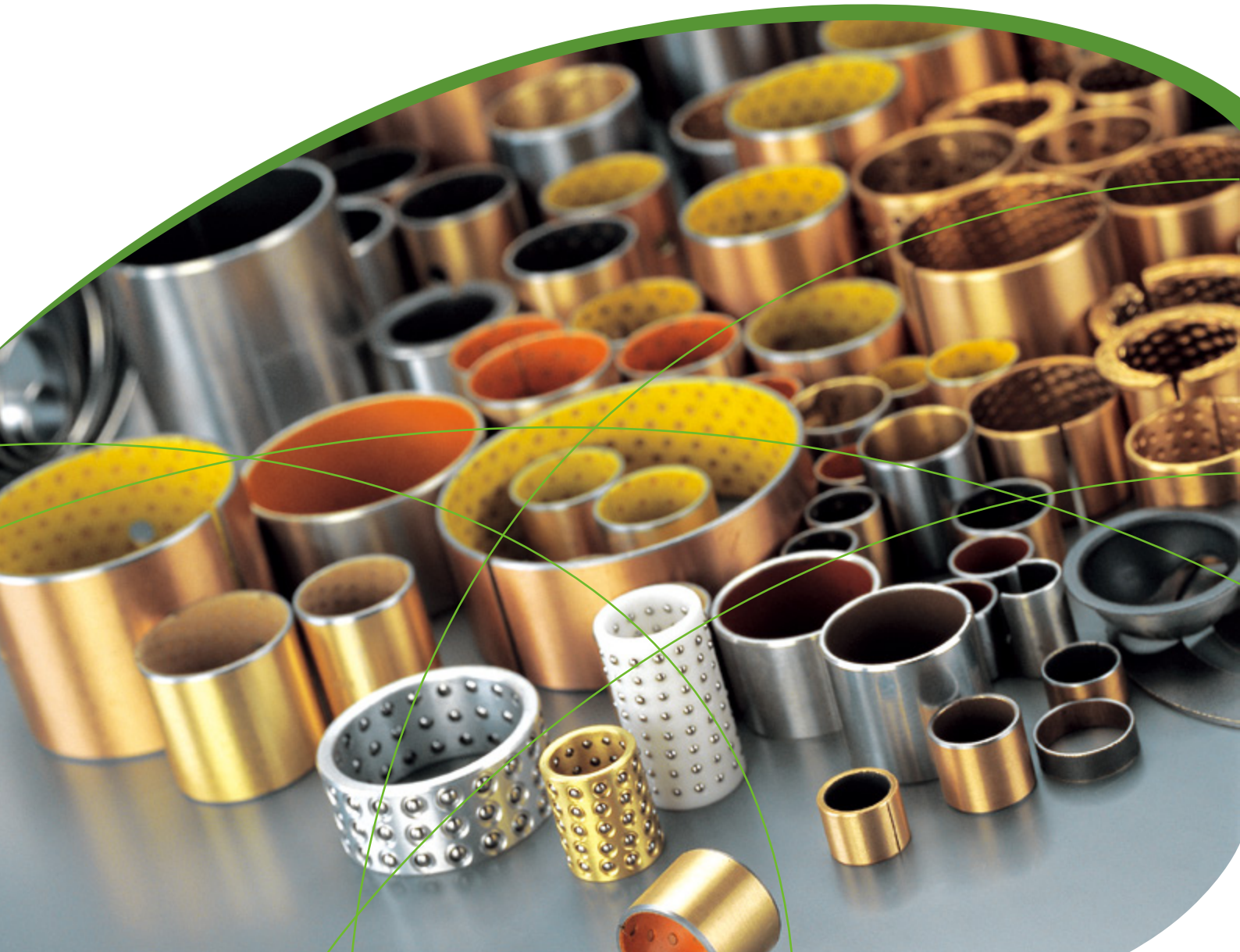


HTB SLIDE  
BEARING

# Introduction | 公司简介

浙江禾田滑动轴承股份有限公司是生产各类滑动轴承的专业性实体企业。在多年生产实践中，始终坚持管理和技术的创新，十分注重学习和借鉴国内外同行经验，并与国内大专院校，科研机构建立密切联系，坚持以科技为先导，以质量求发展，建立了严格的质量保证体系，企业的技术水平和产品质量不断提高。企业以“为客户创造价值是我们的宗旨；客户的需求是我们服务的目标；客户的信任是我们工作的责任。”为经营宗旨，努力为客户提供一流的产品和服务。

Zhejiang **HTB** Sliding Bearing Co., Ltd. is a professional enterprise specialized in the production of various sliding bearings. Through years of production and experience, the enterprise has been committed to the innovation on management and technology. It is of great importance to the acquisition of experience from its colleagues from both home and abroad. Meanwhile, it has established ties with domestic universities and institutions so as to seek development opportunities based upon quality while led by the science and technology, establishing a strict quality assurance system. Therefore, the technical level and quality of the products are constantly improved. Committed to the operational motto of "creating values for our clients and taking the requirement of the clients as our target in the service, and winning clients trust is the liability of our work". The arm of our is to provide the clients with top-class products and service.



## HTB-1

### Carbon Steel Self-lubricating Bearing 碳钢基自润滑轴承



性能指标 Performance Index		有关数据 Data
最大承载压力 P Max Load Capacity P	静载 Static Load	250N/mm <sup>2</sup>
	动载 Dynamic Load	140N/mm <sup>2</sup>
最大线速度 V Max Line Speed V	干摩擦 Dry friction	2.5m/s
	油润滑 Oil Lubrication	5m/s
最高PV值 Maximum PV Value	干摩擦 Dry friction	3.6N/mm <sup>2</sup> ·m/s
	油润滑 Oil Lubrication	50N/mm <sup>2</sup> ·m/s
摩擦系数 μ Friction Coef μ	干摩擦 Dry friction	0.08~0.20
	油润滑 Oil Lubrication	0.02~0.07
工作温度 Working Temperature		-200°C~+280°C
导热系数 Thermal Conductivity		40W/m·k
线膨胀系数 Coefficient of Linear Expansion		12 × 10 <sup>-6</sup> /K

该产品以优质低碳钢板为基体，中间烧结多孔青铜层，表面轧制聚四氟乙烯 (PTFE) 和铅 (Pb) 的混合物。它能提供较好的自润滑、耐磨损、低摩擦等性能，充分发挥了金属和多元素聚合物的优点。产品应用于印刷机械、纺织机械、烟草机械、健身器等。

It's made of high quality low-carbon steel backing with sintering porous bronze in its interlayer and the compound of PTFE and Pb on its surface. It can offer the good properties of self-lubricating, anti-abrasion, low-friction, fully developing the advantages of metal and multi-element polymer. It's applied to the printing, woven, tobacco and gymnastic machinery, etc.

## HTB-1B

### Bronze Self-lubricating Bearing 铜基自润滑轴承



性能指标 Performance Index		有关数据 Data
最大承载压力 P Max Load Capacity P	静载 Static Load	250N/mm <sup>2</sup>
	动载 Dynamic Load	140N/mm <sup>2</sup>
最大线速度 V Max Line Speed V	干摩擦 Dry friction	2m/s
	油润滑 Oil Lubrication	5m/s
最高PV值 Maximum PV Value	干摩擦 Dry friction	3.6N/mm <sup>2</sup> ·m/s
	油润滑 Oil Lubrication	50N/mm <sup>2</sup> ·m/s
摩擦系数 μ Friction Coef μ	干摩擦 Dry friction	0.08~0.20
	油润滑 Oil Lubrication	0.02~0.07
工作温度 Working Temperature		-200°C~+280°C
导热系数 Thermal Conductivity		60W/m·k
线膨胀系数 Coefficient of Linear Expansion		18 × 10 <sup>-6</sup> /K

该产品是以特殊配方的高密度铜合金为基体，中间烧结多孔青铜层，表面轧制聚四氟乙烯 (PTFE) 和铅 (Pb) 的混合物。它能提供较好的自润滑、耐磨损、低摩擦等性能，充分发挥了金属和多元素聚合物的优点。产品应用于冶金行业、连铸轧机、水泥机械和螺旋式输送机。

It's made of high density special copper alloy with sintering porous bronze in its interlayer and the compound of PTFE and Pb on its surface. It can offer the good properties of self-lubricating, anti-abrasion, low-friction, fully developing the advantages of metal and multi-element polymer. The product is applied to metallurgical industry, continuous casting and rolling mill, concrete machinery and spiral conveyers etc.

## HTB-1T

### Carbon Steel Gear Pump Self-lubricating Bearing 碳钢基齿轮泵自润滑轴承



性能指标 Performance Index		有关数据 Data
最大承载压力 P Max Load Capacity P	静载 Static Load	250N/mm <sup>2</sup>
	动载 Dynamic Load	140N/mm <sup>2</sup>
最大线速度 V Max Line Speed V	干摩擦 Dry friction	2m/s
	油润滑 Oil Lubrication	10m/s
最高PV值 Maximum PV Value	干摩擦 Dry friction	3.8N/mm <sup>2</sup> ·m/s
	油润滑 Oil Lubrication	60N/mm <sup>2</sup> ·m/s
摩擦系数 μ Friction Coef μ	干摩擦 Dry friction	0.08~0.20
	油润滑 Oil Lubrication	0.01~0.05
工作温度 Working Temperature		-200°C~+280°C
导热系数 Thermal Conductivity		40W/m·k
线膨胀系数 Coefficient of Linear Expansion		12 × 10 <sup>-6</sup> /K

该材料是根据液压油泵的高PV值特定工艺条件而开发的材料。它有较低的摩擦系数及优异的耐磨损性，能在干燥条件下使用。产品主要应用于中、高压齿轮油泵、柱塞泵、叶片泵等。

The product is developed according to the high PV value of hydraulic pump. It can offer the low friction coefficient and good anti-abrasion, be used in dry condition. The product is applied to medium, high-pressure gear pump, ram pump, vane pumps, etc.

## HTB-1D

### Hydraulic Pb-free Self-lubricating Bearing 液压专用自润滑轴承



性能指标 Performance Index		有关数据 Data
最大承载压力 P Max Load Capacity P	静载 Static Load	250N/mm <sup>2</sup>
	动载 Dynamic Load	140N/mm <sup>2</sup>
最大线速度 V Max Line Speed V	干摩擦 Dry friction	2m/s
	油润滑 Oil Lubrication	5m/s
最高PV值 Maximum PV Value	干摩擦 Dry friction	3.8N/mm <sup>2</sup> ·m/s
	油润滑 Oil Lubrication	60N/mm <sup>2</sup> ·m/s
摩擦系数 μ Friction Coef μ	干摩擦 Dry friction	0.08~0.22
	油润滑 Oil Lubrication	0.02~0.07
工作温度 Working Temperature		-200°C~+280°C
导热系数 Thermal Conductivity		40W/m·k
线膨胀系数 Coefficient of Linear Expansion		12 × 10 <sup>-6</sup> /K

该材料是根据减震器往复运动及侧向受力较大的特殊条件而开发的产品，它有很低的摩擦系数及较好的耐磨损性，能在半干燥条件下使用。产品主要应用于汽车减震器、摩托车减震器、液压油缸等。由于不含铅，使润滑条件更为干净，符合环保要求。

The product is developed according to reciprocating motion of shock absorber and high pressure in flank. It can offer low friction coefficient and good anti-abrasion, be used to semi-dry condition. The product is applied to shock absorber of automobiles & motorcycles and pneumatic cylinder. Because of without lead, the bushing has clean lubricating condition and accord with environmental requirement.

## HTB-1W

Carbon Steel Pb-free Self-lubricating Bearing  
碳钢基无铅自润滑轴承

性能指标 Performance Index		有关数据 Data
最大承载压力 P Max Load Capacity P	静载 Static Load	250N/mm <sup>2</sup>
	动载 Dynamic Load	140N/mm <sup>2</sup>
最大线速度 V Max Line Speed V	干摩擦 Dry friction	2m/s
	油润滑 Oil Lubrication	5m/s
最高PV值 Maximum PV Value	干摩擦 Dry friction	3.8N/mm <sup>2</sup> ·m/s
	油润滑 Oil Lubrication	50N/mm <sup>2</sup> ·m/s
摩擦系数 μ Friction Coef μ	干摩擦 Dry friction	0.08~0.22
	油润滑 Oil Lubrication	0.02~0.07
工作温度 Working Temperature		-200°C~+280°C
导热系数 Thermal Conductivity		40W/m·k
线膨胀系数 Coefficient of Linear Expansion		12×10 <sup>-6</sup> /K

该产品是以优质低碳钢板为基体，中间烧结多孔青铜层，在表面轧制以聚四氟乙烯(PTFE)为主的混合物。由于不含铅，使轴承润滑条件更为干净，符合环保要求。

It's made of high quality low-carbon steel backing with sintering porous bronze in its interlayer and the compound of PTFE on its surface. Because of without lead, the bushing has clean lubricating condition and accord with environmental request.

## HTB-1P

Reciprocate Self-lubricating Bearing  
往复自润滑轴承

性能指标 Performance Index		有关数据 Data
最大承载压力 P Max Load Capacity P	静载 Static Load	250N/mm <sup>2</sup>
	动载 Dynamic Load	140N/mm <sup>2</sup>
最大线速度 V Max Line Speed V	干摩擦 Dry friction	2.5m/s
	油润滑 Oil Lubrication	5m/s
最高PV值 Maximum PV Value	干摩擦 Dry friction	3.6N/mm <sup>2</sup> ·m/s
	油润滑 Oil Lubrication	50N/mm <sup>2</sup> ·m/s
摩擦系数 μ Friction Coef μ	干摩擦 Dry friction	0.08~0.20
	油润滑 Oil Lubrication	0.02~0.07
工作温度 Working Temperature		-200°C~+280°C
导热系数 Thermal Conductivity		40W/m·k
线膨胀系数 Coefficient of Linear Expansion		12×10 <sup>-6</sup> /K

该材料是根据减震器往复运动且侧向受力较大的特殊条件而开发的产品。它有很低的摩擦系数和较好的耐磨损性，能在半干燥条件下使用。产品主要用于汽车减震器、摩托车减震器、液压油缸等。

The Product is developed according to reciprocating motion of shock absorber and high pressure in flank. It can offer low friction coefficient and good anti-abrasion, be used in semi-dry condition. The product is applied to shock absorber of automobiles, motorcycles and pneumatic cylinder.

## HTB-1S

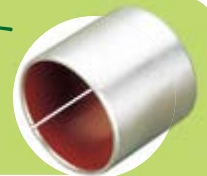
Stainless Steel Self-lubricating Bearing  
不锈钢基自润滑轴承

性能指标 Performance Index		有关数据 Data
最大承载压力 P Max Load Capacity P	静载 Static Load	250N/mm <sup>2</sup>
	动载 Dynamic Load	140N/mm <sup>2</sup>
最大线速度 V Max Line Speed V	干摩擦 Dry friction	2.5m/s
	油润滑 Oil Lubrication	5m/s
最高PV值 Maximum PV Value	干摩擦 Dry friction	3.6N/mm <sup>2</sup> ·m/s
	油润滑 Oil Lubrication	50N/mm <sup>2</sup> ·m/s
摩擦系数 μ Friction Coef μ	干摩擦 Dry friction	0.08~0.20
	油润滑 Oil Lubrication	0.02~0.07
工作温度 Working Temperature		-200°C~+280°C
导热系数 Thermal Conductivity		40W/m·k
线膨胀系数 Coefficient of Linear Expansion		12×10 <sup>-6</sup> /K

该产品是以不锈钢为基体，中间烧结多孔青铜层，在表面轧制以聚四氟乙烯(PTFE)和铅(Pb)的混合物，可在中酸、强碱中使用。产品适用于印染机械、海洋工业耐腐蚀部位等。

The product is based on stainless steel backing with sintering porous bronze layer and it's surface is coated the compound of PTFE and Pb. It can be used in strong acid and alkaline. It's applied to the corrosion resistant part in dyeing machinery and ocean industry etc.

## HTB-1SS

Lining-Sprayed Stainless Steel Bearing  
不锈钢喷塑自润滑轴承

性能指标 Performance Index		有关数据 Data
最大承载压力 P Max Load Capacity P		100N/mm <sup>2</sup>
适用温度范围 Temperature		-195°C~+280°C
最高滑动速度 Max.Sliding Speed V		2.5m/s
摩擦系数 μ Friction Coef μ		0.03~0.18
允许最高PV值(干) PV Limit (Dry)		3.0N/mm <sup>2</sup> ·m/s
允许最高PV值(油) PV Limit (Oil)		40N/mm <sup>2</sup> ·m/s

HTB-1SS不锈钢材料为基体，表面涂喷PTFE组成的高耐蚀、耐磨轴承。该材料特别适应强酸、强碱、轻载中低速的场合，其耐磨性能明显优于单体PTFE轴套和石墨轴套。目前该产品已广泛用于化工酸碱流量计、泵、阀以及海洋工业中耐腐蚀滑动的部位。

HTB-1SS stainless steel bearing coated with PTFE: It is based on stainless steel spay-painted PTFE on the surface. It had performance of anti-acid, anti-alkali, anti-salty liquid and can be widely used in chemical industry such as acid/alkali flow meter, pumps, valves ect. It will show its advantage at the sliding part where anti-corrosion is necessary in marine industry.

## HTB-2X

### Marginal Self-lubricating Bearing 碳钢基边界自润滑轴承



性能指标 Performance Index		有关数据 Data
最大承载压力 P Max Load Capacity P	静载 Static Load	250N/mm <sup>2</sup>
	动载 Dynamic Load	140N/mm <sup>2</sup>
最大线速度 V Max Line Speed V	脂润滑 Grease Lubrication	2.5m/s
最高PV值 Maximum PV Value	脂润滑 Grease Lubrication	2.8N/mm <sup>2</sup> ·m/s
摩擦系数 μ Friction Coef μ	脂润滑 Grease Lubrication	0.05~0.25
工作温度 Working Temperature		-40°C~+130°C
导热系数 Thermal Conductivity		4W/m·k
线膨胀系数 Coefficient of Linear Expansion		12×10 <sup>-6</sup> /K

该产品是以优质低碳钢板为基体，中间烧结一层多孔青铜层，表面轧制聚甲醛(POM)和铅(Pb)的混合物。能提供较好的承载性和耐磨损性。产品应用于汽车底盘、锻压机床、冶金机械、矿山机械、水利行业、轧钢行业等。

It is made of high quality low-carbon steel with sintering porous bronze as its interlayer, and the compound of polyoxymethylene (POM) & Pb as its surface. It can offer the good load capacity and wear-resistant. The product is applied to vehicle chassis, forging and pressing machine, metallurgical machinery, mining machinery, hydraulic industry and rolling steel industry, etc.

## HTB-2Y

### Marginal Pb-free Self-lubricating Bearing 碳钢基边界无铅自润滑轴承



性能指标 Performance Index		有关数据 Data
最大承载压力 P Max Load Capacity P	静载 Static Load	250N/mm <sup>2</sup>
	动载 Dynamic Load	140N/mm <sup>2</sup>
最大线速度 V Max Line Speed V	脂润滑 Grease Lubrication	2.5m/s
最高PV值 Maximum PV Value	脂润滑 Grease Lubrication	2.8N/mm <sup>2</sup> ·m/s
摩擦系数 μ Friction Coef μ	脂润滑 Grease Lubrication	0.05~0.25
工作温度 Working Temperature		-40°C~+130°C
导热系数 Thermal Conductivity		4W/m·k
线膨胀系数 Coefficient of Linear Expansion		12×10 <sup>-6</sup> /K

该产品与HTB-2具有相同结构和使用性能，在边界润滑条件下可长期使用而加不加油，耐磨层表面有储油坑。产品广泛应用于冶金机械、矿山机械、水利机械、汽轮机、建筑机械、农用机械、轧钢行业等。

HTB-2Y has the same structure and functional performance with HTB-2. It can work long time without oil in the condition of prelubricated with lubrication indents. Widely applied to metallurgy machinery, Mining machinery, water conservancy machinery, automobile, building machinery, agriculture machinery, rolling steel industry etc.

## HTB-2S

### Marginal Pb-free Self-lubricating Bearing 碳钢基边界无铅自润滑轴承



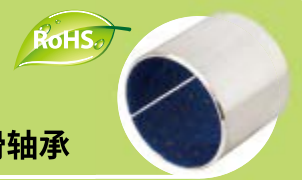
性能指标 Performance Index		有关数据 Data
最大承载压力 P Max Load Capacity P	静载 Static Load	250N/mm <sup>2</sup>
	动载 Dynamic Load	140N/mm <sup>2</sup>
最大线速度 V Max Line Speed V	脂润滑 Grease Lubrication	2.5m/s
最高PV值 Maximum PV Value	脂润滑 Grease Lubrication	2.8N/mm <sup>2</sup> ·m/s
摩擦系数 μ Friction Coef μ	脂润滑 Grease Lubrication	0.05~0.25
工作温度 Working Temperature		-40°C~+130°C
导热系数 Thermal Conductivity		4W/m·k
线膨胀系数 Coefficient of Linear Expansion		12×10 <sup>-6</sup> /K

该产品以优质低碳钢板为基体，中间烧结球形青铜层，表面轧制以缩醛树脂/亲油性纤维的特殊树脂。具有摩擦系数低、耐磨性能好、无油条件下润滑的特点。产品广泛应用于卷场机、推土机、印染机、采煤机、冲床、吊车/行车高空作业等领域。

HTB-2S Marginal Pb-free self-lubricating bearing based on steel backing, sintered porous bronze as its interlayer, surface rolled by acetal resin and polymer material containing oleophilicity fiber and perform well on low friction factor, well wear performance and oil free condition lubrication. It has been widely applied to winding engines, printing and dyeing machinery, coal-cutters, punch, winch truck, traveling crane etc.

## HTB-2L

### Marginal Pb-free Self-lubricating Bearing 碳钢基边界无铅自润滑轴承



性能指标 Performance Index		有关数据 Data
最大承载压力 P Max Load Capacity P	静载 Static Load	250N/mm <sup>2</sup>
	动载 Dynamic Load	140N/mm <sup>2</sup>
最大线速度 V Max Line Speed V	脂润滑 Grease Lubrication	2.5m/s
最高PV值 Maximum PV Value	脂润滑 Grease Lubrication	2.8N/mm <sup>2</sup> ·m/s
摩擦系数 μ Friction Coef μ	脂润滑 Grease Lubrication	0.05~0.25
工作温度 Working Temperature		-40°C~+130°C
导热系数 Thermal Conductivity		4W/m·k
线膨胀系数 Coefficient of Linear Expansion		12×10 <sup>-6</sup> /K

该产品是以优质低碳钢板为基体，中间烧结一层多孔青铜层，表面轧制一层改性的聚甲醛(POM)。产品应用于汽车底盘、锻压机床、冶金机械、矿山机械、水利行业、轧钢行业等。

It is made of high quality low-carbon steel with sintering porous bronze as its interlayer, the modified compound of POM as its surface. It is applied to vehicle chassis, forming machine tools, steel metallurgical machinery, mining machinery, hydraulic industry and rolling steel industry, etc.

## HTB-800

Bi-metal Self-lubricating Bearing  
双金属自润滑轴承

性能指标 Performance Index		有关数据 Data
最大承载压力 P Max Load Capacity P		150N/mm <sup>2</sup>
最大线速度 V Max Line Speed V	油润滑 Oil Lubrication	5m/s
最高PV值 Maximum PV Value	脂润滑 Grease Lubrication	2.8N/mm <sup>2</sup> ·m/s
	油润滑 Oil Lubrication	10N/mm <sup>2</sup> ·m/s
合金硬度 Alloy Hardness		60~90HB
合金材料 Alloy Material		CuPb10Sn10

该产品以优质低碳钢板为基体，表面烧结锡青铜合金，经多次烧结轧制而成，它有很高的疲劳强度和承载能力，高的抗冲击力。产品适用于汽车发动机连杆，变速箱齿轮，工程机械、农业机械等。

It is made of high quality low-carbon steel, and sintered and rolled copper alloy as its surface, it has high fatigue strength, load capacity and impact strength. The product is applies to con-rod of automobile engines, transmission gearbox, engineering and agriculture machinery, etc.

## HTB-750

Bi-metal Self-lubricating Bearing  
双金属自润滑轴承

性能指标 Performance Index		有关数据 Data
最大承载压力 P Max Load Capacity P		100N/mm <sup>2</sup>
最大线速度 V Max Line Speed V	油润滑 Oil Lubrication	25m/s
最高PV值 Maximum PV Value	脂润滑 Grease Lubrication	6N/mm <sup>2</sup> ·m/s
	油润滑 Oil Lubrication	10N/mm <sup>2</sup> ·m/s
合金硬度 Alloy Hardness		30~40HB
合金材料 Alloy Material		CuPb24Sn1

该产品双金属轴承，是以低碳钢板为基体，表面烧结铜铅合金材料的产品。该产品有较好的抗疲劳强度和承载能力。适用于中速中载。有油滑动的场合。表面镀软合金时，可以作高速内燃机衬套、连杆衬套、摇臂衬套，达到良好的耐磨，耐疲劳效果。

It is made of high quality low-carbon steel, rolled with aluminium-tin alloy on surface with special techniques. It has medium fatigue strength, load capacity, good corrosion-resistance and super surface property. It is mainly applied to main shaft and con-rod shaft of internal combustion engine, pressure squeeze machine and cooling machine.

## HTB-720

Bi-metal Self-lubricating Bearing  
双金属自润滑轴承

性能指标 Performance Index		有关数据 Data
最大承载压力 P Max Load Capacity P		130N/mm <sup>2</sup>
最大线速度 V Max Line Speed V	油润滑 Oil Lubrication	10m/s
最高PV值 Maximum PV Value	脂润滑 Grease Lubrication	2.8N/mm <sup>2</sup> ·m/s
	油润滑 Oil Lubrication	10N/mm <sup>2</sup> ·m/s
合金硬度 Alloy Hardness		45~70HB
合金材料 Alloy Material		CuPb24Sn4

该产品以优质低碳钢板为基体，表面烧结铅锡青铜合金，经多次烧结轧制而成。它有很高的疲劳强度、承载能力、抗冲击能力、耐腐蚀、有较好的轴承表面性能，产品适用于高速、重载的内燃机主轴和连杆衬套。

It is made of high quality low-carbon steel backing, sintered and rolled tin-lead-bronze alloy on the surface. It is has highly fatigue strength, load capacity, impact strength and corrosion-resistance. It is widely applied to main shaft and con-rod shaft of the internal combustion engine with heavy capacity and high Speed.

## HTB-700

Bi-metal Self-lubricating Bearing  
双金属自润滑轴承

性能指标 Performance Index		有关数据 Data
最大承载压力 P Max Load Capacity P		130N/mm <sup>2</sup>
最大线速度 V Max Line Speed V	油润滑 Oil Lubrication	10m/s
最高PV值 Maximum PV Value	脂润滑 Grease Lubrication	2.8N/mm <sup>2</sup> ·m/s
	油润滑 Oil Lubrication	10N/mm <sup>2</sup> ·m/s
合金硬度 Alloy Hardness		40~60HB
合金材料 Alloy Material		CuPb30

该产品以优质低碳钢板为基体，表面烧结铅锡青铜合金，经多次烧结轧制而成。它有较高的疲劳强度和承载能力，较好的轴承表面性能，产品适用于内燃机主轴和连杆衬套、摇臂衬套。

It is made of high quality low-carbon steel backing, rolled and sintered many times with tin-lead bronze alloy on surface. It has high fatigue strength, load capacity, excellent surface property. It is mainly applied to main shaft and bushes of rocker arm.

## HTB-850

### Bi-metal Self-lubricating Bearing 双金属自润滑轴承



性能指标 Performance Index		有关数据 Data
最大承载压力 P Max Load Capacity P		100N/mm <sup>2</sup>
最大线速度 V Max Line Speed V	油润滑 Oil Lubrication	25m/s
最高PV值 Maximum PV Value	脂润滑 Grease Lubrication	6N/mm <sup>2</sup> ·m/s
合金硬度 Alloy Hardness		30~40HB
合金材料 Alloy Material		CuSn6Zn6Pb3

该产品是以低碳钢板为基材材料，表面烧结铜合金材料。该产品是双合金轴承中承载能力最强的一种，重型车的平衡桥衬套、垫片；推土机的支重轮；汽车钢板衬套，汽车底盘、车桥、工程机械、农用机械等。

It is made of high quality low-carbon steel backing and sintered and rolled copper alloy as its surface. It has medium fatigue strength, load capacity, good corrosion-resistance and super surface property. It is mainly applied to main shaft and con-rod shaft of internal combustion engine, pressure squeeze machine and cooling machine.

## HTB-930

### Bi-metal Self-lubricating Bearing 双金属自润滑轴承



性能指标 Performance Index		有关数据 Data
最大承载压力 P Max Load Capacity P		130N/mm <sup>2</sup>
最大线速度 V Max Line Speed V	油润滑 Oil Lubrication	10m/s
最高PV值 Maximum PV Value	脂润滑 Grease Lubrication	2.8N/mm <sup>2</sup> ·m/s
	油润滑 Oil Lubrication	10N/mm <sup>2</sup> ·m/s
合金硬度 Alloy Hardness		70~100HB
合金材料 Alloy Material		CuPb6.5Sn0.1

该产品以优质低碳钢板为基材，表面烧结磷青铜合金，经多次烧结轧制而成。它有中等疲劳强度和承载能力，较好的轴承表面性能，产品主要适用于汽车启动电机衬套。

It is made of high quality low-carbon steel backing, rolled and sintered tin, lead, bronze alloy on surface. It has medium fatigue strength, load capacity, excellent surface property. It is mainly applied to main shaft and con-rod shaft of internal combustion engine.

## HTB-20

### Bi-metal Self-lubricating Bearing 双金属自润滑轴承



性能指标 Performance Index		有关数据 Data
最大承载压力 P Max Load Capacity P		100N/mm <sup>2</sup>
最大线速度 V Max Line Speed V	油润滑 Oil Lubrication	25m/s
最高PV值 Maximum PV Value	脂润滑 Grease Lubrication	6N/mm <sup>2</sup> ·m/s
合金硬度 Alloy Hardness		30~40HB
合金材料 Alloy Material		AlSn20Cu

该产品以优质低碳钢板为基材，表面采用特殊工艺轧制铝锡合金。它有中等疲劳强度和承载能力，良好的耐腐蚀性，较好的轴承表面性能，产品适用于内燃机主轴和连杆衬套、空压机、制冷机用衬套。

It is made of high quality low-carbon steel backing, rolled with aluminium-tin alloy on surface with special techniques. It has medium fatigue strength, load capacity, good corrosion-resistance and super surface property. It is mainly applied to main shaft and con-rod shaft of internal combustion engine, pressure squeeze machine and cooling machine.

## HTB-08G

### Bi-metal Self-lubricating Bearing 双金属自润滑轴承



性能指标 Performance Index		有关数据 Data
最大承载压力 P Max Load Capacity P		90N/mm <sup>2</sup>
最大线速度 V Max Line Speed V	干摩擦 Dry friction	0.4m/s
	脂润滑 Grease Lubrication	2m/s
摩擦系数 μ Friction Coef μ	干摩擦 Dry friction	<0.22
	脂润滑 Grease Lubrication	<0.08
最高PV值 Maximum PV Value	干摩擦 Dry friction	1.8N/mm <sup>2</sup> ·m/s
合金硬度 Alloy Hardness		60~90HB

该产品以优质低碳钢板为基材，表面烧结CuPb10Sn10锡青铜合金，合金表面轧制菱形油孔，油穴内埋入特殊的固体润滑剂，它有良好的润滑性和抗磨损性，能在无油或少油条件下工作，特别适用于高温，水溶液浸润或其他加油或加油困难场合。

It is made of high quality low-carbon steel backing, sintered copper alloy of CuPb10Sn10, the alloy surface is rolled to diamond oil grooves. The special lubricant is embedded in the grooves. It has good lubricating and corrosion resistance property, it can work in the condition of little of oil or none of oil. It is particularly applied to high temperature and the occasions where cannot be added oil.

## HTB-090

Warpped Bronze Bearing  
青铜卷制轴承

性能指标 Performance Index	有关数据 Data
密度 Y Density Y	8.8 g/cm <sup>3</sup>
抗压强度 α <sub>c</sub> Compression Strength	470N/mm <sup>2</sup>
导热系数 Coefficient of Heat Conduction	58W/m-K
线膨胀系数 α <sub>L</sub> Coefficient of Linear Expansion	18.5 × 10 <sup>-6</sup> /K
硬度 Hardness	90~120HB
延伸率 Elongation	40%
材料名称 Alloy Material	CuSn8P0.3

该产品以特殊配方的磷青铜材料为基体，表面轧制菱形或球形油穴，它有高密度，良好承载压力及很好的耐磨性。产品适用于起重机械、建筑机械、采矿机械等。

HTB-090 is a kind of bushes wrapped by bronze strip. The bronze is of particular formulation with high specific gravity and on its surface may be incorporated with spherical or diamond shaped indentations or oil grooves as required. It has high density, good load capacity and wear-resistant. The product is applied to lifting machinery, construction machinery and mining machinery, etc.

## HTB-091

Warpped Bronze Bearing  
黄铜卷制轴承

性能指标 Performance Index	有关数据 Data
密度 Y Density Y	8.4 g/cm <sup>3</sup>
抗压强度 α <sub>c</sub> Compression Strength	440N/mm <sup>2</sup>
导热系数 Coefficient of Heat Conduction	71W/m-K
线膨胀系数 α <sub>L</sub> Coefficient of Linear Expansion	19.2 × 10 <sup>-6</sup> /K
硬度 Hardness	80~110HB
延伸率 Elongation	30%
材料名称 Alloy Material	CuZn31Si

该产品是以特殊配方的黄铜材料为基体，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，产品运用于建筑机械、机床工业等。

It is based on high density copper alloy of special formula. The alloy surface is rolled to oil grooves or hole according to customer require. It has good load capacity and wear-resistant. The product is applied to construction machinery and machine tool etc.

## HTB-092

Warpped Bronze Bearing  
青铜卷制轴承

性能指标 Performance Index	有关数据 Data
密度 Y Density Y	8.8 g/cm <sup>3</sup>
抗压强度 α <sub>c</sub> Compression Strength	470N/mm <sup>2</sup>
导热系数 Coefficient of Heat Conduction	58W/m-K
线膨胀系数 α <sub>L</sub> Coefficient of Linear Expansion	18.5 × 10 <sup>-6</sup> /K
硬度 Hardness	90~120HB
延伸率 Elongation	40%
材料名称 Alloy Material	CuSn8P0.3

该产品是在磷青铜材料的基础上改进而成，表面按一定的角度和密度有序地排列润滑通孔。它具有延长使用期及润滑间隔频率，减少磨损等优点。

The product is improved from HTB-090. The hole is arranged on the surface according to certain angle and density. It can delay life, low lubricating frequency and decrease wear etc.

## HTB-093

Warpped Bronze Bearing  
青铜卷制轴承

性能指标 Performance Index	有关数据 Data
密度 Y Density Y	8.8 g/cm <sup>3</sup>
抗压强度 α <sub>c</sub> Compression Strength	470N/mm <sup>2</sup>
导热系数 Coefficient of Heat Conduction	58W/m-K
线膨胀系数 α <sub>L</sub> Coefficient of Linear Expansion	18.5 × 10 <sup>-6</sup> /K
硬度 Hardness	90~120HB
延伸率 Elongation	40%
材料名称 Alloy Material	CuSn8P0.3

该产品是在磷青铜材料的基础上改进而成，表面轧制球形油穴，它有高密度，良好承载压力及很好的耐磨性。产品适用于起重机械、建筑机械、采矿机械等。

The product is improved from HTB-090. The alloy surface is rolled to spherical indent. It has high density, good load capacity and wear-resistant. The product is applied to lifting machinery, construction machinery and mining machinery, etc.



## HTB-094

Warped Bronze Bearing  
青铜卷制轴承



性能指标 Performance Index	有关数据 Data
密度 Y Density Y	8.8 g/cm <sup>3</sup>
抗压强度 α <sub>c</sub> Compression Strength	470N/mm <sup>2</sup>
导热系数 Coefficient of Heat Conduction	58W/m-K
线膨胀系数 α <sub>l</sub> Coefficient of Linear Expansion	18.5 × 10 <sup>-6</sup> /K
硬度 Hardness	90~120HB
延伸率 Elongation	40%
材料名称 Alloy Material	CuZn8P0.3

该产品是在HTB-092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 HTB-092. It is configured airproof ring on the bushing height. It can prevent grease leaking and dirt penetrating, so as to delay lubricating time.

## HTB-09G

Warped Bronze Bearing  
青铜卷制轴承



性能指标 Performance Index	有关数据 Data
密度 Y Density Y	8.3 g/cm <sup>3</sup>
抗压强度 α <sub>c</sub> Compression Strength	470N/mm <sup>2</sup>
导热系数 Coefficient of Heat Conduction	58W/m-K
线膨胀系数 α <sub>l</sub> Coefficient of Linear Expansion	18.5 × 10 <sup>-6</sup> /K
硬度 Hardness	90~120HB
延伸率 Elongation	40%
材料名称 Alloy Material	CuZn8P0.3

该产品是在HTB-090为基础，在表面菱形油穴内埋入特殊的固体润滑剂。它具有很低的摩擦系数，较好的耐磨性等优点，能在无油或少油的条件下工作。

It is improved from HTB-090. The special solid lubricant is imbedded into lozenge oil hole on surface. It has very low friction coefficient and good wear-resistance, is used to the condition of no or little oil.

## HTB-ST

Wrapped Steel Bearing  
钢板卷制轴承



性能指标 Performance Index	有关数据 Data
低碳钢材质 Low-carbon Steel Material	SPCC
不锈钢材质 Stainless Steel Material	SUS 304
硬度 Hardness	>HV600

该产品用优质低碳钢板或不锈钢，使用特殊工艺加工而成。产品广泛应用于汽车零部件、重型机械等。

It's made of high quality low-carbon steel or stainless steel with a special technique. It is widely applied to automobile parts, heavy-duty machinery etc.

## HTB-701

Metal Base Point-lubricating Bearing  
金属基弥散型自润滑轴承



性能指标 Performance Index		有关数据 Data
最大承载力 P (干摩擦) Max. Permissible Load P	静载 Static Load	73.5N/mm <sup>2</sup>
	动载 Dynamic Load	24.5N/mm <sup>2</sup>
最大承载力 P (定期润滑) Max. Permissible Load P	静载 Static Load	73.5N/mm <sup>2</sup>
	动载 Dynamic Load	24.5N/mm <sup>2</sup>
最大线速度 V Max Sliding Speed V	干摩擦 Dry friction	0.5m/s
	定期润滑 Periodical Lubrication	1.0m/s
最高PV值 Maximum PV Value	干摩擦 Dry friction	1.63N/mm <sup>2</sup> ·m/s
	定期润滑 Periodical Lubrication	2.45N/mm <sup>2</sup> ·m/s
工作温度 Working Temperature		-40°C~+120°C
密度 Y Density Y		6.3g/cm <sup>3</sup>
合金硬度 Alloy Hardness		≥55 HB

该产品是以优质低碳钢为基体，表面烧结青铜合金，合金层内均匀地分布固体润滑剂，并经过特殊的含油处理，使产品始终保持较低的摩擦系数，它能提供较好的自润滑、耐磨损、抗咬合等性能，产品应用于高负载及无法加油润滑的场合。

The product is based on low-carbon steel backing and the sintering surface of bronze alloy. Alloy layer is distributed uniformly the solid lubricant. By specially impregnated with oil, the product is keeping the lower coefficient of friction, supporting the good self-lubricating, friction-resistant and anti-gear, etc. The product is applied in the situation of high load and none of oil.

## HTB-702

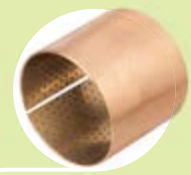
Metal Base Point-lubricating Bearing  
金属基弥散型自润滑轴承

性能指标 Performance Index		有关数据 Data
最大承载压力 P Max Load Capacity P	静载 Static Load	200N/mm <sup>2</sup>
	动载 Dynamic Load	80N/mm <sup>2</sup>
摩擦系数 μ Friction Coef μ	干摩擦 Dry friction	0.13~0.18
	油润滑 Oil Lubrication	0.11~0.16
最大线速度 V Max Line Speed V		0.25m/s
最高PV值 Maximum PV Value		0.8N/mm <sup>2</sup> ·m/s
工作温度 Working Temperature		-150~280°C
线膨胀系数 α <sub>l</sub> Coefficient of Linear Expansion		17.5 × 10 <sup>-6</sup> /K
抗压强度 α <sub>c</sub> Compression Strength		320N/mm <sup>2</sup>
密度 Y Density Y		6.3g/cm <sup>3</sup>
合金硬度 Alloy Hardness		≥40 HB

该产品以优质不锈钢为基体，表面烧结铅青铜合金，合金层内均匀地分布固体润滑剂，合金层表面可根据实际需要，可覆盖一层固体润滑膜，产品具有较低的摩擦系数，较好的自润滑、耐磨损和抗咬合等性能，应用于高负载、污染环境及水或其它液体中。

The product is typified by its stainless steel backing and the sintering surface of bronze alloy. Alloy layer is distributed uniformly the solid lubricant. The surface is spread the solid lubricant coating according to fact require. The product is keeping the lower coefficient of friction, Having the good self-lubricating, friction-resistant and anti-gear, etc. The product is applied in the situation of high load, polluted environment, water and other liquid.

## HTB-703

Metal Base Point-lubricating Bearing  
金属基弥散型自润滑轴承

性能指标 Performance Index		有关数据 Data
最大承载压力 P Max Load Capacity P	静载 Static Load	200N/mm <sup>2</sup>
	动载 Dynamic Load	80N/mm <sup>2</sup>
摩擦系数 μ Friction Coef μ	干摩擦 Dry friction	0.13~0.18
	油润滑 Oil Lubrication	0.11~0.16
最大线速度 V Max Line Speed V		0.25m/s
最高PV值 Maximum PV Value		0.8N/mm <sup>2</sup> ·m/s
工作温度 Working Temperature		-150~280°C
线膨胀系数 α <sub>l</sub> Coefficient of Linear Expansion		19.5 × 10 <sup>-6</sup> /K
抗压强度 α <sub>c</sub> Compression Strength		300N/mm <sup>2</sup>
密度 Y Density Y		7.1g/cm <sup>3</sup>
合金硬度 Alloy Hardness		≥40 HB

该产品以优质青铜板为基体，表面烧结铅青铜合金，合金层内均匀地分布固体润滑剂，合金层表面可根据实际需要，覆盖一层固体润滑膜，使产品始终保持较低的摩擦系数，它能提供较好的自润滑、耐磨损、抗咬合等性能，产品应用于高负载、污染环境及水或其它液体中。

The product is based on good quality copper backing and the sintering surface of bronze alloy. Alloy layer is distributed uniformly the solid lubricant. The surface is spread the solid lubricant coating according to the fact require. The product is keeping the lower coefficient of friction, supporting the good self-lubricating, friction-resistant and anti-gear, etc. The product is applied in the situation of high load, polluted environment, water or other liquid.

## HTB-704

Metal Base Point-lubricating Plate  
金属基弥散型自润滑滑板

性能指标 Performance Index	有关数据 Data
最大承载压力 P (动载) Max Load Capacity P	50N/mm <sup>2</sup>
最大线速度 V Max Line Speed V	0.1N/m/s
最高PV值 Maximum PV Value	1.05N/mm <sup>2</sup> ·m/s
最高使用温度 Max. Temperature	250°C
摩擦系数 μ Friction Coefficient μ	0.1~0.2
密度 Y Density Y	6.4g/cm <sup>3</sup>
线膨胀系数 α <sub>l</sub> Coefficient of Linear Expansion	18 × 10 <sup>-6</sup> /K
抗压强度 α <sub>c</sub> Compression Strength	343N/mm <sup>2</sup>
合金硬度 Alloy Hardness	≥50 HB

该产品是以优质低碳钢为基体，表面烧结青铜合金，合金层内均匀地分布固体润滑剂，并经过特殊的含油处理，使产品始终保持较低的摩擦系数，它能提供较好的自润滑、耐磨损、抗咬合等性能，产品应用于高负载及无法加油润滑的场合。

The product is based on low-carbon steel backing and the sintering surface of bronze alloy. Alloy layer is distributed uniformly the solid lubricant. By specially impregnated with oil, the product is keeping the lower coefficient of friction, supporting the good self-lubricating, friction-resistant and anti-gear, etc. The product is applied in the situation of high load and none of oil.

## HTB-705

Metal Base Point-lubricating Plate  
金属基弥散型自润滑滑板

性能指标 Performance Index	有关数据 Data
最大承载压力 P (动载) Max Load Capacity P	50N/mm <sup>2</sup>
最大线速度 V Max Line Speed V	0.1N/m/s
最高PV值 Maximum PV Value	1.05N/mm <sup>2</sup> ·m/s
最高使用温度 Max. Temperature	250°C
摩擦系数 μ Friction Coefficient μ	0.1~0.2
密度 Y Density Y	6.4g/cm <sup>3</sup>
线膨胀系数 α <sub>l</sub> Coefficient of Linear Expansion	18 × 10 <sup>-6</sup> /K
抗压强度 α <sub>c</sub> Compression Strength	343N/mm <sup>2</sup>
合金硬度 Alloy Hardness	≥50 HB

该产品是以不锈钢为基体，表面烧结青铜合金，合金层内均匀地分布固体润滑剂，并经过特殊的含油处理，使产品始终保持较低的摩擦系数，它能提供较好的自润滑、耐磨损、抗咬合等性能，产品应用于高负载及无法加油润滑的场合。

The product is based on stainless steel backing and the sintering surface of bronze alloy. Alloy layer is distributed uniformly the solid lubricant. By specially impregnated with oil, the product is keeping the lower coefficient of friction, supporting the good self-lubricating, friction-resistant and anti-gear, etc. The product is applied in the situation of high load and none of oil.

## HTB-310

### Casting Bronze Bearing

#### 黄铜铸造轴承



性能指标 Performance Index	有关数据 Data
拉伸强度 Tensile strength	>230N/mm <sup>2</sup>
屈服强度 Yield Strength	>130N/mm <sup>2</sup>
延伸率 Elongation	>9%
硬度 Hardness	60~80HB
弹性系数 Coefficient of Elasticity	93KN/mm <sup>2</sup>
材质 Material	CuZn24Al6

该产品以黄铜合金为基体，产品广泛应用于机器工具、农业机械、起重机、电动摩托、弹簧栓轴套、转向轴轴套和传动装置等。

It is based on the copper alloy. This kind of products are widely used in machine-tool, agricultural machinery, crane electromotor, spring pin, steering shaft and transmission, etc.

## HTB-320

### Casting Bronze Bearing

#### 青铜铸造轴承



性能指标 Performance Index	有关数据 Data
拉伸强度 Tensile strength	>230N/mm <sup>2</sup>
屈服强度 Yield Strength	>130N/mm <sup>2</sup>
延伸率 Elongation	>9%
硬度 Hardness	60~80HB
弹性系数 Coefficient of Elasticity	93KN/mm <sup>2</sup>
材质 Material	CuSn6Zn6Pb3

该产品以黄铜合金为基体，产品广泛应用于机器工具、农业机械、起重机、电动摩托、弹簧栓轴套、转向轴轴套和传动装置等。

It is based on the copper alloy. This kind of products are widely used in machine-tool, agricultural machinery, crane electromotor, spring pin, steering shaft and transmission, etc.

## HTB-330

### Steel+Bronze Casting Bearing

#### 钢+铜铸造轴承



性能指标 Performance Index	有关数据 Data
钢基 Steel	≥50HRC
铜 Bronze alloy	≥80 HB
最大静承载 Max.Static load	50N/mm <sup>2</sup>
最大动承载 Max.Dynamic load	30N/mm <sup>2</sup>
最大速度 Max. Speed	2m/s
最大PV值 Max. PV	1.8N/mm <sup>2</sup> ·m/s
摩擦系数 Friction coefficient	0.03~+0.20
温度 Temp.(°C)	-50~+250

HTB-330以优质钢为基体，内孔覆以特种耐磨铜合金材料。同时根据客户要求可在铜合金表面加工出规则的油槽，以提高润滑性能。该种材料具有摩擦系数小，耐摸性能好，尺寸精度高，耐冲击、耐高温的特性。可用于高精度冲压模具，汽车覆盖模具等频繁工作的往复运动导套。

HTB-330 is the steel backed bronze alloy lined bearing material, the work surface can be produced the oil groove if requested which can improve the oil giving system. Characteristic compare with the traditional steel bushes this structure provides the material have lower friction, excellent wear resistance, higher temp. can bear etc. . Now the bearings have been succeed in the high speed mold & Die industries.

## HTB-STM

### Spring Steel Bearing

#### 弹簧钢卷制轴承



性能指标 Performance Index	有关数据 Data
最高静承载 Max. Static Load	650N/mm <sup>2</sup>
最高动承载 Max. Dynamic Load	100N/mm <sup>2</sup>
最大线速度 Max. Speed	0.1m/s
最高使用温度 Max. Temperature	200°C
油润滑摩擦因数 Friction Coefficient (Oil)	≤0.18
硬度 Hardness	42~48HB
材质 Material	65Mn

HTB-STM弹簧钢卷制轴承是以弹簧钢板为基材进行卷制，然后经整体淬火内表研磨处理而成。该产品取代普通的轴承钢的产品，具有硬度适中，承载能力强，耐磨性能好等优点，该产品富有本能的弹性特点,在受严重冲击时对轴有缓冲保护作用。

HTB-STM spring steel bearing, made of high grade spring steel, it is wrapped bushing with treatment of whole body quenched and inner surface grinded.The bushing can replace normal bearing steel bushings; it has the advantages of mid hardness, high load enduring, good anti-wear performance. With good elastic, the shaft can be protected from damages of harmful stresses or load.The product can be used in many parts of large-scale construction machinery such as the rocker-arm,grab bucket etc.

## HTB-TEX

Steel with PTFE Fibre Fabric

弹钢基PTFE织物自润滑轴承



性能指标 Performance Index		有关数据 Data
最大承载压力 P Max Load Capacity P	静载 Static	350N/mm <sup>2</sup>
	动载 Dynamic	180N/mm <sup>2</sup>
最快速度 Max Line Speed V	干运行 Dry	0.5m/s
	带油运行 Grease	>1m/s
最大(PV)干 Max.PV(Dry)	短时间 Short-term	3.6N/mm <sup>2</sup> ·m/s
	连续 Continuous	1.8N/mm <sup>2</sup> ·m/s
工作温度 Working Temperature		-50°C~+250°C
摩擦系数 μ Friction Coef μ		0.05~0.2
导热系数 Thermal Conductivity		42W/m·k
线膨胀系数 Coefficient of Linear Expansion		11 × 10 <sup>-6</sup> /K

该材料以各种优质不锈钢为基体，表面覆着以PTFE和其它添加剂为主的低摩擦耐磨编织物材料。这种材料结构相比一半三层复合材料具有更高的承载能力和更长的使用寿命。主要运用于农用机械、建筑机械、汽机车底盘零部件、球阀、蝶阀各种阀门，水泵及化工工业等重载低速而无法加油的场合。

This new material use the PTFE fibres fabric overlay on metal backings, the fabric have very high load capacity and much longer operating life compare with conventional 3-layer bushes. Now have been used like suspension and auxiliary of agriculture and construction machines, cranes and hydraulic and mechanical jibs, ball butterfly and sluice valves, water pumps, chemical industries etc.

## HTB-3S

Metal Mesh with PTFE Layer Bearing

不锈钢基冲孔无给油轴承



性能指标 Performance Index		有关数据 Data
最大承载压力 P Max Load Capacity P	静载 Static	80N/mm <sup>2</sup>
	动载 Dynamic	40N/mm <sup>2</sup>
最快速度 Max Line Speed V	干运行 Dry	1m/s
	带油运行 Grease	>1m/s
工作温度 Working Temperature		-195°C~+260°C
摩擦系数 μ Friction Coef μ		0.05~0.2

HTB-3S以规则不锈钢网为基材，表面附着以PTFE为主的耐磨材料。产品广泛运用化工行业、食品工业等，如化工阀门，需在海水中润滑的部件等。此产品大大提高了耐腐蚀性，耐强酸、强碱性，而且又起到了自润滑的效果。

HTB-3S consists of a stainless steel mesh shell laminated with compounded PTFE tape. This material structure enables the final goods have more light. The stainless steel provides good corrosion resistance. It is widely been used in chemical industries like chemical valves, medical industries, food industries etc.

## HTB-FDAL

Linear Motion Bearing

铝塑直线轴承



性能指标 Performance Index	有关数据 Data
基本材质 Base Material	AL+PTFE和填充结合物 Filled PTFE+Aluminum Alloy
摩擦系数 μ Friction Coef μ	0.03~0.2
最大承载压力 P Max Load Capacity P	20N/mm <sup>2</sup>
适用温度范围 Temperature Limit	-100°C~+250°C

HTB-FDAL铝塑直线轴承，是一种无油润滑的直线运动产品，在精密机械的滑动平台上使用，以取代钢珠滚动轴承，可以降低噪音、降低成本、创造缺油使用性能。因此，该产品已在国外的模具滑台、精密仪器滑台上普遍使用。

HTB-FDAL linear motion bearing is kind of self-lubricated linear motion products. As a substitute of linear ball bearing, it can be used in sliding platform for precision machines or mould & die. It is popular for its obvious advantages of low noise, low cost; in addition, it can work for long time without oil lubrication.

## HTB-FZH

Bronze Ball-retainer

铜基钢球保持架



性能指标 Performance Index	有关数据 Data
最大承载压力 P Max Load Capacity P	30N/mm <sup>2</sup>
装配过盈 Assembling Shrink	0.01mm~0.02mm
最高滑动速度 Max.Sliding Speed V	6m/s
摩擦系数 μ Friction Coef μ	0.01~0.08
钢球直径偏差 Deviation of The Steel Ball Diameter	<0.01mm

该产品以铜基为基体，配以优质钢球，按一定的角度和密度有序地排列，采用特殊工艺加工而成。产品适用于冷冲模具，精密机床等。

The basement of this product is copper. With the high quality roller being arranged orderly in certain angle and density, it is produced by special technics. This kind of products is used in punching mold and high-precision machine tools.

## HTB-FZL

**Aluminum Ball-retainer**  
**铝基钢球保持架**



性能指标 Performance Index	有关数据 Data
最大承载压力 P Max Load Capacity P	30N/mm <sup>2</sup>
装配过盈 Assembling Shrink	0.01mm~0.02mm
最高滑动速度 Max.Sliding Speed V	6m/s
摩擦系数 μ Friction Coef μ	0.01~0.08
钢球直径偏差 Deviation of The Steel Ball Diameter	<0.01mm

该产品以铝基为基体，配以优质钢球，按一定的角度和密度有序地排列，采用特殊工艺加工而成。产品适用于冷冲模具，精密机床等。

The basement of this product is aluminum, With the high quality roller being arranged orderly in certain angle and density, it is produced by special technics. This kind of products is used in punching mold and high-precision machine tools.

## HTB-FZP

**POM Colophony Ball-retainer**  
**树脂钢球保持架**



性能指标 Performance Index	有关数据 Data
最大承载压力 P Max Load Capacity P	30N/mm <sup>2</sup>
装配过盈 Assembling Shrink	0.01mm~0.02mm
最高滑动速度 Max.Sliding Speed V	6m/s
摩擦系数 μ Friction Coef μ	0.01~0.08
钢球直径偏差 Deviation of The Steel Ball Diameter	<0.01mm

该产品以POM为基体，配以优质钢球，按一定的角度和密度有序地排列，采用特殊工艺加工而成。产品适用于冷冲模具，精密机床等。

The basement of this product is POM. With the high quality roller being arranged orderly in certain angle and density, it is produced by special technics. This kind of products is used in punching mold and high-precision machine tools.

## HTB-FU1

**Oil Retaining Sintered Bearing**  
**铜基粉末冶金轴承**



性能指标 Performance Index	有关数据 Data
最大承载压力 P Max Load Capacity P	150N/mm <sup>2</sup>
工作温度 Working Temperature	-60°C~+200°C
最高滑动速度 Max.Sliding Speed V	2.5m/s
材质 Material	CuSn6-6-3
允许最高PV值 Maximum PV Value	2.45N/mm <sup>2</sup> ·m/s

该产品是以铜粉为原料，经模具压制、高温烧结、真空浸油后加工而成。产品广泛应用于家用电器、电动工具、纺织机械、化工机械、汽车工业等。

It's made of bronze powder, mold pressed in high pressure, sintered in high temperature and soaked in oil by vacuum. It's used in electric appliances, electric tools, textiles machinery, chemical machinery and automobile industry, etc.

## HTB-FU2

**Oil Retaining Iron Bearing**  
**铁基粉末冶金轴承**



性能指标 Performance Index	有关数据 Data
最大承载压力 P Max Load Capacity P	150N/mm <sup>2</sup>
工作温度 Working Temperature	-60°C~+200°C
最高滑动速度 Max.Sliding Speed V	2.5m/s
材质 Material	Fe
允许最高PV值 Maximum PV Value	2.45N/mm <sup>2</sup> ·m/s

该产品是以铁粉为原料，经模具压制、高温烧结、真空浸油后加工而成。产品广泛应用于家用电器、电动工具、纺织机械、化工机械、汽车工业等。

It's made of iron powder, mold pressed in high pressure, sintered in high temperature and soaked in oil by vacuum. It's used in electric appliances, electric tools, textiles machinery, chemical machinery and automobile industry, etc.

## HTB-FR1

Bronze Self-lubricating Bearing  
青铜四氟轴承

性能指标 Performance Index	有关数据 Data
最大承载压力 P Max Load Capacity P	30N/mm <sup>2</sup>
工作温度 Working Temperature	-40°C~+260°C
最高滑动速度 Max.Sliding Speed V	2.5m/s
摩擦系数 μ Friction Coefficient μ	0.05~0.20
允许最高PV值 Maximum PV Value	1.65N/mm <sup>2</sup> ·m/s

该产品是以青铜丝网为基体，单面或双面轧制以聚四氟乙烯(PTFE)为主的混合物加工而成。产品广泛应用于纺织机械、关节轴承、轿车门铰链、汽车操纵杆等。It's made of bronze mesh and the compound of PTFE is process by rolling on single or double side. The product is widely applied to textile machine, joint bushing, door hinges and joystick of automobile, etc.

## HTB-FR2

Bronze Self-lubricating Bearing  
碳钢基青铜四氟轴承

性能指标 Performance Index	有关数据 Data
最大承载压力 P Max Load Capacity P	40N/mm <sup>2</sup>
工作温度 Working Temperature	-40°C~+260°C
最高滑动速度 Max.Sliding Speed V	2.5m/s
摩擦系数 μ Friction Coefficient μ	0.04~0.20
允许最高PV值 Maximum PV Value	1.65N/mm <sup>2</sup> ·m/s

该产品以优质低碳钢板为基体，中间烧结锡青铜丝网，表面轧制以聚四氟乙烯(PTFE)为主的混合物，该产品不含铅，符合环保要求，适用于变速排档连杆，离合器制动杆，操纵杆等部位。

The product is based on high quality low-carbon, sintering tin-bronze mesh. The compound of PTFE is rolled on its surface. Because of without Pb, the bushing is accord with environmental request. It is applied to shift connecting rod, braking rod of clutch, manipulate rod, etc.

## HTB-FD1

Copper PTFE Soft Strip  
含铜四氟轴承

性能指标 Performance Index		有关数据 Data
最大承载压力 P Max Load Capacity P	静载 Static Load	80N/mm <sup>2</sup>
	动载 Dynamic Load	40N/mm <sup>2</sup>
最大线速度 V Max Line Speed V		1.5m/s
抗拉强度 Tensile Strength		22N/mm <sup>2</sup>
延伸率 Extension Rate		100%
摩擦系数 μ Friction Coef μ		≤0.25
工作温度 Working Temperature		-100°C~+250°C
线膨胀系数 Coefficient of Linear Expansion		8 × 10 <sup>-5</sup> /K

该产品是以聚四氟乙烯为主要原料，填充铜粉等耐磨材料，经模具压制烧结而成，具有良好的耐磨性，摩擦系数低，在有润滑油和无油润滑条件下都能正常使用。产品被广泛应用于汽车减震器，汽车活塞环。

HTB-FD1 copper PTFE soft strip as main material is made of filling copper powder and wear resistance material pressing and agglomeration, it has low wear resistance and low friction, it can work with or without oil. The products have been widely used in automobile shake absorber and piston rings.

## HTB-FD2

Graphite PTFE Soft Strip  
含石墨四氟轴承

性能指标 Performance Index		有关数据 Data
最大承载压力 P Max Load Capacity P	静载 Static Load	80N/mm <sup>2</sup>
	动载 Dynamic Load	40N/mm <sup>2</sup>
最大线速度 V Max Line Speed V		1.5m/s
抗拉强度 Tensile Strength		20N/mm <sup>2</sup>
延伸率 Extension Rate		200%
摩擦系数 μ Friction Coef μ		≤0.25
工作温度 Working Temperature		-100°C~+250°C
线膨胀系数 Coefficient of Linear Expansion		8 × 10 <sup>-5</sup> /K

该产品是以聚四氟乙烯为主要原料，填充石墨等耐磨材料，经模具压制烧结而成，具有良好的韧性、耐磨性。产品被广泛应用于汽车减震器。

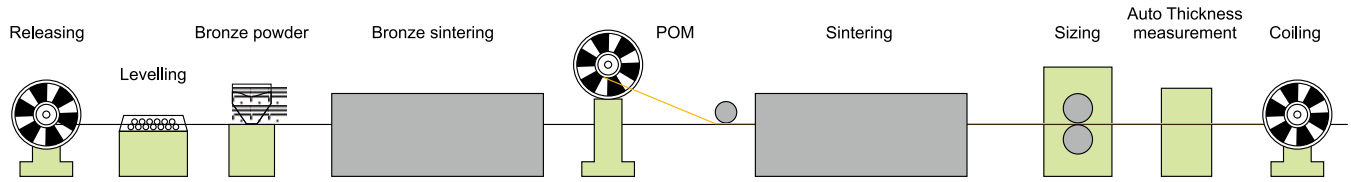
HTB-FD2 graphite PTFE soft strip with PTFE as main material is made though filling wear proof material such as graphite though polishing, pressing and agglomeration, it has good tenacity and wearing performance. The products have been widely used in automobile absorber.

## 生产工艺流程

### Producing Flow

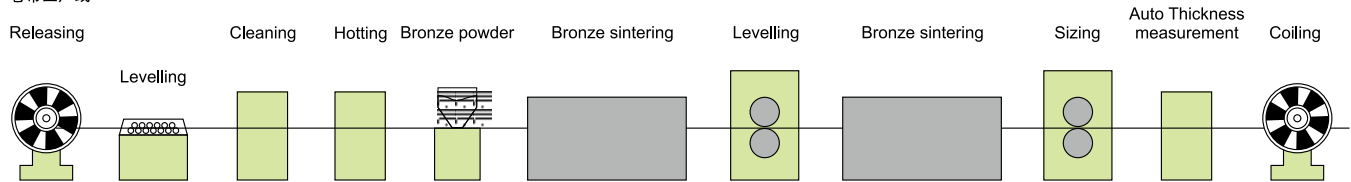
#### HTB-1 Strip line

卷带生产线



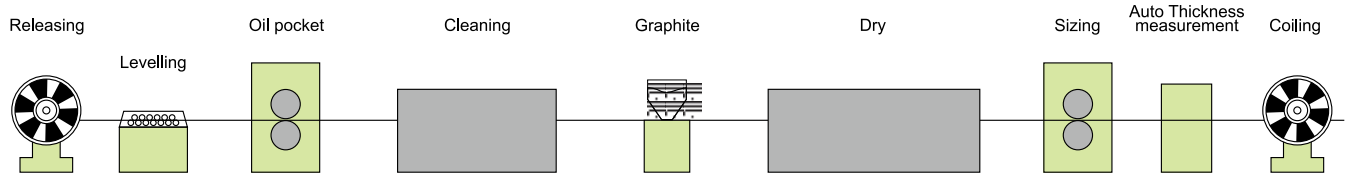
#### HTB-800 Strip line

卷带生产线



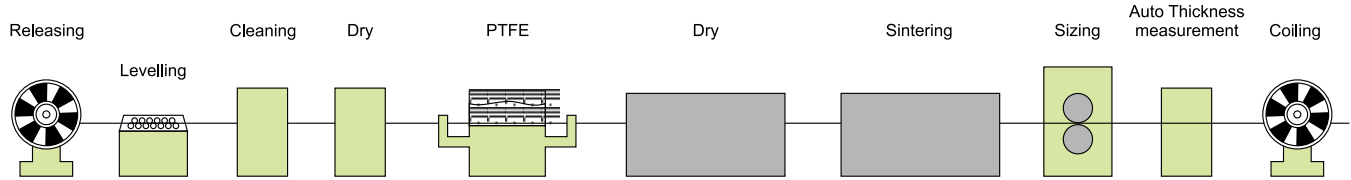
#### HTB-09G Strip line

卷带生产线



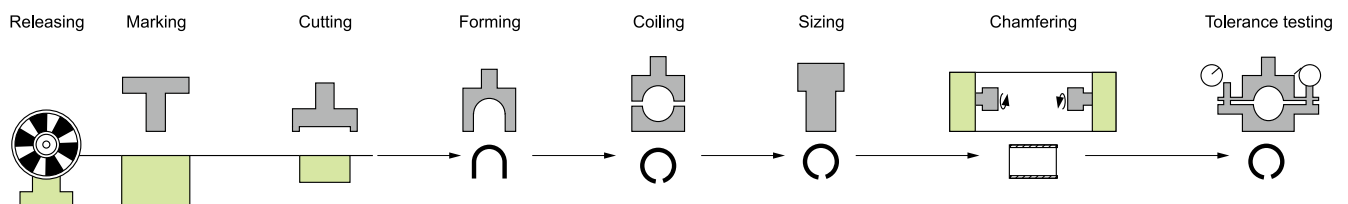
#### HTB-FR1 Strip line

卷带生产线



#### Bushing Produce line

轴承生产线





## 浙江禾田滑动轴承股份有限公司

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HTB/CAT.03

Print: 03/2013