



Jiashan TD Composite Bearing Factory

嘉善天地复合轴承厂



Solid Lubricant Inlaid Bearing 镶嵌式固体润滑轴承



基材特性 Material Features

JDB固体润滑轴承是在轴承基体的金属摩擦面上开出大小适当、排列有序的孔穴，然后在孔穴中嵌入具有独特自润滑性能的成型固体润滑剂（固体润滑剂面积一般为摩擦面积的25%—35%）而制成的自润滑轴承。该轴承综合了金属基体和特殊配方润滑材料的各自优点，突破了一般轴承依靠油膜润滑的局限性。JDB固体润滑轴承特别适用于无油、高温、高负载、低速度、防污、防蚀、防辐射、以及在水中或真空溶液浸润而根本无法加润滑油膜的特殊工况条件下使用。该产品广泛应用于冶金轧钢设备、灌装设备、水轮机、气

JDB material is made of strong cast bronze based metal with special solid lubricants embedded. The base metal withstands high load and the solid lubricants provide for self-lubrication. The bearing shows excellent performance without pre-lubrication under conditions of extreme high/lower temperature with low speed.

This material provides a maintenance-free bearing solution, particularly for high load, intermittent of oscillating motion.

轮机、仪器仪表以及矿山机械、船舶机械、纺织机械、船舶工业、航天航海等领域。同时也越来越广泛的使用在其它工农业机械中。JDB固体润滑轴承的基体应根据轴承自身的工况条件而定。比较常用的材料有高力黄铜、锡青铜、铸件等。根据轴承自身工况条件，通过不同金属基体和嵌入固体润滑剂的组合，可保证产品能满足各种温度、负荷、运动和介质等工况条件下的特殊需要，同时保证稳定可靠地工作。

This kind of bearing can be applied under dry, high temperature, high pressure, corrosive, water or other chemical environments when no oil can be introduced.

Now is widely be used in automotive products line, water engineering, dam gate, plastic industries, successive casting machines, steel rollers in metallurgy industry, mineral machines, ships, turbo generators, hydraulic turbines and injection molding machines...

主要技术指标 Main Technical Index

型号	Type	JDB-1	JDB-2	JDB-3	JDB-4	JDB-5
基本材质	Base Material	CuZn25Al6Mn4	CuSn6Zn6Pb3	CuSn6Zn6Pb3	HT-250	Gcr15
基本硬度	Base Hardness	HB210-250 (HB270)	HB80-120	HB60-90	HB180-230	HRC55-60
摩擦系数	Friction Coef. (μ)	< 0.16	< 0.15	< 0.14	< 0.17	< 0.17
最高使用温度	Temp Limit	300℃	350℃	300℃	400℃	350℃
极限载荷	Dynamic Load Limit	100N/mm ²	60N/mm ²	70N/mm ²	60N/mm ²	250N/mm ²
1m/mm的 极限载荷	Load Limit Under 1m/mm	25N/mm ²	15N/mm ²	20N/mm ²	15N/mm ²	70N/mm ²
最高滑动速度	Sliding Velocity Limit	干0.4m/s 油5m/s	2m/s	2m/s	0.5m/s	0.1m/s
允许极限PV值	PV Limit	3.8N/mm ² · m/s	0.5N/mm ² · m/s	0.6N/mm ² · m/s	0.8N/mm ² · m/s	2.5N/mm ² · m/s

镶嵌式固体润滑轴承 Solid Lubricant Inlaid Bearing

JDB 磨损性能 Wear Performance 与CuZn6Zn6Pb青铜套的比较耐磨性能如下表 (Compared with CuZn6Zn6Pb-Composed Bushing):

试驾压强 Load Applied		62N/mm ²		24.5N/mm ²		14.7N/mm ²	
项目 Item		磨损量 Wear Capacity	时间 Time	磨损量 Wear Capacity	时间 Time	磨损量 Wear Capacity	时间 Time
型号 Type	润滑条件 Lubrication	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)
铜套 CuSn6Zn6Sn3	油润滑 Oil	0.098	10	0.125	100	0.10	100
JDB-1	干摩擦 Dry	0.075	100	0.015	100	0.012	100
JDB-2	干摩擦 Dry	0.025	30	0.065	100	0.025	100
JDB-3	干摩擦 Dry	0.003	30	0.12	100	0.012	100
JDB-4	干摩擦 Dry	0.003	10	0.25	20	0.011	100
JDB-5	干摩擦 Dry	0.022	100	0.013	100	0.01	100

基材特性 Material Features

JDB-1是通用的基础产品，无论高压、低压、高温、低温、有油润滑、无油润滑还是水中润滑。都能适用。产品的基体是高力黄铜，比一般的铜套硬度提高一倍。耐磨性能提高一倍以上。因此在冶金行业的连铸机、轧机、输送机上都可采用。还用于塑料注塑机锁模机构，挤出机构。高压电的自动开关，建筑机械的起吊支撑部位，以及水利枢纽工程的弧门支撑。滑轮和传动轮部位。还有造纸机烘道、汽车模具、船舶起锚滑动部位等。

JDB-2主要适应低载高温中速的使用场合，例如壁炉门铰链、烘炉滚道、轻工机械、机床工业等。

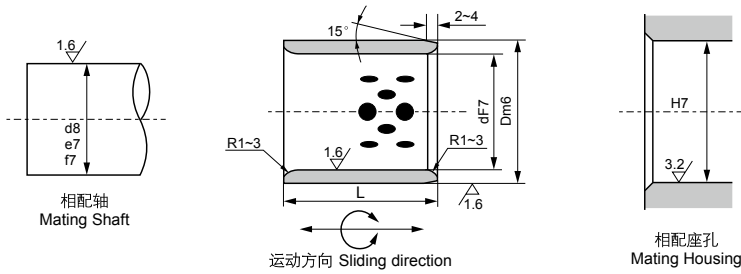
JDB-3的内材与JDB-2同样，除了具有JDB-2的功能外，还体现了节省成本，提高抗压强度和可以端面与基体焊接安装的作用，适用于建筑机械、冶金机械和输送机械中的不加油润滑部位。

JDB-4是一种典型的省材产品，在机械性能要求不是很高的地方。可作取JDB-2替代材料使用。能大大地降低成本，满足使用要求，例：模具导套、注塑机模架等。

JDB-5是一种加强型的产品。它具有极高的抗压性能，在起重机械的支撑部位特别适应，例：挖土机支承、卷扬机支承、吊车支承等。但由于基体为钢材。所以不宜在水中或酸、碱的场合使用。

Type	Application Features
JDB-1	Basically general-purpose products, suitable for various circumstances including high or low load, high or low temperature, with oil or oilless lubrication, or even in the water. With its matrix made of high strength brass, its hardness doubles than normal bronze bushings and the wear performance improves in large degree, so it is applicable for continuous casting machine, conveyors of metallurgy industry. It could also be used in plastic injection machines, in the automatic switch of high-tension electricity, in the luffing and supporting parts of construction machines, hydraulic gate supporter, pulley, drive wheels of water control project, and also for drying tunnel of paper machines, auto die, sliding parts for ships unmooring etc.
JDB-2	Products of JDB-2 series are mainly for circumstances with low load high temperature, for example: hinge of fireplace gate, raceway of baker, machines of light industry, machine tools industry and so on.
JDB-3	The inner side material of products of JDB-3 series is the same as that of the JDB-2 series, so they could function as well as the that of JDB-2 series. In addition, they have other advantages such as saving material costs, improving compressive strength, and that they could be assembled by welding the bushing surface together with other matrix. They are suitable for parts which need not oil lubrication of construction machines, metallurgy machines and conveying machines.
JDB-4	Products of JDB-4 are a typical kind of material-saving product. They could replace JDB-2 products where the mechanical requirements are not so high. They could reduce the cost largely, and meet the demands for application. Such as: mould guide bushing, die carrier of plastic moulding machines and so on.
JDB-5	Products of JDB-5 series are a kind of fortified products. Due to its excellent comprehensive capability, it's especially suited in the supporting parts of hoisting machines, for example: support of rooster. support of hoist engine, support of crane and so on. But as for their matrix being steel, they are not suitable for circumstances with water, acid and alkali.

Solid Lubricant Inlaid Bearing Metric Size 镶嵌式固体润滑轴承尺寸



单位:unit:mm

IDF7 (内径)	ODm6 (外径)	L ^{-0.10} _{-0.30}													
		8	10	12	15	16	20	25	30	35	40	50	60	70	80
8	12	+0.028 +0.013	081208	081210	081212	081215									
10			101408	101410	101412	101415		101420							
12	18	+0.021 +0.008		121810	121812	121815	121816	121820	121825	121830					
13	19			131910		131915	131916								
14	20			142010	142012	142015		142020	142025	142030					
15	21			152110	152112	152115	152116	152120	152125	152130					
16	22			162210	162212	162215	162216	162220	162225	162230	162235	162240			
18	24				182412	182415	182416	182420	182425	182430	182435	182440			
20	28			202810	202812	202815	202816	202820	202825	202830	202835	202840	202850		
22	32		+0.041 +0.020		223212	223215		223220	223225						
25	33				253312	253315	253316	253320	253325	253330	253335	253340	253350	253360	
30	38			+0.025 +0.009		303812	303815		303820	303825	303830	303835	303840	303850	303860
35	45	+0.050 +0.025					354520	354525	354530	354535	354540	354550	354560		
40	50						405020	405025	405030	405035	405040	405050	405060	405070	405080
45	55								455530	455535	455540	455550	455560		
50	60	+0.030 +0.011							506030	506035	506040	506050	506060	506070	506080

注：除以上规格尺寸外，可按客户图纸制造。

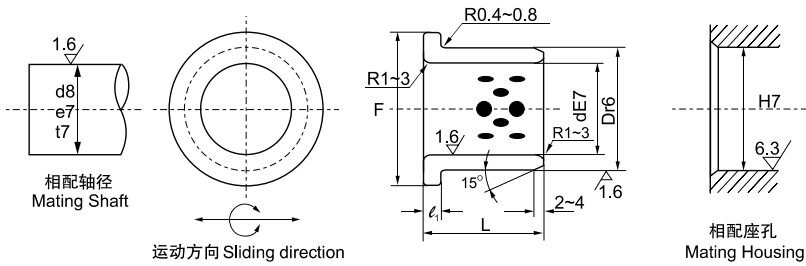
Solid Lubricant Inlaid Bearing Metric Size

镶嵌式固体润滑轴承尺寸

单位unit:mm

IDF7 (内径)	ODm6 (外径)	L ^{-0.10} L ^{-0.30}												
		30	35	40	50	60	70	80	100	120	130	140	150	
50	+0.050 +0.025	62	506230	506235	506240	506250	506260	506270						
50		65	506530		506540	506550	506560	506570	506580	5065100				
55	+0.030 +0.011	70			557040	557050	557060	557070						
60		74	607430	607435	607440	607450	607460	607470	607480					
60		75	607530	607535	607540	607550	607560	607570	607580	6075100				
63		75					637560	637570	637580					
65		80				658050	658060	658070	658080					
70	+0.060 +0.030	85		708535	708540	708550	708560	708570	708580	7085100				
70		90			709050	709060	709070	709080						
75		90				759060	759070	759080	7590100					
75		95				759560	759570	759580	7595100					
80		96			809640	809650	809660	809670	809680	8096100	8096120			
80	+0.035 +0.013	100			8010040	8010050	8010060	8010070	8010080	80100100	80100120		80100140	
90		110	9011030			9011050	9011060	9011070	9011080	90110100	90110120			
100		120					10012060	10012070	10012080	100120100	100120120		100120140	
110		130							11013080	110130100	110130120			
120		140							12014080	120140100	120140120		120140140	
125	+0.040 +0.015	145							125145100	125145120				
130		150							130150100		130150130			
140		160							140160100				140160140	
150		170							150170100				150170150	
160		180							160180100				160180150	

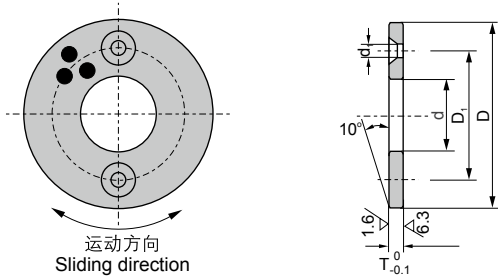
Solid Lubricant Inlaid Bearing Metric Size 镶嵌式固体润滑轴承尺寸



单位unit:mm

IDF7 (内径)		ODm6 (外径)		F	l_1 -0.10	L -0.10 -0.30										
						15	20	25	30	35	40	50	60	80	100	
10	+0.040 +0.025	14	+0.034 +0.023	22	2	1015F	1020F									
12		18		25		1215F	1220F									
13		19		26		1315F	1320F									
14	+0.050 +0.032	20		27	3	1415F	1420F									
15		21	+0.041 +0.028	28		1515F	1520F	1525F	1530F							
16		22		29		1615F	1620F	1625F	1630F							
20		30		40		2015F	2020F	2025F	2030F		2040F					
25	+0.061 +0.040	35		45		2515F	2520F	2525F	2530F		2540F					
30		40		50			3020F	3025F	3030F	3035F	3040F	3050F				
31.5		40	+0.050 +0.034	50			3120F			3135F						
35		45		60	5		3520F		3530F		3540F	3550F				
40	+0.075 +0.050	50		65			4020F		4030F		4040F	4050F				
45		55		70					4530F		4540F	4550F	4560F			
50		60	+0.060 +0.041	75					5030F		5040F	5050F	5060F			
55		65		80							5540F		5560F			
60		75		90							6040F	6050F		6080F		
63	+0.090 +0.060	75	+0.062 +0.043	85	7.5									6367F		
70		85		105								7050F		7080F		
75		90	+0.073 +0.051	110									7560F			
80		100		120										8060F	8080F	80100F
90		110		130										9060F	9080F	
100	+0.107 +0.072	120	+0.076 +0.054	150	10										10080F	100100F
120		140	+0.088 +0.063	170											12080F	120100F

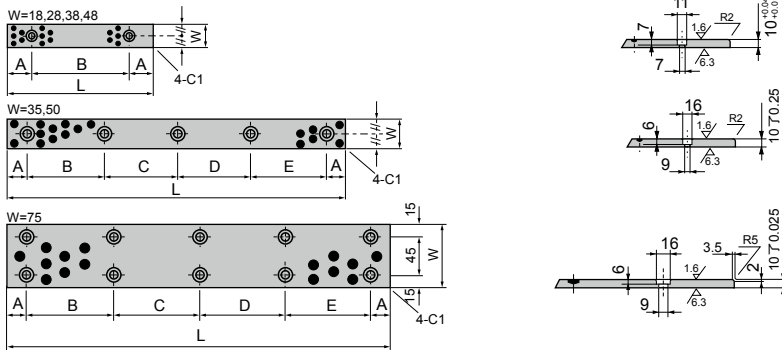
Oilless Thrust Washers Metric Size 止推垫片尺寸



单位unit:mm

规格 Standard No.	d	D	T ⁰ _{-0.1}	螺栓 Bolt			
				D ₁	数量 Q'ty	尺寸 size	d ₁
JTW -10	10.2	30	3	-----	-----	-----	-----
JTW -12	12.2	40		28	2	M 3	3.5
JTW -13	13.2						
JTW -14	14.2						
JTW -15	15.2						
JTW -16	16.2	50		-----	-----	-----	-----
JTW -16N	16.2		35	2	M 3	3.5	
JTW -18	18.2						
JTW -20	20.2		35	2	M 5	6	
JTW -20N	20.2						
JTW -25	25.2	55	5	40	2	M 5	6
JTW -25N				-----	-----	-----	-----
JTW -30	30.2	60	7	45	2	M 5	6
JTW -35	35.2	70		50			
JTW -40	40.2	80		60			
JTW -45	45.3	90	8	67.5	2	M 6	7
JTW -50	50.3	100		75			
JTW -55	55.3	110		85			
JTW -60	60.3	120		90			
JTW -65	65.3	125	10	95	4	M 8	9
JTW -70	70.3	130		100			
JTW -75	75.3	140		110			
JTW -80	80.3	150		120			
JTW -90	90.5	170	10	140	4	M 10	11
JTW -100	100.5	190		160			
JTW -120	120.5	200		175			

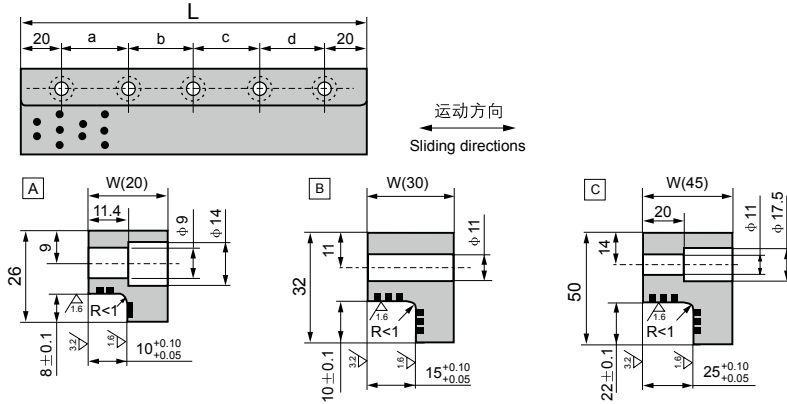
Oiless Sliding Plate Metric Size 滑板尺寸



单位unit:mm

型号规格 Standard No.	W	L	A	B	C	D	E	平头螺钉 Flat Head Screw	数量 No.of Holes		
JSP-1875	18	75	15	45				M6	2		
JSP-18100		100		60							
JSP-18125		125	25	75							
JSP-18150		150		100							
JSP-2875	28	75	15	45				M8	3		
JSP-28100		100		50							
JSP-28125		125	25	75							
JSP-35100	35	100		60				M8	4		
JSP-35150		150		55	55						
JSP-35200		200	20	55	50	55				M8	4
JSP-35250		250		70	70	70					
JSP-35300		300		65	65	65	65				
JSP-35350	350		80	75	75	80	M8	5			
JSP-3875	38	75	15	45				M6	2		
JSP-38100		100		50							
JSP-38125		125	25	75							
JSP-38150		150		100							
JSP-4875	48	75	15	45				M6	2		
JSP-48100		100		50							
JSP-48125		125	25	75							
JSP-48150		150		100							
JSP-50100	50	100		60				M8	3		
JSP-50150		150		55	55						
JSP-50200		200	20	55	50	55				M8	4
JSP-50250		250		70	70	70					
JSP-50300		300		65	65	65	65				
JSP-50400	400		90	90	90	90	M8	5			
JSP-75150	75	150	20	110				M8	4		
JSP-75200		200		80	80					M8	6
JSP-75250		250		105	105						
JSP-75300		300		85	90	85					
JSP-75400		400		120	120	120				M8	8
JSP-75500		500		115	115	115	115				

Oiless Sliding Plate Metric Size 滑板尺寸



单位unit:mm

规格 Standard No.	W	L	螺孔 Bole Hole				Bolt		Type
			a	b	c	d	螺孔 Size	数量 Number	
JSL-20×100	20	100	60	—	—	—	M8	2	A
JSL-20×150		150	55	55	—	—		3	
JSL-20×200		200	55	50	55	—		4	
JSL-30×100	30	100	60	—	—	—	M10	2	B
JSL-30×150		150	55	55	—	—		3	
JSL-30×200		200	55	50	55	—		4	
JSL-30×250	45	250	70	70	70	—	M10	4	C
JSL-45×200		200	55	50	55	—		4	
JSL-45×250		250	70	70	70	—		4	
JSL-45×300		300	65	65	65	65		5	
JSL-45×350	350	80	75	75	80	5			



嘉善天地复合轴承厂

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