Solid Bronze Bearing is manufactured using high tensile manganese bronze plugged with solid lubricants. Basic bronze alloy material is CuZn25Al6Fe3Mn3 with graphite (SL2) plugged, we also provide widely optional choice from CuSn5Pb5Zn5, CuAl10Fe5Ni5, CuSn12, and other standards materials.

Especially our company have developed the SL4 solid lubricants for water contacting applications like jet, propeller, ship, boatyard, offshore platform, hydraulic turbine etc.

These products are mainly used in applications of high load & moderate speed. It has the ability to withstand the temperature up to 400°C. We also have the capability to develop these bushes and plates as per any specifications of our clients.

Technical Data

Bronze material	CuZn25Al6Fe3Mn3 +SL2	CuSn5Pb5Zn5 +SL2	CuAl10Fe5Ni5 +SL2	CuSn12 +SL2
Cu%	Rest	85	80	88
Sn%	--	5	--	12
Pb%	--	5	--	--
Zn%	25	5	--	--
Al%	6	--	10	--
Ni%	--	--	5	--
Fe%	3	--	5	--
Mn%	3	--	--	--
Density	8.2 g/cm3	8.8 g/cm3	8.5 g/cm3	8.8 g/cm3
Hardness	>HB210	>HB70	>HB150	>HB80
Max. Load Pressure	100 N/mm^2	40 N/mm^2	50 N/mm^2	45 N/mm^2
Max. Linear Speed	0.5 m/s(dry)	0.4 m/s(dry)	0.25 m/s(dry)	0.5 m/s(dry)
Max. PV	1.65 N/mm^2 * m/s	1.00 N/mm^2 * m/s	1.25 N/mm^2 * m/s	1.20 N/mm^2 * m/s
Tensile Strength	>750 N/mm^2	>200 N/mm^2	>500 N/mm^2	>360 N/mm^2
Elongation	>12 %	>15 %	>10 %	>8 %
Temperature Limit	-40 ~ +300 ^{o}C	-40 ~ +250 ^{o}C	-40 ~ +400 ^{o}C	-40 ~ +300 ^{o}C

Products Standard: ISO 4379 (replaces DIN 1850)

Solid Lubricants

Code	Material	Features	Application
SL2	Graphite composite	Low friction Chemical resistant Low cost Temperature limit 400°C	Widely used for machinery
SL4	PTFE+MoS2 composite	Water contacting lubricating Longer life Temperature limit 300°C	(Sea) Water lubricating

Basic Materials

JDB	JWB	JCB
Bronze* + SL2	Bronze* + SL4	Casting Bronze*

☐ = ordering code

*Standard bronze material is CuZn25Al6Fe3Mn3 if without specified

Basic Structures
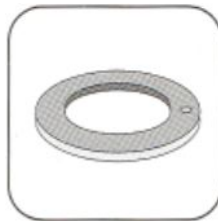

S	Sleeve Bushing	F	Edge Flanged	W	Thrust Washer	P	Slide Pad

Special Structures

SGF	SPFG	EGB	JCB-F

SOL	CBS	SGL	HCS-Lubripad

☐ = ordering code

Oil groove types for:
- JCB-S
- JCB-F
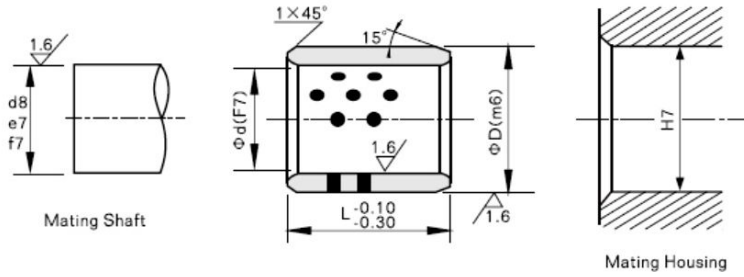
Unit: mm

ID d(F7)		OD D(m6)		L -0.00 / -0.40 (d<28L -0.30)																
				12	15	20	25	30	35	40	50	60	70	80	90	100	110	120	130	140
10	+0.028 +0.013	14	+0.018 +0.007	●	●	●														
12	+0.028 +0.013	18	+0.018 +0.007	●	●	●	●													
14	+0.034 +0.016	20	+0.021 +0.008	●	●	●	●	●												
16	+0.034 +0.016	22	+0.021 +0.008	●	●	●	●	●	●	●										
18	+0.034 +0.016	24	+0.021 +0.008	●	●	●	●	●	●	●										
20	+0.041 +0.020	28	+0.021 +0.008	●	●	●	●	●	●	●										
25	+0.041 +0.020	33	+0.025 +0.009		●	●	●	●	●	●	●									
30	+0.041 +0.020	38	+0.025 +0.009			●	●	●	●	●	●									
35	+0.050 +0.025	45	+0.025 +0.009					●	●	●	●	●								
40	+0.050 +0.025	50	+0.025 +0.009					●	●	●	●	●	●							
45	+0.050 +0.025	55	+0.030 +0.011					●	●	●	●	●	●	●						
50	+0.050 +0.025	60	+0.030 +0.011					●	●	●	●	●	●	●						
55	+0.060 +0.030	65	+0.030 +0.011						●	●	●	●	●	●	●					
60	+0.060 +0.030	75	+0.030 +0.011						●	●	●	●	●	●	●					
65	+0.060 +0.030	80	+0.030 +0.011							●	●	●	●	●	●	●				
70	+0.060 +0.030	85	+0.035 +0.013							●	●	●	●	●	●	●	●			
75	+0.060 +0.030	90	+0.035 +0.013							●	●	●	●	●	●	●	●	●		
80	+0.060 +0.030	95	+0.035 +0.013								●	●	●	●	●	●	●	●		
85	+0.071 +0.036	100	+0.035 +0.013								●	●	●	●	●	●	●	●	●	
90	+0.071 +0.036	110	+0.035 +0.013								●	●	●	●	●	●	●	●	●	●
95	+0.071 +0.036	115	+0.035 +0.013									●	●	●	●	●	●	●	●	●
100	+0.071 +0.036	120	+0.035 +0.013									●	●	●	●	●	●	●	●	●
110	+0.071 +0.036	130	+0.040 +0.015										●	●	●	●	●	●	●	●
120	+0.071 +0.036	140	+0.040 +0.015										●	●	●	●	●	●	●	●
130	+0.083 +0.043	150	+0.040 +0.015										●	●	●	●	●	●	●	●
140	+0.083 +0.043	160	+0.040 +0.015											●	●	●	●	●	●	●
150	+0.083 +0.043	170	+0.040 +0.015											●	●	●	●	●	●	●

Ordering : JDB/JWB/JCB - S - d x D x L = ___ pcs
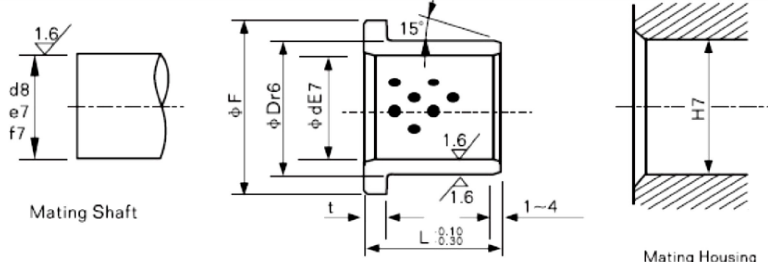
Mating Shaft   Mating Housing   Unit: mm

ID d(E7)		OD D(r6)		F	t	L −0.00 / −0.40 (d<28L −0.30)														
						15	20	25	35	40	45	50	55	60	70	80	90	100	110	120
10	+0.040 / +0.025	14	+0.034 / +0.023	22	2	●	●													
12	+0.050 / +0.025	18	+0.034 / +0.023	25	3	●	●	●												
14	+0.050 / +0.025	20	+0.041 / +0.028	27	3	●	●	●	●											
16	+0.050 / +0.025	22	+0.041 / +0.028	29	3	●	●	●	●											
18	+0.050 / +0.025	24	+0.041 / +0.028	32	3	●	●	●	●	●										
20	+0.061 / +0.00	28	+0.041 / +0.028	35	3		●	●	●	●										
25	+0.061 / +0.040	33	+0.041 / +0.028	45	5		●	●	●	●	●									
30	+0.061 / +0.040	40	+0.050 / +0.034	50	5		●	●	●	●	●	●								
35	+0.075 / +0.050	45	+0.050 / +0.034	60	5			●	●	●	●	●								
40	+0.075 / +0.050	50	+0.050 / +0.034	65	5			●	●	●	●	●	●							
45	+0.075 / +0.050	55	+0.060 / +0.041	70	5					●	●	●	●	●						
50	+0.075 / +0.050	60	+0.060 / +0.041	75	5					●	●	●	●	●						
55	+0.090 / +0.060	65	+0.060 / +0.041	80	5					●	●	●	●	●	●					
60	+0.090 / +0.060	75	+0.062 / +0.043	90	7.5						●	●	●	●	●					
65	+0.090 / +0.060	80	+0.062 / +0.043	95	7.5						●	●	●	●	●	●				
70	+0.090 / +0.060	85	+0.073 / +0.051	105	7.5							●	●	●	●	●				
75	+0.090 / +0.060	90	+0.073 / +0.051	110	7.5								●	●	●	●	●			
80	+0.090 / +0.060	100	+0.073 / +0.051	120	10									●	●	●	●	●		
90	+0.107 / +0.072	110	+0.076 / +0.054	130	10										●	●	●	●	●	
100	+0.107 / +0.072	120	+0.076 / +0.054	150	10											●	●	●	●	●
120	+0.107 / +0.072	140	+0.088 / +0.063	170	10											●	●	●	●	●
130	+0.125 / +0.085	150	+0.090 / +0.065	180	10											●	●	●	●	●
140	+0.125 / +0.085	160	+0.090 / +0.065	190	10												●	●	●	●
150	+0.125 / +0.085	170	+0.093 / +0.068	200	10													●	●	●
160	+0.125 / +0.085	180	+0.093 / +0.068	210	10													●	●	●

Customized sizes also can be produced

Ordering : JDB/JWB/JCB - F - d x D / F / t x L = pcs
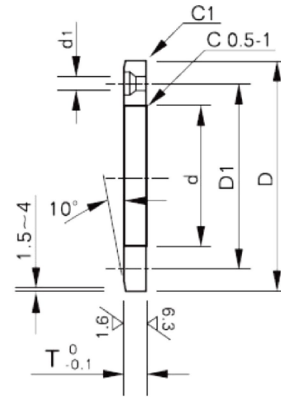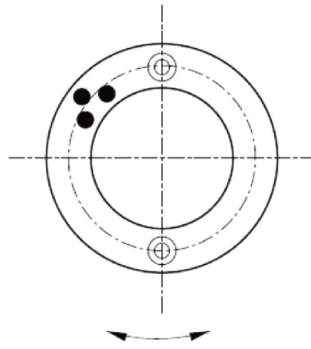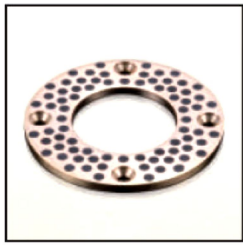
Sliding direction   Unit: mm

Shaft	ID d		Center D1	OD D		Thickness T-0.1	Size for Installation		
							d1	Qty	Screw
10	10.2	+0.2 +0.1	---	30	-0.00 -0.25	3	---	---	---
12	12.2	+0.2 +0.1	28	40	-0.00 -0.25	3	3.5	2	M3
13	13.2	+0.2 +0.1	28	40	-0.00 -0.25	3	3.5	2	M3
14	14.2	+0.2 +0.1	28	40	-0.00 -0.25	3	3.5	2	M3
15	15.2	+0.2 +0.1	35	50	-0.00 -0.25	3	3.5	2	M3
16	16.2	+0.2 +0.1	35	50	-0.00 -0.25	3	3.5	2	M3
18	18.2	+0.2 +0.1	35	50	-0.00 -0.25	3	3.5	2	M3
20	20.2	+0.2 +0.1	35	50	-0.00 -0.25	5	6	2	M5
25	25.2	+0.2 +0.1	40	55	-0.00 -0.25	5	6	2	M5
30	30.2	+0.2 +0.1	45	60	-0.00 -0.25	5	6	2	M5
35	35.2	+0.2 +0.1	50	70	-0.00 -0.25	5	6	2	M5
40	40.2	+0.2 +0.1	60	80	-0.00 -0.25	7	7	2	M6
45	45.2	+0.2 +0.1	70	90	-0.00 -0.25	7	7	2	M6
50	50.3	+0.2 +0.1	75	100	-0.00 -0.25	8	7	4	M6
55	55.3	+0.2 +0.1	85	110	-0.00 -0.25	8	7	4	M6
60	60.3	+0.2 +0.1	90	120	-0.00 -0.25	8	9	4	M8
65	65.3	+0.2 +0.1	95	125	-0.00 -0.25	8	9	4	M8
70	70.3	+0.2 +0.1	100	130	-0.00 -0.25	10	9	4	M8
80	80.3	+0.2 +0.1	120	150	-0.00 -0.25	10	9	4	M8
90	90.5	+0.2 +0.1	140	170	-0.00 -0.25	10	11	4	M10
100	100.5	+0.2 +0.1	160	190	-0.00 -0.25	10	11	4	M10
120	120.5	+0.2 +0.1	175	200	-0.00 -0.25	10	11	4	M10

Customized sizes also can be produced

Ordering : | JDB/JWB/JCB | - | W | - | d | x | D | x | T | = | | pcs
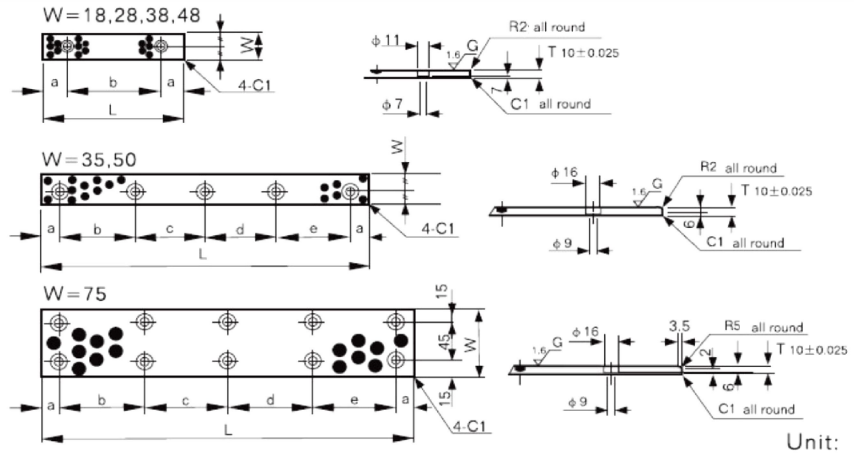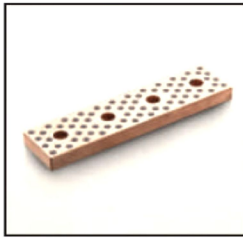
Unit: mm

W	L	a	b	c	d	e	T $^{+/-0.025}$	Size for Installation	
								Screw	Hole Qty
18	75	15	45				5/10	M6	2
18	100	25	50				5/10	M6	2
18	125	25	75				5/10	M6	2
28	100	25	50				5/10	M6	2
28	125	25	75				5/10	M6	2
28	150	25	100				5/10	M6	2
35	100	20	60				5/10	M8	2
35	150	20	55	55			5/10	M8	3
35	200	20	55	50	55		5/10	M8	4
38	100	25	50				5/10/20	M6	2
38	125	25	75				5/10/20	M6	2
38	150	25	100				5/10/20	M6	2
48	100	25	50				5/10/20	M6	2
48	125	25	75				5/10/20	M6	2
48	150	25	100				5/10/20	M6	2
50	100	20	60				10/20	M8	2
50	150	20	55	55			10/20	M8	3
50	200	20	55	50	55		10/20	M8	4
50	300	20	65	65	65		10/20	M8	5
75	200	20	80	80			10/20	M8	6
75	300	20	85	90	85		10/20	M8	8
75	400	20	120	120	120		10/20	M8	8
75	500	20	115	115	115	115	10/20	M8	10

Customized sizes also can be produced

Ordering :   JDB/JWB/JCB - P - W x L x T = ☐ pcs