



LS650-Turned bearings with solid lubricant

Material:

Turned bearings with solid lubricant embedded. This material makes it possible to use the bearings without additional lubrication. The solid lubricant covers about 25-30% of the sliding surface. This kind of bearings are possible to use both with extreme high or low temperatures.

Bearing design:

Turned bearings with solid lubricant are always produced according to customer drawings. Therefore, both material and bearing design can be produced for the demands of the bearing situation. Tolerances, lubricant material, possible grease grooves, grease holes and chamfers will be produced according the bearing conditions. The direction of the load and movement effects also the bearing design.

Material composition %	LS650	LS650S1	LS650S2	LS650S3	LS650S4
Cu	62-68	85	80	88	80
Sn		5		12	10
Pb		5			10
Zn	Rest	5			
Ni			5		
Al	5-7,5		10		
Fe	2-4		5		
Mn	2,5-5				
Properties					
Yield point N/mm ²	>450	>90	>260	>150	>100
Tensile strength N/mm ²	>750	>250	>500	>270	>210
Max load N/mm ²	100	60	50	70	60
Max speed m/min	15	10	20	10	10
Density	8,0	8,8	7,6	8,8	8,9
Hardness HB	>210	>70	>150	>95	>75
Friction μ	0,03 – 0,20	0,03 – 0,18	0,03 – 0,20	0,03 – 0,18	0,03 – 0,20
Temperature range	-40/+300°C	-100/+400°C	-100/+400°C	-100/+400°C	-100/+400°C

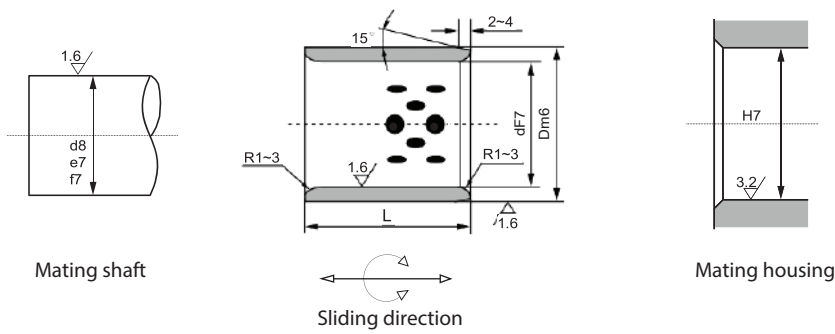
Delivery possibilities:

- Straight bearings, flanged bearings, half bearings
- Thrust washers, rails, plates

Solid lubricants:

- SL1: Graphite + additives: For normal conditions. Temperature up to +400°C.
- SL4: PTFE+MoS₂+CF: For conditions where the bearing works in water. Temperature up to +300°C.

LS650-Size



Unit: mm

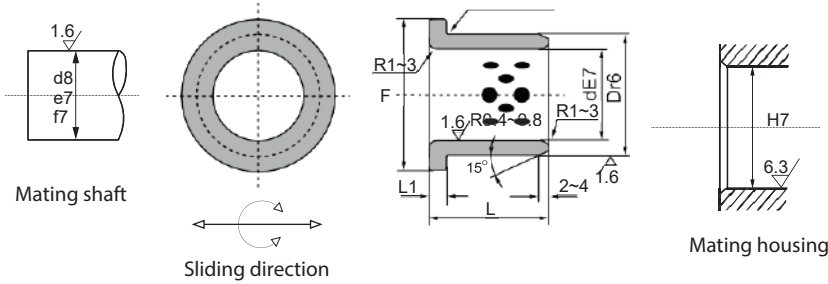
d	D	d F7	D m6	L-0.30															
				8	10	12	15	16	20	25	30	35	40	50	60	70	80		
8	12	8	12	081208	081210	081212	081215												
10	14	10	14	101408	101410	101412	101415	101416	101420										
12	18	12	18		121810	121812	121815	121816	121820	121830									
13	19	13	19		131910	131912	131915	131916	131920	131925	131930								
14	20	14	20		142010	142012	142015	142016	142020	142025	142030								
15	21	15	21		152110	152112	152115	152116	152120	152125	152130								
16	22	16	22		162210	162212	162215	162220	162225	162230	162235	162240							
18	24	18	24		182410	182412	182415	182416	182420	182425	182430	182435	182440						
20	28	20	28		202810	202812	202815	202816	202820	202825	202830	202835	202840	202850					
22	32	22	32			223212	223215	223216	223220	223225	223230	223235	223240	223250					
25	33	25	33			253312	253315	253316	253320	253325	253330	253335	253340	253350	253360				
30	38	30	38			303812	303815	303816	303820	303825	303830	303835	303840	303850	303860				
35	45	35	45						354520	354525	354530	354535	354540	354550	354560	354570			
40	50	40	50						405020	405025	405030	405035	405040	405050	405060	405070	405080		
45	55	45	55								455530	455535	455540	455550	455560	455570	455580		
50	60	50	60								506030	506035	506040	506050	506060	506070	506080		



LS650-Size

d	D	d F7	D m6	L -0.30																			
				30	35	40	50	60	70	80	100	120	130	140	150								
50	62	50	62 +0.050 +0.025		506230	506235	506240	506250	506260	506270													
50	65	50		65		506530	506535	506540	506550	506560	506570	506580	5065100										
55	70	55	70 +0.030 +0.011		557030	557035	557040	557050	557060	557070	557080	5570100											
60	74	60		75		607430	607435	607440	607450	607460	607470	607480	6074100										
60	75	60		75		607530	607535	607540	607550	607560	607570	607580	6075100										
63	75	63		75			637535	637540	637550	637560	637570	637580	6375100										
65	80	65	80 +0.060 +0.030			658035	658040	658050	658060	658070	658080	6580100											
70	85	70		85			708535	708540	708550	708560	708570	708580	7085100										
70	90	70	90 +0.035 +0.013			709035	709040	709050	709060	709070	709080	7090100											
75	90	75		90				759040	759050	759060	759070	759080	7590100										
75	95	75		95					759540	759550	759560	759570	759580	7595100	7595120								
80	96	80		96					809640	809650	809660	809670	809680	8096100	8096120	8096130							
80	100	80	100						8010040	8010050	8010060	8010070	8010080	80100100	80100120	80100130	80100140						
90	110	90	110 +0.071 +0.036							9011050	9011060	9011070	9011080	90110100	90110120	90110130	90110140						
100	120	100		120								10012060	10012070	10012080	100120100	100120120	100120130	100120140					
110	130	110	130										11013080	110130100	110130120	110130130	110130140						
120	140	120	140											12014080	120140100	120140120	120140130	120140140					
125	145	125	145 +0.040 +0.015													125145100	125145120	125145130	125145140				
130	150	130		150													130150100	130150120	130150130	130150140	130150150		
140	160	140	160 +0.083 +0.043															140160100	140160120	140160130	140160140	140160150	
150	170	150		170															150170100	150170120	150170130	150170140	150170150
160	180	160	180																160180100	160180120	160180130	160180140	160180150

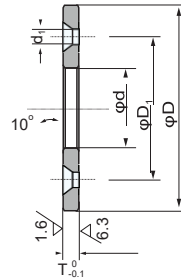
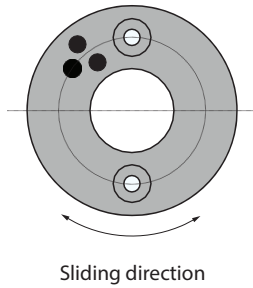
LS650WF-Size



Unit: mm

d	D	dE7	Dr6	F	L	L-0.30													
						15	20	25	30	35	40	50	60	80	100				
10	14	10	^{+0.040} / _{+0.025} 14	22	2	1015	1020												
12	18	12	^{+0.034} / _{+0.023} 18	25	3	1215	1220												
13	19	13	^{+0.050} / _{+0.032} 20	26		1315	1320												
14	20	14		27		1415	1420	1425											
15	21	15		21		1515	1520	1525	1530										
16	22	16		22		1615	1620	1625	1630										
20	30	20		^{+0.061} / _{+0.040} 30	40	5		2020	2025	2030	2035								
25	35	25	^{+0.050} / _{+0.034} 35	45			2520	2525	2530	2535	2540								
30	40	30	^{+0.050} / _{+0.034} 40	50			3020	3025	3030	3035	3040	3050							
35	45	35	^{+0.075} / _{+0.050} 45	60				3525	3530	3535	3540	3550							
40	50	40	^{+0.075} / _{+0.050} 50	65					4030	4035	4040	4050							
45	55	45	^{+0.060} / _{+0.041} 55	70					4530	4535	4540	4550	4560						
50	60	50	^{+0.060} / _{+0.041} 60	75						5035	5040	5050	5060						
55	65	55	^{+0.090} / _{+0.060} 65	80							5540	5550	5560						
60	75	60	^{+0.062} / _{+0.043} 75	90	7.5						6040	6050	6060	6080					
70	85	70	^{+0.073} / _{+0.051} 85	105									7050	7060	7080				
75	90	75	^{+0.073} / _{+0.051} 90	110								7550	7560	7580	75100				
80	100	80	100	120	10								8060	8080	80100				
90	110	90	^{+0.107} / _{+0.072} 110	130										9060	9080	90100			
100	120	100	^{+0.107} / _{+0.072} 120	150										10060	10080	100100			
120	140	120	^{+0.088} / _{+0.063} 140	170										12060	12080	120100			

LS650WC-Size



Unit: mm

Description	ϕd	ϕD	$T_{0-0.10}$	Fastening hole			
				ϕD_1	Screw	ϕd_1	Hole
LS650-WC-10	10.2	30	3	20	M3	3.5	2
LS650-WC-12	12.2	40		28			
LS650-WC-13	13.2						
LS650-WC-14	14.2						
LS650-WC-15	15.2	50	35	M5	6		
LS650-WC-16	16.2						
LS650-WC-18	18.2						
LS650-WC-20	20.2						
LS650-WC-25	25.2	55	5	40	M6	7	
LS650-WC-30	30.2	60	45				
LS650-WC-35	35.2	70		50			
LS650-WC-40	40.2	80	7				60
LS650-WC-45	45.3	90		70			
LS650-WC-50	50.3	100			75		
LS650-WC-55	55.3	110				85	
LS650-WC-60	60.3	120	90				
LS650-WC-65	65.3	125		95			
LS650-WC-70	70.3	130			100		
LS650-WC-75	75.3	140				110	
LS650-WC-80	80.3	150	120				
LS650-WC-90	90.5	170		140			
LS650-WC-100	100.5	190			160		
LS650-WC-120	120.5	200				175	
			M8				9
				M10			