

LS-POM-Triple layer bearing with the slide layer of POM

Material:

LS-POM is a triple layer bearing with copper plated steel backing, thin bronze layer in the middle and the slide layer of POM. The slide layer is equipped with lubrication pockets, which will be filled with grease before the mounting of the shaft. This material is suitable for the constructions where the loads are quite heavy, and movements are slow rotating or oscillating movements. Additional lubrication is always recommended and will increase the life time of the bearing.

Technical data:

Load:

Static 250 N/mm²

Dynamic 140 N/mm²

Oscillating 60 N/mm²

Maximum speed:

Lubricated >2,5 m/s

No lubrication 2,5 m/s

Friction:

Boundary lubricated 0,05 – 0,15 μ

No lubrication 0,15 – 0,25 μ

Temperature range:

-40 / +130 °C

Tolerances:

Housing H7

Recommended shaft tolerance h8

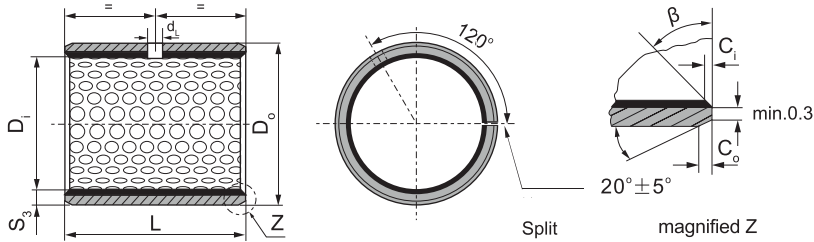
Lubrication:

Additional lubrication should be made through the shafts or through the lubrication groove in the housing. All normal lubrication greases can be used. Lubricants with additives of molybdenum disulphide or graphite should be avoided.

Delivery possibilities:

- Cylindrical bearings, flanged bearings, thrust washers, plates, drawing details
- Alternative materials: Steel backing, bronze backing, stainless steel backing

LS-POM-Size



S ₃	C _o	C _i	β	S ₃	C _o	C _i	β
1.0	0.6 ± 0.3	0.30 ± 0.2	30° ± 5°	2.00	1.2 ± 0.4	0.50 ± 0.3	30° ± 5°
1.5	0.7 ± 0.3	0.50 ± 0.2	30° ± 5°	2.50	1.8 ± 0.6	0.80 ± 0.3	45° ± 5°

Unit: mm

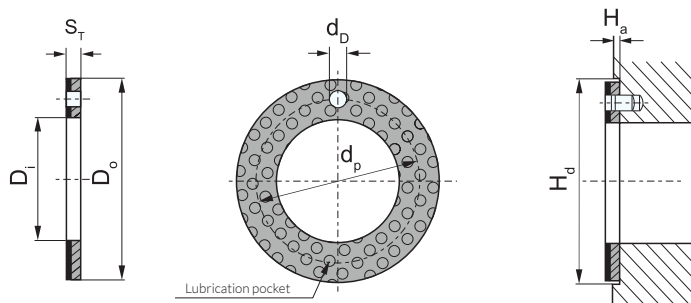
Shaft D _S	Housing H7 D _H	Tolerance D _O	After fixed D _{i,a}	Clearance D _D	Wall thickness S ₃	Oil hole d _L	L ⁰ _{-0.40}														
							10	15	20	25	30	35	40	45	50	60					
10 ^{-0.022}	12 ^{+0.018}	12 ^{+0.065} ^{+0.030}	10.108 10.040	0.130 0.040	0.980 0.955	4	1010	1015	1020												
12 ^{-0.027}	14 ^{+0.018}	14 ^{+0.065} ^{+0.030}	12.108 12.040	0.135 0.040			1210	1215	1220												
14 ^{-0.027}	16 ^{+0.018}	16 ^{+0.065} ^{+0.030}	14.108 14.040				1415	1420													
15 ^{-0.027}	17 ^{+0.018}	17 ^{+0.065} ^{+0.030}	15.108 15.040				1515	1520	1525												
16 ^{-0.027}	18 ^{+0.018}	18 ^{+0.065} ^{+0.030}	16.108 16.040				1615	1620	1625												
18 ^{-0.027}	20 ^{+0.021}	20 ^{+0.075} ^{+0.035}	18.111 18.040				0.138 0.040	1815	1820	1825											
20 ^{-0.033}	23 ^{+0.021}	23 ^{+0.075} ^{+0.035}	20.131 20.050	0.164 0.050	1.475 1.445	4	2015	2020	2025	2030											
22 ^{-0.033}	25 ^{+0.021}	25 ^{+0.075} ^{+0.035}	22.131 22.050				2215	2220	2225	2230											
25 ^{-0.033}	28 ^{+0.021}	28 ^{+0.075} ^{+0.035}	25.131 25.050				2515	2520	2525	2530											
28 ^{-0.033}	32 ^{+0.025}	32 ^{+0.085} ^{+0.045}	28.155 28.060	0.188 0.060	1.970 1.935	6			2820	2825	2830										
30 ^{-0.033}	34 ^{+0.025}	34 ^{+0.085} ^{+0.045}	30.155 30.060						3020	3025	3030	3035	3040								
35 ^{-0.039}	39 ^{+0.025}	39 ^{+0.085} ^{+0.045}	35.155 35.060				0.194 0.060			3520	3525	3530	3535	3540							
40 ^{-0.039}	44 ^{+0.025}	44 ^{+0.085} ^{+0.045}	40.155 40.060	0.234 0.080	2.460 2.415	8			4020	4025	4030	4035	4040	4045	4050						
45 ^{-0.039}	50 ^{+0.025}	50 ^{+0.085} ^{+0.045}	45.195 45.080						4520	4525	4530	4535	4540	4545	4550						
50 ^{-0.039}	55 ^{+0.030}	55 ^{+0.100} ^{+0.055}	50.200 50.080				0.239 0.080					5030	5035	5040	5045	5050	5060				
55 ^{-0.046}	60 ^{+0.030}	60 ^{+0.100} ^{+0.055}	55.200 55.080				0.246 0.080					5530	5535	5540	5545	5550	5560				
60 ^{-0.046}	65 ^{+0.030}	65 ^{+0.100} ^{+0.055}	60.200 60.080						6030	6035	6040	6045	6050	6060							



LS-POM-Size

Shaft D _S	Housing H7	Tolerance D _O	After fixed D _{i,a}	Clearance D _D	Wall thickness S ₃	Oil hole d _L	L ⁰ -0.40													
							40	50	60	80	90	95	100	110	120					
65 -0.046	70 +0.030	70 +0.055	65.200 65.080	0.246 0.080	2.460 2.415	8	6540	6550	6560											
70 -0.046	75 +0.030	75 +0.055	70.200 70.080				7040	7050	7060	7080										
75 -0.046	80 +0.030	80 +0.055	75.200 75.080				7540	7550	7560	7580										
80 -0.046	85 +0.035	85 +0.070	80.265 80.100	0.313 0.100		9.5	8040	8050	8060	8080										
85 -0.054	90 +0.035	90 +0.070	85.265 85.100				8540	8550	8560	8580										
90 -0.054	95 +0.035	95 +0.070	90.265 90.100				9040	9050	9060	9080	9090									
100 -0.054	105 +0.035	105 +0.070	100.265 100.100	0.321 0.100		9.5		10050	10060	10080	10090	10095								
105 -0.054	110 +0.035	110 +0.070	105.265 105.100				10550	10560	10580	10590	10595	105100	105110							
110 -0.054	115 +0.035	115 +0.070	110.265 110.110				11050	11060	11080	11090	11095	110100	110110							
120 -0.054	125 +0.040	125 +0.100	120.270 120.110	0.324 0.100		9.5	12050	12060	12080	12090	12095	120100	120110							
125 -0.063	130 +0.040	130 +0.100	125.270 125.110				12550	12560	12580	12590	12595	125100	125110							
130 -0.063	135 +0.040	135 +0.100	130.270 130.110				13050	13060	13080	13090	13095	130100	130110							
140 -0.063	145 +0.040	145 +0.100	140.270 140.110	0.324 0.100		9.5	14050	14060	14080	14090	14095	140100	140110							
150 -0.063	155 +0.040	155 +0.100	150.270 150.110				15050	15060	15080	15090	15095	150100	150110							
160 -0.063	165 +0.040	165 +0.100	160.270 160.110				16050	16060	16080	16090	16095	160100	160110							
170 -0.063	175 +0.040	175 +0.100	170.270 170.110	0.339 0.110		9.5	17050	17060	17080	17090	17095	170100	170110							
180 -0.063	185 +0.046	185 +0.130	180.276 180.110				18050	18060	18080	18090	18095	180100	180110							
190 -0.072	195 +0.046	195 +0.130	190.276 190.110				19050	19060	19080	19090	19095	190100	190110	190120						
200 -0.072	205 +0.046	205 +0.130	200.276 200.110	0.339 0.110		9.5	20050	20060	20080	20090	20095	200100	200110	200120						
220 -0.072	225 +0.046	225 +0.130	220.276 220.110				22050	22060	22080	22090	22095	220100	220110	220120						
240 -0.072	245 +0.046	245 +0.130	240.276 240.110				24050	24060	24080	24090	24095	240100	240110	240120						
250 -0.072	255 +0.052	255 +0.170	250.282 250.110	0.354 0.110		9.5	25050	25060	25080	25090	25095	250100	250110	250120						
260 -0.081	265 +0.052	265 +0.170	260.282 260.110				26050	26060	26080	26090	26095	260100	260110	260120						
280 -0.081	285 +0.052	285 +0.170	280.282 280.110				28050	28060	28080	28090	28095	280100	280110	280120						
300 -0.081	305 +0.052	305 +0.170	300.282 300.110				30050	30060	30080	30090	30095	300100	300110	300120						

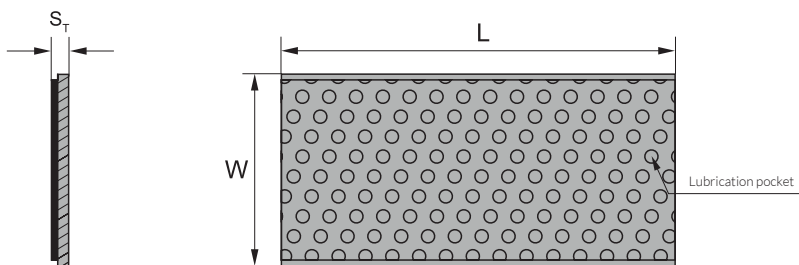
LS-POMWC Washer



Unit: mm

Shaft D_s	Standard No.	Washer size				Assemble size		$H_d + 0.12$
		$D_i + 0.25$	$D_o - 0.25$	$S_T - 0.05$	$d_p \pm 0.125$	$d_D^{+0.4/+0.1}$	$H_a \pm 0.2$	
8	W10	10	20	1.5	15	1.5	1	20
10	W12	12	24		18			24
12	W14	14	26		20	2		26
14	W16	16	30		23			30
16	W18	18	32		25	3		32
18	W20	20	36		28			36
20	W22	22	38		30			38
22	W24	24	42		33	4		42
24	W26	26	44		35			44
26	W28	28	48		38	2		1.5
30	W32	32	54	43	54			
36	W38	38	62	50	62			
40	W42	42	66	54	66			
46	W48	48	74	61	1.5		74	
50	W52	52	78	65			78	
60	W62	62	90	76			90	

LS-POMSP Strip



Standard No.	$L \pm 1$	$W \pm 1$	Wall thickness
P	500	150	1.0
P	500	150	1.5
P	500	150	2.0
P	500	150	2.5