



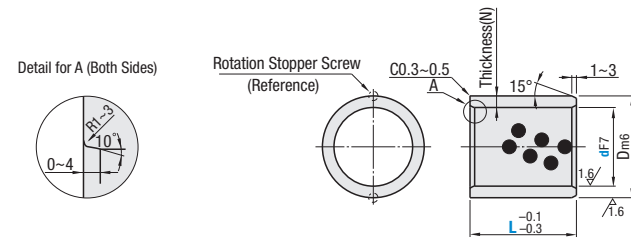
Oil-Free Bushings (Copper Alloy Straight Standard)

Thin Wall I.D. F7 O.D. m6

Oil-Free Bushings – Standard I.D. F7 O.D. m6



MPBZ
Standard I.D. F7 O.D. m6



- Ⓢ Recommended Mating Shaft of I.D. F7 Type
- Ⓢ Use of Rotation Stopper Screws is recommended to affix bushings.

d8: General Purpose (High-Load)
e7: General Use (Light Load)

f8: High Precision Use
g6: High Precision Use (Intermittent Operation)

Material: High Tensile Brass Alloy Solid Lubricant Embedded (Graphite)



Part Number		L	Dm6		Thickness (N)	Housing Dia. (Reference)		*Rotation Stopper Screw (Reference)
Type	d _{F7}		Reference Dimension	Tolerance (H7)		Reference Dimension	Tolerance (H7)	
MPBZ	5	+0.022	8 9 10 12 15	9	+0.015	9	+0.015	M4×8
	6	+0.010	8 9 10 12 15 16 19 20	10	+0.006	10	0	
	8	+0.028	8 9 10 12 15 16 19 20 25	12		12		
	10	+0.013	8 9 10 12 15 16 19 20 25 30	14	+0.018	14	0	
	12		8 9 10 12 15 16 19 20 25 30 35	18		18		
	13		9 10 12 15 16 19 20 25 30 35	19		19		
	15	+0.034	9 10 12 15 16 19 20 25 30 35 40	21		21		
	16	+0.016	9 10 12 15 16 19 20 25 30 35 40	22	+0.021	22	0	
	18		9 10 12 15 16 19 20 25 30 35 40	24	+0.008	24		
	20		9 10 12 15 16 19 20 25 30 35 40 50 60	28		28		
	20A	+0.041	9 10 12 15 16 19 20 25 30 35 40 50	30		30		
	25	+0.020	12 15 16 19 20 25 30 35 40 50 60	33		33		
	25A		12 15 16 19 20 25 30 35 40 50 60	35		35		
	30		12 15 16 19 20 25 30 35 40 50 60 70	38		38		
	32		20 30 40	42	+0.025	42		
	35		20 25 30 35 40 50 60 70	44	+0.009	44		
	38	+0.050	40	48		48		
	40	+0.025	20 25 30 35 40 50 60 70 80	50		50		
	45		30 35 40 50 60	55		55		
	50		30 35 40 50 60 70 80	62		62		
55		30 35 40 50 60 70	70	+0.030	70			
60	+0.060	50 60 70 80	75	+0.011	75			
65	+0.030	50 60 70 80	80		80	+0.030		
70		50 60 70 80	85		85			
80		50 60 70 80	96		96			
90	+0.071	80 90	110	+0.035	110	+0.035		
100	+0.036	80 100	120	+0.013	120	0		

Ⓢ For housing diameter, tolerance H7 (*2) to D dimensions (*1) is recommended. (Refer to Table 1)
*Indicated dimensions of Rotation Stopper Screw are recommended dimensions.

Part Number Example
MPBZ10 - 15

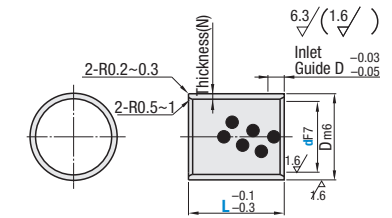
Oil-Free Bushings (Copper Alloy Straight Standard)

Thin Wall I.D. F7 O.D. m6, continued

Oil-Free Bushings – Thin Wall I.D. F7 O.D. m6



MPBZU
Thin Wall I.D. F7 O.D. m6



- Ⓢ Recommended Mating Shaft of I.D. F7 Type
- Ⓢ Use of Rotation Stopper Screws is recommended to affix bushings.

d8: General Purpose (High-Load)
e7: General Use (Light Load)

f8: High Precision Use
g6: High Precision Use (Intermittent Operation)

Material: High Tensile Brass Alloy Solid Lubricant Embedded Graphite

Part Number		L	Dm6		Thickness (N)	Housing Dia. (Reference)		*Rotation Stopper Screw (Reference)
Type	d _{F7}		Reference Dimension	Tolerance (H7)		Reference Dimension	Tolerance (H7)	
MPBZU	5	+0.022	8 10 12	7		7		M4×8
	6	+0.010	8 10 12 15 16	8	+0.015	8	+0.015	
	8	+0.028	8 10 12 15 16 20	10	+0.006	10	0	
	10	+0.013	8 10 12 15 16 20 25	12		12		
	12		10 12 15 16 20 25	15	+0.018	15	+0.018	
	13		10 12 15 16 20 25	16	+0.007	16	0	
	15	+0.034	10 12 15 16 20 25 30	18		18		
	16	+0.016	10 12 15 16 20 25 30	20		20		
	18		12 15 16 20 25 30	22		22		
	20		15 16 20 25 30 40	24	+0.021	24	+0.021	
	25	+0.041	15 16 20 25 30 40	29	+0.008	29	0	
	30	+0.020	15 16 20 25 30 40	34		34		
	35		20 25 30 40	40	+0.025	40	+0.025	
	40	+0.050	20 25 30 40 50	45	+0.009	45	0	
	50	+0.025	30 40 50	55	+0.030	55	+0.030	

Features of Thin Wall Type

- Thin wall to be comparable to Multi-Layer LF Bushings.
- Applicable to both reciprocal and oscillating motions.
- Suitable for use in limited space.
- Excels in abrasion resistance compared to Multi-Layer LF Bushings or Resin Bushings. Usable under high-load conditions.

Outer Diameter Comparison Table

d	Dimension Difference		Thin Type MPBZU		Standard Type MPBZ	
	Dm6	Thickness (N)	Dm6	Thickness (N)	Dm6	Thickness (N)
5	-2	-1	7		9	
6	-2	-1	8		10	
8	-2	-1	10	1	12	2
10	-2	-1	12		14	
12	-3	-1.5	15		18	
13	-3	-1.5	16	1.5	19	
15	-3	-1.5	18		21	
16	-2	-1	20		22	3
18	-2	-1	22		24	
20	-4	-2	24	2	28	
25	-4	-2	29		33	
30	-4	-2	34		38	4
35	-4	-2	40		44	4.5
40	-5	-2.5	45	2.5	50	5
50	-7	-3.5	55		62	6

Part Number Example
MPBZU16 - 20