

Oil Free Bushings

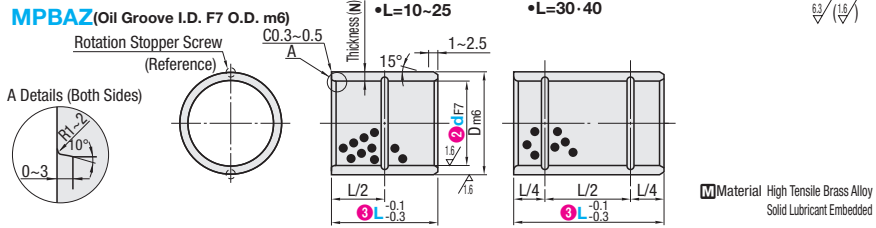
- Copper Alloy, Oil Groove / Flanged, Standard / Thin Wall-

■ Features: Lubrication frequency can be reduced by gathering initial grease in oil groove.

When ordering, select Part Number and Values from Selection Steps ①~③.

Ordering Example	Part Number(①Type · ②d) - ③L
MPBAZ10	- 15
MPFZ20	- 30
MPFZU12	- 15

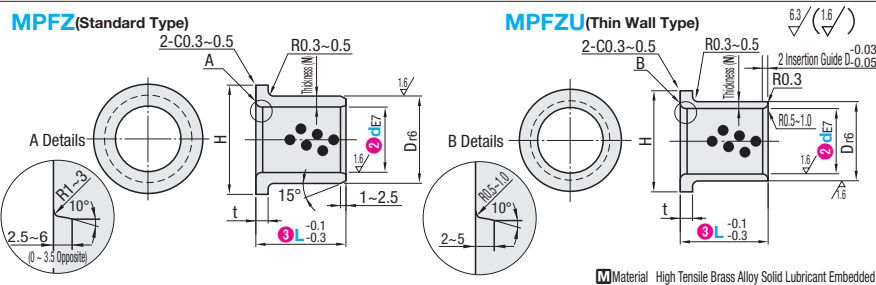
Oil Groove



Part Number ①Type	②dF7	③L				Dm6	Thickness (N)	* Rotation Stopper Screw (Reference)	Housing Dia. (Recommended Dimension)	
		One Groove (Center)	Two Grooves	Ref. Dim.	Tolerance (H7)					
MPBAZ	10	+0.028 +0.013	10 12 15 16		14	2	M4x8	14	+0.018 0	
	12		12 15 16 20		18	3		18		
	13	+0.034 +0.016	12 15 16 20		19			+0.021 +0.008	19	
	15		12 15 16 20		21					
	16		12 15 16 20 25		22		M5x8	22		
	20		15 16 20 25 30		28	+0.025 +0.009		28		
	25	+0.041 +0.020	20 25 30 40		33			33	33	+0.025 0
	30		20 25 30 40		38				38	

■ Features: Flanged, less likely to pull-out.

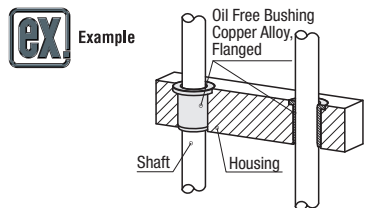
Flanged, Standard / Thin Wall Type



Precautions for use

Recommended Mating Shaft for I.D. F7 Type d8: General Use (High-Load) e7: General Use (Light Load) f8: High Precision Use g6: High Precision Use (Intermittent Operation)
 * Use of Rotation Stopper Screws is recommended to affix bushings.

Part Number ①Type	②dE7	③L	MPFZ				MPFZU				Housing Dia. (Recommended Dimension)		
			Dm6	Thickness (N)	H	t-0.1	Dm6	Thickness (N)	H	t-0.1	Ref. Dim.	Tolerance (H7)	
MPFZ MPFZU * L dimensions in () are available for MPFZU only.	5	+0.032	10 12	9	+0.028	14	7	+0.028	11	9	+0.015	7	+0.015
	6	+0.020	10 12 15	10	+0.019	16	8	+0.019	12	10	0	8	0
	8	+0.040	10 12 15 20	12	+0.034	20	10		14	10		10	
	10	+0.025	10 12 15 20 (25) (30)	14	+0.023	22	12		16	14	+0.018	12	
	12		10 12 15 20 25 30	18		25	15	+0.034	21	18		15	+0.018
	13		(10) 12 15 20 (25) (30)	19		26	16		22	19		16	0
	15	+0.050	10 12 15 20 25 (30)	21		28	18		24	21		18	
	16	+0.032	12 15 20 25 30 (35) (40)	22	+0.041	29	20	+0.034	26	22	+0.021	20	
	18		(15) (20) (25) (30) (35) (40)	24	+0.028	32	-	-	-	24	0	21	+0.021
	20		15 20 25 30 (35) 40	30		40	24	+0.041	32	30		24	0
	25	+0.061	(15) (20) (25) 30 (35) 40 50	35		45	29	+0.028	37	35		29	
	30	+0.040	(20) (25) 30 (35) 40 50	40	+0.050	50	34	+0.050	42	40	+0.025	34	+0.025
	35		(20) (25) (30) (35) (40) (50)	45	+0.034	60	-	-	-	45	0	-	-
	40	+0.075	(20) (25) (30) (35) (40) (50)	50		65	-	-	-	50		-	-
	50	+0.050	(30) (35) (40) (50) (60)	60	+0.060	75	-	-	-	60	+0.030	-	-



Oil Free Bushings

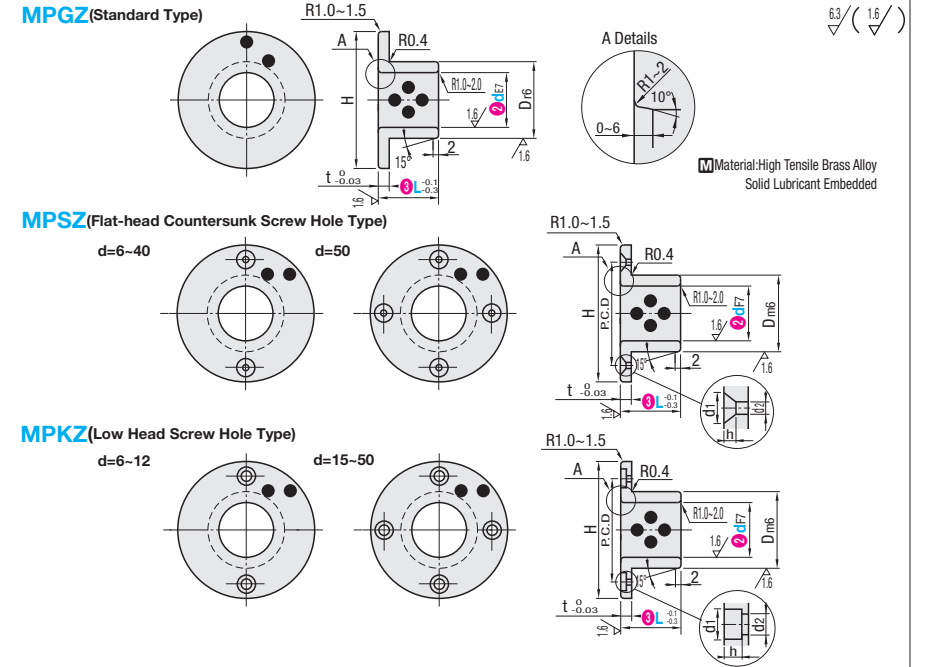
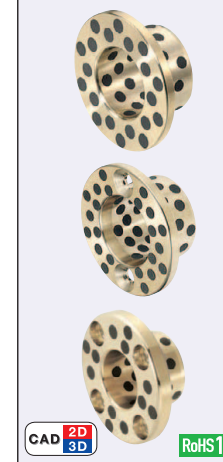
-Copper Alloy, Thrust-

■ Features: Lubricant is embedded in the flange so that one bushing can bear radial journal load and thrust load at the same time.

When ordering, select Part Number and Values from Selection Steps ①~③.

Ordering Example	Part number(①Type · ②d) - ③L
MPGZ10	- 15
MPSZ12	- 15
MPKZ16	- 20

Thrust Type



Part Number ①Type	②de7	③L				Dm6	H	t	Housing Dia. (Recommended Dimension)	
		6	10 12	14	15				Ref. Dim.	Tolerance (H7)
MPGZ (Standard)	6	+0.032 +0.020	10 12	12		12	22	3	12	+0.018
	8	+0.040 +0.025	10 12 15	14		14	25		14	0
	10		10 12 15 20	16		16	30		16	
	12		10 12 15 20 25	18		18	35		18	
	13		12 15 20 25	19		19	40	19		
	15	+0.050	12 15 20 25	21		21	45	21	+0.021	
	16	+0.032	12 15 20 25 30	22		22	50	22	0	
	18		14 20 25 30 35	24		24	55	24		
	20		14 20 25 30 35 40	28		28	60	28		
	25	+0.061 +0.040	14 20 25 30 35 40	33		33	65	33	+0.025	
	30		20 25 30 35 40	38		38	70	38	0	
	35	+0.075 +0.050	20 25 30 35 40	44		44	75	44		
	40		25 30 35 40 45 50	50		50	80	50		
	50		30 35 40 45 50 60	62		62	90	62	+0.030	

Part Number ①Type	②dF7	③L	Dm6	MPSZ				MPKZ				Housing Dia. (Recommended Dimension)				
				P.C.D	d1	d2	h	P.C.D	d1	d2	h	Ref. Dim.	Tolerance (H7)			
MPSZ (Flat-head Countersunk Screw Hole)	6	+0.022	10 12	10	+0.015	25	15	25	17	6	3.5	2.2	M3-10 x 2 pcs.	4	12	+0.018
	8	+0.028	12 15	12	+0.018	28	18	27	19				M4-12 x 2 pcs.	5	14	0
	10	+0.013	12 15 20	14		30	20	29	21				M4-12 x 4 pcs.	5	21	+0.021
	12		12 15 20	18		40	28	36	26					5	22	0
	15	+0.034	12 15 20	21		50	35	39	29					5	24	
MPKZ (Low Head Screw Hole)	20		20 25 30 35 40 28	22	+0.021	28	21	49	38	9	5.5	3.7	M5-16 x 4 pcs.	6	28	
	25	+0.041	20 25 30 35 40	33		55	40	54	43					6	33	
	30	+0.020	20 25 30 35 40	38	+0.025	60	45	63	50	11	6.6	4.2	M6-20 x 4 pcs.	8	38	+0.025
	35	+0.016	20 25 30 35 40	44	+0.009	70	52	69	56					8	44	0
	40	+0.050	25 30 35 40 45 50	50		80	60	82	66	16	7	4.5	M6	10	50	
	50	+0.025	30 35 40 45 62	62	+0.030	100	75	94	78	14	9	5.2	M8-25 x 4 pcs.	10	62	+0.030

Precautions for use

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