

# Oil Free Bushings

## Copper Alloy, Thrust

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

**Thrust Type**

**MPGZ (Standard)**

**MPSZ (Countersunk Hole)**  
d=6-40, d=50

**MPKZ (Low Head Screw Hole)**  
d=6-12, d=15-50

**Recommended Mating Shaft:**  
 d8: General Use (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

**RoHS 10**

**EX**

**MPGZ**  
Flat Bar  
Hinge Pin

Part Number		L				Dm6	H	t	Housing Dia. (Recommended Dimension)		
Type	dE7	10	12	15	20				Ref. Dim.	Tolerance (H7)	
<b>MPGZ</b> (Standard)	6	10	12			12		22	12	+0.018 0	
	8	10	12	15		14	+0.034	25	14		
	10	10	12	15	20	16	+0.023		16		
	12	10	12	15	20	18		30	18		
	13	12	15	20	25	19			19		
	16	12	15	20	25	21	+0.041	35	21		
	18		14	20	25	30	+0.028	40	22	+0.021 0	
	20		14	20	25	30	35	40	24		
	25	+0.061		14	20	25	30	35	40	28	
	30	+0.040			20	25	30	35	40	33	+0.025 0
	35				20	25	30	35	40	38	
	40	+0.075				25	30	35	40	44	
50	+0.050				25	30	35	40	50		
					30	35	40	45	50		
					30	35	40	45	50	+0.030	

Part Number		L				Dm6	MPSZ Mounting Hole				MPKZ Mounting Hole				Housing Dia. (Recommended Dimension)					
Type	dF7	10	12	15	20		H	P.C.D	d1	d2	h	t	P.C.D	d1	d2	h	Accessory: Hex Socket / Low Head Cap Screw	t	Ref. Dim.	Tolerance (H7)
<b>MPSZ</b> (Countersunk Hole)	6	10	12			10	12	25	15			25	17				M3-10x2 pcs.	4	10	+0.015
	8	10	12	15		12	18	27	19			27	19	6	3.5	2.2		4	12	+0.018 0
	10	10	12	15	20	14	20	29	21			29	21				M4-12x2 pcs.	5	18	
	12	10	12	15	20	18	28	40	28	8.5	3.5	2.5	36	26				5	21	+0.021 0
	15	10	12	15	20	21	30	40	30				39	29	7.5	4.5	3		22	
	16	+0.034	12	15	20	25	30	22	40	30			40	30				M4-12x4 pcs.	5	24
18		12	15	20	25	30	24	42	32			42	32					6	28	
20		12	15	20	25	30	28	49	38			49	38	9	5.5	3.7	M5-16x4 pcs.	6	33	
25	+0.041				20	25	30	35	40	13	6	3.5	5	54	4.3			6	33	
30	+0.020				20	25	30	35	40				63	5.0			M5-16x4 pcs.	8	38	+0.025 0
35					20	25	30	35	40				69	5.6			M6-20x4 pcs.	8	44	
40	+0.050				25	30	35	40	45				78	6.6	4.2		M6-20x4 pcs.	8	50	
50	+0.025				25	30	35	40	45	16	7	4.5	80	6.6			M8-25x4 pcs.	10	50	
					30	35	40	45	62				84	7.8	5.2		M8-25x4 pcs.	10	62	+0.030

d-L	Unit Price			d-L	Unit Price			d-L	Unit Price			d-L	Unit Price			d-L	Unit Price		
	MPGZ	MPSZ	MPKZ		MPGZ	MPSZ	MPKZ		MPGZ	MPSZ	MPKZ		MPGZ	MPSZ	MPKZ		MPGZ	MPSZ	MPKZ
6-10				12-25				16-30				25-20				35-35			
6-12				13-12				18-14				25-25				35-40			
8-10				13-15				18-20				25-30				40-25			
8-12				13-20				18-25				25-35				40-30			
8-15				13-25				18-30				25-40				40-35			
10-10				15-12				18-35				30-20				40-40			
10-12				15-15				20-14				30-25				40-45			
10-15				15-20				20-20				30-30				40-50			
10-20				15-25				20-25				30-35				50-30			
12-10				16-12				20-30				30-40				50-35			
12-12				16-15				20-35				35-20				50-40			
12-15				16-20				20-40				35-25				50-45			
12-20				16-25				25-14				35-30				50-50			
																50-50			
																50-60			

**Ordering Example**

Part Number - L

MPGZ10 - 15

MPSZ12 - 15

MPKZ16 - 20