

Flange Integrated Oil Free Bushings

Copper Alloy, Standard Flanged, I.D. F7

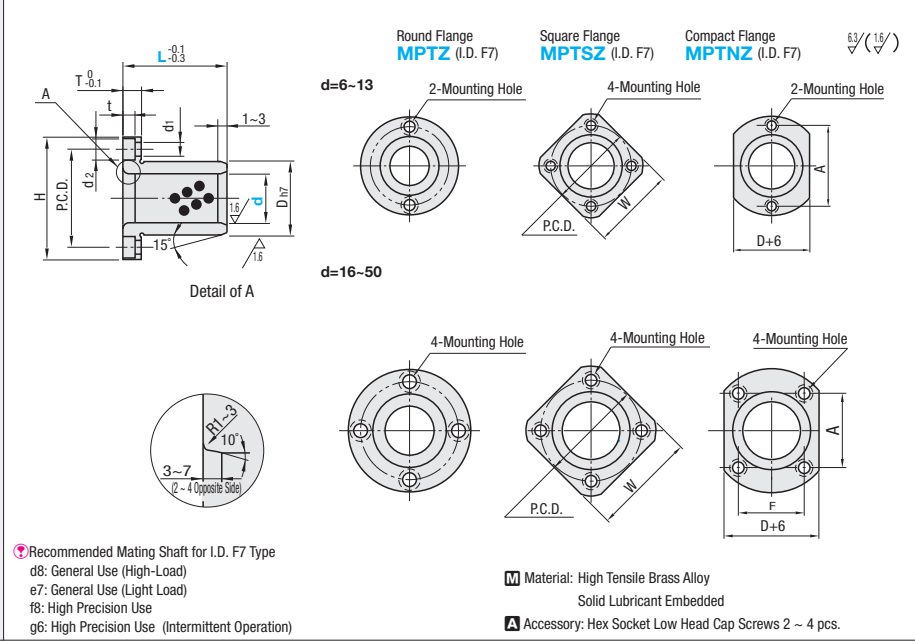
Flange Integrated Oil Free Bushings / Oil Free Copper Alloy Washers

Copper Alloy, Pilot Flanged / Center Flanged

Flat Head Screw / Low Head Cap Screw

■ **Features:** Flange Integrated Oil Free Bushings can reduce the time of assembling.

■ **Standard Flanged, I.D. F7**



Part Number	Type	dF7	L		Dh7	H	T	t	d1	d2	P.C.D.	W	F	A	Accessory: Hex Socket Low Head Cap Screw	
			6	8												
6	I.D. F7 MPTZ MPTSZ MPTNZ	+0.022 +0.010	15	20	10	0 -0.015	25				17	20		17	M3-10x2	
8		+0.028 +0.013	20	25	12	0	27	4	2.2	3.5	6	19	22	19	(4)	
10			20	25	30	14	0 -0.018	29				21	23	21		
12			20	25	30	18		36				26	28	26	M4-12x2	
13		+0.034 +0.016	20	25	30	19		37	5	3	4.5	27	29	27	(4)	
16			20	25	30	22	0 -0.021	40				30	31	18	24	M4-12x4
20			25	30	35	28		49	6	3.7	5.5	38	38	22	31	M5-16x4
25		+0.041 +0.020	30	35	40	33		54				43	42	25	35	
30			35	40	50	38	0 -0.025	63	8	4.2	6.6	50	50	30	40	M6-20x4
35			50	60	70	44		69				56	54	36	43	
40	+0.050 +0.025	60	70	80	50		82	10	5.2	9	66	64	38	54	M8-25x4	
50		70	80	100	62	0 -0.030	94				78	73	50	60		

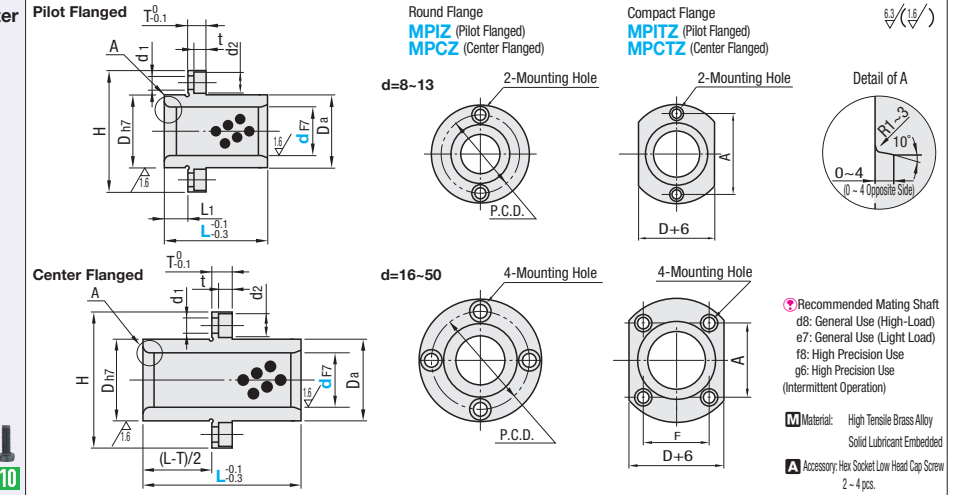
* Values in () are the number of screws included in MPTSZ.

Part Number	Type	Unit Price			Unit Price			Unit Price			Unit Price		
		d-L	MPTZ	MPTSZ	MPTNZ	d-L	MPTZ	MPTSZ	MPTNZ	d-L	MPTZ	MPTSZ	MPTNZ
6-15					13-25				20-40				30-70
20					30				50				35-50
8-20					35				70				60
25					16-20				35				70
10-20					25				40				40-60
25					30				50				70
30					35				60				80
12-20					40				30-35				50-70
25					20-25				40				80
30					30				50				100
13-20					35				60				

Ordering Example: Part Number - L
 MPTZ12 - 30

■ **Features:** Flange Integrated Oil Free Bushings can reduce the time of assembling. Pilot Flanged: Oil Free Bushings do not project from bushing mounting position. Saves space on the opposite side. Center Flanged: Workpiece located near the center of the bushing provides balanced load and clearance on both sides of the flange.

■ **Pilot Flanged / Center Flanged**

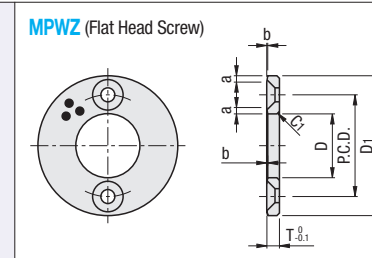
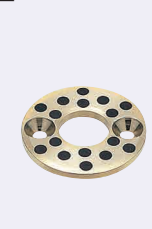


Part Number	Type	dF7	L		Dh7	Da	L1	H	T	t	d1	d2	P.C.D.	F	A	Accessory: Hex Socket Low Head Cap Screw	
			20	25													
8	Pilot Flanged MPIZ MPITZ	+0.028	20	(25)	12	0	11.5	5	27	4	2.2	3.5	6	19	19	M3-10x2	
10		+0.013	25	30	14	-0.018	13.5		29					21	21		
12			25	30	18		17.5	6	36					26	26	M4-12x2	
13	Center Flanged MPCZ MPCTZ	+0.034	(25)	(30)	19		18.5		37	5	3	4.5	7.5	27	27	M4-12x4	
16		+0.016	25	30	22	0 -0.021	21.5		40					30	18	24	M4-12x4
20			30	35	28		27.5	8	49	6	3.7	5.5	9	38	22	31	M5-16x4
25		+0.041	(30)	(35)	33	0	32.5		54	6				43	25	35	
30		+0.020	(35)	(40)	38	-0.025	37.5	10	63	8	4.2	6.6	11	50	30	40	M6-20x4

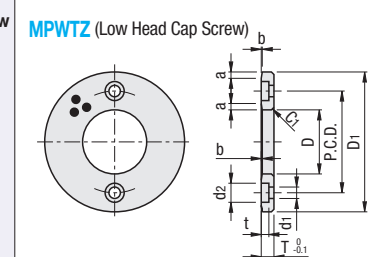
d-L	Unit Price				d-L	Unit Price				d-L	Unit Price			
	MPIZ	MPITZ	MPCZ	MPCTZ		MPIZ	MPITZ	MPCZ	MPCTZ		MPIZ	MPITZ	MPCZ	MPCTZ
8-20					16-40					30-50				
25					20-30					60				
10-25					35					70				
30					40									
12-25					50									
30					25-30									
13-25					35									
30					40									
35					50									
16-25					60									
30					30-35									
35					40									

■ **Features:** Supports a thrust load.

■ **Flat Head Screw**



■ **Low Head Cap Screw**



Part Number	Type	No.	Tolerance	D	D1	Mounting Hole			Chamfer	Unit Price			
						MPWZ	MPWTZ	MPWZ					
6	MPWZ MPWTZ	3(4)	0	+0.1	25	15	M3	3.5	6	2.4	1.5	0.3	
8													2
10													
12													
13													
15													
16		5	0	+0.1	50	35	M5	4.5	7.5	3	2.5	0.4	
18													
20													
25													
30													
35	7	0	+0.1	80	60	M6	5.5	9	4	3	0.5		
40													
50													

* For MPWTZ, T dimensions of No.6 ~ 18 are values in (). * For Hex Socket Low Head Cap Screws, refer to P.194. * Indicated dimensions of Flat Head Screws are recommended dimensions.

Ordering Example: Part Number - L
 MPWZ18
 MPWTZ15