


Oil Free Bushings

Copper Alloy Straight, Standard / Thin Wall, I.D. E7 O.D. r6 / I.D. G6 O.D. m6

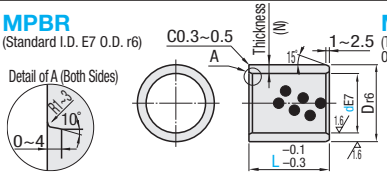
■ **Features:** Bushings can be affixed only by Press-fit process. No process using Rotation Stopper Screws is required.

■ **Standard / Thin Wall, I.D. E7 O.D. r6**

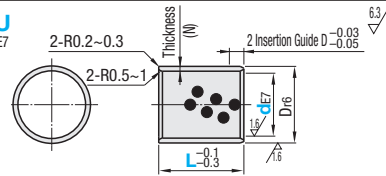


RoHS 10

MPBR
(Standard I.D. E7 O.D. r6)



MPBRU
(Thin Wall I.D. E7 O.D. r6)



6.3 / (1.6 /)

Ⓜ Recommended Mating Shafts for I.D. E7 O.D. r6 Type d8: General Use (High-Load)
 Ⓜ Press fitting is recommended to affix bushings. e7: General Use (Light Load)

f8: High Precision Use Ⓜ Material: High Tensile Brass Alloy
 g6: High Precision Use (Intermittent Operation) Solid Lubricant Embedded


Part Number	Type	dE7	L										MPBR D#6 (*1)	Thickness (N)	MPBRU D#6 (*1)	Thickness (N)	D	O.D. r6 (*1)	Housing Dia. H7 (*2)	Copper Alloy Bushings: I.D. Variations after Press-Fitted (Reference)		
			5	6	8	10	12	15	16	20	25	30								30	34	Inner Diameter after press-fit is almost equal to I.D. F7 O.D. m6 Type. (See below for I.D. Variations after press-fitted)
MPBR	5	+0.032	8	10	(12)	(15)							9	7	7~10	+0.028	+0.015	Standard	99.84%	99.95%		
MPBRU	6	+0.020	8	10	12	15	16	(20)					10	8	11~18	+0.034	+0.018	Thin Wall	99.83%	99.94%		
	8	+0.040	8	10	12	15	16	(20)					12	10	19~30	+0.041	+0.021					
	10	+0.025	(8)	10	12	15	16	(20)	(25)				14	12	31~50	+0.028	0					
	12	+0.050	(10)	12	15	16	20	(25)					18	15		+0.050	+0.025					
	15	+0.032		12	15	16	20	(25)					21	18		0						
	16			12	15	16	20	(25)	(30)	(40)			22	20								
	20			15	16	20	25	30	(40)	(50)	(60)	28	24	24								
	25	+0.061		16	20	25	30	(40)	(50)	(60)	33	29	29									
	30	+0.040		16	20	25	30	(40)	(50)	(60)	38	34	34									

* L dimensions in () are only available for MPBR.
 Ⓜ Tolerance H7 (*2) to D dimensions (*1) is recommended for housing diameter.

Part Number	Type	Unit Price										Part Number	Type	Unit Price									
		L8	L10	L12	L15	L16	L20	L25	L30	L40	L50			L8	L10	L12	L15	L16	L20	L25	L30		
MPBR	5	-	-	-	-	-	-	-	-	-	-	MPBRU	5	-	-	-	-	-	-	-	-	-	-
	6	-	-	-	-	-	-	-	-	-	-		6	-	-	-	-	-	-	-	-	-	-
	8	-	-	-	-	-	-	-	-	-	-		8	-	-	-	-	-	-	-	-	-	-
	10	-	-	-	-	-	-	-	-	-	-		10	-	-	-	-	-	-	-	-	-	-
	12	-	-	-	-	-	-	-	-	-	-		12	-	-	-	-	-	-	-	-	-	-
	15	-	-	-	-	-	-	-	-	-	-		15	-	-	-	-	-	-	-	-	-	-
	16	-	-	-	-	-	-	-	-	-	-		16	-	-	-	-	-	-	-	-	-	-
	20	-	-	-	-	-	-	-	-	-	-		20	-	-	-	-	-	-	-	-	-	-
	25	-	-	-	-	-	-	-	-	-	-		25	-	-	-	-	-	-	-	-	-	-
	30	-	-	-	-	-	-	-	-	-	-		30	-	-	-	-	-	-	-	-	-	-

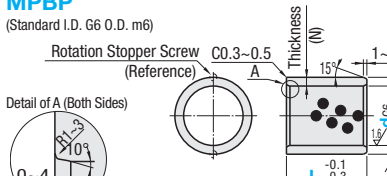
■ **Features:** More precise linear and rotary motion compared to I.D. F7 O.D. m6 (MPBZ, MPBZU) and I.D. E7 O.D. r6 (MPBR, MPBRU) can be achieved by keeping the clearance between bushings and g6 shafts small.

■ **Standard / Thin Wall, I.D. G6 O.D. m6**

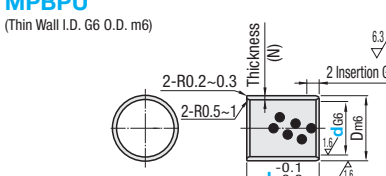


RoHS 10

MPBP
(Standard I.D. G6 O.D. m6)



MPBPU
(Thin Wall I.D. G6 O.D. m6)



6.3 / (1.6 /)

Ⓜ How to use MPBP, MPBPU
 Ⓜ Use of Rotation Stopper Screws is recommended to affix bushings.
 Ⓜ Recommended Mating Shaft for I.D. G6 Type, g6: High Precision Use

Ⓜ Material: High Tensile Brass Alloy
 Solid Lubricant Embedded

Part Number	Type	dG6	L										MPBP D#6 (*1)	Thickness (N)	* Rotation Stopper Screw (Reference)	MPBPU D#6 (*1)	Thickness (N)	D	O.D. m6 (*1)	Housing Dia. G7 (*2)	
			5	6	8	10	12	15	16	20	25	30									30
MPBP	5	+0.012	8	10	12	(15)							9	2	M4X8	7	7~10	+0.015	+0.020		
MPBPU	6	+0.004	8	10	12	15	16						10	1		8	11~18	+0.006	+0.005		
	8	+0.014	10	12	15	16	20						12			10	19~30	+0.018	+0.024		
	10	+0.005	10	12	15	16	20	25					14			12	31~50	+0.007	+0.006		
	12		12	15	16	20	25					18			15		+0.021	+0.028			
	13	+0.017	12	15	16	20	25					19	3		16		+0.008	+0.007			
	15	+0.006	12	15	16	20	25					21			18		+0.025	+0.034			
	16		12	15	16	20	25					22			20		+0.009	+0.009			
	20	+0.020	15	16	20	25	30					28	4		24						
	25	+0.007	16	20	25	30	40					33			29						
	30		16	20	25	30	40					38			34						

* L dimensions in () are only available for MPBP.
 Ⓜ Tolerance G7 (*2) to D dimensions (*1) for housing diameter * Indicated dimensions of Rotation Stopper Screws are recommended dimensions.

Part Number	Type	Unit Price										Part Number	Type	Unit Price									
		L8	L10	L12	L15	L16	L20	L25	L30	L40	L8			L10	L12	L15	L16	L20	L25	L30	L40		
MPBP	5	-	-	-	-	-	-	-	-	-	-	MPBPU	5	-	-	-	-	-	-	-	-	-	-
	6	-	-	-	-	-	-	-	-	-	-		6	-	-	-	-	-	-	-	-	-	-
	8	-	-	-	-	-	-	-	-	-	-		8	-	-	-	-	-	-	-	-	-	-
	10	-	-	-	-	-	-	-	-	-	-		10	-	-	-	-	-	-	-	-	-	-
	12	-	-	-	-	-	-	-	-	-	-		12	-	-	-	-	-	-	-	-	-	-
	13	-	-	-	-	-	-	-	-	-	-		13	-	-	-	-	-	-	-	-	-	-
	15	-	-	-	-	-	-	-	-	-	-		15	-	-	-	-	-	-	-	-	-	-
	16	-	-	-	-	-	-	-	-	-	-		16	-	-	-	-	-	-	-	-	-	-
	20	-	-	-	-	-	-	-	-	-	-		20	-	-	-	-	-	-	-	-	-	-
	25	-	-	-	-	-	-	-	-	-	-		25	-	-	-	-	-	-	-	-	-	-
	30	-	-	-	-	-	-	-	-	-	-		30	-	-	-	-	-	-	-	-	-	-

Ordering Example
 Part Number - L
 MPBR12 - 12
 MPBR20 - 15