

Oil Free Bushings / Oil Free Bushing Housing Units - Blocks

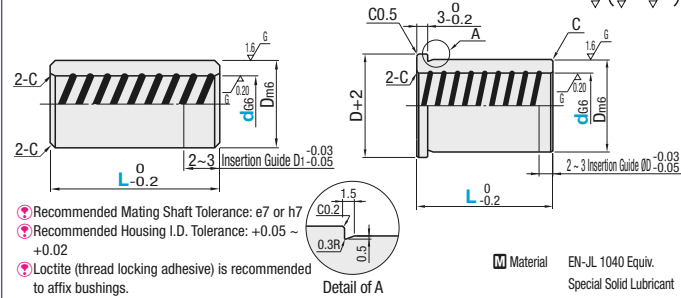
Casting Built-in Cast Bushings

■Features: Optimal for use in medium load and low speed applications.

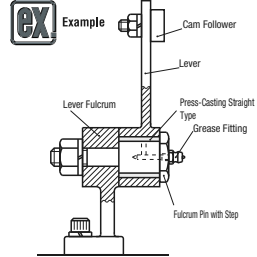
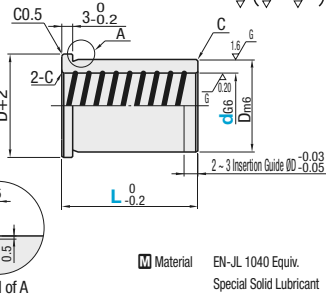
Straight / Flanged



SMZ (Straight)



SMZF (Flanged)



Part Number		L		Dm6		C		SMZ		SMZF	
Type	d66							Unit Price	Volume Discount Rate	Unit Price	Volume Discount Rate
								1 ~ 9 pc(s)	10 ~ 50 pcs	1 ~ 9 pc(s)	10 ~ 20 pcs
Straight	6	*6 8 10 12		10							
	8	+0.014		12							
	10	+0.005		16							
	12			18							
	15	+0.017		22							
	16	+0.006		23							
	20			28							
	25	+0.020		32							
	30	+0.007		38							
Flanged	6	*6 8 10 12		10							
	8	+0.014		12							
	10	+0.005		16							
	12			18							
	15	+0.017		22							
	16	+0.006		23							
	20			28							
	25	+0.020		32							
	30	+0.007		38							

* marked L dimension is available for SMZ only.

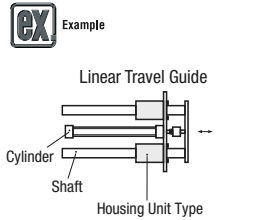
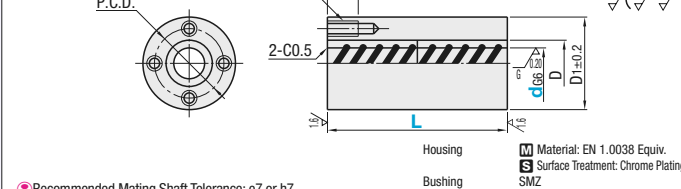
For orders larger than indicated quantity, please request a quotation.

■Features: Reduces the time of manufacturing and assembling the housing.

Housing Units



MHSR



Part Number		L (1 Bushing)		L (2 Bushings)		D		D1		Mxℓ		P.C.D.		Mass (g)		Short		Long	
Type	d	Short	Long	Short	Long									Short	Long	Unit Price	Volume Discount Rate	Unit Price	Volume Discount Rate
														1 ~ 9 pc(s)	10 ~ 20 pcs	1 ~ 9 pc(s)	10 ~ 20 pcs	1 ~ 9 pc(s)	10 ~ 20 pcs
MHSR	8	15	30	12	30					4x8		21		77	154				
	10	20	40	16	34							25		130	260				
	12	25	40	18	36							27		177	284				
	15	30	50	22	42							32		284	474				
	20	40	60	28	48					5x10		38		469	939				
	25	50	80	32	52							42		641	1025				
	30	60	100	38	60					6x12		49		999	1665				

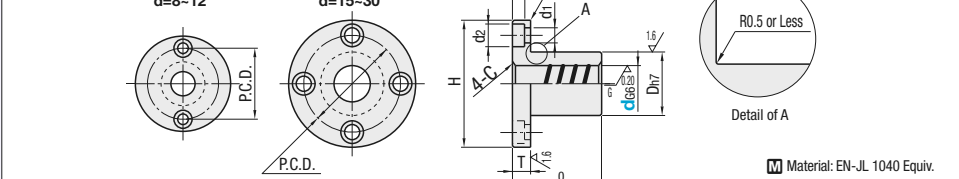
Ordering Example	Part Number	L
Example	SMZ12	20
	MHSR15	50

For orders larger than indicated quantity, please request a quotation.

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

Flanged

SMZH



RoHS		Recommended Mating Shaft Tolerance: e7 or h7										L -0.3		Special Solid Lubricant				
Part Number			Dh7	Tolerance	L	H	T	d1	d2	t	P.C.D.	Mass (g)	Unit Price 1 ~ 9 pc(s).	Volume Discount Rate 10 ~ 20 pcs.				
Type	d66	Tolerance																
SMZH	8	+0.014	15	0 -0.013	20	32	5	3.5	6	3.1	24	45						
	10	+0.005	19	0 -0.016	25	40	6	4.5	7.5	4.1	29	85						
	12	+0.017	21		30	42					32	103						
	15	+0.006	28		40	48					38	180						
	20		32	0 -0.019	50	54	8	5.5	9	5.1	43	280						
	25	+0.020	40		60	62					51	270						
	30	+0.007	45		70	74					10	6.6	11	6.1	60	670		

For orders larger than indicated quantity, please request a quotation.

Ordering Example	Part Number	L
Example	SMZH10	

Oil Free Bushings / Thrust Washers

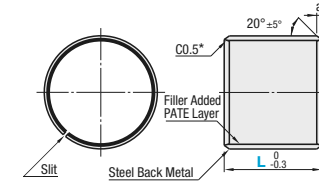
Multi-Layer LF Bushings - Straight / Flanged

■Features: Thin wall and compact. The bulk-purchase is a better deal.

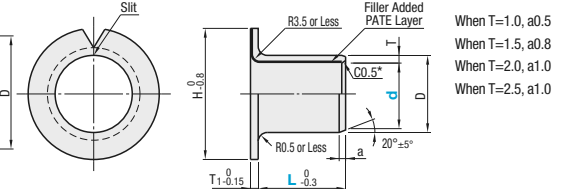
Straight / Flanged



MDZB (Straight)



MDZF (Flanged)



Applicable to linear and rotary motion.

Press fitting is recommended to affix bushings.

1) Bushings with I.D. d<10 are only de-burred lightly instead of full chamfering.

2) Chamfering is C0.3 when the I.D. is d≥10 and the plate thickness is 1.0.

There may be some color variations.

Part Number		L		D		T		MDZF		* Shaft Diameter		* Housing Dia. H7		I.D. Tolerance after press fit (Reference Value)	
Type	d														
Straight Type	3	3	(4)	5	(6)	5	+0.047	4.6	7	3	-0.025	3-6	+0.012	+0.062	
	4	(3)	4	(5)	6	(8)	+0.017	5.6	9	4	-0.025	7-10	+0.015	+0.065	
	5	(3)	4	5	6	(8)	+0.055	7	10	5	-0.037	11-18	+0.018	+0.068	
	6	(3)	(4)	5	6	8	+0.025	8	12	6	-0.040	19-20	+0.021	+0.071	
	8	(5)	6	8	10	(12)	+0.060	10	15	8	-0.025	21-30	0	+0.081	
	10	6	8	10	12	15	+0.030	12	18	10	-0.040	31-50	+0.025	+0.085	
	12	6	8	10	12	15	+0.030	14	20	12	-0.025	51-80	+0.030	+0.110	
	13	(8)	10	(12)	15	(20)	+0.068	15	21	13	-0.025				
	15	(8)	10	12	15	20	+0.035	17	23	15	-0.043				
	16	10	12	15	20	(25)	+0.070	18	24	16	-0.046				
Flanged	18	10	12	15	20	(25)	+0.098	20	26	18	-0.030				
	20	10	12	15	20	(25)	+0.080	23	31	20	-0.025				
	22	10	12	15	20	(25)	+0.045	25	33	22	-0.025				
	25	10	12	15	20	(25)	+0.085	28	36	25	-0.046				
	30	12	15	20	25	30	+0.050	34	42	30	-0.030				
	35	12	15	20	25	30	+0.055	39	49	35	-0.025				
	40	12	(15)	20	25	30	+0.055	44	54	40	-0.050				
	50	20	(25)	30	(35)	40	+0.105	55	65	50	-0.040				

* Housing diameters and shaft diameters listed here are recommended dimensions. MDZB is a rolled bushing with a slit. Indicated values of D tolerance are reference after press fitted into ring gauge (±0.002).

Part Number		Unit Price		Unit Price	
Type	d	L3	L4	L5	L6
MDZB	3				
	4				
	5				
	6				
	8				
	10				
	12				
	13				
	15				
	16				
MDZF	18				
	20				
	22				