

# Oil Free Bushings

-Bronze, Straight, I.D. F7 O.D. m6 / I.D. E7 O.D. r6 / Bronze, Flanged-

Stock

Reduced Production Time

Features: Minute sliding motion can be achieved. Excels in seizure resistance.

CAD Data Folder Name: 05\_Oil\_Free\_Bushings

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

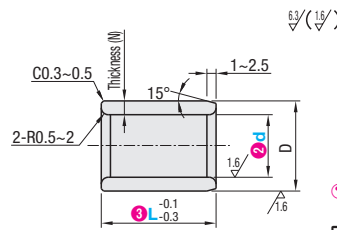
Ordering Example	Part number(①Type-②d)	-	③L
	SHBZ12	-	15
	SHBR16	-	20
	SHFZ16	-	20

## Straight



SHBZ (I.D. F7 O.D. m6)  
SHBR (I.D. E7 O.D. r6)

Rotation Stopper Screw (Reference)



Recommended Mating Shafts f8 or g6  
Material Special Bronze Casting  
Allowable Temperature: -40~150°C

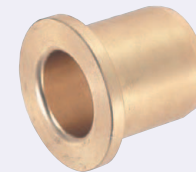
Ensure the bushing remains periodically lubricated.  
Use of Rotation Stopper Screws or Press-fit (SHBR) is recommended to affix bushings.

Part Number	①Type	②d		③L	D	Thickness (N)	* Housing Dia.		* Rotation Stopped Screw (Reference)
		F7	E7				Ref. Dim.	Tolerance (H7)	
SHBZ (I.D. F7 O.D. m6)	5	+0.022	+0.032	8 10 12 15	9	2	9	+0.015	M4x8
	6	+0.010	+0.020	8 10 12 15 20	10	2	10	0	
	8	+0.028	+0.040	8 10 12 15 20 25	12	2	12	+0.018	
	10	+0.013	+0.025	8 10 12 15 20 25	14	2	14	0	
	12			10 12 15 20 25	18	2	18	0	
SHBR (I.D. E7 O.D. r6)	13	+0.034	+0.050	15 20	19	3	19	0	M5x8
	15	+0.016	+0.032	10 12 15 20 25	21	3	21	+0.021	
	16			10 12 15 20 25 30 40	22	3	22	0	
	20	+0.041	+0.061	15 20 25 30 40 50	28	3	28	0	
	25	+0.020	+0.040	20 25 30 40 50	33	4	33	+0.025	
	30			25 30 40 50 60	38	4	38	0	

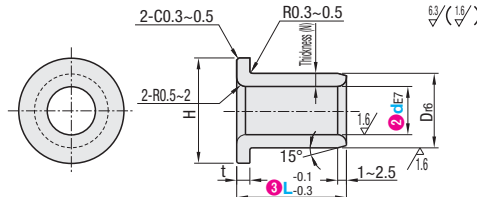
\* Indicated dimensions of Housing Dia. and Rotation Stopper Screws are recommended dimensions. For working on SHBZ, the use of Rotation Stopper Screws is recommended.

Features: Pull-out resistant Flanged.

## Flanged



SHFZ



Recommended Mating Shafts f8 or g6  
Material Special Bronze Casting  
Allowable Temperature: -40~150°C

Ensure the bushing remains well lubricated.  
Use of Rotation Stopper Screws is recommended to affix bushings.

Part Number	①Type	②d <sub>F7</sub>		③L	D <sub>r6</sub>	Thickness (N)	H	0 t-0.1	* Housing Dia.	
		10	12						Ref. Dim.	Tolerance (H7)
SHFZ	5	+0.032		10 12	9	2	14	2	9	+0.015
	6	+0.020		10 12 15	10	2	16	2	10	0
	8	+0.040		10 12 15 20	12	2	20	2	12	+0.018
	10	+0.025		10 12 15 20	14	2	22	2	14	0
	12			10 12 15 20 25 30	18	2	25	2	18	0
	13	+0.050		12 15 20	19	3	26	3	19	0
	15	+0.032		10 12 15 20 25	21	3	28	3	21	+0.021
	16			12 15 20 25 30	22	3	29	3	22	0
	20	+0.061		15 20 25 30 40	30	5	40	5	30	0
	25	+0.040		30 40 50	35	5	45	5	35	+0.025
30			30 40 50	40	5	50	5	40	0	

\* Housing diameters listed here are recommended dimensions.

Features of I.D. E7 O.D. r6 Type  
Less likely to pull-out than I.D. F7 O.D. m6 Type.

Inner Diameter after press-fit is almost equal to I.D. F7 O.D. m6 Type.

Bronze Bushings: I.D. Variations after Press-Fit (Reference)  
Housing Diameter Tolerance: H7

I.D. E7 O.D. r6	I.D. F7 O.D. m6
99.82%	99.94%

Data above are obtained by test, not guaranteed.

Days to Ship	Order Quantity	Standard Service Regular Quantity	Non-Standard Service Large Quantity
	Quantity	1~100	101~
	Days to ship	Standard	To be quoted

Stock

Stock lineup may vary by country.  
Same day shipping available upon request.  
Order by THA: 16:00, SGP: 12:00, MYS: 15:00 P.75

Others

3 Days

# Oil Free Bushings

-Bronze, Standard Flanged / Threaded Housing (Built-in Copper Alloy)-

Stock

Reduced Production Time

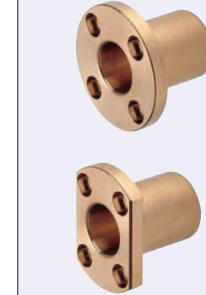
Features: Flange Integrated Oil Free Bushings can reduce the time of assembling.

CAD Data Folder Name: 05\_Oil\_Free\_Bushings

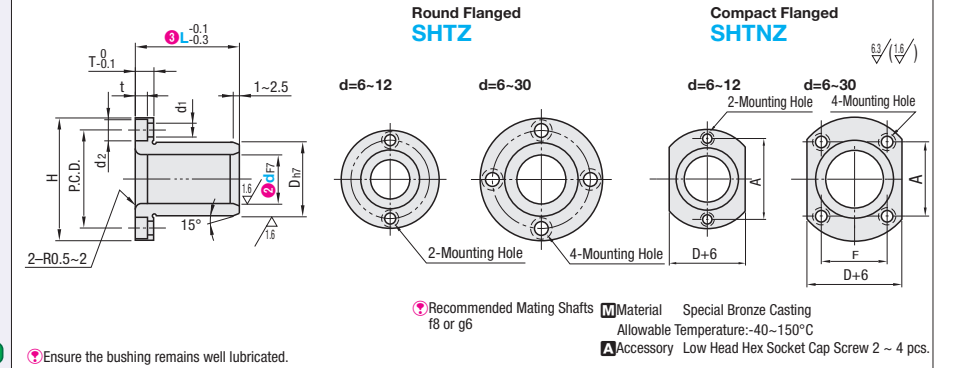
When ordering, select Part Number and Values from Selection Steps ①~③.

Ordering Example	Part number(①Type-②d)	-	③L
	SHTZ16	-	25
	MPNT6		

## Standard Flange



CAD 2D 3D RoHS



Recommended Mating Shafts f8 or g6  
Material Special Bronze Casting  
Allowable Temperature: -40~150°C  
Accessory Low Head Hex Socket Cap Screw 2 ~ 4 pcs.

Part Number	①Type	②d <sub>F7</sub>	③L	D <sub>H7</sub>	H	T	t	d <sub>1</sub>	d <sub>2</sub>	P.C.D.	F	A	Accessory	
													Hex Socket Low Head Cap Screw	
SHTZ SHTNZ	6	+0.022 +0.010	15	10	0	25	4	2.2	3.5	6	17	17	M3-10x2	
	8	+0.028	20 25	12	-0.015	27	18	26	19	19				
	10	+0.013	25 30	14	0	29	18	26	21	21				
	12	+0.034	30 30	18	-0.018	36	18	26	26	26			M4-12x2	
	16	+0.016	25 30 35 40	22	0	40	5	3	4.5	7.5	30	18	24	M4-12x4
	20	+0.041	30 35 40 50	28	-0.021	49	28	30	22	31	43	25	35	M5-16x4
	25	+0.020	30 35 40 50 60	33	0	54	6	3.7	5.5	9	43	25	35	M5-16x4
	30		35 40 50 60 70	38	-0.025	63	8	4.2	6.6	11	50	30	40	M6-20x4

Days to Ship

SHTZ (d=8,16,20) / SHFZ (d=8,12)

Others

Order Quantity	Standard Service Regular Quantity	Non-Standard Service Large Quantity
Quantity	1~50	51~
Days to ship	Standard	To be quoted

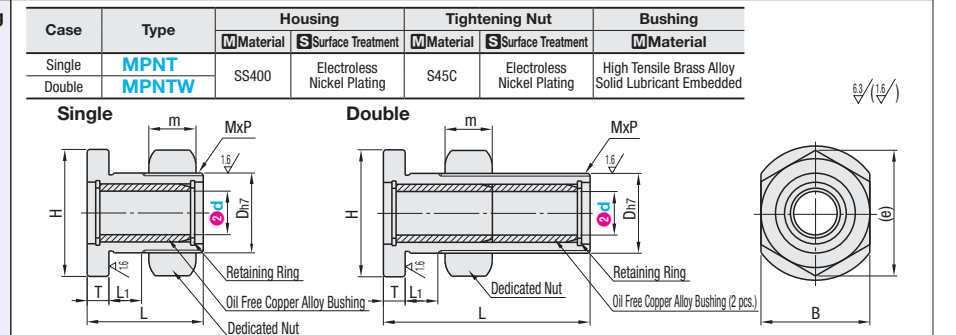
Stock lineup may vary by country. Same day shipping available upon request. Order by THA: 16:00, SGP: 12:00, MYS: 15:00 P.75

Features: Machining and assembly process to the assembling plate can be reduced by changing from the conventional tapped hole x4 to H7 hole x1. Removing counterbored holes for screw mounting from the flange has made the flange diameter up to 17mm smaller, resulting in space savings.

## Male Thread Housing Oil Free Bushing



CAD 2D 3D RoHS



The nut was specifically developed for this product with compact opposite sides and angles, the same thickness as JIS Type 3. Recommended Mating Shafts: f8 or g6

Part Number	①Type	②d	D	L		L <sub>1</sub>	T	H	B	M	m	(e)	<Dimensions of Special Nuts>				
				Single	Double								M	m			
Single MPNT	6	14	22	37	5	5	20	17	14x1.5	8	19.6	14	8	17	19.6	22	25.4
	8	18	27	47	5	5	25	21	18x1.5	11	24.3	18	11	21	24.3	27	31.2
	10	20	32	57	5	6	30	24	20x1.5	12	27.7	20	12	24	27.7	30	34.6
	12	22	32	57	10	6	32	27	22x1.5	13	31.2	22	13	27	31.2	32	37.0
	13	24	32	57	10	6	35	30	24x1.5	14	34.6	24	14	30	34.6	36	41.6
	16	27	37	67	10	6	40	32	27x1.5	16	37.0	27	16	32	37.0	41	47.3
	20	33	42	77	10	8	45	38	33x1.5	20	43.9	33	20	38	43.9	50	57.7
	25	40	58	108	10	8	55	46	40x1.5	25	53.1	40	25	46	53.1	-	-
	30	48	68	128	10	10	65	55	48x1.5	29	63.5	48	29	55	63.5	75	86.5

Days to Ship

3 Days

Order Quantity	Standard Service Regular Quantity	Non-Standard Service Large Quantity
Quantity	1~30	31~
Days to ship	Standard	To be quoted