

THERMALLOY D type

(solid lubricant dispersal bearing)



We offer bronze alloys as a standard material for THERMALLOY D type and also standard parts such as finished bushings. Lead-bronze products are only made to order and do not comply with RoHS or ELV restrictions.

Physical Properties

Material Symbol	Contents (Metal)	Carbon Amount	Density	Hardness	Compressive Strength	Max. Operating Temperature	Coefficient of Linear Thermal Expansion
B1/6	Cu-Sn	6wt%	7.0g/cm ³	Hv65	324MPa	200°C	18×10 ⁻⁶ /°C
B1/8	Cu-Sn	8	6.6	60	245		

Bearing Characteristics

Alloy	Bronze	
Material Symbol	B1/6	B1/8
Bearing Pressure MPa	10~30	1~10
Allowable Sliding Speed m/min	4.2 m/min for 10 MPa 1.0 m/min for 30 MPa	72.0 m/min for 1 MPa 9.0 m/min for 10 MPa
Wear Amount per Friction Distance of 1 km	9μm (2MPa·3.0m/min)	6μm (2MPa·3.0m/min)
Hardness of Mating Surface	Above HB200	

- The above mentioned bearing pressure is the value given at normal clearance. If the bearing is used with extremely large clearance, apply a lower bearing pressure.
- The relationship between the bearing pressure and allowable sliding speed is decided through a balance of heat generation and heat radiation in the bearing.
- The amount of wear is affected by bearing pressure, sliding speed and the roughness of the shaft.



Material Dimension Table

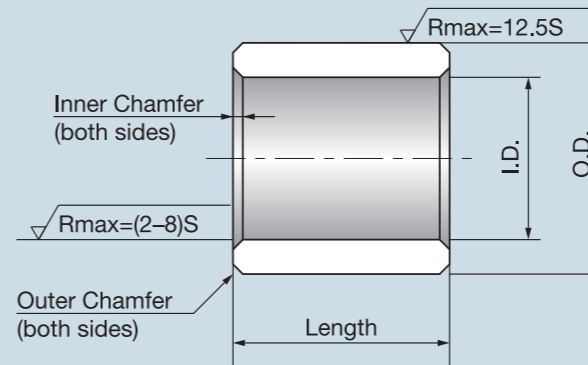
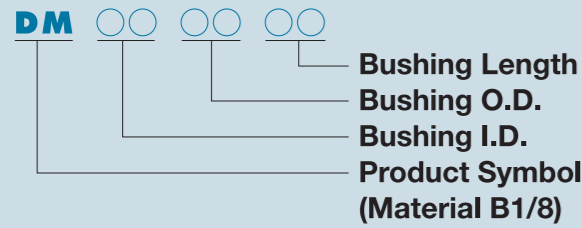
(Unit: mm)

Dimension Part Number	O.D.	I.D.	Length ⁺⁴ ₀	Material Code
BR12-20DM	12.50	—	20	B1/6 · B1/8
BR20-40DM	20.45	—	40	B1/6 · B1/8
BR30-50DM	30.55	—	50	B1/6 · B1/8
BR45-50DM	45.75	—	50	B1/8 Only
BR45-60DM	45.75	—	60	B1/6 Only
TU20-8-30DM	20.45	7.00	30	B1/6 · B1/8
TU25-15-30DM	25.55	14.10	30	B1/6 · B1/8
TU30-15-50DM	30.55	14.10	50	B1/6 · B1/8
TU30-20-40DM	30.55	19.00	40	B1/6 · B1/8
TU35-25-40DM	35.60	24.00	40	B1/6 · B1/8
TU40-20-50DM	40.60	19.00	50	B1/8 Only
TU40-20-60DM	40.60	19.00	60	B1/6 Only
TU40-30-40DM	40.60	29.00	40	B1/6 · B1/8
TU45-25-50DM	45.75	24.00	50	B1/8 Only
TU45-25-60DM	45.75	24.00	60	B1/6 Only
TU45-35-40DM	45.75	34.05	40	B1/6 · B1/8
TU50-30-50DM	50.60	29.00	50	B1/8 Only
TU50-30-60DM	50.60	29.00	60	B1/6 Only
TU50-40-40DM	50.60	39.25	40	B1/6 · B1/8
TU55-45-50DM	55.60	44.05	50	B1/6 · B1/8
TU60-40-50DM	60.95	39.25	50	B1/8 Only
TU60-40-60DM	60.95	39.25	60	B1/6 Only
TU60-50-50DM	60.95	49.05	50	B1/6 · B1/8
TU65-55-50DM	65.65	54.05	50	B1/6 · B1/8
TU70-55-50DM	70.65	54.05	50	B1/8 Only
TU70-55-60DM	70.65	54.05	60	B1/6 Only
TU75-60-50DM	75.65	59.05	50	B1/6 · B1/8

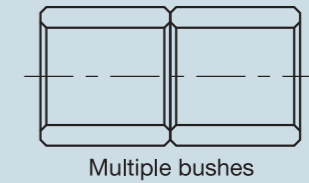
Note: When ordering, please specify the material code and dimension number (example: "B1/6 TU40-30-40DM").

DM D type DM Series (Bushing Inner Diameter: 10 to 100 mm)

Designation of Part Number



- ① If products with a shorter length are required, adjust the dimension of the length to suit.
- ② If products with a longer length are required use multiple pieces as shown in the figure below.



(Bushing Inner Diameter: 10 to 100 mm)

DM 101610

Please specify by part number.

(Unit: mm)

Bushing I.D.	Recommended Dimension Mating Part		Bushing Dimensions											Chamfer on O.D.	Chamfer on I.D.	Bushing I.D.				
	Housing I.D.	Shaft Dia.	O.D.	Wall Thickness	Part Number & Bushing Length Tolerance $_{-0.3}^0$															
					10	15	16	20		25	30	35	40	50						
10	φ16H7 ^{+0.018} ₀	φ10h7 ⁰ _{-0.015}	φ10C7 ^{+0.095} _{+0.080}	φ16r6 ^{+0.034} _{+0.023}	101610	101615		101620										C0.3	C0.3	10
12	φ18H7 ^{+0.018} ₀	φ12h7 ⁰ _{-0.018}	φ12C7 ^{+0.113} _{+0.095}	φ18r6 ^{+0.034} _{+0.023}	121810	121815	121816	121820		121825	121830							C0.3	C0.3	12
13	φ19H7 ^{+0.021} ₀	φ13h7 ⁰ _{-0.018}	φ13C7 ^{+0.113} _{+0.095}	φ19r6 ^{+0.041} _{+0.028}		131915		131920										C0.3	C0.3	13
14	φ20H7 ^{+0.021} ₀	φ14h7 ⁰ _{-0.018}	φ14C7 ^{+0.113} _{+0.095}	φ20r6 ^{+0.041} _{+0.028}		142015		142020										C0.3	C0.3	14
15	φ21H7 ^{+0.021} ₀	φ15h7 ⁰ _{-0.018}	φ15C7 ^{+0.113} _{+0.095}	φ21r6 ^{+0.041} _{+0.028}		152115		152120		152125								C0.3	C0.3	15
16	φ22H7 ^{+0.021} ₀	φ16h7 ⁰ _{-0.018}	φ16C7 ^{+0.113} _{+0.095}	φ22r6 ^{+0.041} _{+0.028}		162215	162216	162220		162225	162230	162235						C0.3	C0.3	16
18	φ24H7 ^{+0.021} ₀	φ18h7 ⁰ _{-0.018}	φ18C7 ^{+0.113} _{+0.095}	φ24r6 ^{+0.041} _{+0.028}		182415		182420		182425	182430							C0.5	C0.5	18
20	φ28H7 ^{+0.021} ₀	φ20h7 ⁰ _{-0.021}	φ20C7 ^{+0.131} _{+0.110}	φ28r6 ^{+0.041} _{+0.028}		202815	202816	202820		202825	202830	202835	202840					C0.5	C0.5	20
20	φ30H7 ^{+0.021} ₀	φ20h7 ⁰ _{-0.021}	φ20C7 ^{+0.131} _{+0.110}	φ30r6 ^{+0.041} _{+0.028}				203020		203025	203030	203035	203040					C0.5	C0.5	20
22	φ30H7 ^{+0.021} ₀	φ22h7 ⁰ _{-0.021}	φ22C7 ^{+0.131} _{+0.110}	φ30r6 ^{+0.041} _{+0.028}				223020		223025	223030							C0.5	C0.5	22
25	φ33H7 ^{+0.025} ₀	φ25h7 ⁰ _{-0.021}	φ25C7 ^{+0.131} _{+0.110}	φ33r6 ^{+0.050} _{+0.034}			253316	253320		253325	253330	253335	253340					C0.5	C0.5	25
25	φ35H7 ^{+0.025} ₀	φ25h7 ⁰ _{-0.021}	φ25C7 ^{+0.131} _{+0.110}	φ35r6 ^{+0.050} _{+0.034}				253520		253525	253530	253535	253540					C0.5	C0.5	25
28	φ38H7 ^{+0.025} ₀	φ28h7 ⁰ _{-0.021}	φ28C7 ^{+0.131} _{+0.110}	φ38r6 ^{+0.050} _{+0.034}				283820			283830							C0.5	C0.5	28
30	φ38H7 ^{+0.025} ₀	φ30h7 ⁰ _{-0.021}	φ30C7 ^{+0.131} _{+0.110}	φ38r6 ^{+0.050} _{+0.034}				303820		303825	303830	303835	303840	303850				C0.5	C0.5	30
30	φ40H7 ^{+0.025} ₀	φ30h7 ⁰ _{-0.021}	φ30C7 ^{+0.131} _{+0.110}	φ40r6 ^{+0.050} _{+0.034}				304020		304025	304030	304035	304040	304050				C0.5	C0.5	30
					15	16	20	25		30	35	40	50	60						
31.5	φ40H7 ^{+0.025} ₀	φ31.5h7 ⁰ _{-0.025}	φ31.5C7 ^{+0.095} _{+0.080}	φ40r6 ^{+0.050} _{+0.034}						314030		314040						C0.5	C0.5	31.5
32	φ42H7 ^{+0.025} ₀	φ32h7 ⁰ _{-0.025}	φ32C7 ^{+0.113} _{+0.095}	φ42r6 ^{+0.050} _{+0.034}				324225		324230		324240						C0.5	C0.5	32
35	φ44H7 ^{+0.025} ₀	φ35h7 ⁰ _{-0.025}	φ35C7 ^{+0.113} _{+0.095}	φ44r6 ^{+0.050} _{+0.034}						354430	354435	354440	354450					C0.5	C0.5	35
35	φ45H7 ^{+0.025} ₀	φ35h7 ⁰ _{-0.025}	φ35C7 ^{+0.113} _{+0.095}	φ45r6 ^{+0.050} _{+0.034}						354530	354535	354540	354550					C0.5	C0.5	35
40	φ50H7 ^{+0.025} ₀	φ40h7 ⁰ _{-0.025}	φ40C7 ^{+0.113} _{+0.095}	φ50r6 ^{+0.050} _{+0.034}			405020	405025		405030	405035	405040	405050					C0.5	C0.5	40
45	φ55H7 ^{+0.030} ₀	φ45h7 ⁰ _{-0.025}	φ45C7 ^{+0.113} _{+0.095}	φ55r6 ^{+0.060} _{+0.041}								455540	455550					C0.5	C0.5	45
50	φ60H7 ^{+0.030} ₀	φ50h7 ⁰ _{-0.025}	φ50C7 ^{+0.113} _{+0.095}	φ60r6 ^{+0.060} _{+0.041}								506040	506050	506060				C0.5	C0.5	50
55	φ65H7 ^{+0.030} ₀	φ55h7 ⁰ _{-0.030}	φ55C7 ^{+0.131} _{+0.110}	φ65r6 ^{+0.060} _{+0.041}								556540		556560				C0.5	C0.5	55
60	φ75H7 ^{+0.030} ₀	φ60h7 ⁰ _{-0.030}	φ60C7 ^{+0.131} _{+0.110}	φ75r6 ^{+0.062} _{+0.043}								607540		607560				C0.5	C0.5	60
65	φ80H7 ^{+0.030} ₀	φ65h7 ⁰ _{-0.030}	φ65C7 ^{+0.131} _{+0.110}	φ80r6 ^{+0.062} _{+0.043}								658040		658060				C1.0	C1.0	65
70	φ85H7 ^{+0.035} ₀	φ70h7 ⁰ _{-0.030}	φ70C7 ^{+0.131} _{+0.110}	φ85r6 ^{+0.073} _{+0.051}								708540		708560				C1.0	C1.0	70
75	φ90H7 ^{+0.035} ₀	φ75h7 ⁰ _{-0.030}	φ75C7 ^{+0.131} _{+0.110}	φ90r6 ^{+0.073} _{+0.051}								759040		759060				C1.0	C1.0	75
80	φ100H7 ^{+0.035} ₀	φ80h7 ⁰ _{-0.030}	φ80C7 ^{+0.131} _{+0.110}	φ100r6 ^{+0.073} _{+0.051}								8010040		8010060				C1.0	C1.0	80
85	φ105H7 ^{+0.035} ₀	φ85h7 ⁰ _{-0.035}	φ85C7 ^{+0.131} _{+0.110}	φ105r6 ^{+0.076} _{+0.054}								8510540		8510560				C1.0	C1.0	85
90	φ110H7 ^{+0.035} ₀	φ90h7 ⁰ _{-0.035}	φ90C7 ^{+0.131} _{+0.110}	φ110r6 ^{+0.076} _{+0.054}								9011040		9011060				C1.0	C1.0	90
100	φ120H7 ^{+0.035} ₀	φ100h7 ⁰ _{-0.035}	φ100C7 ^{+0.131} _{+0.110}	φ120r6 ^{+0.076} _{+0.054}								10012040		10012060				C1.0	C1.0	100

GB-C D type C Series (Bushing Inner Diameter: 6 to 50 mm)

Designation of Part Number

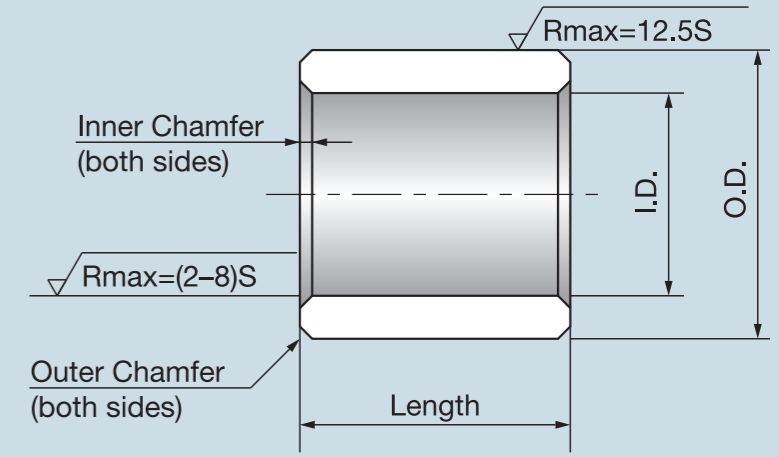
GB-C 00 00

Bushing Length
Bushing I.D.
Product Symbol
(Material B1/8)



GB-C 0606

Please specify by part number.



(Unit: mm)

Bushing I.D.	Recommended Dimension Mating Part		Bushing Dimensions																		Chamfer on O.D.	Chamfer on I.D.	Bushing I.D.	
	Housing I.D.	Shaft Dia.	O.D.	Wall Thickness	Part Number & Bushing Length Tolerance ${}^0_{-0.3}$																			
					6	8	10	12	16	20	25	30	35	40	45	50	55	60						
6	$\phi 10H7^{+0.015}_0$	$\phi 6g6^{-0.004}_{-0.012}$	$\phi 6^{+0.028}_{+0.013}$	$\phi 10^{+0.021}_{+0.006}$	0606	0608	0610														C0.3	C0.3	6	
8	$\phi 14H7^{+0.018}_0$	$\phi 8g6^{-0.005}_{-0.014}$	$\phi 8^{+0.028}_{+0.013}$	$\phi 14^{+0.021}_{+0.006}$		0808	0810	0812	0816													C0.3	C0.3	8
10	$\phi 16H7^{+0.018}_0$	$\phi 10g6^{-0.005}_{-0.014}$	$\phi 10^{+0.034}_{+0.016}$	$\phi 16^{+0.021}_{+0.006}$			1010	1012	1016	1020												C0.3	C0.3	10
12	$\phi 18H7^{+0.018}_0$	$\phi 12g6^{-0.006}_{-0.017}$	$\phi 12^{+0.034}_{+0.016}$	$\phi 18^{+0.021}_{+0.006}$			1210	1212	1216	1220												C0.3	C0.3	12
16	$\phi 22H7^{+0.021}_0$	$\phi 16g6^{-0.006}_{-0.017}$	$\phi 16^{+0.034}_{+0.016}$	$\phi 22^{+0.021}_{+0.006}$					1616	1620		1625										C0.3	C0.3	16
20	$\phi 30H7^{+0.021}_0$	$\phi 20g6^{-0.007}_{-0.020}$	$\phi 20^{+0.041}_{+0.020}$	$\phi 30^{+0.021}_{+0.006}$					2016	2020		2025	2030									C0.5	C0.5	20
25	$\phi 35H7^{+0.025}_0$	$\phi 25g6^{-0.007}_{-0.020}$	$\phi 25^{+0.041}_{+0.020}$	$\phi 35^{+0.025}_{+0.009}$						2520		2525	2530									C0.5	C0.5	25
30	$\phi 40H7^{+0.025}_0$	$\phi 30g6^{-0.007}_{-0.020}$	$\phi 30^{+0.041}_{+0.020}$	$\phi 40^{+0.025}_{+0.009}$						3020		3025	3030	3035	3040							C0.5	C0.5	30
35	$\phi 45H7^{+0.025}_0$	$\phi 35g6^{-0.009}_{-0.025}$	$\phi 35^{+0.050}_{+0.025}$	$\phi 45^{+0.025}_{+0.009}$									3530	3535	3540	3545	3550					C0.5	C0.5	35
40	$\phi 50H7^{+0.025}_0$	$\phi 40g6^{-0.009}_{-0.025}$	$\phi 40^{+0.050}_{+0.025}$	$\phi 50^{+0.025}_{+0.009}$										4030	4035	4040	4045	4050				C0.5	C0.5	40
45	$\phi 55H7^{+0.030}_0$	$\phi 45g6^{-0.009}_{-0.025}$	$\phi 45^{+0.050}_{+0.025}$	$\phi 55^{+0.033}_{+0.011}$												4540	4545	4550				C0.5	C0.5	45
50	$\phi 62H7^{+0.030}_0$	$\phi 50g6^{-0.009}_{-0.025}$	$\phi 50^{+0.050}_{+0.025}$	$\phi 62^{+0.033}_{+0.011}$												5040	5045	5050	5055	5060		C0.5	C0.5	50