

PRECISION
HIGH PERFORMANCE



DALON BUSHING CATALOGUE

SINCE 2002

A collection of various sliding bearing components, including cylindrical bushings of different sizes and materials (some polished metal, some with blue or red internal coatings, and some brass), and several flat, ring-shaped washers or plates. Some components have the DALON logo engraved on them. They are arranged on a white reflective surface.

**DALON ALWAYS FOCUS
QUALITY AS YOU ARE!**

WWW.DALONMACHINERY.COM
info@dalonmachinery.com

COMPANY PROFILE

DALON Machinery Co., Ltd. (DALON) is a manufacturer and exporter of all kinds of powder transmission products for sliding bushing & parts since year 2002. Headquartered in Hangzhou, China, In Year 2004 invested two production lines for powder metallurgy products offer oil impregnated bushing products and sintered filter silencer application. All above products can be supplied according to client's special requirements. Relying on our experienced developing and R&D teams, DALON can supply good solutions with stable quality and reasonable prices. Most importantly, we always supply fast and good services in responding and delivery. We hope to have long-term cooperation relationships with our clients. If you are interested in any of our products, please do not hesitate to send enquiry to Dalon. We ensure that you can be totally satisfied with our best solutions!

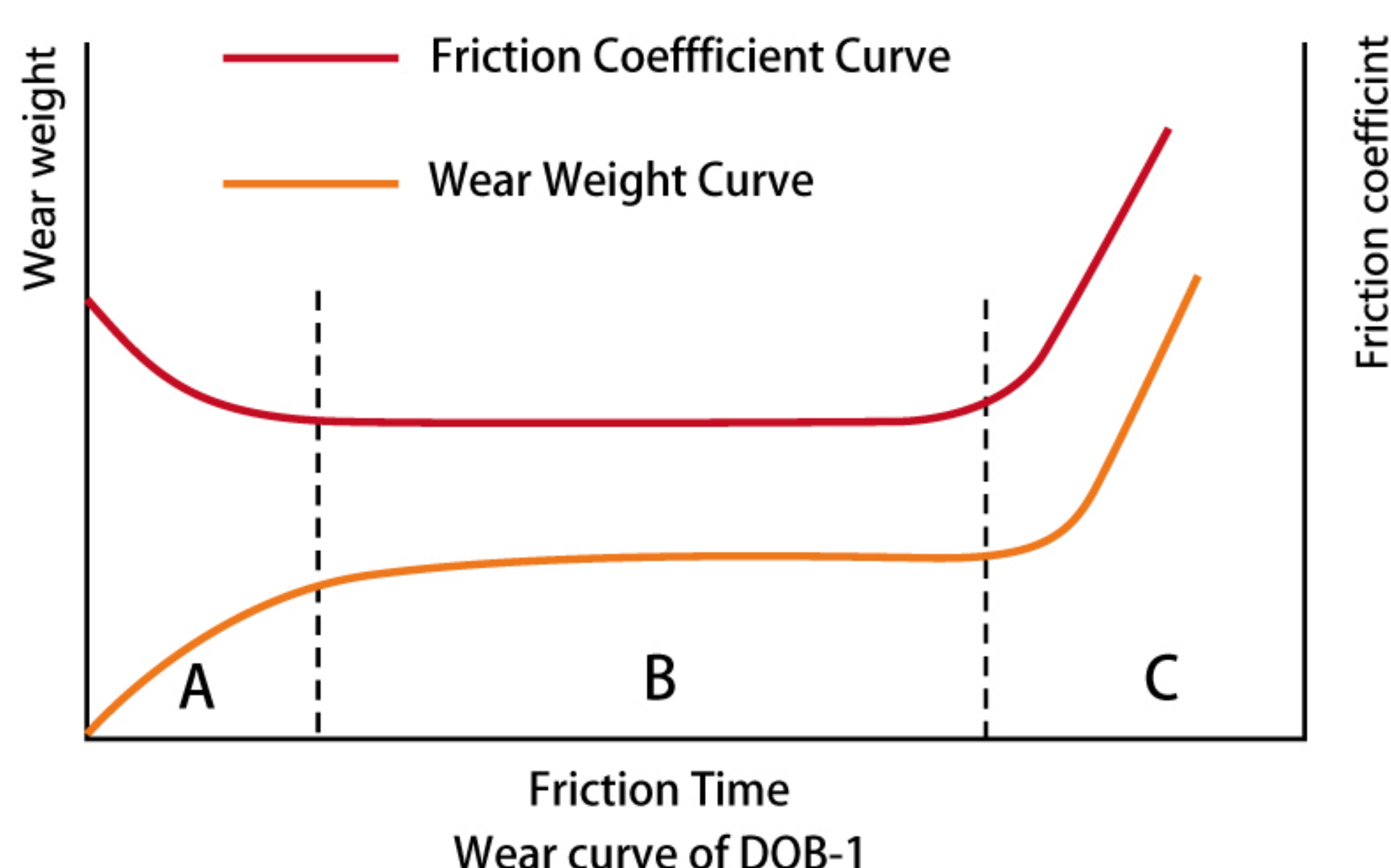
Our products include full series of oilless sliding bearing, self lubricating plate, washers etc., Among which sliding bushing products have passed testing by SGS/ RoHS / MSDS under our Quality Management ISO 9001 :2005. Based on main local market, DALON also have rich experience on foreign markets since 2002 ,which have supplied in markets of North America, EU region and S.E. Asia with our long term cooperation partners & enjoying a good reputation.

DOB-1 SELF LUBRICATING MULTILAYER COMPOSITE BUSHING



Anti-abrasion Performance

DOB-1 Series have excellent anti-abrasion performance, mainly due to the particular molecule structure of PTFE. The abrasion process can be generally divided into three phases, so there are three kinds of friction coefficient. See the graph as below.



1. "Running-in" phrase: PTFE compound on the bushing is transferred to its mating surface and forms a lubricating film. At this phase, the friction coefficient is bigger, thus the abrasion pace is very quick. See the curve showed in area A of the graph.

2. "Stabilization" abrasion phrase: After the "Running-in" phase, the friction happens between PTFE and PTFE, thus the friction coefficient is smaller and keeps steady. As a result, the wear rate is low and steady. See the curve showed in area B of the graph.

3. "Sharp" abrasion phrase: As PTFE in the porous layer is slowly consumed up, not enough lubricant can be supplied to the gliding media. Friction coefficient and wear rate will rapidly rise. When 70% of the bronze surface is exposed, service life of DOB-1 closes to its end. See the curve showed in area C of the graph.

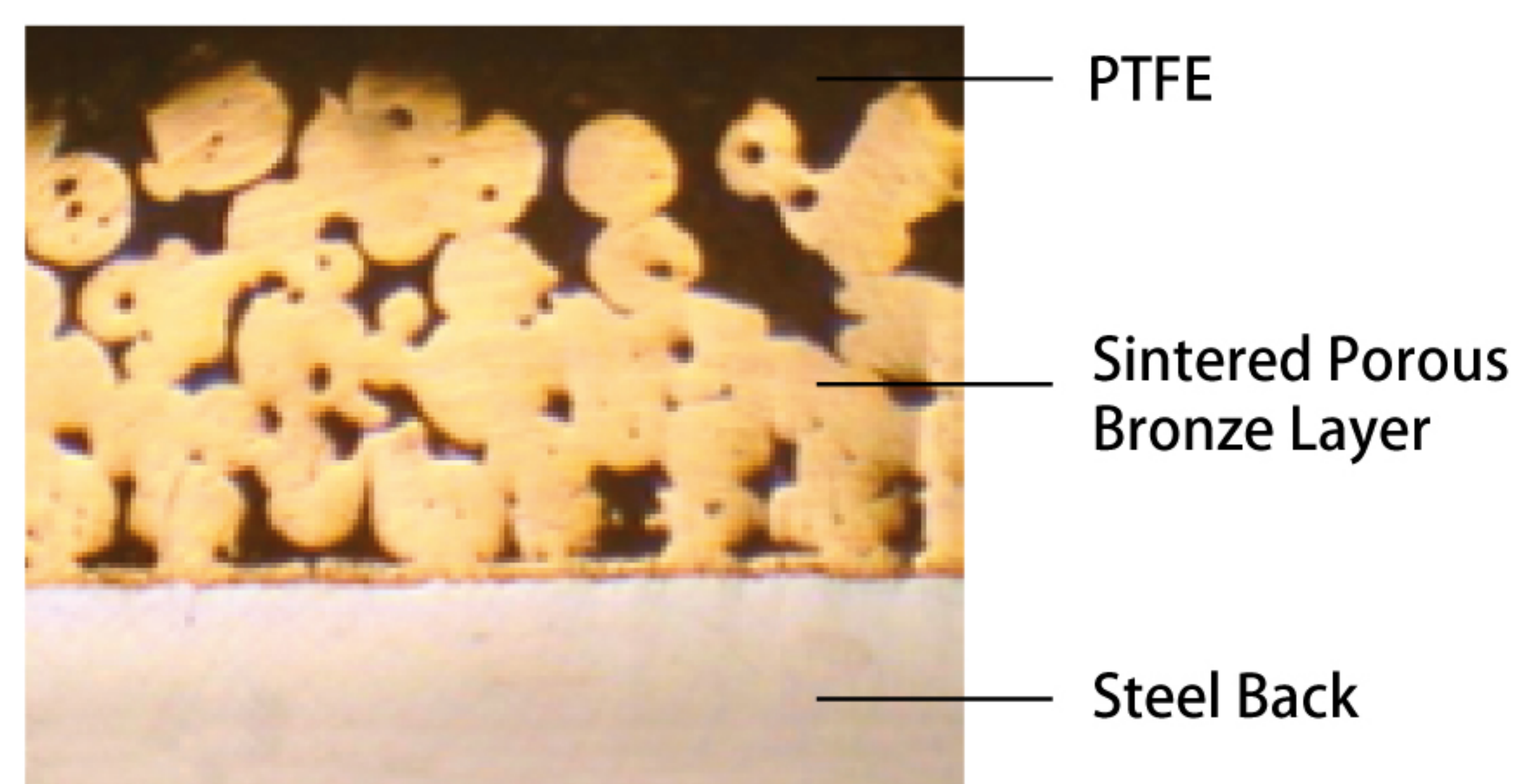
Besides the standard products displayed in the list of catalogue, DALON can also supply custom products or design according to customer requirements.

Structure Characteristics and Applications

DOB-1 is backed with copper-plated steel with porous bronze sintered on the steel and polymers (PTFE) embedded into the bores of the bronze. By combining the metals and the polymers together, its products are endowed with the lower friction coefficient and good capacity of anti-abrasion and self-lubrication. Moreover, the steel back is plated with an erosion-prevention layer. Products of DOB-1 series are widely applied in printing, textile and tobacco machinery, gym equipments, etc.

Physical and Mechanical Performance

Performance Index		Data
Max Load P	Static Load	250N/mm ²
	Dynamic Load	140N/mm ²
	Oscillation Load	60N/mm ²
Linear Velocity V	Dry Lubrication	2.5m/s
	Oil Lubrication	>5m/s
Max PV value	Grease Lubrication	1.8N/mm ² .m/s
	Oil Lubrication	3.6N/mm ² .m/s
Friction Coefficient μ	Dry Lubrication	0.08~0.20
	Oil Lubrication	0.02~0.07
Mating Axis	Hardness	>200 HB
	Roughness	Ra=0.4~1.25
Working Temperature		-200~+280°C
Heat-conducting Coefficient		40W/(m.k)
Heat-expansion Coefficient(Axial)		11×10 ⁻⁶ /K



Metallography

Main factors that influence the service life of Bushing

1) PV Value

PV value is an effective criterion to calculate the service life of bushing. If required to enlonger the service life, the PV value must be reduced.

2) Quality of the Mating Surface

Service life of DOB-1 can be obviously prolonged if its mating axis is made by alloy steel or hard chrome plated and with surface roughness Ra=0.4~0.63

3) Environment Temperature

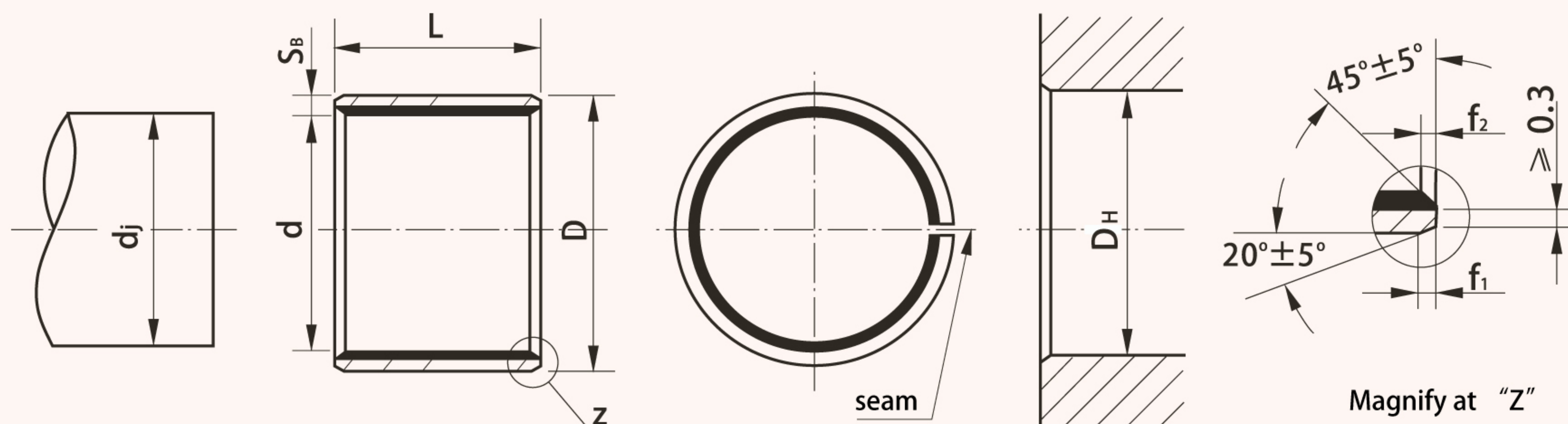
The higher working temperature is the factor of short life.

DOB-1 SELF LUBRICATING MULTILAYER COMPOSITE BUSHING

Standard metal back of DOB-1 bushing are high quality of low carbon steel, which also can be change to stainless steel, bronze depending on different working conditions and environment. With inside of NON-Lead PTFE polymers layer. Like our different types of DOB-1X , DOB-1B, DOB-1S, DOB-1D Series. The application fields & material structure , technical parameter are listed below.

Types		DOB-1X	DOB-1B	DOB-1S	DOB-1D	DOB-1P
Data	Material	Steel+Bronze+(PTFE+Filler)	Bronze+Bronze+(PTFE+Filler)	Stainless steel+Bronze+(PTFE+Filler)	Steel+Bronze+(PTFE+Filler)	Steel+Bronze+(PTFE+Filler)
Please contact DALON for more types						
Load capacity P (Dry friction)	Static load N/mm ²	250	250	250	250	250
	Dynamic load N/mm ²	140	140	140	140	140
	Oscillation Load N/mm ²	60	60	60	60	60
Max line speed V	Dry friction m/s	2.5	2.5	2.5	2.5	2.5
	Oil lubrication m/s	> 5	> 5	> 5	> 10	> 5
PV value limit	Dry friction N/mm ² ·m/s	1.8	1.8	1.8	1.8	1.8
	Oil lubrication N/mm ² ·m/s	3.6	3.6	3.6	3.6	3.6
Friction coef u	Dry friction	0.08~0.20	0.08~0.20	0.08~0.20	0.08~0.25	0.08~0.20
	Oil lubrication	0.02~0.12	0.02~0.12	0.02~0.12	0.02~0.08	0.02~0.08
Mating Axis	Hardness	> 220	> 220	> 220	> 220	> 220
	Roughness	0.4~1.25	0.4~1.25	0.4~1.25	0.4~1.25	0.4~1.25
Working temperature℃		-200~+280	-200~+280	-200~+280	-200~+280	-200~+280
Thermal conductivity W/mk		40	60	40	40	40
Coefficient of linear expansion		11×10 ⁻⁶ /K	18×10 ⁻⁶ /K	11×10 ⁻⁶ /K	11×10 ⁻⁶ /K	11×10 ⁻⁶ /K
Outside surface Plating		copper/tin	No	No	copper/tin	copper/tin
Typical application		Application: the printing, woven, tobacco and gymnastic machinery, etc.	Application: metallurgical industry, continuous casting and rolling mill, concrete machinery and spiral conveyers	Application: the corrosion resistant part in dyeing machinery and ocean industry, etc.	Application: medium, and high-pressure gear pump, ram pump, vane pumps, etc.	Application: shock absorber of automobiles, motorcycles and pneumatic cylinder. etc.

DOB-1 Series Bushing – Metric Size



Designation	Shaft Dia Ø d _j	Housing Ø D _H	Installed Bushing I.D Ød	High L	O.D. ØD	Wall Thickness S _B
DOB-1 □ 0203	2 h6 $\begin{smallmatrix} 0 \\ -0.006 \end{smallmatrix}$	3.5 H6 $\begin{smallmatrix} +0.008 \\ 0 \end{smallmatrix}$	2 $\begin{smallmatrix} +0.058 \\ +0.010 \end{smallmatrix}$	3 ± 0.25	3.5 $\begin{smallmatrix} +0.055 \\ +0.025 \end{smallmatrix}$	0.75 $\begin{smallmatrix} -0.005 \\ -0.025 \end{smallmatrix}$
DOB-1 □ 0205				5 ± 0.25		
DOB-1 □ 0303	3 h6 $\begin{smallmatrix} 0 \\ -0.006 \end{smallmatrix}$	4.5 H6 $\begin{smallmatrix} +0.008 \\ 0 \end{smallmatrix}$	3 $\begin{smallmatrix} +0.048 \\ 0 \end{smallmatrix}$	3 ± 0.25	4.5 $\begin{smallmatrix} +0.055 \\ +0.025 \end{smallmatrix}$	0.75 $\begin{smallmatrix} 0 \\ -0.02 \end{smallmatrix}$
DOB-1 □ 0305				5 ± 0.25		
DOB-1 □ 0306				6 ± 0.25		
DOB-1 □ 0403	4 h6 $\begin{smallmatrix} 0 \\ -0.008 \end{smallmatrix}$	5.5 H6 $\begin{smallmatrix} +0.008 \\ 0 \end{smallmatrix}$	4 $\begin{smallmatrix} +0.048 \\ 0 \end{smallmatrix}$	3 ± 0.25	5.5 $\begin{smallmatrix} +0.055 \\ +0.025 \end{smallmatrix}$	0.75 $\begin{smallmatrix} 0 \\ -0.02 \end{smallmatrix}$
DOB-1 □ 0404				4 ± 0.25		
DOB-1 □ 0406				6 ± 0.25		
DOB-1 □ 0410				10 ± 0.25		
DOB-1 □ 0505	5 f7 $\begin{smallmatrix} -0.010 \\ -0.022 \end{smallmatrix}$	7 H7 $\begin{smallmatrix} +0.015 \\ 0 \end{smallmatrix}$	5 $\begin{smallmatrix} +0.055 \\ -0.010 \end{smallmatrix}$	5 ± 0.25	7 $\begin{smallmatrix} +0.055 \\ +0.025 \end{smallmatrix}$	1 $\begin{smallmatrix} +0.005 \\ -0.020 \end{smallmatrix}$
DOB-1 □ 0508				8 ± 0.25		
DOB-1 □ 0510				10 ± 0.25		
DOB-1 □ 0604	6 f7 $\begin{smallmatrix} -0.010 \\ -0.022 \end{smallmatrix}$	8 H7 $\begin{smallmatrix} +0.015 \\ 0 \end{smallmatrix}$	6 $\begin{smallmatrix} +0.055 \\ -0.010 \end{smallmatrix}$	4 ± 0.25	8 $\begin{smallmatrix} +0.055 \\ +0.025 \end{smallmatrix}$	1 $\begin{smallmatrix} +0.005 \\ -0.020 \end{smallmatrix}$
DOB-1 □ 0606				6 ± 0.25		
DOB-1 □ 0608				8 ± 0.25		
DOB-1 □ 0610				10 ± 0.25		
DOB-1 □ 0710	7 f7 $\begin{smallmatrix} -0.013 \\ -0.028 \end{smallmatrix}$	9 H7 $\begin{smallmatrix} +0.015 \\ 0 \end{smallmatrix}$	7 $\begin{smallmatrix} +0.055 \\ -0.010 \end{smallmatrix}$	10 ± 0.25	9 $\begin{smallmatrix} +0.055 \\ +0.025 \end{smallmatrix}$	1 $\begin{smallmatrix} +0.005 \\ -0.020 \end{smallmatrix}$
DOB-1 □ 0806	8 f7 $\begin{smallmatrix} -0.013 \\ -0.028 \end{smallmatrix}$	10 H7 $\begin{smallmatrix} +0.015 \\ 0 \end{smallmatrix}$	8 $\begin{smallmatrix} +0.055 \\ -0.010 \end{smallmatrix}$	6 ± 0.25	10 $\begin{smallmatrix} +0.055 \\ +0.025 \end{smallmatrix}$	1 $\begin{smallmatrix} +0.005 \\ -0.020 \end{smallmatrix}$
DOB-1 □ 0808				8 ± 0.25		
DOB-1 □ 0810				10 ± 0.25		
DOB-1 □ 0812				12 ± 0.25		
DOB-1 □ 1008	10 f7 $\begin{smallmatrix} -0.013 \\ -0.028 \end{smallmatrix}$	12 H7 $\begin{smallmatrix} +0.018 \\ 0 \end{smallmatrix}$	10 $\begin{smallmatrix} +0.058 \\ -0.010 \end{smallmatrix}$	8 ± 0.25	12 $\begin{smallmatrix} +0.065 \\ +0.030 \end{smallmatrix}$	1 $\begin{smallmatrix} +0.005 \\ -0.020 \end{smallmatrix}$
DOB-1 □ 1010				10 ± 0.25		
DOB-1 □ 1012				12 ± 0.25		
DOB-1 □ 1015				15 ± 0.25		
DOB-1 □ 1020				20 ± 0.25		
DOB-1 □ 1208	12 f7 $\begin{smallmatrix} -0.016 \\ -0.034 \end{smallmatrix}$	14 H7 $\begin{smallmatrix} +0.018 \\ 0 \end{smallmatrix}$	12 $\begin{smallmatrix} +0.058 \\ -0.010 \end{smallmatrix}$	8 ± 0.25	14 $\begin{smallmatrix} +0.065 \\ +0.030 \end{smallmatrix}$	1 $\begin{smallmatrix} +0.005 \\ -0.020 \end{smallmatrix}$
DOB-1 □ 1210				10 ± 0.25		

DOB-1 Series Bushing – Metric Size

Designation	Shaft Dia Ø dj	Housing Ø DH	Installed Bushing I.D Ød	High L	O.D. ØD	Wall Thickness S _B
DOB-1 □ 1212	12 f7 ^{-0.016} _{-0.034}	14 H7 ^{+0.008} ₀	12 ^{+0.058} _{+0.010}	12±0.25	14 ^{+0.065} _{+0.030}	1 ^{+0.005} _{- 0.020}
DOB-1 □ 1215				15±0.25		
DOB-1 □ 1220				20±0.25		
DOB-1 □ 1225				25±0.25		
DOB-1 □ 1310	13 f7 ^{-0.016} _{-0.034}	15 H7 ^{+0.018} ₀	13 ^{+0.058} _{+0.010}	10±0.25	15 ^{+0.065} _{+0.030}	
DOB-1 □ 1320				20±0.25		
DOB-1 □ 1405	14 f7 ^{-0.016} _{-0.034}	16 H7 ^{+0.018} ₀	14 ^{+0.058} _{- 0.010}	5±0.25	16 ^{+0.065} _{+0.030}	
DOB-1 □ 1410				10±0.25		
DOB-1 □ 1412				12±0.25		
DOB-1 □ 1415				15±0.25		
DOB-1 □ 1420				20±0.25		
DOB-1 □ 1425				25±0.25		
DOB-1 □ 1510	15 f7 ^{-0.016} _{-0.034}	17 H7 ^{+0.018} ₀	15 ^{+0.058} _{-0.010}	10±0.25	17 ^{+0.065} _{+0.030}	
DOB-1 □ 1512				12±0.25		
DOB-1 □ 1515				15±0.25		
DOB-1 □ 1520				20±0.25		
DOB-1 □ 1525				25±0.25		
DOB-1 □ 1610	16 f7 ^{-0.016} _{-0.034}	18 H7 ^{+0.018} ₀	16 ^{+0.058} _{-0.010}	10±0.25	18 ^{+0.065} _{+0.030}	
DOB-1 □ 1612				12±0.25		
DOB-1 □ 1615				15±0.25		
DOB-1 □ 1620				20±0.25		
DOB-1 □ 1625				25±0.25		
DOB-1 □ 1712	17 f7 ^{-0.016} _{-0.034}	19 H7 ^{+0.021} ₀	17 ^{+0.061} _{-0.010}	12±0.25	19 ^{+0.075} _{+0.035}	
DOB-1 □ 1720				20±0.25		
DOB-1 □ 1810	18 f7 ^{-0.016} _{-0.034}	20 H7 ^{+0.021} ₀	18 ^{+0.061} _{-0.010}	10±0.25	20 ^{+0.075} _{+0.035}	
DOB-1 □ 1815				15±0.25		
DOB-1 □ 1820				20±0.25		
DOB-1 □ 1825				25±0.25		
DOB-1 □ 2010	20 f7 ^{-0.020} _{-0.041}	23 H7 ^{+0.021} ₀	20 ^{+0.071} _{-0.010}	10±0.25	23 ^{+0.075} _{+0.035}	
DOB-1 □ 2015				15±0.25		
DOB-1 □ 2020				20±0.25		
DOB-1 □ 2025				25±0.25		
DOB-1 □ 2030				30±0.25		
DOB-1 □ 2215	22 f7 ^{-0.020} _{-0.041}	25 H7 ^{+0.021} ₀	22 ^{+0.071} _{-0.010}	15±0.25	25 ^{+0.075} _{+0.035}	
DOB-1 □ 2220				20±0.25		
DOB-1 □ 2225				25±0.25		
DOB-1 □ 2230				30±0.25		
DOB-1 □ 2415	24 f7 ^{-0.020} _{-0.041}	27 H7 ^{+0.021} ₀	24 ^{+0.071} _{-0.010}	15±0.25	27 ^{+0.075} _{+0.035}	
DOB-1 □ 2420				20±0.25		
DOB-1 □ 2425				25±0.25		
DOB-1 □ 2430				30±0.25		
DOB-1 □ 2515	25 f7 ^{-0.020} _{-0.041}	28 H7 ^{+0.021} ₀	25 ^{+0.071} _{-0.010}	15±0.25	28 ^{+0.075} _{+0.035}	
DOB-1 □ 2520				20±0.25		

DOB-1 Series Bushing – Metric Size

Designation	Shaft Dia Ø dj	Housing Ø DH	Installed Bushing I.D Ød	High L	O.D. ØD	Wall Thickness S _B
DOB-1 □ 2525	25 f7 ^{-0.020} _{-0.041}	28 H7 ^{+0.021} ₀	25 ^{+0.071} _{+0.010}	25±0.25	28 ^{+0.065} _{+0.030}	1.5 ^{+0.005} _{- 0.025}
DOB-1 □ 2530				30±0.25		
DOB-1 □ 2540				40±0.25		
DOB-1 □ 2550				50±0.25		
DOB-1 □ 2815	28 f7 ^{-0.020} _{-0.041}	32 H7 ^{+0.025} ₀	28 ^{+0.085} _{-0.010}	15±0.25	32 ^{+0.065} _{+0.030}	2 ^{+0.005} _{- 0.030}
DOB-1 □ 2820				20±0.25		
DOB-1 □ 2825				25±0.25		
DOB-1 □ 2830				30±0.25		
DOB-1 □ 3010	30 f7 ^{-0.020} _{-0.041}	34 H7 ^{+0.025} ₀	30 ^{+0.085} _{-0.010}	10±0.25	34 ^{+0.065} _{+0.030}	2 ^{+0.005} _{- 0.030}
DOB-1 □ 3015				15±0.25		
DOB-1 □ 3020				20±0.25		
DOB-1 □ 3025				25±0.25		
DOB-1 □ 3030				30±0.25		
DOB-1 □ 3040				40±0.25		
DOB-1 □ 3220	32 f7 ^{-0.025} _{-0.050}	36 H7 ^{+0.025} ₀	32 ^{+0.085} _{-0.010}	20±0.25	36 ^{+0.065} _{+0.030}	2 ^{+0.005} _{- 0.030}
DOB-1 □ 3230				30±0.25		
DOB-1 □ 3240				40±0.25		
DOB-1 □ 3520	35 f7 ^{-0.025} _{-0.050}	39 H7 ^{+0.025} ₀	35 ^{+0.085} _{-0.010}	20±0.25	39 ^{+0.065} _{+0.030}	2 ^{+0.005} _{- 0.030}
DOB-1 □ 3530				30±0.25		
DOB-1 □ 3535				35±0.25		
DOB-1 □ 3540				40±0.25		
DOB-1 □ 3550				50±0.25		
DOB-1 □ 3720	37 f7 ^{-0.025} _{-0.050}	41 H7 ^{+0.025} ₀	37 ^{+0.085} _{-0.010}	20±0.25	41 ^{+0.075} _{+0.035}	2 ^{+0.005} _{- 0.030}
DOB-1 □ 4020	40 f7 ^{-0.025} _{-0.050}	44 H7 ^{+0.025} ₀	40 ^{+0.085} _{-0.010}	20±0.25	44 ^{+0.075} _{+0.035}	2 ^{+0.005} _{- 0.030}
DOB-1 □ 4030				30±0.25		
DOB-1 □ 4040				40±0.25		
DOB-1 □ 4050				50±0.25		
DOB-1 □ 4520	45 f7 ^{-0.025} _{-0.050}	50 H7 ^{+0.025} ₀	45 ^{+0.105} _{-0.010}	20±0.25	50 ^{+0.075} _{+0.035}	2.5 ^{+0.005} _{- 0.040}
DOB-1 □ 4530				30±0.25		
DOB-1 □ 4540				40±0.25		
DOB-1 □ 4545				45±0.25		
DOB-1 □ 4550				50±0.25		
DOB-1 □ 5020	50 f7 ^{-0.025} _{-0.050}	55 H7 ^{+0.030} ₀	50 ^{+0.110} _{-0.010}	20±0.25	55 ^{+0.075} _{+0.035}	2.5 ^{+0.005} _{- 0.040}
DOB-1 □ 5030				30±0.25		
DOB-1 □ 5040				40±0.25		
DOB-1 □ 5050				50±0.25		
DOB-1 □ 5060				60±0.25		
DOB-1 □ 5520	55 f7 ^{-0.030} _{-0.060}	60 H7 ^{+0.030} ₀	55 ^{+0.110} _{-0.010}	20±0.25	60 ^{+0.075} _{+0.035}	2.5 ^{+0.005} _{- 0.040}
DOB-1 □ 5525				25±0.25		
DOB-1 □ 5530				30±0.25		
DOB-1 □ 5540				40±0.25		
DOB-1 □ 5550				50±0.25		
DOB-1 □ 5560				60±0.25		

DOB-1 Series Bushing – Metric Size

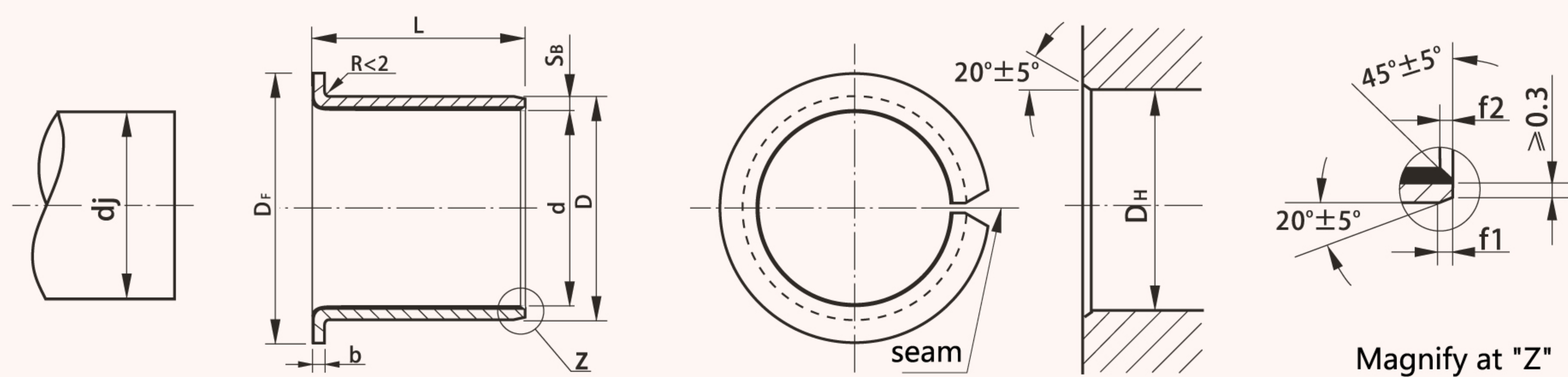
Designation	Shaft Dia Ø dj	Housing Ø DH	Installed Bushing I.D Ød	High L	O.D. ØD	Wall Thickness S _B
DOB-1 □ 6020	60 f7 ^{-0.030} _{-0.060}	65 H7 ^{+0.030} ₀	60 ^{+0.110} _{-0.010}	20±0.25	65 ^{+0.100} _{+0.055}	2.5 ^{+0.005} _{-0.040}
DOB-1 □ 6030				30±0.25		
DOB-1 □ 6040				40±0.25		
DOB-1 □ 6050				50±0.25		
DOB-1 □ 6060				60±0.25		
DOB-1 □ 6070				70±0.25		
DOB-1 □ 6530	65 f7 ^{-0.030} _{-0.060}	70 H7 ^{+0.030} ₀	65 ^{+0.110} _{-0.010}	30±0.25	70 ^{+0.100} _{+0.055}	2.5 ^{+0.005} _{-0.040}
DOB-1 □ 6550				50±0.25		
DOB-1 □ 6570				70±0.25		
DOB-1 □ 7040	70 f7 ^{-0.030} _{-0.060}	75 H7 ^{+0.030} ₀	70 ^{+0.110} _{-0.010}	40±0.25	75 ^{+0.100} _{+0.055}	2.5 ^{+0.005} _{-0.040}
DOB-1 □ 7050				50±0.25		
DOB-1 □ 7060				60±0.25		
DOB-1 □ 7070				70±0.25		
DOB-1 □ 7550	75 f7 ^{-0.030} _{-0.060}	80 H7 ^{+0.030} ₀	75 ^{+0.110} _{-0.010}	50±0.5	80 ^{+0.100} _{+0.055}	2.5 ^{+0.005} _{-0.040}
DOB-1 □ 7560				60±0.5		
DOB-1 □ 7580				80±0.5		
DOB-1 □ 8060	80 h8 ⁰ _{-0.046}	85 H7 ^{+0.035} ₀	80 ^{+0.155} _{+0.020}	60±0.5	85 ^{+0.12} _{+0.07}	2.5 ^{-0.01} _{-0.06}
DOB-1 □ 80100				100±0.5		
DOB-1 □ 8530	85 h8 ⁰ _{-0.054}	90 H7 ^{+0.035} ₀	85 ^{+0.155} _{+0.020}	30±0.5	90 ^{+0.12} _{+0.07}	2.5 ^{-0.01} _{-0.06}
DOB-1 □ 8560				60±0.5		
DOB-1 □ 85100				100±0.5		
DOB-1 □ 9060	90 h8 ⁰ _{-0.054}	95 H7 ^{+0.035} ₀	90 ^{+0.155} _{+0.020}	60±0.5	95 ^{+0.12} _{+0.07}	2.5 ^{-0.01} _{-0.06}
DOB-1 □ 90100				100±0.5		
DOB-1 □ 9560	95 h8 ⁰ _{-0.054}	100 H7 ^{+0.035} ₀	95 ^{+0.155} _{+0.020}	60±0.5	100 ^{+0.12} _{+0.07}	2.5 ^{-0.01} _{-0.06}
DOB-1 □ 95100				100±0.5		
DOB-1 □ 10050	100 h8 ⁰ _{-0.054}	105 H7 ^{+0.035} ₀	100 ^{+0.155} _{+0.020}	50±0.5	105 ^{+0.12} _{+0.07}	2.5 ^{-0.01} _{-0.06}
DOB-1 □ 10060				60±0.5		
DOB-1 □ 100115				115±0.5		
DOB-1 □ 10560	105 h8 ⁰ _{-0.054}	110 H7 ^{+0.035} ₀	105 ^{+0.155} _{+0.020}	60±0.5	110 ^{+0.12} _{+0.07}	2.5 ^{-0.01} _{-0.06}
DOB-1 □ 105115				115±0.5		
DOB-1 □ 11060	110 h8 ⁰ _{-0.054}	115 H7 ^{+0.035} ₀	110 ^{+0.155} _{+0.020}	60±0.5	115 ^{+0.12} _{+0.07}	2.5 ^{-0.01} _{-0.06}
DOB-1 □ 110115				115±0.5		
DOB-1 □ 11550	115 h8 ⁰ _{-0.054}	120 H7 ^{+0.035} ₀	115 ^{+0.155} _{+0.020}	50±0.5	120 ^{+0.12} _{+0.07}	2.5 ^{-0.01} _{-0.06}
DOB-1 □ 11570				70±0.5		
DOB-1 □ 12050	120 h8 ⁰ _{-0.054}	125 H7 ^{+0.040} ₀	120 ^{+0.210} _{+0.070}	50±0.5	125 ^{+0.17} _{+0.10}	2.5 ^{-0.035} _{-0.085}
DOB-1 □ 12060				60±0.5		
DOB-1 □ 120100				100±0.5		
DOB-1 □ 125100	125 h8 ⁰ _{-0.063}	130 H7 ^{+0.040} ₀	125 ^{+0.210} _{+0.070}	100±0.5	130 ^{+0.17} _{+0.10}	2.5 ^{-0.035} _{-0.085}
DOB-1 □ 13060	130 h8 ⁰ _{-0.063}	135 H7 ^{+0.040} ₀	130 ^{+0.210} _{+0.070}	60±0.5	135 ^{+0.17} _{+0.10}	2.5 ^{-0.035} _{-0.085}
DOB-1 □ 130100				100±0.5		
DOB-1 □ 13560	135 h8 ⁰ _{-0.063}	140 H7 ^{+0.040} ₀	135 ^{+0.210} _{+0.070}	60±0.5	140 ^{+0.17} _{+0.10}	2.5 ^{-0.035} _{-0.085}
DOB-1 □ 13580				80±0.5		
DOB-1 □ 14060	140 h8 ⁰ _{-0.063}	145 H7 ^{+0.040} ₀	140 ^{+0.210} _{+0.070}	60±0.5	145 ^{+0.17} _{+0.10}	2.5 ^{-0.035} _{-0.085}

DOB-1 Series Bushing – Metric Size

Designation	Shaft Dia Ø dj	Housing Ø DH	Installed Bushing I.D Ød	High L	O.D. ØD	Wall Thickness S _B
DOB-1 □ 140100	140 h8 ⁰ _{-0.063}	145 H7 ^{+0.040} ₀	140 ^{+0.210} _{+0.070}	100±0.5	145 ^{+0.170} _{+0.100}	2.5 ^{-0.035} _{-0.085}
DOB-1 □ 15060	150 h8 ⁰ _{-0.063}	155 H7 ^{+0.040} ₀	150 ^{+0.210} _{+0.070}	60±0.5	155 ^{+0.170} _{+0.100}	2.5 ^{-0.035} _{-0.085}
DOB-1 □ 15080				80±0.5		
DOB-1 □ 150100				100±0.5		
DOB-1 □ 16080	160 h8 ⁰ _{-0.063}	165 H7 ^{+0.040} ₀	160 ^{+0.210} _{+0.070}	80±0.5	165 ^{+0.170} _{+0.100}	2.5 ^{-0.035} _{-0.085}
DOB-1 □ 160100				100±0.5		
DOB-1 □ 18080	180 h8 ⁰ _{-0.063}	185 H7 ^{+0.046} ₀	180 ^{+0.216} _{+0.070}	80±0.75	185 ^{+0.210} _{+0.130}	2.5 ^{-0.035} _{-0.085}
DOB-1 □ 180100				100±0.75		
DOB-1 □ 200100	200 h8 ⁰ _{-0.072}	205 H7 ^{+0.046} ₀	200 ^{+0.216} _{+0.070}	100±0.75	205 ^{+0.210} _{+0.130}	2.5 ^{-0.035} _{-0.085}
DOB-1 □ 210100	210 h8 ⁰ _{-0.072}	215 H7 ^{+0.046} ₀	210 ^{+0.216} _{+0.070}	100±0.75	215 ^{+0.210} _{+0.130}	2.5 ^{-0.035} _{-0.085}
DOB-1 □ 220100	220 h8 ⁰ _{-0.072}	225 H7 ^{+0.046} ₀	220 ^{+0.222} _{+0.070}	100±0.75	225 ^{+0.210} _{+0.130}	2.5 ^{-0.035} _{-0.085}
DOB-1 □ 250100	250 h8 ⁰ _{-0.072}	255 H7 ^{+0.052} ₀	250 ^{+0.222} _{+0.070}	100±0.75	255 ^{+0.260} _{+0.170}	2.5 ^{-0.035} _{-0.085}
DOB-1 □ 280100	280 h8 ⁰ _{-0.081}	285 H7 ^{+0.052} ₀	280 ^{+0.222} _{+0.070}	100±0.75	285 ^{+0.260} _{+0.170}	2.5 ^{-0.035} _{-0.085}
DOB-1 □ 300100	300 h8 ⁰ _{-0.081}	305 H7 ^{+0.052} ₀	300 ^{+0.222} _{+0.070}	100±0.75	305 ^{+0.260} _{+0.170}	2.5 ^{-0.035} _{-0.085}

Label example			Wall Thickness S _B	Outside Chamfer f ₁	Inner Chamfer f ₂
Type DOB-1 □	I.D. 200	High 100	0.75	0.5±0.3	0.3±0.2
			1.0	0.6±0.3	0.3±0.2
			1.5	0.6±0.4	0.4±0.3
			2.0	1.2±0.4	0.6±0.3
			2.5	1.8±0.6	0.6±0.4

DOB-1F Series Flange Bushing – Metric Size



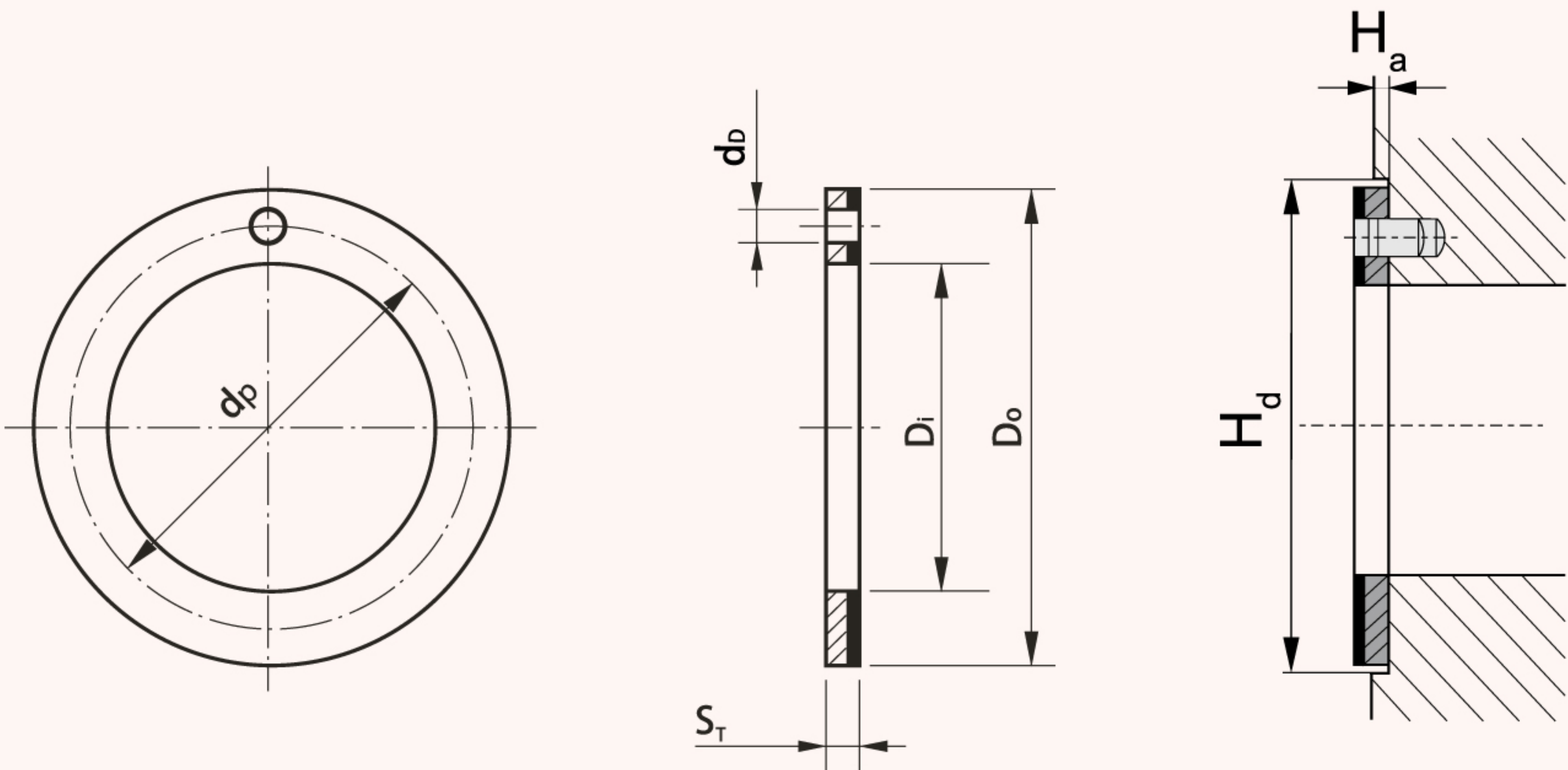
Designation	Shaft Dia $\varnothing d_j$	Housing $\varnothing D_H$	flange $\varnothing D_F$	Installed Bushing I.D $\varnothing d$	High L	O.D. $\varnothing D$	Wall Thickness S_B
DOB-1 □ F 03040	3 h6 $-\frac{0}{-0.006}$	4.5 H6 $+\frac{0.008}{0}$	7±0.5	3 $+\frac{0.048}{0}$	4±0.25	4.5 $+\frac{0.055}{+0.025}$	0.75 $-\frac{0}{-0.02}$
DOB-1 □ F 04040	4 h6 $-\frac{0}{-0.008}$	5.5 H6 $+\frac{0.008}{0}$	9±0.5	4 $+\frac{0.048}{0}$	4±0.25	5.5 $+\frac{0.055}{+0.025}$	0.75 $-\frac{0}{-0.02}$
DOB-1 □ F 05050	5 h6 $-\frac{0}{-0.008}$	7 H7 $+\frac{0.015}{0}$	10±0.5	5 $+\frac{0.055}{-0.010}$	5±0.25	7 $+\frac{0.055}{+0.025}$	1 $+\frac{0.005}{-0.020}$
DOB-1 □ F 06040	6 f7 $-\frac{-0.010}{-0.022}$	8 H7 $+\frac{0.015}{0}$	12±0.5	6 $+\frac{0.055}{-0.010}$	4±0.25	8 $+\frac{0.055}{+0.025}$	1 $+\frac{0.005}{-0.020}$
DOB-1 □ F 06070					7±0.25		
DOB-1 □ F 06080					8±0.25		
DOB-1 □ F 08055	8 f7 $-\frac{-0.013}{-0.028}$	10 H7 $+\frac{0.015}{0}$	15±0.5	8 $+\frac{0.055}{-0.010}$	5.5±0.25	10 $+\frac{0.055}{+0.025}$	1 $+\frac{0.005}{-0.020}$
DOB-1 □ F 08060					6±0.25		
DOB-1 □ F 08075					7.5±0.25		
DOB-1 □ F 08080					8±0.25		
DOB-1 □ F 08095					9.5±0.25		
DOB-1 □ F 08100					10±0.25		
DOB-1 □ F 10070	10 f7 $-\frac{-0.013}{-0.028}$	12 H7 $+\frac{0.018}{0}$	18±0.5	10 $+\frac{0.058}{-0.010}$	7±0.25	12 $+\frac{0.065}{+0.030}$	1 $+\frac{0.005}{-0.020}$
DOB-1 □ F 10090					9±0.25		
DOB-1 □ F 10120					12±0.25		
DOB-1 □ F 10170					17±0.25		
DOB-1 □ F 12070	12 f7 $-\frac{-0.016}{-0.028}$	14 H7 $+\frac{0.018}{0}$	20±0.5	12 $+\frac{0.058}{-0.010}$	7±0.25	14 $+\frac{0.065}{+0.030}$	1 $+\frac{0.005}{-0.020}$
DOB-1 □ F 12090					9±0.25		
DOB-1 □ F 12120					12±0.25		
DOB-1 □ F 12150					15±0.25		
DOB-1 □ F 12170					17±0.25		
DOB-1 □ F 14120	14 f7 $-\frac{-0.016}{-0.034}$	16 H7 $+\frac{0.018}{0}$	22±0.5	14 $+\frac{0.058}{-0.010}$	12±0.25	16 $+\frac{0.065}{+0.030}$	1 $+\frac{0.005}{-0.020}$
DOB-1 □ F 14170					17±0.25		
DOB-1 □ F 15090	15 f7 $-\frac{-0.016}{-0.034}$	17 H7 $+\frac{0.018}{0}$	23±0.5	15 $+\frac{0.058}{-0.010}$	9±0.25	17 $+\frac{0.065}{+0.030}$	1 $+\frac{0.005}{-0.020}$
DOB-1 □ F 15120					12±0.25		
DOB-1 □ F 15170					17±0.25		
DOB-1 □ F 16120	16 f7 $-\frac{-0.016}{-0.034}$	18 H7 $+\frac{0.018}{0}$	24±0.5	16 $+\frac{0.058}{-0.010}$	12±0.25	18 $+\frac{0.065}{+0.030}$	1 $+\frac{0.005}{-0.020}$
DOB-1 □ F 16170					17±0.25		

DOB-1F Series Flange Bushing – Metric Size

Designation	Shaft Dia Ø dj	Housing Ø DH	flange Ø DF	Installed Bushing I.D Ø d	High L	O.D. Ø D	Wall Thickness S _B
DOB-1 □ F 18120	18 f7 ^{-0.016} _{-0.034}	20 H7 ^{+0.021} ₀	26±0.5	18 ^{+0.061} _{-0.010}	12±0.25	20 ^{+0.075} _{+0.035}	1 ^{+0.005} _{-0.020}
DOB-1 □ F 18170					17±0.25		
DOB-1 □ F 18200					20±0.25		
DOB-1 □ F 20115	20 f7 ^{-0.020} _{-0.041}	23 H7 ^{+0.021} ₀	30±0.5	20 ^{+0.071} _{-0.010}	11.5±0.25	23 ^{+0.075} _{+0.035}	1.5 ^{+0.005} _{-0.025}
DOB-1 □ F 20165					16.5±0.25		
DOB-1 □ F 20215					21.5±0.25		
DOB-1 □ F 25115	25 f7 ^{-0.020} _{-0.041}	28 H7 ^{+0.021} ₀	35±0.5	25 ^{+0.071} _{-0.010}	11.5±0.25	28 ^{+0.075} _{+0.035}	1.5 ^{+0.005} _{-0.025}
DOB-1 □ F 25165					16.5±0.25		
DOB-1 □ F 25215					21.5±0.25		
DOB-1 □ F 25265					26.5±0.25		
DOB-1 □ F 30160	30 f7 ^{-0.020} _{-0.041}	34 H7 ^{+0.025} ₀	42±0.5	30 ^{+0.085} _{-0.010}	16±0.25	34 ^{+0.085} _{+0.045}	2 ^{+0.005} _{-0.030}
DOB-1 □ F 30260					26±0.25		
DOB-1 □ F 35160	35 f7 ^{-0.025} _{-0.050}	39 H7 ^{+0.025} ₀	47±0.5	35 ^{+0.085} _{-0.010}	16±0.25	39 ^{+0.085} _{+0.045}	2 ^{+0.005} _{-0.030}
DOB-1 □ F 35260					26±0.25		
DOB-1 □ F 40160	40 f7 ^{-0.025} _{-0.050}	44 H7 ^{+0.025} ₀	53±0.5	40 ^{+0.085} _{-0.010}	16±0.25	44 ^{+0.085} _{+0.045}	2 ^{+0.005} _{-0.030}
DOB-1 □ F 40260					26±0.25		
DOB-1 □ F 45260	45 f7 ^{-0.025} _{-0.050}	50 H7 ^{+0.025} ₀	58±0.5	45 ^{+0.105} _{-0.010}	16±0.25	50 ^{+0.085} _{+0.045}	2.5 ^{+0.005} _{-0.040}
DOB-1 □ F 45260					26±0.25		
DOB-1 □ F 50325	50 f7 ^{-0.025} _{-0.050}	55 H7 ^{+0.030} ₀	63±0.5	50 ^{+0.110} _{-0.010}	32.5±0.25	55 ^{+0.100} _{+0.050}	2.5 ^{+0.005} _{-0.040}
DOB-1 □ F 50425					42.5±0.25		
DOB-1 □ F 55325	55 f7 ^{-0.030} _{-0.060}	60 H7 ^{+0.030} ₀	68±0.5	55 ^{+0.110} _{-0.010}	32.5±0.25	60 ^{+0.100} _{+0.050}	2.5 ^{+0.005} _{-0.040}
DOB-1 □ F 55425					42.5±0.25		
DOB-1 □ F 60325	60 f7 ^{-0.030} _{-0.060}	65 H7 ^{+0.030} ₀	73±0.5	60 ^{+0.110} _{-0.010}	32.5±0.25	65 ^{+0.100} _{+0.050}	2.5 ^{+0.005} _{-0.040}
DOB-1 □ F 60425					42.5±0.25		

Label example			Wall Thickness S _B	Outside Chamfer f ₁	Inner Chamfer f ₂
			0.75	0.5±0.3	0.3±0.2
Type	I.D.	High	1.0	0.6±0.3	0.3±0.2
DOB-1 □ F	20	11.5	1.5	0.6±0.4	0.4±0.3
			2.0	1.2±0.4	0.6±0.3
			2.5	1.8±0.6	0.6±0.4

DOB-1W Series Slide Washer – Metric Size



Designation	I.D. ØD _i	O.D. ØD _o	Wall Thickness S _T	Middle diameter Ød _p	Pilot hole Ød _D	Assembling house ØH _d	Recess Depth H _a
DOB-1 □ W08	10 ^{+0.25 0}	20 ^{0 -0.25}	1.5 ^{0 -0.05}	15±0.12	1.5 ^{+0.375 +0.125}	20 ^{+0.12 0}	1.0 ^{+0.20 -0.05}
DOB-1 □ W10	12 ^{+0.25 0}	24 ^{0 -0.25}		18±0.12		24 ^{+0.12 0}	
DOB-1 □ W12	14 ^{+0.25 0}	26 ^{0 -0.25}		20±0.12		26 ^{+0.12 0}	
DOB-1 □ W14	16 ^{+0.25 0}	30 ^{0 -0.25}		22±0.12	2 ^{+0.375 +0.125}	30 ^{+0.12 0}	
DOB-1 □ W16	18 ^{+0.25 0}	32 ^{0 -0.25}		25±0.12		32 ^{+0.12 0}	
DOB-1 □ W18	20 ^{+0.25 0}	36 ^{0 -0.25}		28±0.12		36 ^{+0.12 0}	
DOB-1 □ W20	22 ^{+0.25 0}	38 ^{0 -0.25}		30±0.12	3 ^{+0.375 +0.125}	38 ^{+0.12 0}	
DOB-1 □ W22	24 ^{+0.25 0}	42 ^{0 -0.25}		33±0.12		42 ^{+0.12 0}	
DOB-1 □ W24	26 ^{+0.25 0}	44 ^{0 -0.25}		35±0.12		44 ^{+0.12 0}	
DOB-1 □ W25	28 ^{+0.25 0}	48 ^{0 -0.25}		38±0.12	4 ^{+0.375 +0.125}	48 ^{+0.12 0}	
DOB-1 □ W30	32 ^{+0.25 0}	54 ^{0 -0.25}		43±0.12		54 ^{+0.12 0}	
DOB-1 □ W35	38 ^{+0.25 0}	62 ^{0 -0.25}		50±0.12		62 ^{+0.12 0}	
DOB-1 □ W40	42 ^{+0.25 0}	66 ^{0 -0.25}		54±0.12		66 ^{+0.12 0}	
DOB-1 □ W45	48 ^{+0.25 0}	74 ^{0 -0.25}	2 ^{0 -0.05}	61±0.12		74 ^{+0.12 0}	1.5 ^{+0.20 -0.05}
DOB-1 □ W50	52 ^{+0.25 0}	78 ^{0 -0.25}		65±0.12		78 ^{+0.12 0}	
DOB-1 □ W60	62 ^{+0.25 0}	90 ^{0 -0.25}		76±0.12		90 ^{+0.12 0}	

Label example

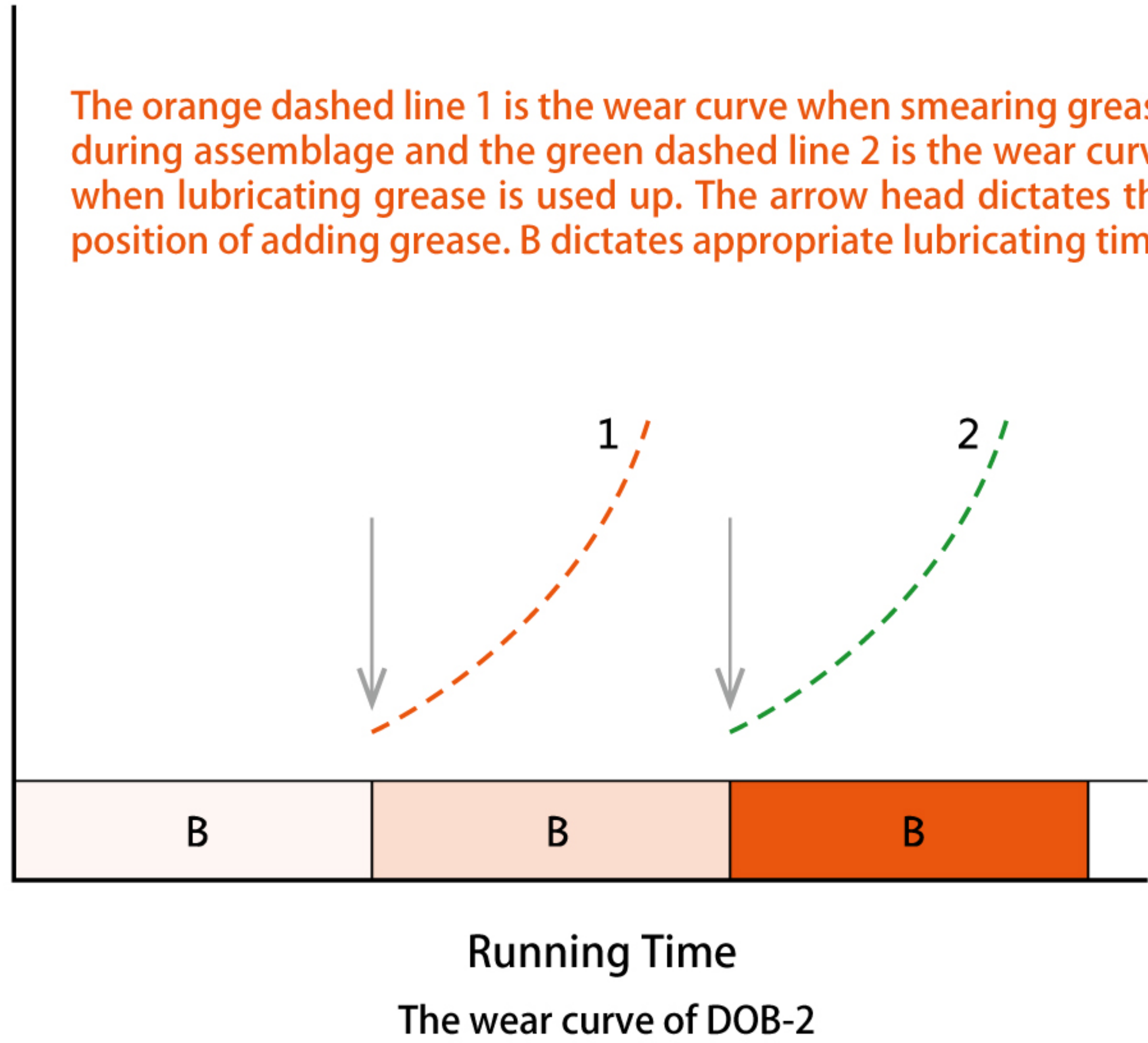
Type Shaft diameter
DOB-1 □ W 60

DOB-2 Series Boundary Lubricating Bushing



Anti-abrasion Performance

See the below chart for abrasion characteristics of DOB-2 series in the condition of grease lubrication. From the chart , it can be well known that in the Running-in Phase, the wear rate is rather small and when smearing grease during assemblage, it will gradually become bigger (see orange dashed line 1 in the chart). If the lubricating grease was duly added, the wear rate could still keep steady. Service life of the bushing could be prolonged if the time interval for adding grease is suited. The time interval is decide by the running PV value, while service life is decided by the accumulative abrasion quantity. Under condition of grease lubrication which recommended to use lithium fatty acid when environment temperature is lower than 80℃ and to use silion fatty acid when environment temperature is above 80℃. It is not advisable to use fatty acid with EP additives.



Besides the standard products displayed in the list of catalogue, DALON can also supply custom products or design according to customer requirements.

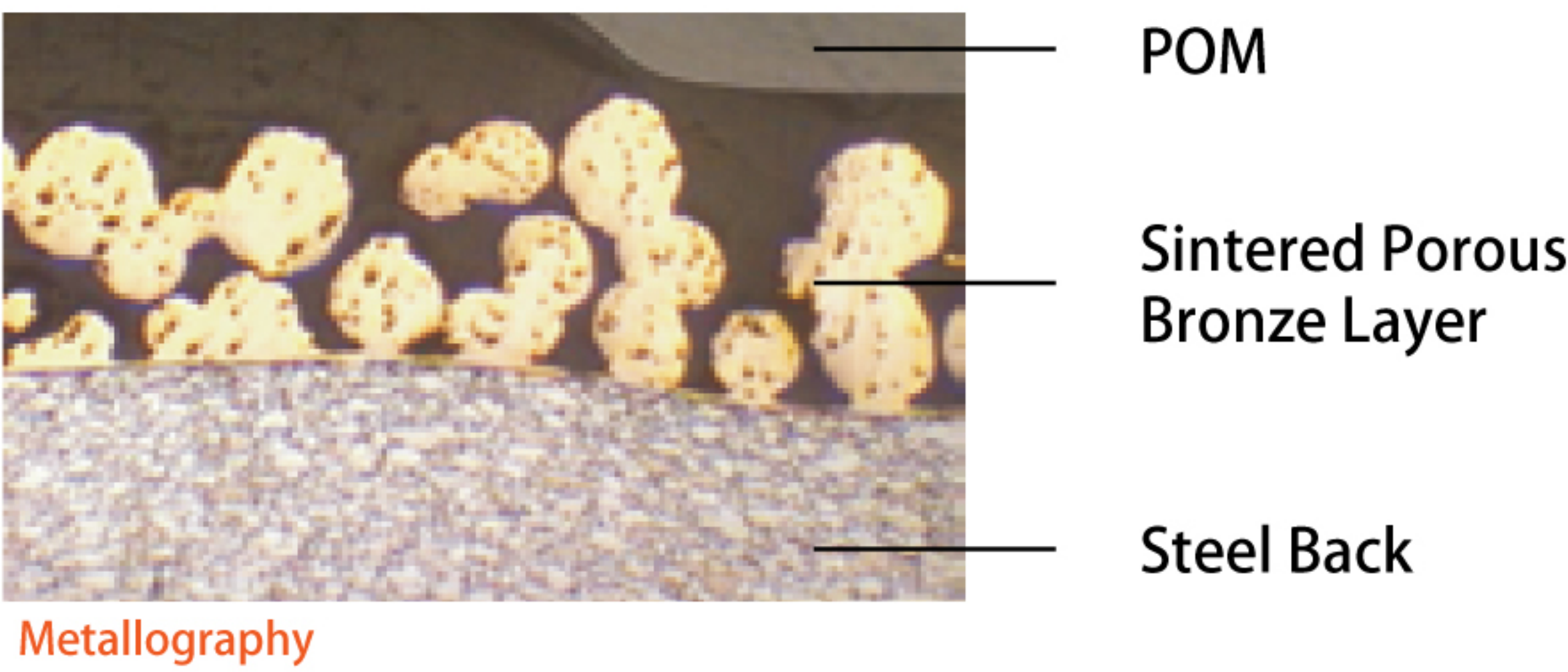
Structure Characteristics and Applications

DOB-2 Series are kinds of marginal lubricating bushing. DOB-2 bushing are backed with copper-plated steel with porous bronze sintered on it and polymers (POM) imbedded into the bores of the bronze. The steel back provides the products with high quality low carbon steel. Oil dents stamped on the surface of the polymer can achieve good lubrication between the bushing and its mating axis. It is good of anti -abrasion and load capacity. The plating coating on the surface is erosion protective, which is environmental protective as free of lead included in the surface polymer POM. Products of DOB-2 series are widely used on automotive industrial, forging machines, mine quarrying machines, metal melting and casting machines and in water irrigating and steel rolling industries.

Physical and Mechanical Performance

Performance Index		Data
Max Load P	Static Load	250N/mm ²
	Dynamic Load	140N/mm ²
Linear Velocity V	Grease Lubrication	2.5m/s
Max PV value	Grease Lubrication	2.8N/mm ² .m/s
Friction Coefficient	Grease Lubrication	0.06~0.12
Mating Axis	Hardness	>270 HB
	Roughness	Ra=0.4~1.25
Working Temperature		-40~+120℃
Heat-conducting Coefficient		52W/(m·k)
Heat-expansion Coefficient(Axial)		11×10 ⁻⁶ /K

As standard the surface polymer of DOB-2 bushing has chemical erosion resistant quality. which is primarily decided by the quality of the steel back and its plating layer. Air-erosion could be effectively prevented if the steel back is plated with bronze or tin. If the bushing is to be used in erosive environment, the steel back needs to be plated with zinc, etc.



Main factors that influence the service life of Bushing

1) PV Value

PV value is an effective criterion to calculate the service life of DOB-2. If required to enlonger the service life, the PV value must be reduced.

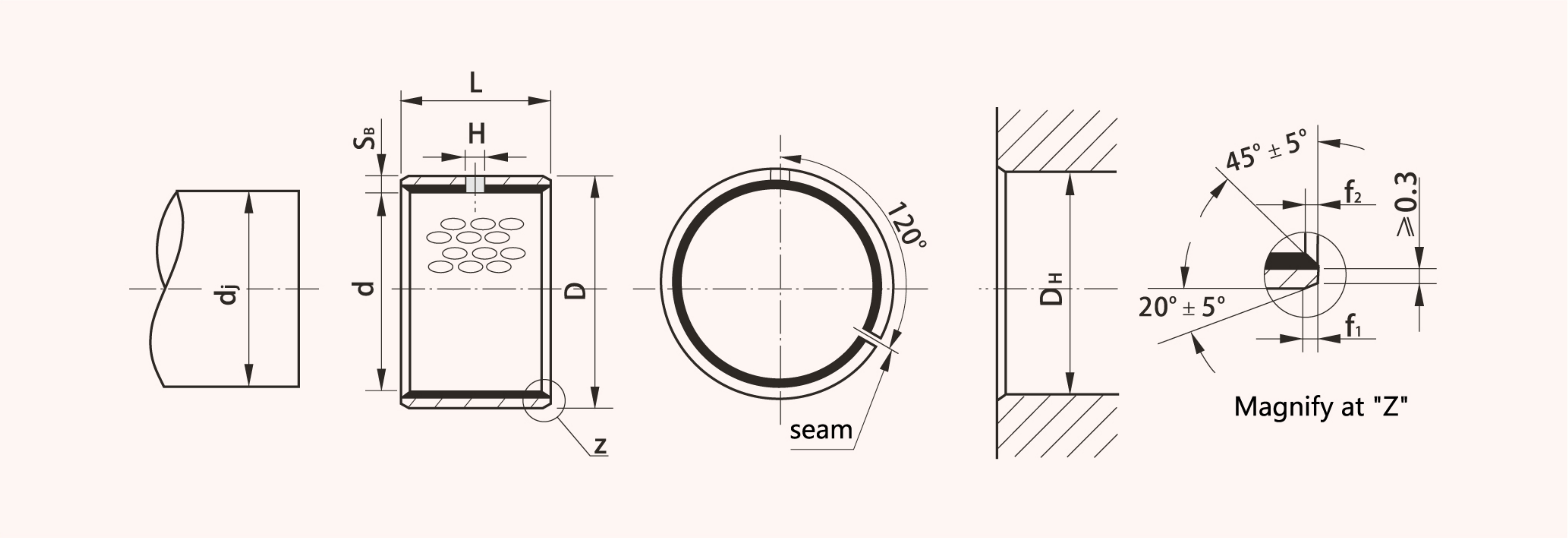
2) Quality of the Mating Surface

Service life of DOB-1 can be obviously prolonged if its mating axis is made by alloy steel or hard chrome plated and with surface roughness Ra=0.4~0.63

3) Environment Temperature

When the environmnet temperature is above 40℃ , the performance of DOB-2 will be debased.The higher working temperature is the factor of short life.

DOB-2 Series Boundary Lubricating Bushing



Metric Size

Designation	Shaft Dia Ø dj	Housing Ø DH	Installed Bushing I.D Ø d	High L	O.D. Ø D	Wall Thickness S _B	Oil hole ØH
DOB-2 □ 0808	8 h8 ⁰ _{-0.022}	10 H7 ^{+0.015} ₀	8 ^{+0.105} _{+0.040}	8±0.25	10 ^{+0.055} _{+0.025}	1 ^{-0.020} _{-0.045}	/
DOB-2 □ 0810				10±0.25			
DOB-2 □ 0812				12±0.25			
DOB-2 □ 1010	10 h8 ⁰ _{-0.027}	12 H7 ^{+0.018} ₀	10 ^{+0.108} _{+0.040}	10±0.25	12 ^{+0.065} _{+0.030}	1 ^{-0.020} _{-0.045}	4
DOB-2 □ 1012				12±0.25			
DOB-2 □ 1015				15±0.25			
DOB-2 □ 1020				20±0.25			
DOB-2 □ 1210	12 h8 ⁰ _{-0.027}	14 H7 ^{+0.018} ₀	12 ^{+0.108} _{+0.040}	10±0.25	14 ^{+0.065} _{+0.030}	1 ^{-0.020} _{-0.045}	
DOB-2 □ 1212				12±0.25			
DOB-2 □ 1215				15±0.25			
DOB-2 □ 1220				20±0.25			
DOB-2 □ 1225				25±0.25			
DOB-2 □ 1415	14 h8 ⁰ _{-0.027}	16 H7 ^{+0.018} ₀	14 ^{+0.108} _{+0.040}	15±0.25	16 ^{+0.065} _{+0.030}	1 ^{-0.020} _{-0.045}	
DOB-2 □ 1420				20±0.25			
DOB-2 □ 1425				25±0.25			
DOB-2 □ 1510	15 h8 ⁰ _{-0.027}	17 H7 ^{+0.018} ₀	15 ^{+0.108} _{+0.040}	10±0.25	17 ^{+0.065} _{+0.030}	1 ^{-0.020} _{-0.045}	
DOB-2 □ 1512				12±0.25			
DOB-2 □ 1515				15±0.25			
DOB-2 □ 1525				25±0.25			
DOB-2 □ 1615	16 h8 ⁰ _{-0.027}	18 H7 ^{+0.018} ₀	16 ^{+0.108} _{+0.040}	15±0.25	18 ^{+0.065} _{+0.030}	1 ^{-0.020} _{-0.045}	
DOB-2 □ 1620				20±0.25			
DOB-2 □ 1625				25±0.25			
DOB-2 □ 1815	18 h8 ⁰ _{-0.027}	20 H7 ^{+0.021} ₀	18 ^{+0.111} _{+0.040}	15±0.25	20 ^{+0.075} _{+0.035}	1 ^{-0.020} _{-0.045}	
DOB-2 □ 1820				20±0.25			
DOB-2 □ 1825				25±0.25			
DOB-2 □ 2010	20 h8 ⁰ _{-0.033}	23 H7 ^{+0.021} ₀	20 ^{+0.131} _{+0.050}	10±0.25	23 ^{+0.075} _{+0.035}	1.5 ^{-0.025} _{-0.055}	
DOB-2 □ 2015				15±0.25			
DOB-2 □ 2020				20±0.25			

DOB-2 Series Boundary Lubricating Bushing

Metric Size

Designation	Shaft Dia Ø dj	Housing Ø DH	Installed Bushing I.D Ø d	High L	O.D. Ø D	Wall Thickness S _B	Oil hole ØH	
DOB-2 □ 2025	20 h8 ⁰ _{-0.033}	23 H7 ^{+0.021} ₀	20 ^{+0.131} _{+0.050}	25±0.25	23 ^{+0.075} _{+0.035}	1.5 ^{-0.025} _{-0.055}	4	
DOB-2 □ 2030				30±0.25				
DOB-2 □ 2215	22 h8 ⁰ _{-0.033}	25 H7 ^{+0.021} ₀	22 ^{+0.131} _{+0.050}	15±0.25	25 ^{+0.075} _{+0.035}	1.5 ^{-0.025} _{-0.055}		
DOB-2 □ 2220				20±0.25				
DOB-2 □ 2225				25±0.25				
DOB-2 □ 2230				30±0.25				
DOB-2 □ 2415	24 h8 ⁰ _{-0.033}	27 H7 ^{+0.021} ₀	24 ^{+0.131} _{+0.050}	15±0.25	27 ^{+0.075} _{+0.035}	1.5 ^{-0.025} _{-0.055}		
DOB-2 □ 2420				20±0.25				
DOB-2 □ 2430				30±0.25				
DOB-2 □ 2515	25 h8 ⁰ _{-0.033}	28 H7 ^{+0.021} ₀	25 ^{+0.131} _{+0.050}	15±0.25	28 ^{+0.075} _{+0.035}	1.5 ^{-0.025} _{-0.055}	6	
DOB-2 □ 2520				20±0.25				
DOB-2 □ 2525				25±0.25				
DOB-2 □ 2530				30±0.25				
DOB-2 □ 2820	28 h8 ⁰ _{-0.033}	32 H7 ^{+0.025} ₀	28 ^{+0.155} _{+0.060}	20±0.25	32 ^{+0.085} _{+0.045}	2 ^{-0.030} _{-0.065}		
DOB-2 □ 2825				25±0.25				
DOB-2 □ 2830				30±0.25				
DOB-2 □ 3020	30 h8 ⁰ _{-0.033}	34 H7 ^{+0.025} ₀	30 ^{+0.155} _{+0.060}	20±0.25	34 ^{+0.085} _{+0.045}	2 ^{-0.030} _{-0.065}		
DOB-2 □ 3030				30±0.25				
DOB-2 □ 3040				40±0.25				
DOB-2 □ 3220	32 h8 ⁰ _{-0.039}	36 H7 ^{+0.025} ₀	32 ^{+0.155} _{+0.060}	20±0.25	36 ^{+0.085} _{+0.045}	2 ^{-0.030} _{-0.065}		
DOB-2 □ 3230				30±0.25				
DOB-2 □ 3235				35±0.25				
DOB-2 □ 3240				40±0.25				
DOB-2 □ 3520	35 h8 ⁰ _{-0.039}	39 H7 ^{+0.025} ₀	35 ^{+0.155} _{+0.060}	20±0.25	39 ^{+0.085} _{+0.045}	2 ^{-0.030} _{-0.065}		
DOB-2 □ 3530				30±0.25				
DOB-2 □ 3535				35±0.25				
DOB-2 □ 3550				50±0.25				
DOB-2 □ 3635	36 h8 ⁰ _{-0.039}	40 H7 ^{+0.025} ₀	36 ^{+0.155} _{+0.060}	35±0.25	40 ^{+0.085} _{+0.045}	2 ^{-0.030} _{-0.065}		8
DOB-2 □ 3720	37 h8 ⁰ _{-0.039}	41 H7 ^{+0.025} ₀	37 ^{+0.155} _{+0.060}	20±0.25	41 ^{+0.085} _{+0.045}	2 ^{-0.030} _{-0.065}		
DOB-2 □ 4020	40 h8 ⁰ _{-0.039}	44 H7 ^{+0.025} ₀	40 ^{+0.155} _{+0.060}	20±0.25	44 ^{+0.085} _{+0.045}	2 ^{-0.030} _{-0.065}		
DOB-2 □ 4030				30±0.25				
DOB-2 □ 4040				40±0.25				
DOB-2 □ 4050				50±0.25				
DOB-2 □ 4520	45 h8 ⁰ _{-0.039}	50 H7 ^{+0.025} ₀	45 ^{+0.195} _{+0.080}	20±0.25	50 ^{+0.085} _{+0.045}	2.5 ^{-0.040} _{-0.085}		
DOB-2 □ 4530				30±0.25				
DOB-2 □ 4540				40±0.25				
DOB-2 □ 4545				45±0.25				
DOB-2 □ 4550				50±0.25				
DOB-2 □ 5040	50 h8 ⁰ _{-0.039}	55 H7 ^{+0.030} ₀	50 ^{+0.200} _{+0.080}	40±0.25	55 ^{+0.100} _{+0.055}	2.5 ^{-0.040} _{-0.085}		
DOB-2 □ 5050				50±0.25				
DOB-2 □ 5060				60±0.25				
DOB-2 □ 5520	55 h8 ⁰ _{-0.046}	60 H7 ^{+0.030} ₀	55 ^{+0.200} _{+0.080}	20±0.25	55 ^{+0.100} _{+0.055}	2.5 ^{-0.040} _{-0.085}		
DOB-2 □ 5525				25±0.25				

DOB-2 Series Boundary Lubricating Bushing

Metric Size							
Designation	Shaft Dia Ø dj	Housing Ø DH	Installed Bushing I.D Ø d	High L	O.D. Ø D	Wall Thickness S _B	Oil hole ØH
DOB-2 □ 5530	55 h8 ⁰ _{-0.046}	60 H7 ^{+0.030} ₀	55 ^{+0.200} _{+0.080}	30±0.25	60 ^{+0.100} _{+0.055}	2.5 ^{-0.040} _{-0.085}	8
DOB-2 □ 5540				40±0.25			
DOB-2 □ 5550				50±0.25			
DOB-2 □ 5560				60±0.25			
DOB-2 □ 6030	60 h8 ⁰ _{-0.046}	65 H7 ^{+0.030} ₀	60 ^{+0.200} _{+0.080}	30±0.25	65 ^{+0.100} _{+0.055}	2.5 ^{-0.040} _{-0.085}	
DOB-2 □ 6040				40±0.25			
DOB-2 □ 6060				60±0.25			
DOB-2 □ 6070				70±0.25			
DOB-2 □ 6540	65 h8 ⁰ _{-0.046}	70 H7 ^{+0.030} ₀	65 ^{+0.200} _{+0.080}	40±0.25	70 ^{+0.100} _{+0.055}	2.5 ^{-0.040} _{-0.085}	
DOB-2 □ 6550				50±0.25			
DOB-2 □ 6560				60±0.25			
DOB-2 □ 6570				70±0.25			
DOB-2 □ 7040	70 h8 ⁰ _{-0.046}	75 H7 ^{+0.030} ₀	70 ^{+0.200} _{+0.080}	40±0.25	75 ^{+0.100} _{+0.055}	2.5 ^{-0.040} _{-0.085}	
DOB-2 □ 7050				50±0.25			
DOB-2 □ 7065				65±0.25			
DOB-2 □ 7070				70±0.25			
DOB-2 □ 7080				80±0.25			
DOB-2 □ 7540	75 h8 ⁰ _{-0.046}	80 H7 ^{+0.030} ₀	75 ^{+0.200} _{+0.080}	40±0.25	80 ^{+0.100} _{+0.055}	2.5 ^{-0.040} _{-0.085}	9.5
DOB-2 □ 7560				60±0.25			
DOB-2 □ 7580				80±0.25			
DOB-2 □ 8040	80 h8 ⁰ _{-0.046}	85 H7 ^{+0.035} ₀	80 ^{+0.265} _{+0.100}	40±0.5	85 ^{+0.120} _{+0.070}	2.5 ^{-0.050} _{-0.115}	
DOB-2 □ 8060				60±0.5			
DOB-2 □ 8080				80±0.5			
DOB-2 □ 80100				100±0.5			
DOB-2 □ 8530	85 h8 ⁰ _{-0.054}	90 H7 ^{+0.035} ₀	85 ^{+0.265} _{+0.100}	30±0.5	90 ^{+0.120} _{+0.070}	2.5 ^{-0.050} _{-0.115}	
DOB-2 □ 8540				40±0.5			
DOB-2 □ 8560				60±0.5			
DOB-2 □ 8580				80±0.5			
DOB-2 □ 85100	100±0.5						
DOB-2 □ 9040	90 h8 ⁰ _{-0.054}	95 H7 ^{+0.035} ₀	90 ^{+0.265} _{+0.100}	40±0.5	90 ^{+0.120} _{+0.070}	2.5 ^{-0.050} _{-0.115}	
DOB-2 □ 9060				60±0.5			
DOB-2 □ 9080				80±0.5			
DOB-2 □ 9090				90±0.5			
DOB-2 □ 90100	100±0.5						
DOB-2 □ 9560	95 h8 ⁰ _{-0.054}	100 H7 ^{+0.035} ₀	95 ^{+0.265} _{+0.100}	60±0.5	95 ^{+0.120} _{+0.070}	2.5 ^{-0.050} _{-0.115}	
DOB-2 □ 95100				100±0.5			
DOB-2 □ 10050	100 h8 ⁰ _{-0.054}	105 H7 ^{+0.035} ₀	100 ^{+0.265} _{+0.100}	50±0.5	105 ^{+0.120} _{+0.070}	2.5 ^{-0.050} _{-0.115}	
DOB-2 □ 10060				60±0.5			
DOB-2 □ 10080				80±0.5			
DOB-2 □ 100115				115±0.5			
DOB-2 □ 10560	105 h8 ⁰ _{-0.054}	110 H7 ^{+0.035} ₀	105 ^{+0.265} _{+0.100}	60±0.5	110 ^{+0.120} _{+0.070}	2.5 ^{-0.050} _{-0.115}	
DOB-2 □ 105110				110±0.5			
DOB-2 □ 105115				115±0.5			

DOB-2 Series Boundary Lubricating Bushing

Metric Size

Designation	Shaft Dia Ø dj	Housing Ø DH	Installed Bushing I.D Ø d	High L	O.D. Ø D	Wall Thickness S _B	Oil hole ØH
DOB-2 ☐ 11060	110 h8 ⁰ _{-0.054}	115 H7 ^{+0.035} ₀	110 ^{+0.265} _{+0.100}	60±0.5	115 ^{+0.120} _{+0.070}	2.5 ^{-0.050} _{-0.115}	9.5
DOB-2 ☐ 110110				110±0.5			
DOB-2 ☐ 110115				115±0.5			
DOB-2 ☐ 11550	115 h8 ⁰ _{-0.054}	120 H7 ^{+0.035} ₀	115 ^{+0.265} _{+0.100}	50±0.5	120 ^{+0.120} _{+0.070}	2.5 ^{-0.050} _{-0.115}	
DOB-2 ☐ 11570				70±0.5			
DOB-2 ☐ 12060	120 h8 ⁰ _{-0.054}	125 H7 ^{+0.040} ₀	120 ^{+0.270} _{+0.100}	60±0.5	125 ^{+0.170} _{+0.100}	2.5 ^{-0.050} _{-0.115}	
DOB-2 ☐ 120100				100±0.5			
DOB-2 ☐ 120110				110±0.5			
DOB-2 ☐ 12560	125 h8 ⁰ _{-0.063}	130 H7 ^{+0.040} ₀	125 ^{+0.270} _{+0.100}	60±0.5	130 ^{+0.170} _{+0.100}	2.5 ^{-0.050} _{-0.115}	
DOB-2 ☐ 125100				100±0.5			
DOB-2 ☐ 125110				110±0.5			
DOB-2 ☐ 13050	130 h8 ⁰ _{-0.063}	135 H7 ^{+0.040} ₀	130 ^{+0.280} _{+0.130}	50±0.5	135 ^{+0.170} _{+0.100}	2.5 ^{-0.065} _{-0.120}	
DOB-2 ☐ 13060				60±0.5			
DOB-2 ☐ 13080				80±0.5			
DOB-2 ☐ 130100				100±0.5			
DOB-2 ☐ 13560	135 h8 ⁰ _{-0.063}	140 H7 ^{+0.040} ₀	135 ^{+0.280} _{+0.130}	60±0.5	140 ^{+0.170} _{+0.100}	2.5 ^{-0.065} _{-0.120}	
DOB-2 ☐ 13580				80±0.5			
DOB-2 ☐ 14050	140 h8 ⁰ _{-0.063}	145 H7 ^{+0.040} ₀	140 ^{+0.280} _{+0.130}	50±0.5	145 ^{+0.170} _{+0.100}	2.5 ^{-0.065} _{-0.120}	
DOB-2 ☐ 14060				60±0.5			
DOB-2 ☐ 14080				80±0.5			
DOB-2 ☐ 140100				100±0.5			
DOB-2 ☐ 15050	150 h8 ⁰ _{-0.063}	155 H7 ^{+0.040} ₀	150 ^{+0.280} _{+0.130}	50±0.5	155 ^{+0.170} _{+0.100}	2.5 ^{-0.065} _{-0.120}	
DOB-2 ☐ 15060				60±0.5			
DOB-2 ☐ 15080				80±0.5			
DOB-2 ☐ 150100				100±0.5			
DOB-2 ☐ 16050	160 h8 ⁰ _{-0.063}	165 H7 ^{+0.040} ₀	160 ^{+0.280} _{+0.130}	50±0.5	165 ^{+0.170} _{+0.100}	2.5 ^{-0.065} _{-0.120}	
DOB-2 ☐ 16060				60±0.5			
DOB-2 ☐ 16080				80±0.5			
DOB-2 ☐ 160100				100±0.5			
DOB-2 ☐ 17050	170 h8 ⁰ _{-0.063}	175 H7 ^{+0.040} ₀	170 ^{+0.280} _{+0.130}	50±0.75	175 ^{+0.170} _{+0.100}	2.5 ^{-0.065} _{-0.120}	
DOB-2 ☐ 17060				60±0.75			
DOB-2 ☐ 17080				80±0.75			
DOB-2 ☐ 170100				100±0.75			
DOB-2 ☐ 18050	180 h8 ⁰ _{-0.063}	185 H7 ^{+0.046} ₀	180 ^{+0.286} _{+0.130}	50±0.75	185 ^{+0.210} _{+0.130}	2.5 ^{-0.065} _{-0.120}	
DOB-2 ☐ 18060				60±0.75			
DOB-2 ☐ 18080				80±0.75			
DOB-2 ☐ 180100				100±0.75			
DOB-2 ☐ 19050	190 h8 ⁰ _{-0.072}	195 H7 ^{+0.046} ₀	190 ^{+0.286} _{+0.130}	50±0.75	195 ^{+0.210} _{+0.130}	2.5 ^{-0.065} _{-0.120}	
DOB-2 ☐ 19080				80±0.75			
DOB-2 ☐ 190100				100±0.75			
DOB-2 ☐ 190120				120±0.75			
DOB-2 ☐ 20050	200 h8 ⁰ _{-0.072}	205 H7 ^{+0.046} ₀	200 ^{+0.286} _{+0.130}	50±0.75	205 ^{+0.210} _{+0.130}	2.5 ^{-0.065} _{-0.120}	
DOB-2 ☐ 20080				80±0.75			

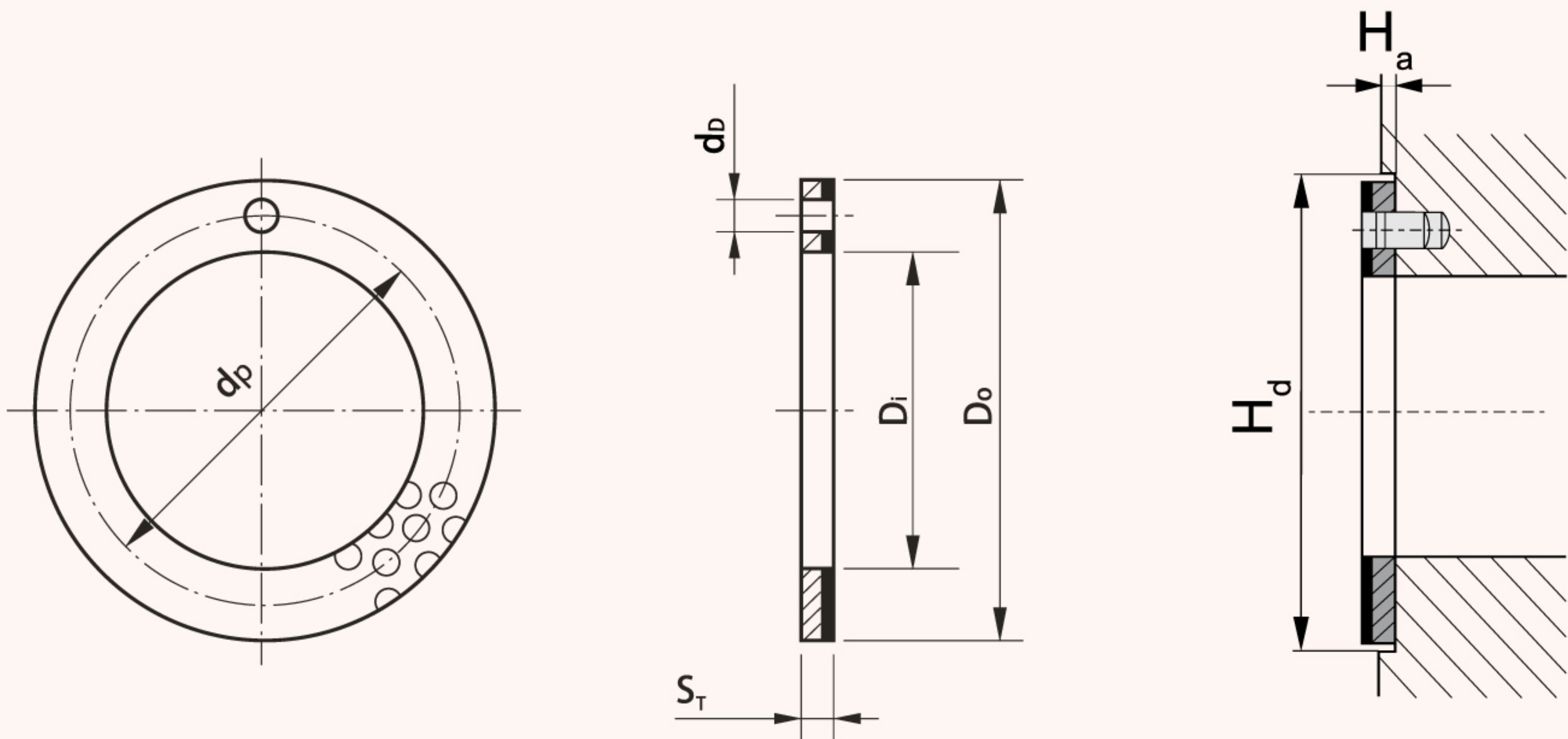
DOB-2 Series Boundary Lubricating Bushing

Metric Size

Designation	Shaft Dia Ø dj	Housing Ø DH	Installed Bushing I.D Ø d	High L	O.D. Ø D	Wall Thickness S _B	Oil hole ØH
DOB-2 ☐ 200100	200 h8 ⁰ _{-0.072}	205 H7 ^{+0.046} ₀	200 ^{+0.286} _{+0.130}	100±0.5	205 ^{+0.210} _{+0.130}	2.5 ^{-0.065} _{-0.120}	/
DOB-2 ☐ 200120				120±0.5			
DOB-2 ☐ 22050	220 h8 ⁰ _{-0.072}	225 H7 ^{+0.046} ₀	220 ^{+0.286} _{+0.130}	50±0.5	225 ^{+0.210} _{+0.130}	2.5 ^{-0.065} _{-0.120}	
DOB-2 ☐ 220100				100±0.5			
DOB-2 ☐ 220120				120±0.5			
DOB-2 ☐ 24050	240 h8 ⁰ _{-0.072}	245 H7 ^{+0.046} ₀	240 ^{+0.286} _{+0.130}	50±0.5	245 ^{+0.210} _{+0.130}	2.5 ^{-0.065} _{-0.120}	
DOB-2 ☐ 24060				60±0.5			
DOB-2 ☐ 24080				80±0.5			
DOB-2 ☐ 240100				100±0.5			
DOB-2 ☐ 240120				120±0.5			
DOB-2 ☐ 25050	250 h8 ⁰ _{-0.072}	255 H7 ^{+0.052} ₀	250 ^{+0.292} _{+0.130}	50±0.5	255 ^{+0.260} _{+0.170}	2.5 ^{-0.065} _{-0.120}	
DOB-2 ☐ 25080				80±0.5			
DOB-2 ☐ 250100				100±0.5			
DOB-2 ☐ 250120				120±0.5			
DOB-2 ☐ 26050	260 h8 ⁰ _{-0.081}	265 H7 ^{+0.052} ₀	260 ^{+0.292} _{+0.130}	50±0.5	265 ^{+0.260} _{+0.170}	2.5 ^{-0.065} _{-0.120}	
DOB-2 ☐ 26080				80±0.5			
DOB-2 ☐ 260100				100±0.5			
DOB-2 ☐ 260120				120±0.5			
DOB-2 ☐ 28050	280 h8 ⁰ _{-0.081}	285 H7 ^{+0.052} ₀	280 ^{+0.292} _{+0.130}	50±0.5	285 ^{+0.260} _{+0.170}	2.5 ^{-0.065} _{-0.120}	
DOB-2 ☐ 28080				80±0.5			
DOB-2 ☐ 280100				100±0.5			
DOB-2 ☐ 280120				120±0.5			
DOB-2 ☐ 30050	300 h8 ⁰ _{-0.081}	305 H7 ^{+0.052} ₀	300 ^{+0.292} _{+0.130}	50±0.5	305 ^{+0.260} _{+0.170}	2.5 ^{-0.065} _{-0.120}	
DOB-2 ☐ 30080				80±0.5			
DOB-2 ☐ 300100				100±0.5			
DOB-2 ☐ 300120				120±0.5			

			Wall Thickness S _B	Outside Chamfer f ₁	Inner Chamfer f ₂
Label example			1.0	0.6±0.3	0.3±0.2
Type	I.D.	High	1.5	0.6±0.4	0.4±0.3
DOB-2	300	120	2.0	1.2±0.4	0.6±0.3
			2.5	1.8±0.6	0.6±0.4

DOB-2 Series Boundary Lubricating Washer



Metric Size

Designation	I.D. ØD _i	O.D. ØD _o	Wall Thickness S _T	Middle diameter Ød _p	Pilot hole Ød _b	Assembling house ØH _d	Recess Depth H _a
DOB-2 □ W08	10 ^{+0.25} ₀	20 ⁰ _{-0.25}	1.5 ⁰ _{-0.05}	15±0.12	1.5 ^{+0.375} _{-0.125}	20 ^{+0.12} ₀	1.0 ^{+0.20} _{-0.05}
DOB-2 □ W10	12 ^{+0.25} ₀	24 ⁰ _{-0.25}		18±0.12		24 ^{+0.12} ₀	
DOB-2 □ W12	14 ^{+0.25} ₀	26 ⁰ _{-0.25}		20±0.12		26 ^{+0.12} ₀	
DOB-2 □ W14	16 ^{+0.25} ₀	30 ⁰ _{-0.25}		22±0.12	2 ^{+0.375} _{-0.125}	30 ^{+0.12} ₀	
DOB-2 □ W16	18 ^{+0.25} ₀	32 ⁰ _{-0.25}		25±0.12		32 ^{+0.12} ₀	
DOB-2 □ W18	20 ^{+0.25} ₀	36 ⁰ _{-0.25}		28±0.12		36 ^{+0.12} ₀	
DOB-2 □ W20	22 ^{+0.25} ₀	38 ⁰ _{-0.25}		30±0.12	3 ^{+0.375} _{-0.125}	38 ^{+0.12} ₀	
DOB-2 □ W22	24 ^{+0.25} ₀	42 ⁰ _{-0.25}		33±0.12		42 ^{+0.12} ₀	
DOB-2 □ W24	26 ^{+0.25} ₀	44 ⁰ _{-0.25}		35±0.12		44 ^{+0.12} ₀	
DOB-2 □ W25	28 ^{+0.25} ₀	48 ⁰ _{-0.25}		38±0.12	4 ^{+0.375} _{-0.125}	48 ^{+0.12} ₀	
DOB-2 □ W30	32 ^{+0.25} ₀	54 ⁰ _{-0.25}		43±0.12		54 ^{+0.12} ₀	
DOB-2 □ W35	38 ^{+0.25} ₀	62 ⁰ _{-0.25}		50±0.12		62 ^{+0.12} ₀	
DOB-2 □ W40	42 ^{+0.25} ₀	66 ⁰ _{-0.25}		54±0.12		66 ^{+0.12} ₀	
DOB-2 □ W45	48 ^{+0.25} ₀	74 ⁰ _{-0.25}	2 ⁰ _{-0.05}	61±0.12		74 ^{+0.12} ₀	1.5 ^{+0.20} _{-0.05}
DOB-2 □ W50	52 ^{+0.25} ₀	78 ⁰ _{-0.25}		65±0.12		78 ^{+0.12} ₀	
DOB-2 □ W60	62 ^{+0.25} ₀	90 ⁰ _{-0.25}		76±0.12		90 ^{+0.12} ₀	

Label example

Type Shaft diameter
DOB-2 □ W 30

DOB-700 Series Bimetal Bushing



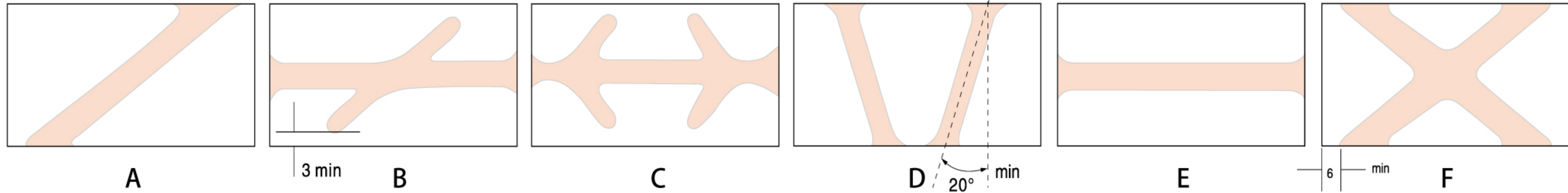
Structure Characteristics and Applications

DOB-700 bimetal bushing is produced with the composite material of high quality low carbon steel & tin-lead-bronze alloy (CuSn10Pb10) sintered layer on its surface. To effectively decrease abrasion, its alloy surface can be machined with ball shaped oil sockets for easier oil storage, which has the characteristics of high speed proof, high load capacity, good tensile strength and low friction. It can be applied to conditions of mediate load with high running velocity and conditions with enormous impact load. In mechanical applications, DOB-700 is used to make wrapped bushes, thrust washer and plain bushes on connecting rod level of gas engine. Thus it has been widely used in field of petrol engines, diesel engines, engineering machinery, lifts, air conditioners, auto gear boxes, transmission cases, leaf springs in heavy duty vehicles and stabilisers, etc.

Alloy Layer Chemical Compositions

Content %	Cu	Pb	Sn	Zn	P	Fe	Ni	Sb	Others
	Rest	9~11	9~11	0.5	0.1	0.7	0.5	0.2	0.5

Oil Groove Types



Metallography

Main factors that influence the service life of Bushing

1) PV Value

PV value is an effective criterion to calculate the service life of DOB-700. If required to enlonger the service life, the PV value must be reduced.

2) Quality of the Mating Surface

Service life of DOB-700 can be obviously prolonged if its mating axis is made by alloy steel or hard chrome plated and with surface roughness $Ra < 0.63$.

3) Environment Temperature

The higher working temperature is the factor of short life.

Physical and Mechanical Performance

Performance Index		Data
Max Load P		140N/mm ²
Linear Velocity V	Grease Lubrication	2.5m/s
	Oil Lubrication	5 m/s
Max PV value	Grease Lubrication	2.8N/mm ² ·m/s
	Oil Lubrication	10N/mm ² ·m/s
Alloy Hardness		HB 60~90
Mating Axis	Hardness	≥53HRC
	Roughness	Ra=0.16~0.63
Working Temperature	Grease Lubrication	150℃
	Oil Lubrication	250℃
Friction Coefficient		0.05~0.15
Heat-conducting Coefficient		47W/(m·k)
Heat-expansion Coefficient(Axial)		18×10 ⁻⁶ /K

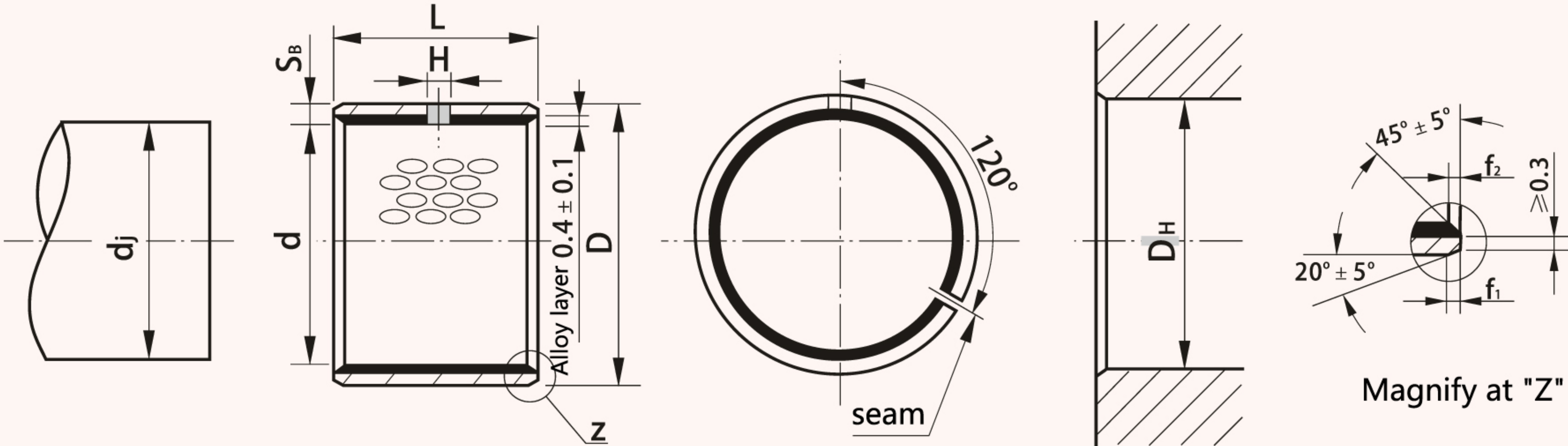
Strong anti-fatigue, and good load and impact bushing with good erosion protection performance. When mating with quenched hard axis, the hardness of the axis must not be less than 53HRC.

DOB-700 Series Bimetal Bushing

DOB-700 Series bimetal bushing is designed for the working condition with heavy load and medium / high speed of rotation and oscillating movements. Choosing different alloy material can have suitable characteristics for different applications. The material structure, application fields and technical parameters as below list.

Grade		DOB-700	DOB-701	DOB-702	DOB-703	DOB-704	DOB-700X
Data	Alloy Layer Material	CuPb ₁₀ Sn ₁₀ +Graphite	CuPb ₁₀ Sn ₁₀	CuPb ₂₄ Sn ₄	CuPb ₂₄ Sn	AlSn ₂₀ Cu	CuPb ₃₀
							
Max dynamic Load P		140	140	120	120	90	100
Max line speed V m/s		2.5	2.5	2.5	2.5	---	---
Max PV value N/mm ² ·m/s	Grease lubrication	2.8	2.8	2.8	2.8	---	---
Friction coef u		0.05~0.15	0.05~0.15	0.05~0.15	0.05~0.15	---	---
Max line speed V m/s	Oil lubrication	---	5	10	10	15	15
Max PV value N/mm ² ·m/s		---	10	10	10	8	8
Friction coef u		---	0.04~0.12	0.04~0.12	0.04~0.12	0.04~0.12	0.04~0.12
Max Working temperature	Grease lubrication	150	150	150	150	150	150
	Oil lubrication	---	250	250	250	250	250
Mating Axis	Hardness	≥53	≥53	≥48	≥45	≥270	≥270
	Roughness	0.32~0.63	0.32~0.63	0.16~0.63	0.16~0.63	0.16~0.63	0.16~0.63
Alloy layer hardness		60~90	60~90	45~70	40~60	30~40	30~45
Thermal conductivity		47	47	60	60	47	60
Coefficient of linear expansion		18×10 ⁻⁶ /K	18×10 ⁻⁶ /K	19×10 ⁻⁶ /K	19×10 ⁻⁶ /K	18×10 ⁻⁶ /K	19×10 ⁻⁶ /K
Typical application		Application: starting motor	Application: con-rod of automobile engines, engineering and agriculture machinery, heavy duty construction machinery etc.	Application: High speed, heavy load engine main shaft and transmission gearbox, etc.	Application: High speed, heavy load engine main shaft and con rod	Application: High speed, heavy load engine main shaft and air compressor, cooling machine. etc.	Application: High speed, heavy load engine main shaft and con rod

DOB-700 Series Bimetal Bushing



Metric Size

Designation	Shaft Dia Ø dj	Housing Ø DH	Installed Bushing I.D Ø d	High L	O.D. Ø D	Wall Thickness S _B	Oil hole ØH
DOB-700 □ 1010	10 h8 ⁰ _{-0.022}	12 H7 ^{+0.018} ₀	10 ^{+0.145} _{+0.010}	10±0.25	12 ^{+0.065} _{+0.030}	1 ^{-0.005} _{-0.065}	4
DOB-700 □ 1015				15±0.25			
DOB-700 □ 1020				20±0.25			
DOB-700 □ 1210	12 h8 ⁰ _{-0.027}	14 H7 ^{+0.018} ₀	12 ^{+0.148} _{+0.010}	10±0.25	14 ^{+0.065} _{+0.030}	1 ^{-0.005} _{-0.065}	
DOB-700 □ 1215				15±0.25			
DOB-700 □ 1220				20±0.25			
DOB-700 □ 1225				25±0.25			
DOB-700 □ 1410	14 h8 ⁰ _{-0.027}	16 H7 ^{+0.018} ₀	14 ^{+0.148} _{+0.010}	10±0.25	16 ^{+0.065} _{+0.030}	1 ^{-0.005} _{-0.065}	
DOB-700 □ 1415				15±0.25			
DOB-700 □ 1420				20±0.25			
DOB-700 □ 1425				25±0.25			
DOB-700 □ 1510	15 h8 ⁰ _{-0.027}	17 H7 ^{+0.018} ₀	15 ^{+0.148} _{+0.010}	10±0.25	17 ^{+0.065} _{+0.030}	1 ^{-0.005} _{-0.065}	
DOB-700 □ 1515				15±0.25			
DOB-700 □ 1520				20±0.25			
DOB-700 □ 1525				25±0.25			
DOB-700 □ 1610	16 h8 ⁰ _{-0.027}	18 H7 ^{+0.018} ₀	16 ^{+0.148} _{+0.010}	10±0.25	18 ^{+0.065} _{+0.030}	1 ^{-0.005} _{-0.065}	
DOB-700 □ 1615				15±0.25			
DOB-700 □ 1620				20±0.25			
DOB-700 □ 1625				25±0.25			
DOB-700 □ 1815	18 h8 ⁰ _{-0.027}	20 H7 ^{+0.021} ₀	18 ^{+0.151} _{+0.010}	15±0.25	20 ^{+0.075} _{+0.035}	1 ^{-0.005} _{-0.065}	
DOB-700 □ 1820				20±0.25			
DOB-700 □ 1825				25±0.25			
DOB-700 □ 2010	20 h8 ⁰ _{-0.033}	23 H7 ^{+0.021} ₀	20 ^{+0.161} _{+0.020}	10±0.25	23 ^{+0.075} _{+0.035}	1.5 ^{-0.01} _{-0.07}	
DOB-700 □ 2015				15±0.25			
DOB-700 □ 2020				20±0.25			
DOB-700 □ 2025				25±0.25			
DOB-700 □ 2030				30±0.25			
DOB-700 □ 2215	22 h8 ⁰ _{-0.033}	25 H7 ^{+0.021} ₀	22 ^{+0.161} _{+0.020}	15±0.25	25 ^{+0.075} _{+0.035}	1.5 ^{-0.01} _{-0.07}	6

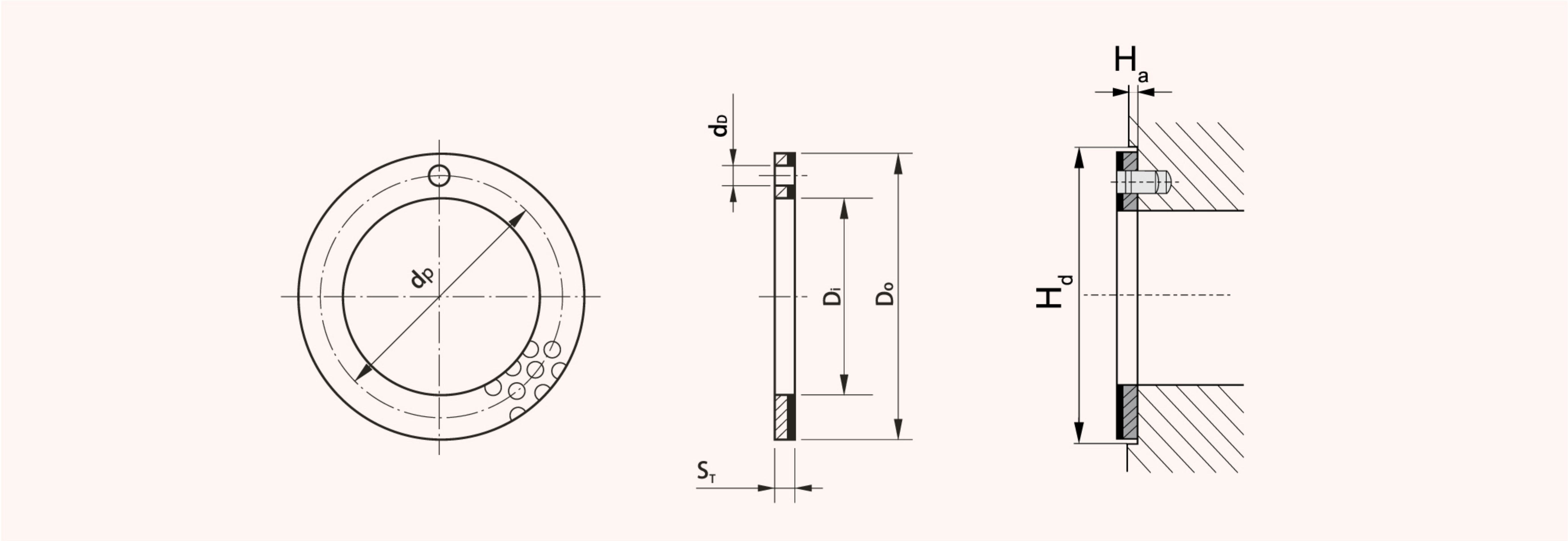
DOB-700 Series Bimetal Bushing

Metric Size

Designation	Shaft Dia Ø dj	Housing Ø DH	Installed Bushing I.D Ø d	High L	O.D. Ø D	Wall Thickness S _B	Oil hole ØH
DOB-700 □ 2220	22 h8 ⁰ _{-0.033}	25 H7 ^{+0.021} ₀	22 ^{+0.161} _{+0.020}	20±0.25	25 ^{+0.075} _{+0.035}	1.5 ^{-0.01} _{-0.07}	6
DOB-700 □ 2225				25±0.25			
DOB-700 □ 2230				30±0.25			
DOB-700 □ 2515	25 h8 ⁰ _{-0.033}	28 H7 ^{+0.021} ₀	25 ^{+0.161} _{+0.020}	15±0.25	28 ^{+0.075} _{+0.035}	1.5 ^{-0.01} _{-0.07}	
DOB-700 □ 2520				20±0.25			
DOB-700 □ 2525				25±0.25			
DOB-700 □ 2530				30±0.25			
DOB-700 □ 2815	28 h8 ⁰ _{-0.033}	32 H7 ^{+0.025} ₀	28 ^{+0.185} _{+0.040}	15±0.25	32 ^{+0.085} _{+0.045}	2 ^{-0.02} _{-0.08}	
DOB-700 □ 2820				20±0.25			
DOB-700 □ 2825				25±0.25			
DOB-700 □ 2830				30±0.25			
DOB-700 □ 3015	30 h8 ⁰ _{-0.033}	34 H7 ^{+0.025} ₀	30 ^{+0.185} _{+0.040}	15±0.25	34 ^{+0.085} _{+0.045}	2 ^{-0.02} _{-0.08}	
DOB-700 □ 3020				20±0.25			
DOB-700 □ 3025				25±0.25			
DOB-700 □ 3030				30±0.25			
DOB-700 □ 3040	32 h8 ⁰ _{-0.039}	36 H7 ^{+0.025} ₀	32 ^{+0.185} _{+0.040}	40±0.25	36 ^{+0.085} _{+0.045}	2 ^{-0.02} _{-0.08}	
DOB-700 □ 3220				20±0.25			
DOB-700 □ 3230				30±0.25			
DOB-700 □ 3240				40±0.25			
DOB-700 □ 3520	35 h8 ⁰ _{-0.039}	39 H7 ^{+0.025} ₀	35 ^{+0.185} _{+0.040}	20±0.25	39 ^{+0.085} _{+0.045}	2 ^{-0.02} _{-0.08}	
DOB-700 □ 3530				30±0.25			
DOB-700 □ 3540				40±0.25			
DOB-700 □ 3550				50±0.25			
DOB-700 □ 4020	40 h8 ⁰ _{-0.039}	44 H7 ^{+0.025} ₀	40 ^{+0.185} _{+0.040}	20±0.25	44 ^{+0.085} _{+0.045}	2 ^{-0.02} _{-0.08}	8
DOB-700 □ 4030				30±0.25			
DOB-700 □ 4040				40±0.25			
DOB-700 □ 4050				50±0.25			
DOB-700 □ 4530	45 h8 ⁰ _{-0.039}	50 H7 ^{+0.025} ₀	45 ^{+0.225} _{+0.080}	30±0.25	50 ^{+0.085} _{+0.045}	2.5 ^{-0.04} _{-0.10}	
DOB-700 □ 4540				40±0.25			
DOB-700 □ 4545				45±0.25			
DOB-700 □ 4550				50±0.25			

			Wall Thickness S _B	Outside Chamfer f ₁	Inner Chamfer f ₂
Label example			1.0	0.6±0.3	Max0.4
			1.5	0.6±0.4	0.4±0.3
Type	I.D.	High	2.0	1.2±0.4	0.6±0.3
DOB-700 □ 40		50	2.5	1.8±0.6	0.6±0.4

DOB-700 Series Bimetal Washer



Metric Size

Designation	I.D. ØD _i	O.D. ØD _o	Wall Thickness S _T	Middle diameter Ød _p	Pilot hole Ød _D	Assembling house ØH _d	Recess Depth H _a
DOB-700 □ W10	12 ^{+0.25} ₀	24 ⁰ _{-0.25}		18±0.12	2 ^{+0.375} _{-0.125}	24 ^{+0.12} ₀	1.0 ^{+0.20} _{-0.05}
DOB-700 □ W12	14 ^{+0.25} ₀	26 ⁰ _{-0.25}		20±0.12		26 ^{+0.12} ₀	
DOB-700 □ W14	16 ^{+0.25} ₀	30 ⁰ _{-0.25}		22±0.12		30 ^{+0.12} ₀	
DOB-700 □ W16	18 ^{+0.25} ₀	32 ⁰ _{-0.25}		25±0.12		32 ^{+0.12} ₀	
DOB-700 □ W18	20 ^{+0.25} ₀	36 ⁰ _{-0.25}		28±0.12	3 ^{+0.375} _{-0.125}	36 ^{+0.12} ₀	
DOB-700 □ W20	22 ^{+0.25} ₀	38 ⁰ _{-0.25}		30±0.12		38 ^{+0.12} ₀	
DOB-700 □ W22	24 ^{+0.25} ₀	42 ⁰ _{-0.25}		33±0.12		42 ^{+0.12} ₀	
DOB-700 □ W24	26 ^{+0.25} ₀	44 ⁰ _{-0.25}		35±0.12		44 ^{+0.12} ₀	
DOB-700 □ W25	28 ^{+0.25} ₀	48 ⁰ _{-0.25}		38±0.12	4 ^{+0.375} _{-0.125}	48 ^{+0.12} ₀	
DOB-700 □ W30	32 ^{+0.25} ₀	54 ⁰ _{-0.25}		43±0.12		54 ^{+0.12} ₀	
DOB-700 □ W35	38 ^{+0.25} ₀	62 ⁰ _{-0.25}		50±0.12		62 ^{+0.12} ₀	
DOB-700 □ W40	42 ^{+0.25} ₀	66 ⁰ _{-0.25}		54±0.12		66 ^{+0.12} ₀	
DOB-700 □ W45	48 ^{+0.25} ₀	74 ⁰ _{-0.25}	2 ⁰ _{-0.05}	61±0.12		74 ^{+0.12} ₀	1.5 ^{+0.20} _{-0.05}
DOB-700 □ W50	52 ^{+0.25} ₀	78 ⁰ _{-0.25}		65±0.12		78 ^{+0.12} ₀	

Label example

Type Shaft diameter
DOB-700 □ W 30

DOB090/092 Series Wrapped Bronze Bushing



Main factors that influence the service life of Bushing

- 1) PV Value
PV value is an effective criterion to calculate the service life of DOB090 & DOB092 series bushing. If required to enlonger the service life, the PV value must be reduced.
- 2) Quality of the Mating Surface
Service life of DOB090 & DOB092 can be obviously prolonged if its mating axis is made by alloy steel or hard chrome plated and with surface roughness Ra<0.63 & hardness more than HRC50
- 3) Environment Temperature
The higher working temperature is the factor of short life.

Structure Characteristics and Applications

DOB090 / DOB092 Series wrapped bronze bushing is made of tin-bronze material (CuSn8p). The inside surface of DOB090 is punched with diamond-type oil sockets , which are preserved for oil saving. The products have good anti-fatigue, anti-erosion & anti-abrasion, which widely applied in heavy load but low running velocity applications.

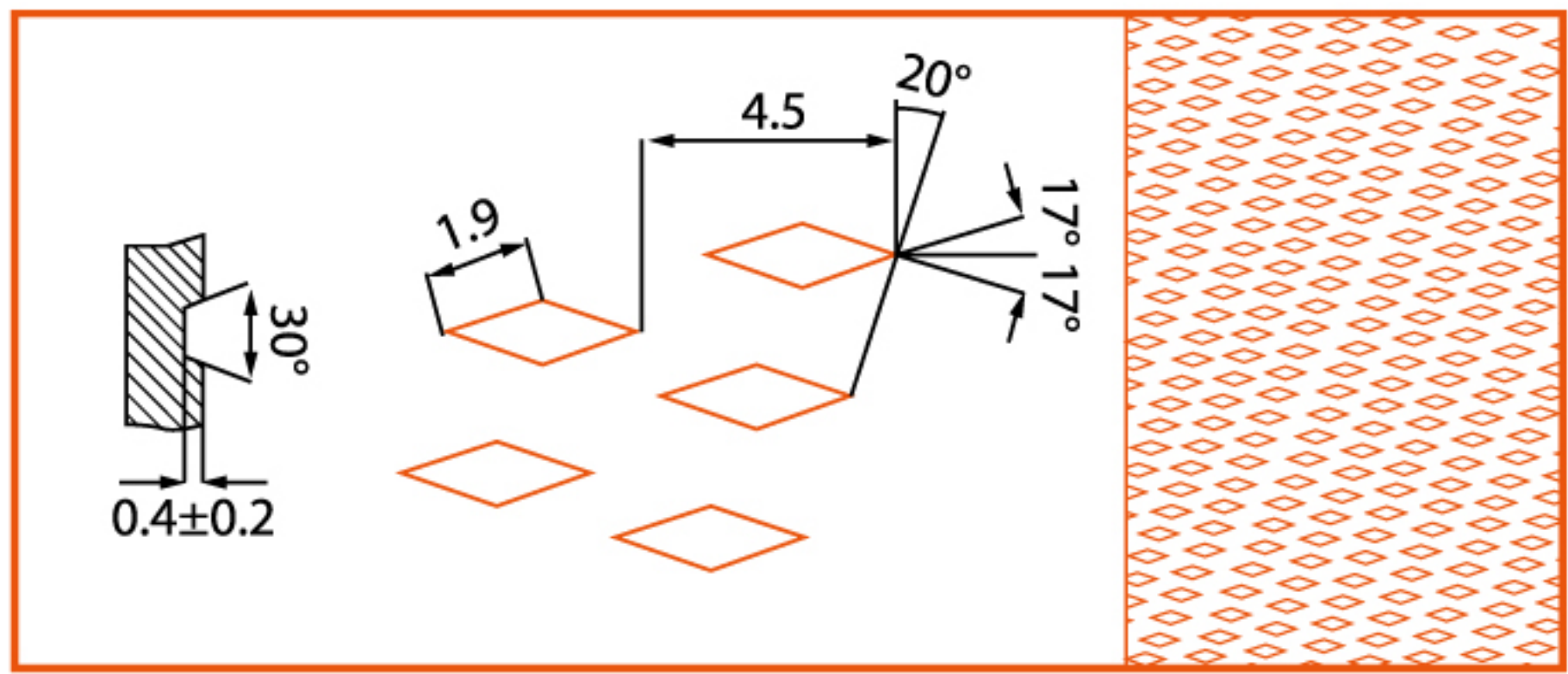
Alloy Chemical Composition

DOB090 / DOB092	Cu	Sn	P
	rest	7~9%	0.2~0.4%

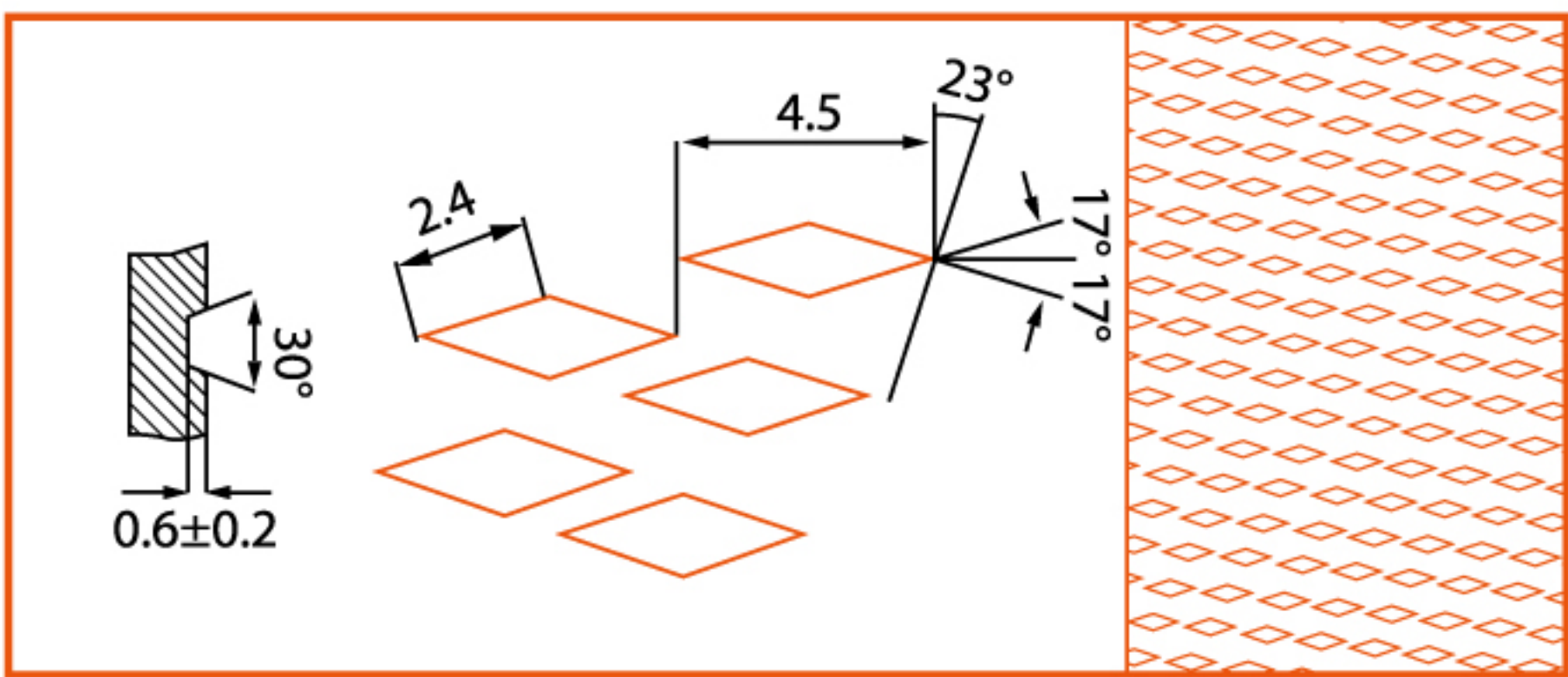
Physical and Mechanical Performance

Performance Index		Data
Max Dynamic Load		100N/mm ²
Max Linear Velocity (Grease)		2m/s
Max PV value (Grease)		2.8m/s
Tensile Strength		460N/mm ²
Yield Strength		280N/mm ²
Hardness		90~150HB
Mating Axis	Hardness	≥50HRC
	Roughness	0.4~1.0HRC
Working Temperature		-40~+150℃
Friction Coefficient		0.06~0.15μ
Heat Conducting Coefficient		58W/(mk)
Heat Expansion Coefficient		18.5×10 ⁻⁶ /K

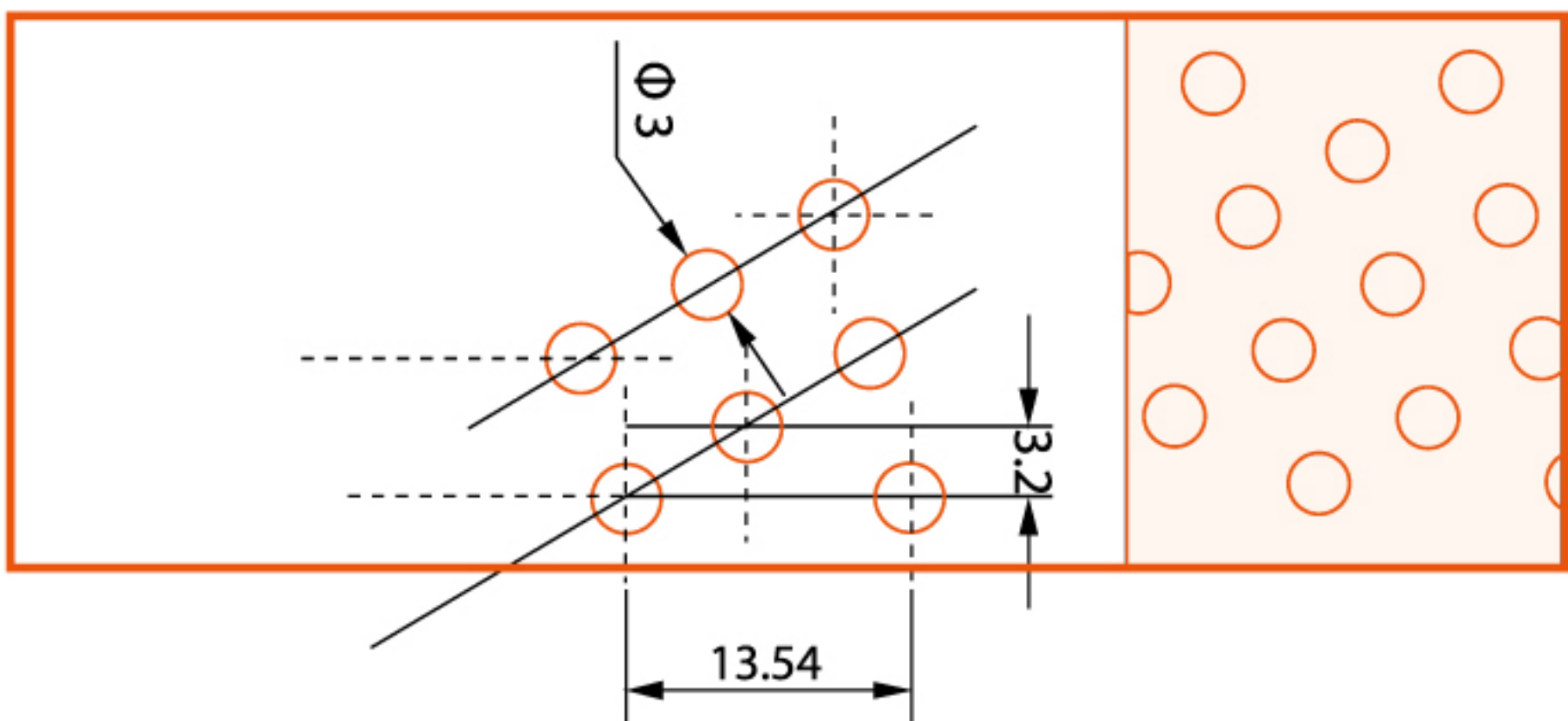
Oil sockets Types



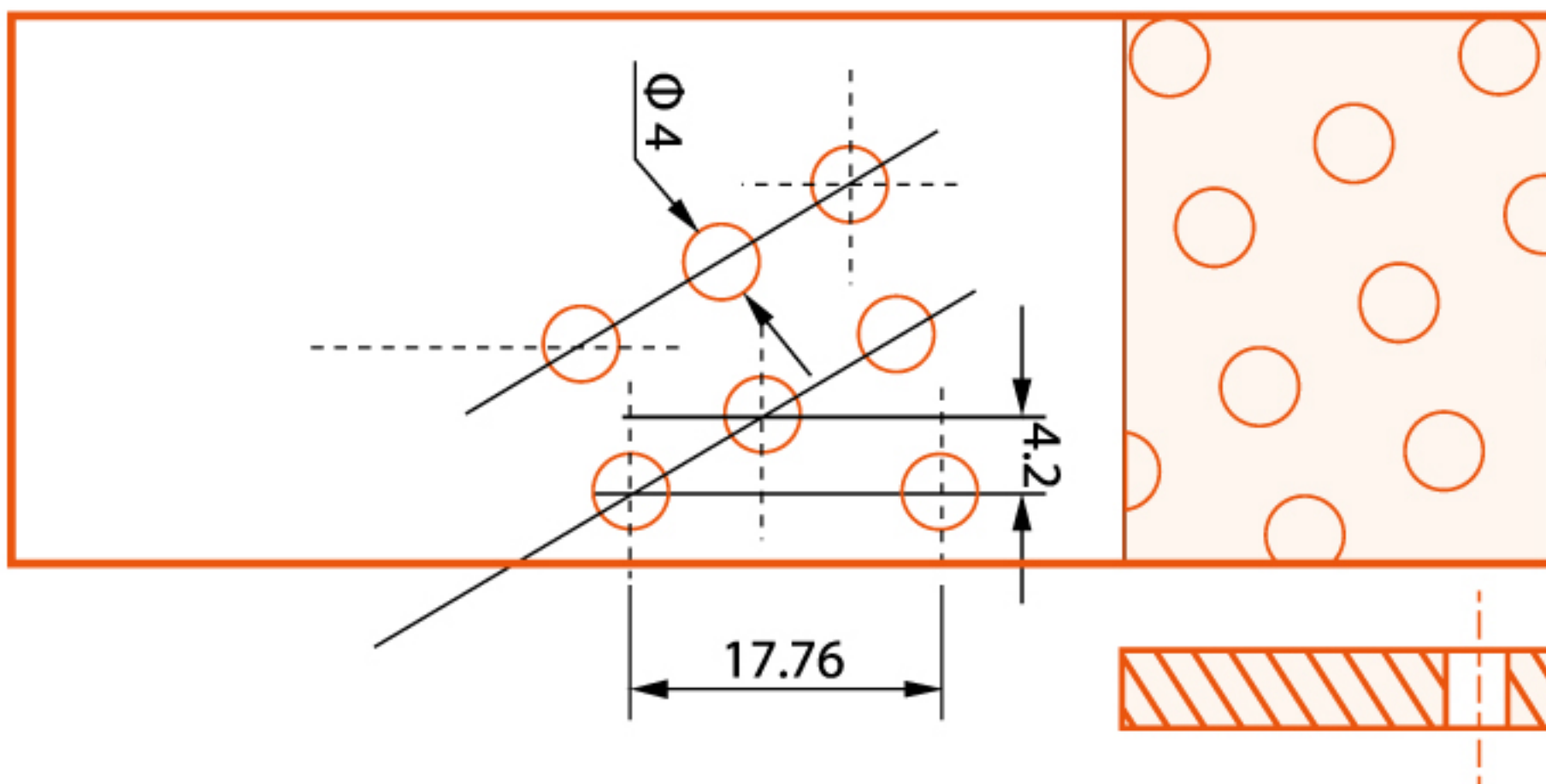
DOB090 Inside Diameter ≤ 22



DOB090 Inside Diameter > 22



DOB092 Inside Diameter ≤ 25



DOB092 Inside Diameter > 25

DOB090/092 Series Wrapped Bronze Bushing

DOB090 / DOB092 series wrapped bronze bushing, with diamond oil socket to preserve oil grease. It can be produced by different tin-bronze material and the surface can be produced with various types of oil socket and oil groove in different working condition, like our product DOB090, DOB902, DOB090G. The material structure, application fields, and technical parameter are as follows.

Grade		DOB090	DOB092	DOB080G	DOB090G
Data	Material	CuSn8P (Qsn8-0.3)	CuSn8P (Qsn8-0.3)	CuSn8P (Qsn8-0.3)	CuSn8P+graphite (Qsn8-0.3+graphite)
Various Types of DOB090/092					
Density g/cm ³		8.8	8.8	8.8	8.8
Max Dynamic Load N/mm ²		100	120	150	100
Max Linear Velocity (Grease) m/s		2	2.5	2.5	2.5
Max PV value Grease N/mm ² ·m/s		2.8	2.8	2.8	2.8
Pressure strength N/mm ²		>460	>460	>460	>460
Yield Strength N/mm ²		>280	>280	>280	>280
Hardness		90~150	90~150	90~150	90~150
Mating Axis	Hardness	≥50	≥50	≥50	≥50
	Roughness	0.4~1.0	0.4~1.0	0.4~1.0	0.4~1.0
Working Temperature ℃		-40~150	-40~150	-40~125	-40~150
Friction Coefficient		0.06~0.15	0.06~0.15	0.06~0.25	0.03~0.1
coefficient of heat conduction W/m·K		58	58	58	58
Linear expansion coefficient		18.5×10 ⁻⁶ /K	18.5×10 ⁻⁶ /K	18.5×10 ⁻⁶ /K	18.5×10 ⁻⁶ /K
Typical application		Application: hoisting, mining machinery, forest machinery, agricultural machinery etc.	Application: agricultural machinery forestry machinery, heavy duty construction machinery, etc.	It can protect the grease leak from the bushing, and prevent dust. Application: Agricultural	Application: starting motor hoisting machines and other construction machines, automobiles, tractors, trucks, machines tools and some mineral engines

DOB-500 SELF LUBRICATING COPPER BASE BUSHING

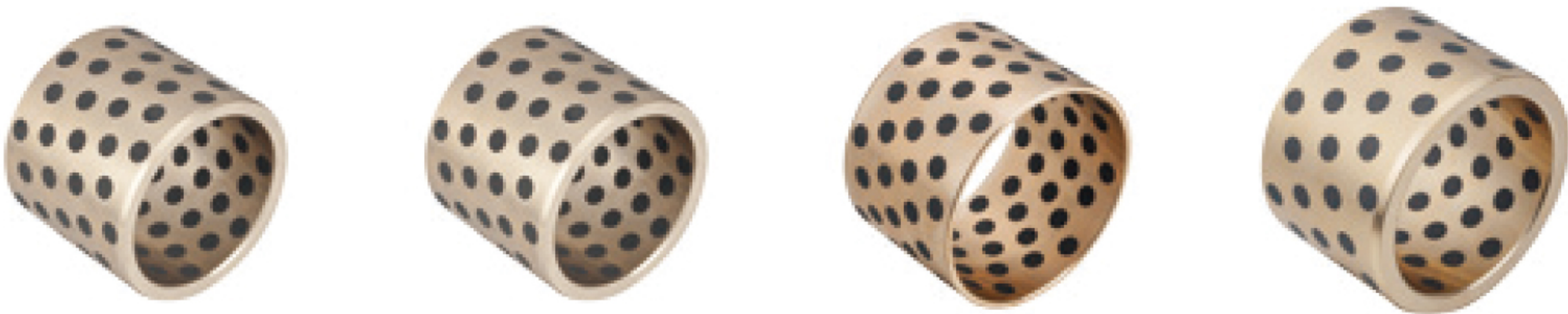
Our solid lubricating copper-based bushings are engineered for longevity and performance. The solid lubricant embedded within the copper matrix is systematically arranged to ensure consistent lubrication throughout the bushing’s service life, significantly reducing maintenance downtime and lubrication costs. This design enables our bushings to excel in environments where traditional lubrication might fail or is impractical, including high-temperature, high-load, and even underwater applications.

It is an ideal choice for industries seeking to enhance the operational efficiency of their equipment. Whether it’s in the automotive, aerospace, manufacturing, or renewable energy sectors, our bushings offer superior wear resistance, lower friction coefficients, and improved overall performance, ensuring your machinery runs smoother, longer, and more reliably.

Technical Data

Grade		DOB500	DOB501	DOB502	DOB503
Material		CuZn25Al5Mn4Fe3	CuAl10Ni5Fe4	CuSn5Pb5Zn5	CuSn12
Density g/cm ³		8	7.8	8.7	8.9
Hardness HB		>210	>150	>70	>90
Tensile strength N/mm ²		>750	>590	>240	>260
Yeild strength N/mm ²		>340	>260	>100	>140
Elongation %		>12	>8	>10	>7
Coefficient of linear expansion 10 ⁻⁵ /°C		2.2	1.6	1.8	1.8
Heat-conducting Coefficient W/(m.k)		38~55	38~55	46~63	50~68
Flexibility Coefficient KN/mm ²		100~140	90~110	85~115	90~120
Temp. Limits °C		-40~+200	-40~+350	-40~+250	-40~+250
Max. Dynamic Load N/mm ²		98	70	60	70
Max.speed m/s	Dry Lubrication	0.3	0.35	0.25	0.25
	Oil Lubrication	1.0	0.85	0.85	0.85
Max.PV N/mm ² *m/s	Dry Lubrication	1.65	1.25	1.0	1.25
	Oil Lubrication	3.25	2.45	2.45	2.8
Friction	Dry Lubrication	0.12~0.16	0.12~0.16	0.12~0.16	0.12~0.16
	Oil Lubrication	0.03~0.08	0.03~0.08	0.03~0.08	0.03~0.08

In addition to the standard product catalog is displayed, we provide non-standard product or to order according to customer requirements.



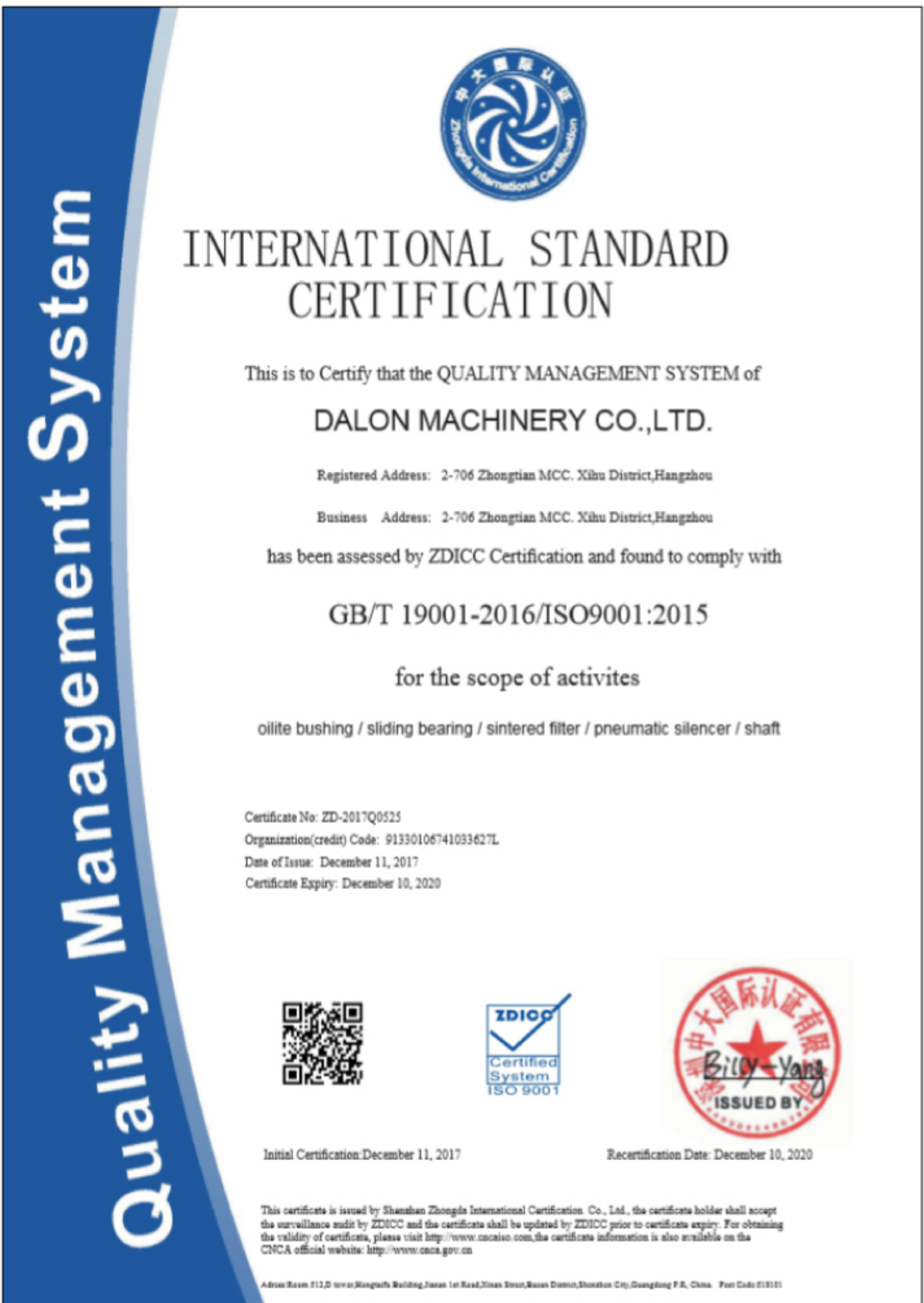
Production Equipments



Quality Certificates



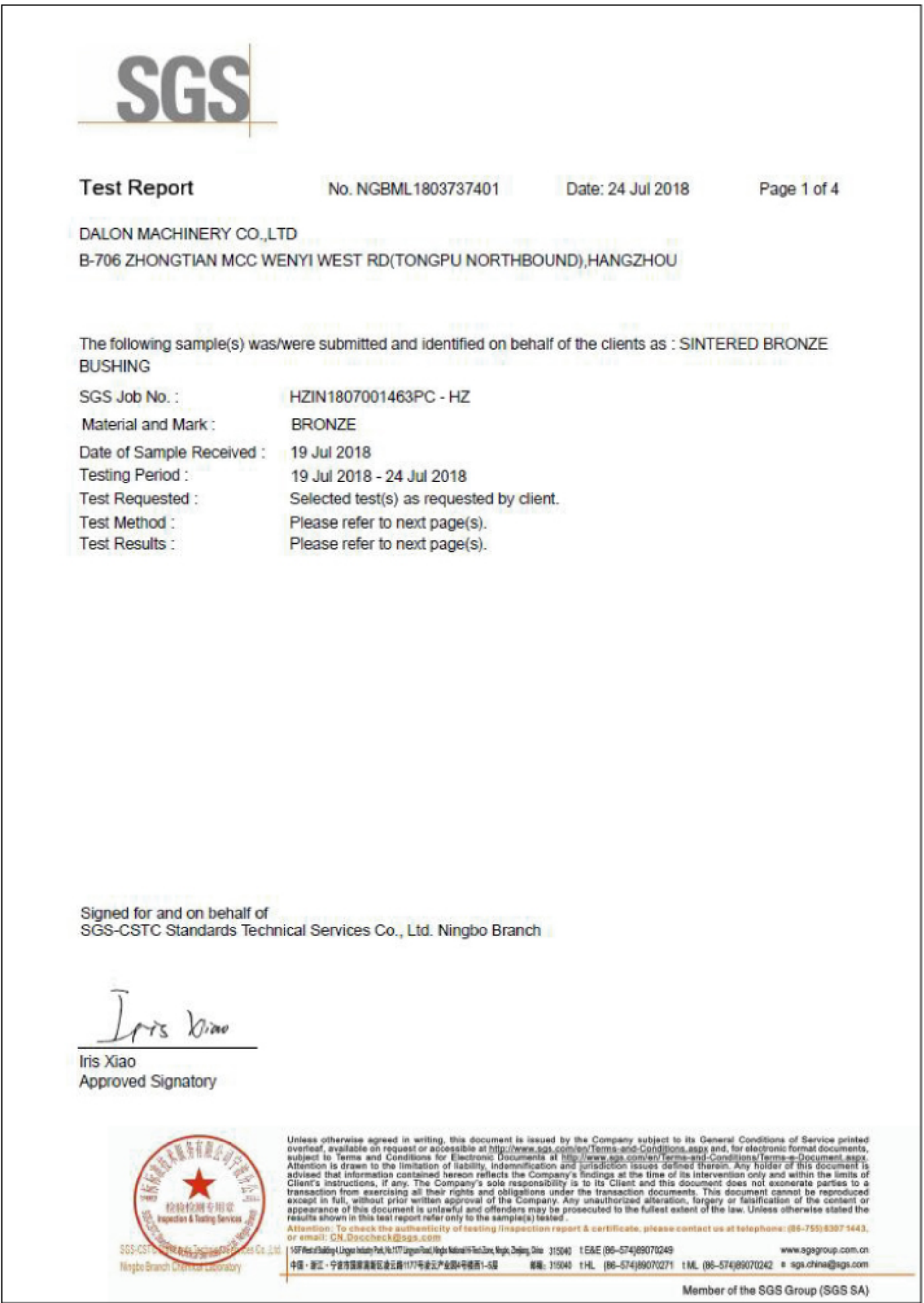
QMS/ISO9001:2015 CERTIFICATE



GB/T-19001-2016 QUALITY MANAGEMENT



MSDS SAFETY DATA CERTIFICATE



SGS CERTIFICATES



REACH TEST CERTIFICATE



DALON WEBSITE



DOB BUSHING

 OUR ADDRESS

B-706 ZHONGTIAN MCC
WENYI WEST ROAD
310012 HANGZHOU
ZHEJIANG CHINA

 CONTACT US

PHONE:+86-571-88836312
PHONE:+86-571-88365029
FAX:+86-571-88396427

 WEB & EMAIL

<https://www.dalonmachinery.com>
eMail: info@dalonmachinery.com
eMail: info@topchoicehz.com