

Oiles 500SP₅ Special high-strength brass bearings with embedded solid lubricant



Feature

- Bears higher loads than the 500SP₁.
- Demonstrates superior wear resistance under high-load and low-speed applications.

Service range	500SP ₅ SL1	
Lubrication condition	Dry	periodic lubrication
Service temperature range °C	-40~+150	
Allowable max. pressure P N/mm ² {kgf/cm ² }	49 (170) {500 (1,735)}	
Allowable max. velocity V m/s {m/min}	0.25 {15}	0.50 {30}
Allowable max. PV value N/mm ² · m/s {kgf/cm ² · m/min}	1.65 {1,010}	3.25 {1,990}

The values in parentheses are static bearing pressures, which are the bearing pressures in applications with no motion or very small motion (≤ 0.0017 m/s [0.1 m/min]).

※Above values are applicable when solid lubricants SL1 are used.

Mechanical properties

Density	—	g/cm ³	7.8
Tensile strength	JIS Z 2241	N/mm ² {kgf/mm ² }	785 {80}
Tensile elongation at break	JIS Z 2241	%	10
Compressive strength	—	N/mm ² {kgf/mm ² }	392 {40} (Note)
Hardness	JIS Z 2243	HBW	235
Modulus of longitudinal elasticity	—	N/mm ² {kgf/mm ² }	98,000 {10,000}
Co-efficient of linear expansion	—	$\times 10^{-5} \text{ } ^\circ\text{C}^{-1}$	2.13

※The values shown above are typical values, not the standard values.

(Note) Compressive strength is 0.1%

▲ Please indicate the type of motion (rotation, reciprocating, rotation & reciprocating) for custom-made products.

▲ Solid lubricant, SL401 and SL403 are not lead-free.

SP5B Oiles 500SP₅ SL1 Ultrathin Bushings



A long-life bearing with compact design and high durability.

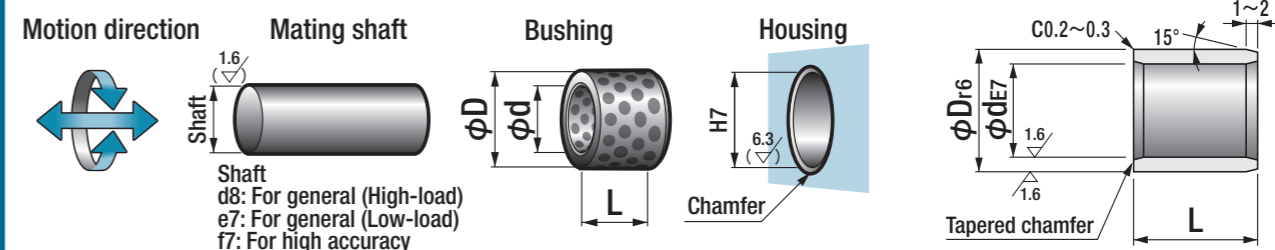
Its wall thickness is 33-50% thinner comparing to #500SP1-SL1 "SPB series (P187)".

As it is made of OILES original metal material that has high strength and wear resistance, it has a long operating life inspite of possessing a thin wall.

Specify Part No. by required I.D., O.D. and Length.

(e.g.) I.D. is 10mm, O.D. is 12mm, and length is 15mm.

SP5B - 101215
Part No.



I.D.		O.D.		Thickness mm	Length L						I.D. tolerance after press fitting (reference)		
φd	Tolerance	φD	Tolerance		8	10	12	15	16	20		25	30
6	+0.032 +0.020	8	+0.028 +0.019	1.0	060808	060810	060812	060815	060816				+0.016 +0.004
8	+0.040 +0.025	10	+0.028 +0.019	1.0	081008	081010	081012	081015	081016				+0.024 +0.009
10	+0.040 +0.025	12	+0.034 +0.023	1.0		101210	101212	101215	101216				+0.021 +0.006
12	+0.050 +0.032	15	+0.034 +0.023	1.5			121512	121515	121516	121520			+0.031 +0.013
15	+0.050 +0.032	18	+0.034 +0.023	1.5			151812	151815	151816	151820			+0.031 +0.013
16	+0.050 +0.032	20	+0.041 +0.028	2.0			162012	162015	162016	162020	162025		+0.026 +0.008
20	+0.061 +0.040	24	+0.041 +0.028	2.0				202415	202416	202420	202425	202430	+0.037 +0.016
25	+0.061 +0.040	29	+0.041 +0.028	2.0					252916	252920	252925	252930	+0.037 +0.016

※The I.D. tolerance is reference value as press fitting into H7 housing.