

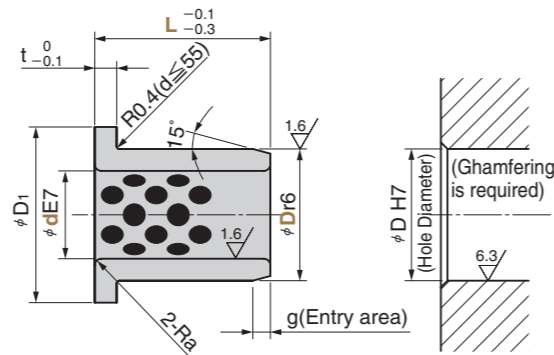
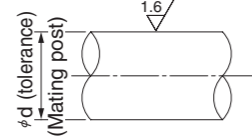
Oiless Bush

Bronze · Flange Type

SO#50SP2

RoHS

SOBF



● Sliding Direction



● Mating post tolerance

- d8: General use (high load)
- e7: General use (light load)
- f7: High precision

● Other operating conditions and characteristics

- Can be used in the atmosphere and fresh water (on condition).
- Good performance in operation under high load and at low speed.

⚠ When the product is used at high temperature (150°C or more), the embedding specification of solid lubricant is different. Please contact us for details.

Material
Base Bronze with Graphite (SP2)
Solid lubricant (GR-1)

■ Operation Range

| Lubricant Type | Lubricating Condition | Environment Condition | Max. Allowable Load P N/mm ² | Max. Allowable Sliding Speed V m/min | Max. Allowable PV value N/mm ² · m/min | Operation Range Temperature °C |
|----------------|------------------------------|-----------------------|---|--------------------------------------|---|--------------------------------|
| GR-1 | No Lubrication | Atmosphere | 100 | 15 | 150 | -50 ~ +300 |
| | Regular lubrication (Grease) | | | 30 | 200 | -50 ~ +150 |

■ Physical Properties

| Specific Gravity g/cm ³ | Hardness HB | Elongation % | Tensile Strength N/mm ² | Linear Expansion Coefficient ×10 ⁻⁵ /°C |
|------------------------------------|-------------|--------------|------------------------------------|--|
| 7.9 | 210 or more | 12 or more | 755 or more | 1.9 |

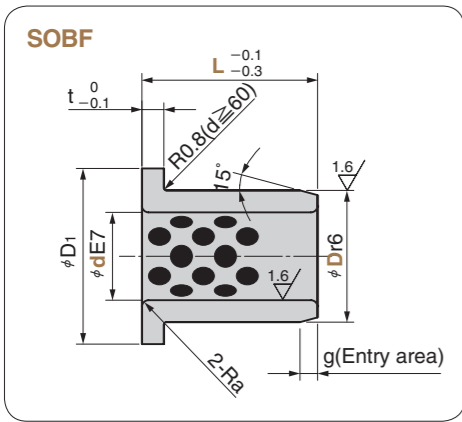
Order **Catalog No.** **d** - **D** - **L**
SOBF 18 - 24 - 30

| d E7 | D r6 | D ₁ | t | Ra | g | Tolerance d after press-fit | Catalog No. | d | D | L |
|------|------|----------------|-----|----|---|-----------------------------|-------------|----|----|----|
| 8 | 12 | 20 | 0.5 | 1 | 1 | +0.025 +0.009 | SOBF | 8 | 12 | 10 |
| | | | | | | | | 15 | | |
| 10 | 14 | 22 | 2 | 2 | 2 | +0.022 +0.006 | SOBF | 10 | 14 | 15 |
| | | | | | | | | 17 | | |
| | | | | | | | | 20 | | |
| 12 | 18 | 25 | 2 | 2 | 2 | +0.035 +0.016 | SOBF | 12 | 18 | 20 |
| | | | | | | | | 25 | | |
| | | | | | | | | 30 | | |
| 13 | 19 | 26 | 1 | 2 | 2 | +0.031 +0.012 | SOBF | 13 | 19 | 15 |
| | | | | | | | | 20 | | |
| 14 | 20 | 27 | 3 | 3 | 3 | +0.050 +0.032 | SOBF | 14 | 20 | 15 |
| | | | | | | | | 25 | | |
| | | | | | | | | 20 | | |
| 15 | 21 | 28 | 3 | 3 | 3 | +0.041 +0.028 | SOBF | 15 | 21 | 15 |
| | | | | | | | | 20 | | |
| | | | | | | | | 25 | | |
| 16 | 22 | 29 | 3 | 3 | 3 | +0.028 +0.009 | SOBF | 16 | 22 | 15 |
| | | | | | | | | 18 | | |
| | | | | | | | | 20 | | |

| d E7 | D r6 | D ₁ | t | Ra | g | Tolerance d after press-fit | Catalog No. | d | D | L |
|------|------|----------------|---|----|---|-----------------------------|-------------|----|----|----|
| 16 | 22 | 29 | 3 | 1 | 1 | +0.028 +0.009 | SOBF | 16 | 22 | 23 |
| | | | | | | | | 30 | | |
| | | | | | | | | 35 | | |
| | | | | | | | | 40 | | |
| 18 | 24 | 32 | 3 | 1 | 1 | +0.041 +0.028 | SOBF | 18 | 24 | 20 |
| | | | | | | | | 30 | | |
| 20 | 30 | 40 | 2 | 2 | 2 | +0.042 +0.020 | SOBF | 20 | 30 | 15 |
| | | | | | | | | 20 | | |
| | | | | | | | | 25 | | |
| | | | | | | | | 30 | | |
| | | | | | | | | 35 | | |
| | | | | | | | | 40 | | |
| 25 | 35 | 45 | 2 | 2 | 2 | +0.034 +0.012 | SOBF | 25 | 35 | 20 |
| | | | | | | | | 25 | | |
| | | | | | | | | 30 | | |
| | | | | | | | | 35 | | |
| | | | | | | | | 40 | | |
| | | | | | | | | 50 | | |
| 30 | 40 | 50 | 2 | 2 | 2 | +0.050 +0.034 | SOBF | 30 | 40 | 25 |
| | | | | | | | | 30 | | |
| | | | | | | | | 35 | | |
| | | | | | | | | 40 | | |
| | | | | | | | | 40 | | |
| | | | | | | | | 50 | | |
| 35 | 45 | 60 | 5 | 2 | 2 | +0.048 +0.022 | SOBF | 35 | 45 | 30 |
| | | | | | | | | 35 | | |
| | | | | | | | | 40 | | |
| | | | | | | | | 40 | | |
| | | | | | | | | 50 | | |
| | | | | | | | | 50 | | |
| 40 | 50 | 65 | 2 | 2 | 2 | +0.045 +0.019 | SOBF | 40 | 50 | 35 |
| | | | | | | | | 40 | | |
| | | | | | | | | 45 | | |
| | | | | | | | | 50 | | |
| | | | | | | | | 50 | | |
| | | | | | | | | 50 | | |
| 45 | 55 | 70 | 2 | 2 | 2 | +0.038 +0.012 | SOBF | 45 | 55 | 30 |
| | | | | | | | | 45 | | |
| | | | | | | | | 50 | | |
| | | | | | | | | 50 | | |
| | | | | | | | | 50 | | |
| | | | | | | | | 60 | | |
| 50 | 60 | 75 | 3 | 3 | 3 | +0.060 +0.041 | SOBF | 50 | 60 | 30 |
| | | | | | | | | 35 | | |
| | | | | | | | | 40 | | |
| 55 | 65 | 80 | 2 | 2 | 3 | +0.075 +0.050 | SOBF | 55 | 65 | 40 |
| | | | | | | | | 40 | | |
| | | | | | | | | 60 | | |

Oilless Bush Bronze · Flange Type SO#50SP2

RoHS



Order **Catalog No.** **SOBF** **d** - **D** - **L**
 90 - 110 - 60

| d | E7 | D | r6 | D ₁ | t | Ra | g | Tolerance d after press-fit | Catalog No. | d | D | L |
|-----|------------------|-----|------------------|----------------|-----|----|---|-----------------------------|-------------|-----|-----|-----|
| 60 | | 75 | +0.062 +0.043 | 90 | | | | +0.052 +0.021 | SOBF | 60 | 75 | 40 |
| | | | | | 7.5 | | | | | 75 | 80 | 50 |
| 70 | +0.090 +0.060 | 85 | | 105 | | | | | | 80 | 100 | 60 |
| | | | +0.073 +0.051 | | | | | +0.045 +0.014 | | 100 | 100 | 80 |
| 80 | | 100 | | 120 | | 3 | 3 | | | 110 | 120 | 80 |
| | | | | | | | | | | 120 | 120 | 100 |
| 90 | | 110 | | 130 | 10 | | | | | 130 | 130 | 60 |
| | | | +0.076 +0.054 | | | | | +0.059 +0.023 | | 140 | 140 | 80 |
| 100 | +0.107 +0.072 | 120 | | 150 | | | | | | 150 | 150 | 80 |
| | | | | | | | | | | 160 | 160 | 100 |
| 120 | | 140 | +0.088 +0.063 | 170 | | | | +0.051 +0.015 | | 170 | 170 | 80 |
| | | | | | | | | | | 180 | 180 | 100 |

Operation Range (SO#50SP2)


| Lubricant Type | Lubricating Condition | Environment Condition | Max. Allowable Load P N/mm ² | Max. Allowable Sliding Speed V m/min | Max. Allowable PV value N/mm ² ·m/min | Operation Range Temperature °C |
|----------------|-----------------------------|-----------------------|---|--------------------------------------|--|--------------------------------|
| GR-1 | No lubrication | Atmosphere | 100 | 15 | 150 | -50~+300 |
| | Regular lubrication(Grease) | | | 30 | 200 | -50~+150 |

Physical Properties (SO#50SP2)

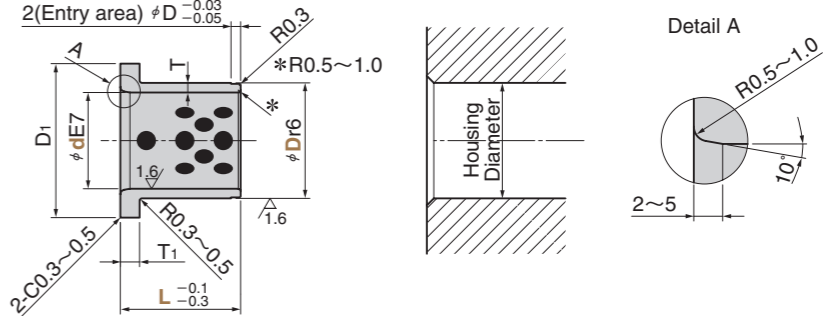
| Specific Gravity g/cm ³ | Hardness HB | Elongation % | Tensile Strength N/mm ² | Linear Expansion Coefficient ×10 ⁻⁵ /°C |
|------------------------------------|-------------|--------------|------------------------------------|--|
| 7.9 | 210 or more | 12 or more | 755 or more | 1.9 |


Oilless Bush Bronze · Thin Flange Type SO#50SP2

RoHS



SOBFU



● Sliding Direction 

- Mating post tolerance
 - d8: General use (high load)
 - e7: General use (light load)
 - f7: High precision
- Other operating conditions and characteristics
 - Can be used in the atmosphere and fresh water (on condition).
 - Good performance in operation under high load and at low speed.

⚠ Operation temperature is 150°C or less

Material
 Base Bronze with Graphite (SP2)
 Solid lubricant (GR-1)

| d | E7 | D | r6 | D ₁ | T | T ₁ | Tolerance d after press-fit | Catalog No. | d | D | L |
|----|------------------|----|------------------|----------------|-----|----------------|-----------------------------|-------------|----|----|----|
| 5 | | 7 | | 11 | | | | SOBFU | 5 | 7 | 10 |
| | | | | | | | +0.017 +0.005 | | 6 | 8 | 10 |
| 6 | +0.032 +0.020 | 8 | +0.028 +0.019 | 12 | | | | | 7 | 9 | 12 |
| | | | | | | | | | 8 | 10 | 15 |
| 8 | | 10 | | 14 | 1 | 2 | +0.023 +0.008 | | 9 | 11 | 12 |
| | | | | | | | | | 10 | 12 | 15 |
| 10 | +0.040 +0.025 | 12 | | 16 | | | +0.020 +0.004 | | 11 | 13 | 12 |
| | | | | | | | | | 12 | 14 | 15 |
| 12 | | 15 | | 21 | | | | | 13 | 15 | 20 |
| | | | +0.034 +0.023 | | | | | | 14 | 16 | 25 |
| 13 | | 16 | | 22 | 1.5 | | +0.030 +0.011 | | 15 | 17 | 12 |
| | | | | | | | | | 16 | 18 | 15 |
| 15 | +0.050 +0.032 | 18 | | 24 | | 3 | | 17 | 19 | 12 | |
| | | | | | | | | 18 | 20 | 15 | |
| 16 | | 20 | | 26 | | | +0.025 +0.006 | 19 | 21 | 12 | |
| | | | | | | | | 20 | 22 | 15 | |
| 20 | | 24 | +0.041 +0.028 | 32 | 2 | | | 21 | 23 | 15 | |
| | | | | | | | | 22 | 24 | 20 | |
| 25 | +0.061 +0.040 | 29 | | 37 | | 4 | +0.036 +0.014 | 23 | 25 | 20 | |
| | | | | | | | | 24 | 26 | 25 | |
| 30 | | 34 | +0.050 +0.034 | 42 | | | +0.031 +0.009 | 25 | 27 | 30 | |
| | | | | | | | | 26 | 28 | 30 | |
| | | | | | | | | 27 | 29 | 40 | |
| | | | | | | | | 28 | 30 | 40 | |
| | | | | | | | | 29 | 31 | 50 | |
| | | | | | | | | 30 | 32 | 50 | |

Order **Catalog No.** **SOBFU** **d** - **D** - **L**
 20 - 24 - 30