

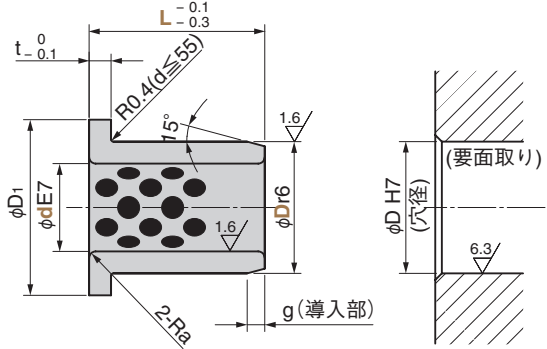
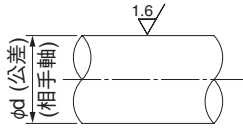
# オイルレスブッシュ

銅合金フランジタイプ

SO#50SP2



## SOBF



●相手軸公差

d8 : 一般用 (高負荷)  
e7 : 一般用 (軽負荷)  
f7 : 高精度用

●その他の使用条件・特性

- 大気中、淡水中 (条件付) にて使用できます。
- 高荷重、低速運転で性能を発揮します。

▲ 使用温度は+150℃以下です。+150℃を超える場合は潤滑剤の埋設仕様が異なります。営業までご相談ください。

材質 母材 銅合金(SO-2)  
固体潤滑剤 (GR-1)

## 使用範囲

| 潤滑剤の種類 | 給油条件     | 環境条件 | 許容最高面圧 P<br>N/mm <sup>2</sup> | 許容最高速度 V<br>m/min | 許容最高 PV 値<br>N/mm <sup>2</sup> · m/min | 使用温度範囲<br>℃ |
|--------|----------|------|-------------------------------|-------------------|--|-------------|
| GR-1   | 無給油      | 大気中  | 100                           | 15                | 150                                    | -50 ~ +300  |
|        | 定期給油 (脂) |      |                               | 30                | 200                                    | -50 ~ +150  |

## 物性

| 比重  | 硬さ<br>HB | 伸び<br>% | 引張強さ<br>N/mm <sup>2</sup> | 線膨張係数<br>× 10 <sup>-5</sup> /℃ |
|-----|----------|---------|---------------------------|--------------------------------|
| 7.9 | 210以上    | 12以上    | 755以上                     | 1.9                            |



Order

Catalog No.

SOBF

d

18

-

D

24

-

L

30

※圧入後 d 公差は参考値です。

| d E7 | D r6 | D <sub>1</sub> | t | Ra  | g | 圧入後 d 公差         | Catalog No. | d  | D  | L  |
|------|------|----------------|---|-----|---|------------------|-------------|----|----|----|
| 8    | 12   | 20             | 1 | 0.5 | 1 | +0.025<br>+0.009 | SOBF        | 8  | 12 | 10 |
|      |      |                |   |     |   |                  |             | 12 | 15 | 10 |
|      |      |                |   |     |   |                  |             | 15 | 10 | 12 |
| 10   | 14   | 22             | 2 | 0.4 | 1 | +0.022<br>+0.006 | SOBF        | 10 | 14 | 15 |
|      |      |                |   |     |   |                  |             | 15 | 17 | 20 |
|      |      |                |   |     |   |                  |             | 20 | 10 | 12 |
| 12   | 18   | 25             | 3 | 0.4 | 2 | +0.035<br>+0.016 | SOBF        | 12 | 18 | 15 |
|      |      |                |   |     |   |                  |             | 15 | 20 | 25 |
|      |      |                |   |     |   |                  |             | 20 | 30 | 10 |
| 13   | 19   | 26             | 3 | 1   | 2 | +0.031<br>+0.012 | SOBF        | 13 | 19 | 15 |
|      |      |                |   |     |   |                  |             | 15 | 20 | 25 |
|      |      |                |   |     |   |                  |             | 20 | 30 | 10 |
| 14   | 20   | 27             | 3 | 0.4 | 2 | +0.028<br>+0.009 | SOBF        | 14 | 20 | 15 |
|      |      |                |   |     |   |                  |             | 15 | 20 | 25 |
|      |      |                |   |     |   |                  |             | 20 | 10 | 12 |
| 15   | 21   | 28             | 3 | 0.4 | 2 | +0.028<br>+0.009 | SOBF        | 15 | 21 | 15 |
|      |      |                |   |     |   |                  |             | 15 | 20 | 25 |
|      |      |                |   |     |   |                  |             | 20 | 30 | 10 |

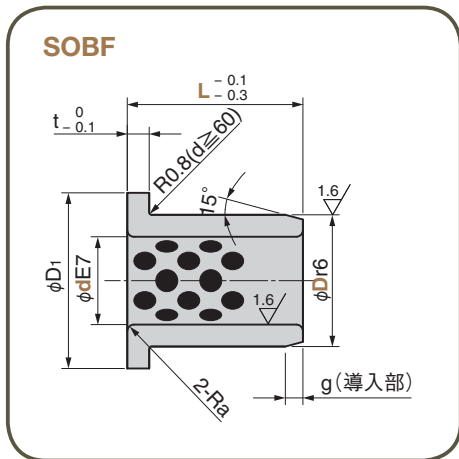
※圧入後d公差は参考値です。

| d    | E7               | D  | r6               | D1 | t   | Ra | g | 圧入後d公差           | Catalog No. | d    | D  | L  |
|------|------------------|----|------------------|----|-----|----|---|------------------|-------------|------|----|----|
|      |                  |    |                  |    |     |    |   |                  |             |      |    | 12 |
|      |                  |    |                  |    |     |    |   |                  |             |      |    | 15 |
|      |                  |    |                  |    |     |    |   |                  |             |      |    | 18 |
|      |                  |    |                  |    |     |    |   |                  |             |      |    | 20 |
| 16   |                  | 22 |                  | 29 |     |    |   |                  |             | 16   | 22 | 23 |
|      |                  |    |                  |    |     |    |   |                  |             |      |    | 25 |
|      |                  |    |                  |    |     |    |   |                  |             |      |    | 30 |
|      | +0.050<br>+0.032 |    |                  |    | 3   | 1  |   | +0.028<br>+0.009 |             |      |    | 35 |
|      |                  |    |                  |    |     |    |   |                  |             |      |    | 40 |
|      |                  |    | +0.041<br>+0.028 |    |     |    |   |                  |             |      |    | 15 |
|      |                  |    |                  |    |     |    |   |                  |             |      |    | 20 |
| 18   |                  | 24 |                  | 32 |     |    |   |                  |             | 18   | 24 | 25 |
|      |                  |    |                  |    |     |    |   |                  |             |      |    | 30 |
|      |                  |    |                  |    |     |    |   |                  |             |      |    | 35 |
|      |                  |    |                  |    |     |    |   |                  |             |      |    | 40 |
|      |                  |    |                  |    |     |    |   |                  |             |      |    | 15 |
|      |                  |    |                  |    |     |    |   |                  |             |      |    | 20 |
| 20   |                  | 30 |                  | 40 |     | 2  |   | +0.042<br>+0.020 |             | 20   | 30 | 25 |
|      |                  |    |                  |    |     |    |   |                  |             |      |    | 30 |
|      |                  |    |                  |    |     |    |   |                  |             |      |    | 35 |
|      |                  |    |                  |    |     |    |   |                  |             |      |    | 40 |
|      |                  |    |                  |    |     | 1  |   |                  |             |      |    | 15 |
|      |                  |    |                  |    |     |    |   |                  |             |      |    | 20 |
|      |                  |    |                  |    |     |    |   |                  |             |      |    | 25 |
| 25   | +0.061<br>+0.040 | 35 |                  | 45 |     | 2  |   |                  |             | 25   | 35 | 30 |
|      |                  |    |                  |    |     |    |   |                  |             |      |    | 35 |
|      |                  |    |                  |    |     |    |   |                  |             |      |    | 40 |
|      |                  |    |                  |    |     |    |   | +0.034<br>+0.012 |             |      |    | 50 |
|      |                  |    |                  |    |     | 1  | 2 |                  |             |      |    | 20 |
|      |                  |    |                  |    |     |    |   |                  |             |      |    | 25 |
| 30   |                  |    |                  |    |     |    |   |                  |             | 30   | 40 | 30 |
|      |                  |    |                  |    |     |    |   |                  |             |      |    | 35 |
|      |                  | 40 |                  | 50 |     |    |   |                  | SOBF        |      |    | 40 |
|      |                  |    |                  |    |     |    |   |                  |             |      |    | 50 |
|      |                  |    |                  |    |     |    |   |                  |             |      |    | 20 |
| 31.5 |                  |    | +0.050<br>+0.034 |    |     | 2  |   | +0.050<br>+0.025 |             | 31.5 | 40 | 30 |
|      |                  |    |                  |    |     |    |   |                  |             |      |    | 35 |
|      |                  |    |                  |    | 5   |    |   |                  |             |      |    | 40 |
|      |                  |    |                  |    |     |    |   |                  |             |      |    | 20 |
|      |                  |    |                  |    |     |    |   |                  |             |      |    | 25 |
| 35   |                  | 45 |                  | 60 |     |    |   | +0.048<br>+0.022 |             | 35   | 45 | 30 |
|      |                  |    |                  |    |     |    |   |                  |             |      |    | 35 |
|      |                  |    |                  |    |     |    |   |                  |             |      |    | 40 |
|      |                  |    |                  |    |     |    |   |                  |             |      |    | 50 |
|      |                  |    |                  |    |     | 1  |   |                  |             |      |    | 20 |
|      |                  |    |                  |    |     |    |   |                  |             |      |    | 25 |
| 40   | +0.075<br>+0.050 | 50 |                  | 65 |     |    |   | +0.045<br>+0.019 |             | 40   | 50 | 30 |
|      |                  |    |                  |    |     |    |   |                  |             |      |    | 35 |
|      |                  |    |                  |    |     |    |   |                  |             |      |    | 40 |
|      |                  |    |                  |    |     |    |   |                  |             |      |    | 50 |
|      |                  |    |                  |    |     | 2  |   |                  |             |      |    | 30 |
| 45   |                  | 55 |                  | 70 |     |    |   |                  |             | 45   | 55 | 35 |
|      |                  |    |                  |    |     |    |   |                  |             |      |    | 40 |
|      |                  |    |                  |    |     |    |   |                  |             |      |    | 50 |
|      |                  |    |                  |    |     |    |   | +0.038<br>+0.012 |             |      |    | 60 |
|      |                  |    | +0.060<br>+0.041 |    |     |    |   |                  |             |      |    | 30 |
|      |                  |    |                  |    |     |    |   |                  |             |      |    | 35 |
| 50   |                  | 60 |                  | 75 |     |    |   |                  |             | 50   | 60 | 40 |
|      |                  |    |                  |    |     |    |   |                  |             |      |    | 50 |
|      |                  |    |                  |    |     | 3  | 3 |                  |             |      |    | 60 |
|      |                  |    |                  |    |     |    |   |                  |             |      |    | 40 |
| 55   |                  | 65 |                  | 80 |     | 2  | 2 | +0.053<br>+0.022 |             | 55   | 65 | 60 |
|      |                  |    |                  |    |     |    | 3 |                  |             |      |    | 40 |
|      | +0.090<br>+0.060 |    |                  |    |     |    |   |                  |             |      |    | 60 |
| 60   |                  | 75 | +0.062<br>+0.043 | 90 | 7.5 | 3  | 3 | +0.052<br>+0.021 |             | 60   | 75 | 40 |
|      |                  |    |                  |    |     |    |   |                  |             |      |    | 50 |
|      |                  |    |                  |    |     |    |   |                  |             |      |    | 80 |

# オイルレスブッシュ

銅合金フランジタイプ

SO#50SP2



Order

Catalog No.

SOBF

d

90

D

110

L

60

▲ d=130、140、150、160は受注生産です。

※圧入後d公差は参考値です。

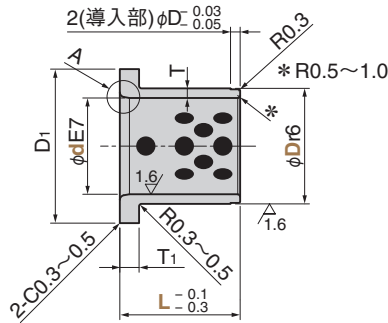
| d E7 | D r6                    | D <sub>1</sub>          | t   | Ra | g | 圧入後d公差           | Catalog No. | d   | D   | L          |
|------|-------------------------|-------------------------|-----|----|---|------------------|-------------|-----|-----|------------|
| 65   | 80<br>+0.062<br>+0.043  | 95                      |     |    |   | +0.055<br>+0.025 |             | 65  | 80  | 60         |
| 70   | 85                      | 105                     | 7.5 |    |   | +0.045<br>+0.014 |             | 70  | 85  | 50<br>80   |
| 75   | +0.090<br>+0.060        | 90<br>+0.073<br>+0.051  |     |    |   | +0.048<br>+0.018 |             | 75  | 90  | 60<br>60   |
| 80   | 100                     | 120                     |     |    |   | +0.045<br>+0.014 |             | 80  | 100 | 80<br>100  |
| 90   | 110                     | 130                     |     |    |   |                  |             | 90  | 110 | 60<br>80   |
| 100  | +0.107<br>+0.072        | 120<br>+0.076<br>+0.054 |     |    | 3 | +0.059<br>+0.023 | SOBF        | 100 | 120 | 80<br>100  |
| 120  | 140<br>+0.088<br>+0.063 | 170                     | 10  |    |   | +0.051<br>+0.015 |             | 120 | 140 | 80<br>100  |
| 130  | 150<br>+0.090<br>+0.065 | 180                     |     |    |   | +0.074<br>+0.034 |             | 130 | 150 | 80<br>100  |
| 140  | 160<br>+0.125<br>+0.085 | 190<br>+0.075<br>+0.035 |     |    |   | +0.075<br>+0.035 |             | 140 | 160 | 80<br>100  |
| 150  | 170<br>+0.093<br>+0.068 | 200                     |     |    |   | +0.073<br>+0.033 |             | 150 | 170 | 100<br>120 |
| 160  | 180                     | 210                     |     |    |   | +0.074<br>+0.033 |             | 160 | 180 | 100<br>120 |

# オイルレスブッシュ

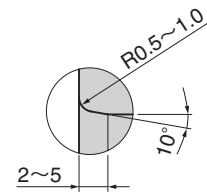
銅合金  
フランジ薄肉タイプ  
SO#50SP2



## SOBFU



A部詳細



●スライド方向



●相手軸公差

d8 : 一般用 (高負荷)  
e7 : 一般用 (軽負荷)  
f7 : 高精度用

●その他の使用条件・特性

- 大気中、淡水中 (条件付) にて使用できます。
- 高荷重、低速運転で性能を発揮します。

材質 母材 銅合金(SO-2)  
固体潤滑剤 (GR-1)

▲ 使用温度は+150°C以下です。

※圧入後d公差は参考値です。

| d E7 | D r6 | D1 | T   | T1 | 圧入後d公差           | Catalog No. | d  | D  | L                    |
|------|------|----|-----|----|------------------|-------------|----|----|----------------------|
| 5    | 7    | 11 |     |    |                  |             | 5  | 7  | 10<br>12             |
|      |      |    |     |    | +0.017<br>+0.005 |             |    |    | 10<br>12             |
| 6    | 8    | 12 |     |    |                  |             | 6  | 8  | 12<br>15             |
|      |      |    |     |    |                  |             |    |    | 10<br>12             |
| 8    | 10   | 14 | 1   | 2  | +0.023<br>+0.008 |             | 8  | 10 | 12<br>15<br>20       |
|      |      |    |     |    |                  |             |    |    | 10<br>12             |
| 10   | 12   | 16 |     |    | +0.020<br>+0.004 |             | 10 | 12 | 12<br>15<br>20       |
|      |      |    |     |    |                  |             |    |    | 10<br>12             |
| 12   | 15   | 21 |     |    |                  |             | 12 | 15 | 15<br>20<br>25<br>30 |
|      |      |    |     |    |                  |             |    |    | 12<br>15             |
| 13   | 16   | 22 | 1.5 |    | +0.030<br>+0.011 | SOBFU       | 13 | 16 | 15<br>20             |
|      |      |    |     |    |                  |             |    |    | 10<br>12             |
| 15   | 18   | 24 |     | 3  |                  |             | 15 | 18 | 15<br>20<br>25       |
|      |      |    |     |    |                  |             |    |    | 12<br>15             |
| 16   | 20   | 26 |     |    | +0.025<br>+0.006 |             | 16 | 20 | 20<br>25<br>30       |
|      |      |    |     |    |                  |             |    |    | 15<br>20             |
| 20   | 24   | 32 | 2   |    |                  |             | 20 | 24 | 25<br>30             |
|      |      |    |     |    | +0.036<br>+0.014 |             |    |    | 30<br>40             |
| 25   | 29   | 37 |     | 4  |                  |             | 25 | 29 | 30<br>40<br>50       |
|      |      |    |     |    |                  |             |    |    | 30                   |
| 30   | 34   | 42 |     |    | +0.031<br>+0.009 |             | 30 | 34 | 40<br>50             |



Order

Catalog No.

SOBFU

d

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D

—

L

20

—

24

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30

▲ 特注品につきましては製作限界があります。  
営業窓口までご相談下さい。

オイルレス摺動部材  
金属系摺動部材