

# 30B

## Oiles 300 Bushings (Thin wall)



Selection Guide

Product Information

Plastic Bearing

Multi-layer Bearing

Metallic Bearing

Air Bearings

Slide Shifter

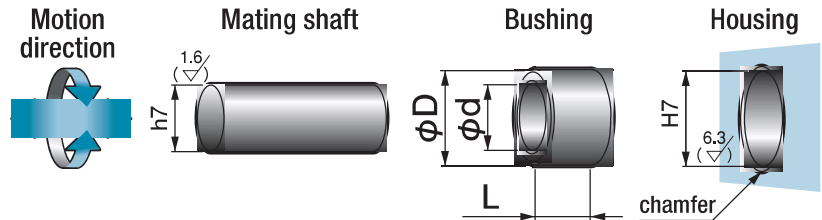
Technical Information

Corporate Profile

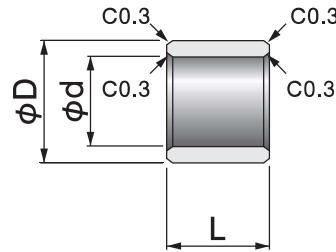


Specify Part No. by required I.D., O.D., and Length.  
(e.g.) I.D. is 8mm, O.D. is 10mm, and length is 12mm.

**30B - 081012 T**  
Parts No.



- Use Oiles 300 in lubrication oil or with periodic lubrication.



| I.D. |                  | O.D. |                  | Length L       |                |                |                |                |                |                |                | I.D. tolerance after press fitting (reference) |
|------|------------------|------|------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|--|
| φd   | Tolerance        | φD   | Tolerance        | 5              | 6              | 8              | 10             | 12             | 15             | 20             | 30             |  |
| 5    | +0.058<br>+0.040 | 7    | +0.034<br>+0.019 | <b>050705T</b> | <b>050706T</b> | <b>050708T</b> |                |                |                |                |                | +0.030<br>+0.012                               |
| 6    | +0.058<br>+0.040 | 8    | +0.034<br>+0.019 | <b>060805T</b> | <b>060806T</b> | <b>060808T</b> | <b>060810T</b> |                |                |                |                | +0.030<br>+0.012                               |
| 8    | +0.062<br>+0.040 | 10   | +0.034<br>+0.019 |                | <b>081006T</b> | <b>081008T</b> | <b>081010T</b> | <b>081012T</b> |                |                |                | +0.034<br>+0.012                               |
| 10   | +0.068<br>+0.046 | 12   | +0.041<br>+0.023 |                |                | <b>101208T</b> | <b>101210T</b> | <b>101212T</b> | <b>101215T</b> |                |                | +0.034<br>+0.012                               |
| 12   | +0.081<br>+0.054 | 14   | +0.041<br>+0.023 |                |                | <b>121408T</b> | <b>121410T</b> | <b>121412T</b> | <b>121415T</b> | <b>121420T</b> |                | +0.047<br>+0.020                               |
| 12   | +0.081<br>+0.054 | 16   | +0.041<br>+0.023 |                |                | <b>121608T</b> | <b>121610T</b> | <b>121612T</b> | <b>121615T</b> | <b>121620T</b> |                | +0.047<br>+0.020                               |
| 14   | +0.081<br>+0.054 | 16   | +0.041<br>+0.023 |                |                |                | <b>141610T</b> | <b>141612T</b> | <b>141615T</b> | <b>141620T</b> |                | +0.047<br>+0.020                               |
| 14   | +0.081<br>+0.054 | 18   | +0.041<br>+0.023 |                |                |                | <b>141810T</b> | <b>141812T</b> | <b>141815T</b> | <b>141820T</b> |                | +0.047<br>+0.020                               |
| 16   | +0.081<br>+0.054 | 18   | +0.041<br>+0.023 |                |                |                | <b>161810T</b> |                | <b>161815T</b> | <b>161820T</b> |                | +0.047<br>+0.020                               |
| 16   | +0.089<br>+0.062 | 20   | +0.049<br>+0.028 |                |                |                | <b>T162010</b> |                | <b>162015T</b> | <b>162020T</b> |                | +0.047<br>+0.020                               |
| 18   | +0.089<br>+0.062 | 22   | +0.049<br>+0.028 |                |                |                |                |                |                | <b>182220T</b> | <b>182230T</b> | +0.047<br>+0.020                               |
| 20   | +0.105<br>+0.072 | 24   | +0.049<br>+0.028 |                |                |                |                |                |                | <b>202420T</b> | <b>202430T</b> | +0.063<br>+0.030                               |

※ The I.D. tolerance after press fitting is for reference only.

▲ The dimensional tolerances are the values measured at +25°C.

# Oiles 300 Bushings Thin wall

## Press-fitting

### Press-fitting jig

Generally, as shown in the figure 1, a mandrel is used for the press-fitting. However use of a guide ring facilitates easier press-fitting. Use of a guide ring prevents damage of a bushing at the time of press-fitting. The dimension of a guide ring should be calculated from the table below.

Inner diameter of the guide ring should be the size so that the bushing can be inserted by hands. Length of the guide ring should be more than one-third of the bushing, or if possible, it should be the same length as the bushing.

The dimension of mandrel should be calculated from table below.

| Dimension of bushing |       | Dimension of mandrel                  |
|----------------------|-------|---------------------------------------|
| I.D.                 | $D_0$ | $d_0 = D_0 - (0.05 \text{ to } 0.10)$ |
| O.D.                 | $D_1$ | $d_1 = D_1 - (0.20 \text{ to } 0.30)$ |
| Length               | $L$   | $l \geq L$                            |

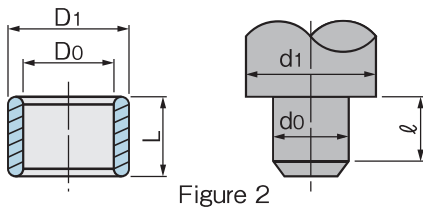


Figure 2

### Housing chamfer

For the housing chamfer, either a round chamfer or a tapered chamfer is recommended. In case of a C-surface chamfer, (more than C1.0) make sure there is no burr. Smoother press-fitting is possible by applying small amount of grease or lubricant.

### Regular press-fitting

### Press-fitting with guide ring

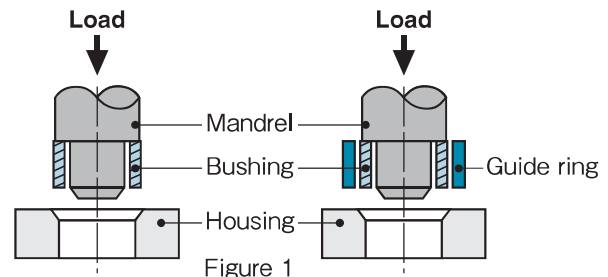
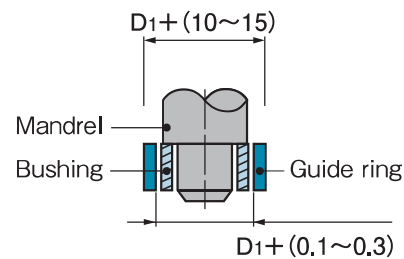


Figure 1

The dimension of guide ring should be calculated from table below.

| Bushing I.D.    | Guide ring I.D.               | Guide ring O.D.             |
|-----------------|-------------------------------|-----------------------------|
| Up to $\phi 20$ | $D_1 + (0.1 \text{ to } 0.3)$ | $D_1 + (10 \text{ to } 15)$ |



### Press-fit force

Press-fit smoothly with hydraulic (pressure), pneumatic pressure, or a vice. Avoid press-fit by use of impact such as use of a hammer. It might induce damage of the bushing, or change the size of the inner diameter after press-fit.