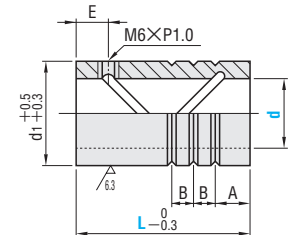


PLAIN GUIDE BUSHINGS FOR DIE SETS

RoHS



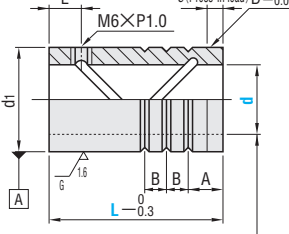
**MDB** (Devcon adhesive type)



RoHS



**LDB** (Loctite adhesive type)

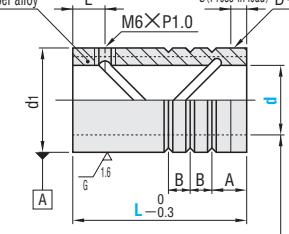


RoHS



**LFB** (Copper alloy type)

Copper alloy

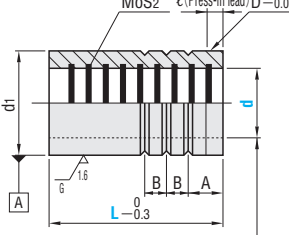


RoHS



**LDBZ** (Oil-free type)

MoS<sub>2</sub> (Press-in lead)



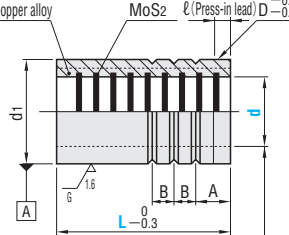
RoHS



**LFBZ** (Copper alloy oil-free type)

Copper alloy

MoS<sub>2</sub> (Press-in lead)



| Catalog No. |    | L  |         | Base unit price |
|-------------|----|----|---------|-----------------|
| Type        | d  |    |         | 1~9 pieces      |
| MDB         | 20 | 50 |         | 962             |
|             | 22 | 50 | 60      | 1,125           |
|             | 25 |    | 60 80   | 1,362           |
|             | 28 |    | 60 80   | 1,598           |
|             | 32 |    | 80 100  | 1,924           |
|             | 38 |    | 80 100  | 2,279           |
|             | 45 |    | 100 120 | 2,960           |
|             | 50 |    | 100 120 | 3,796           |
|             | 60 |    | 100 120 | 4,396           |
|             |    |    |         |                 |

M SUJ2 A Grease nipple GPA6A  
H 58HRC~

| Catalog No. |    | L  |         | Base unit price |
|-------------|----|----|---------|-----------------|
| Type        | d  |    |         | 1~9 pieces      |
| LDB         | 20 | 50 |         | 1,302           |
|             | 22 | 50 | 60      | 1,436           |
|             | 25 |    | 60 80   | 1,658           |
|             | 28 |    | 60 80   | 1,976           |
|             | 32 |    | 80 100  | 2,375           |
|             | 38 |    | 80 100  | 2,768           |
|             | 45 |    | 100 120 | 3,530           |
|             | 50 |    | 100 120 | 4,388           |
|             | 60 |    | 100 120 | 5,106           |
|             |    |    |         |                 |

M SUJ2 A Grease nipple GPA6A  
H 58HRC~

| Catalog No. |    | L  |        | Base unit price |
|-------------|----|----|--------|-----------------|
| Type        | d  |    |        | 1~9 pieces      |
| LFB         | 20 | 50 |        | 2,479           |
|             | 22 | 50 | 60     | 2,723           |
|             | 25 |    | 60 80  | 2,923           |
|             | 28 |    | 60 80  | 3,397           |
|             | 32 |    | 80 100 | 3,996           |
|             |    |    |        |                 |

M SUJ2+Copper alloy A Grease nipple GPA6A  
H 45HRC~ (SUJ2 part)

| Catalog No. |    | L  |         | Base unit price |
|-------------|----|----|---------|-----------------|
| Type        | d  |    |         | 1~9 pieces      |
| LDBZ        | 20 | 50 |         | 1,872           |
|             | 22 | 50 | 60      | 2,094           |
|             | 25 |    | 60 80   | 2,272           |
|             | 28 |    | 60 80   | 2,634           |
|             | 32 |    | 80 100  | 3,027           |
|             | 38 |    | 80 100  | 3,633           |
|             | 45 |    | 100 120 | 4,499           |
|             | 50 |    | 100 120 | 5,469           |
|             |    |    |         |                 |

M SUJ2  
MoS<sub>2</sub> (embedded)  
H 58HRC~

| Catalog No. |    | L  |        | Base unit price |
|-------------|----|----|--------|-----------------|
| Type        | d  |    |        | 1~9 pieces      |
| LFBZ        | 20 | 50 |        | 3,123           |
|             | 22 | 50 | 60     | 3,360           |
|             | 25 |    | 60 80  | 3,596           |
|             | 28 |    | 60 80  | 4,122           |
|             | 32 |    | 80 100 | 4,721           |

M SUJ2+Copper alloy  
MoS<sub>2</sub> (embedded)  
H 45HRC~ (SUJ2 part)

**Rs** The volume discount rate is also applicable to alteration costs. **P.39**

| d  | d <sub>1</sub>                       | d <sub>1</sub> tolerance |                   | ℓ | A  | B  | E                     |
|----|--------------------------------------|--------------------------|-------------------|---|----|----|-----------------------|
|    |                                      | MDB                      | LDB·LFB·LDBZ·LFBZ |   |    |    |                       |
| 20 | 31                                   |                          |                   |   |    |    |                       |
| 22 | +0.027<br>+0.022                     |                          |                   | 4 | 10 | 6  | 10                    |
| 25 |                                      |                          |                   |   |    |    |                       |
| 28 | +0.032<br>+0.027                     |                          |                   | 5 | 12 | 7  |                       |
| 32 |                                      |                          |                   |   |    |    |                       |
| 38 | +0.037<br>+0.032<br>+0.040<br>+0.035 |                          |                   | 6 | 15 | 10 | L 80→E10<br>L 100→E15 |
| 45 |                                      |                          |                   |   |    |    |                       |
| 50 | +0.045<br>+0.040                     |                          |                   |   |    |    | 15                    |
| 60 |                                      |                          |                   |   |    |    |                       |

■ Bushing bonding method (Adhesives **P.856**)

| Catalog No. | Adhesive                         |
|-------------|----------------------------------|
| MDB         | —                                |
| LDB         | Loctite No.638 ( <b>LOC638</b> ) |
| LDBZ        |                                  |
| LFB         |                                  |
| LFBZ        |                                  |

Order

Catalog No. — L  
LFBZ 28 — 80

Dispatch

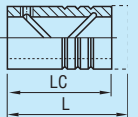
7 Days

Price

**Volume discount price** **P.37**  
Quantity 1~9 10~19 20~29 30~50 For larger orders, ask about prices/delivery.  
Discount rate Base unit price 5% 10% 15%

Alterations

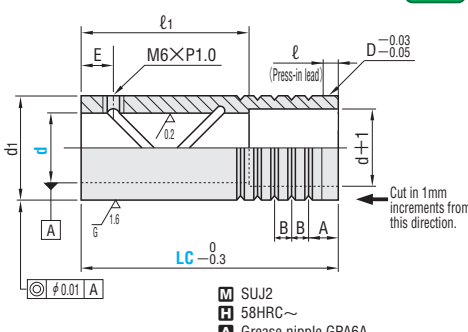
Catalog No. — L (LC)  
LDB 22 — LC45  
9 Days

| Alteration                                                                           | Code | Spec.                                                                                                                           | Rs./Code |     |
|--------------------------------------------------------------------------------------|------|---------------------------------------------------------------------------------------------------------------------------------|----------|-----|
|  | LC   | Full length change<br>Can be used for MDB and LDB only.<br>L/2 ≤ LC < L<br>1mm increments<br>If cut, the oil groove may be cut. | d20~32   | 444 |
|                                                                                      |      |                                                                                                                                 | d38~     | 592 |

■ Long type guide bushings with configurable full length

**LDB** (Loctite adhesive type)

RoHS



M SUJ2  
H 58HRC~  
A Grease nipple GPA6A

| d  | d <sub>1</sub>                       | ℓ | A  | B           | E          | Effective sliding length ℓ <sub>1</sub> | Catalog No. | LC               | Base unit price |
|----|--------------------------------------|---|----|-------------|------------|-----------------------------------------|-------------|------------------|-----------------|
|    |                                      |   |    |             |            |                                         | Type        | d 1mm increments | 1~9 pieces      |
| 20 | 31                                   |   |    |             |            |                                         | LDB         | 20 51~120        | 3,034           |
| 22 | +0.027<br>+0.022                     |   | 4  | 12          | 7×7 pieces | 60                                      |             | 22 61~120        | 3,256           |
| 25 |                                      |   |    |             |            | 80                                      |             | 25 81~120        | 3,700           |
| 28 | +0.032<br>+0.027                     |   | 5  | 10×5 pieces |            | 100                                     |             | 28 81~150        | 4,440           |
| 32 |                                      |   |    |             |            |                                         |             | 32 101~150       | 5,328           |
| 38 | +0.037<br>+0.032<br>+0.040<br>+0.035 |   | 15 | 10×6 pieces |            | 120                                     |             | 38 101~180       | 6,216           |
| 45 |                                      |   |    |             |            |                                         |             | 45 121~180       | 7,770           |
| 50 | +0.045<br>+0.040                     |   | 6  | 10×8 pieces |            |                                         |             | 50 121~200       | 9,768           |
| 60 |                                      |   |    |             |            |                                         |             | 60 121~200       | 11,396          |
|    |                                      |   |    |             |            |                                         |             |                  |                 |
|    |                                      |   |    |             |            |                                         |             |                  |                 |

❗ If there is only one groove remaining as the result of cutting, groove(s) are added so that a minimum of two grooves are present.

Order

Catalog No. — LC  
LDB 22 — LC100

Dispatch

9 Days

Price

**The unit price is the bushing unit price after alteration.**  
**Volume discount price** **P.37**  
Quantity 1~9 10~19 20~29 30~50 For larger orders, ask about prices/delivery.  
Discount rate Base unit price 5% 10% 15%

❗ Do not use a cooling-fit for the bushings. In the same way as with sub-zero treatment, cooling causes residual austenite to transform into martensite and expand. This expands both the bushing inner and outer diameters, rendering the bushing unusable.