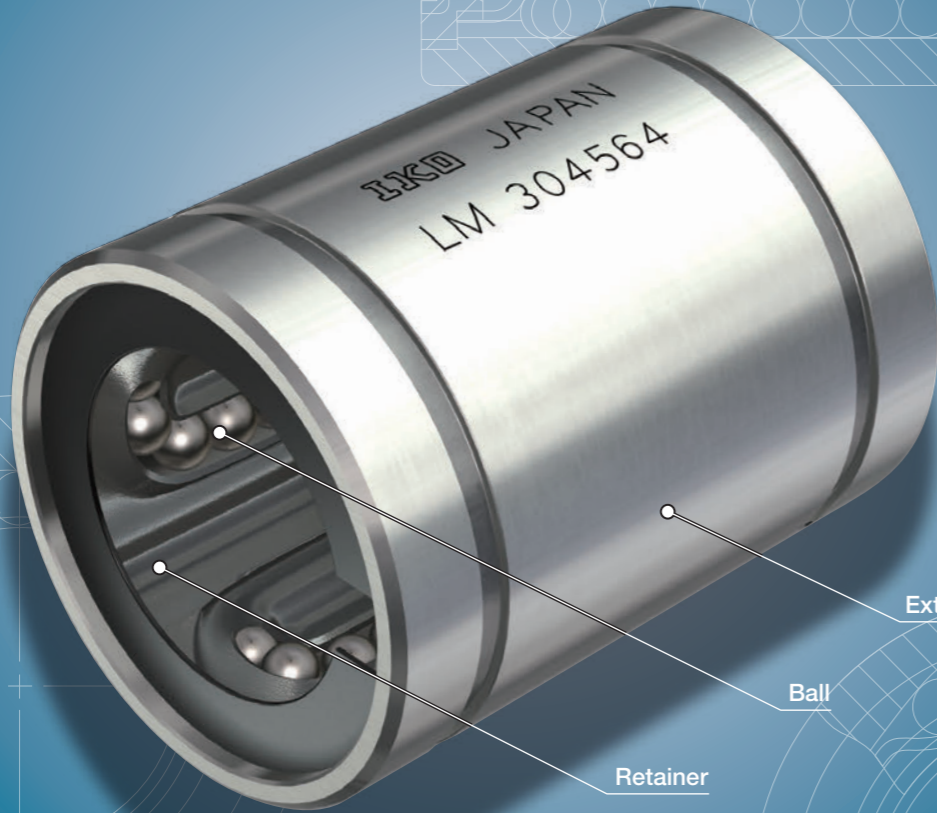


# Linear Bushing

# LM



## Points

### Simple replacement for rolling guide

Since the structure adopts the raceway to be run along the shaft, the rolling guide of conventional bushing type can be easily modified to rolling guide without major design changes.

### Wide range of variations for your needs

For each dimensional series, standard, adjustable clearance, and open types are available with and without seals. You can select an optimal Linear Bushing for the specifications of your machine and device.

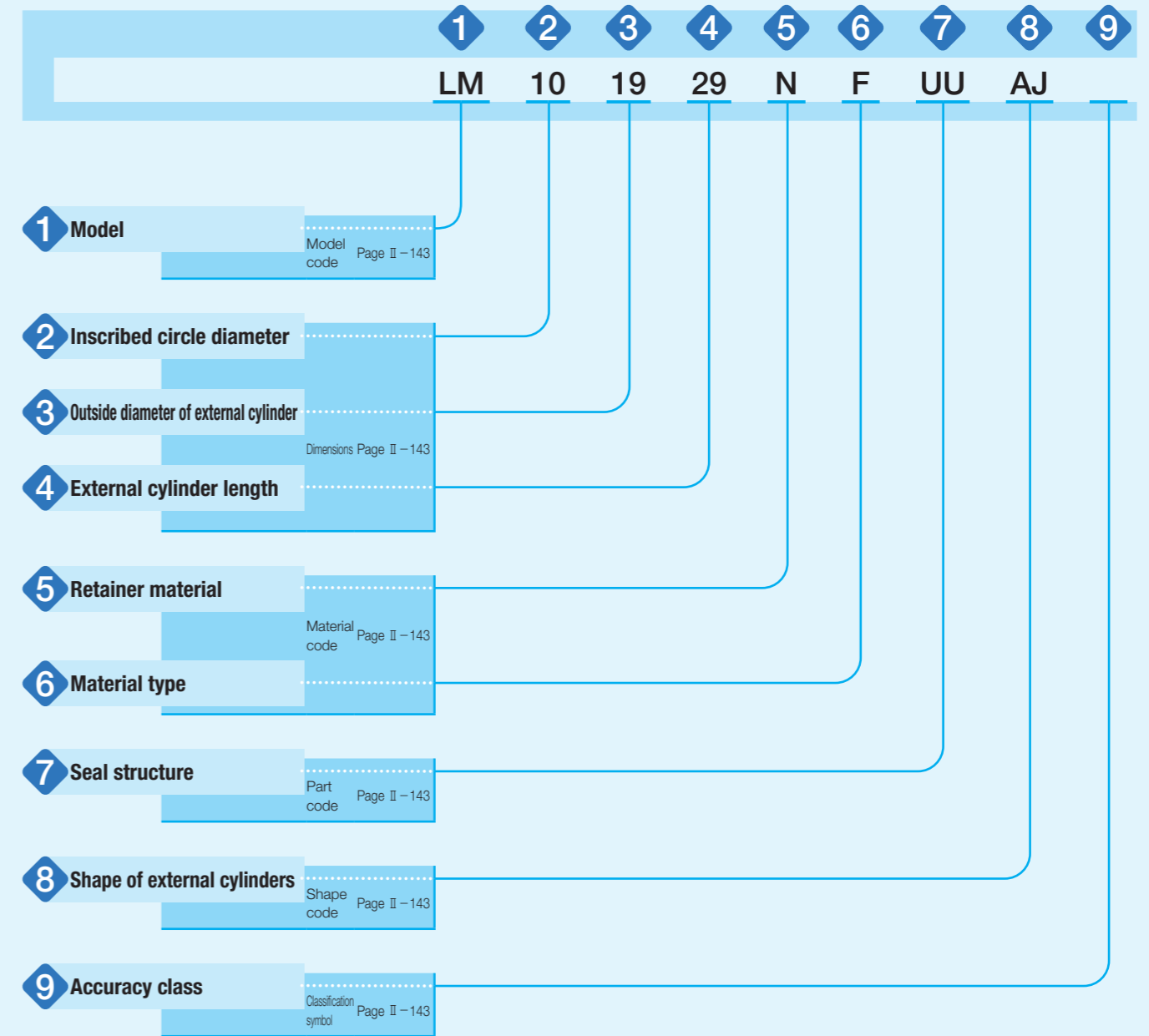
### Stainless steel superior in corrosion resistance are listed on lineup.

Products made of stainless steel are highly resistant to corrosion, so that they are suitable for applications where rust prevention oil is not preferred, such as in a cleanroom environment.

## Identification Number and Specification

### Example of an identification number

The specification of LM series is indicated by the identification number. Indicate the identification number, consisting of a model code, dimensions, a material code, a part code, a shape code, and a classification symbol for each specification to apply.






LMG · LM · LMS

|  |   |   |  |
|--|---|---|--|
| <b>1 Model</b>                                 | Linear Bushing (LM Series)  | Metric series : LM<br>: LME (European specification <sup>(1)</sup> )<br>Inch series : LMB   |  |
|  | For applicable models and sizes, see Table 1.                                 |   |  |
| <b>2 Inscribed circle diameter</b>             |   | For the metric series, indicate the inscribed circle diameter in mm.<br>For the inch series, indicate the inscribed circle diameter in the unit of 1/16 inch.   |  |
| <b>3 Outside diameter of external cylinder</b> |   | For the metric series, indicate the outside diameter of external cylinder in mm.<br>For the inch series, indicate the outside diameter of external cylinder in the unit of 1/16 inch.   |  |
| <b>4 External cylinder length</b>              |   | For the metric series, indicate the length of the external cylinder in mm.<br>For the inch series, indicate the length of external cylinder in the unit of 1/16 inch.   |  |
| <b>5 Retainer material</b>                     | High carbon steel made : No symbol<br>Synthetic resin made : N                | Specify the retainer material. For applicable models and sizes, see the "Identification number" column in the dimension table on pages II-147 to II-168.  |  |
| <b>6 Material type</b>                         | High carbon steel made : No symbol<br>Stainless steel made : F <sup>(2)</sup> | Specify the component part material. For applicable models and sizes, see the "Identification number" column in the dimension table on pages II-147 to II-168.  |  |
| <b>7 Seal structure</b>                        | Without seal : No symbol<br>With one end seal : U<br>With two end seals : UU  | The models with one end seal and two end seals incorporate seals with superior dust protection performance for preventing intrusion of foreign substances. For the inch series, only the type without seal (no symbol) can be specified. The maximum allowable temperature for seals is 120°C.  |  |
| <b>8 Shape of external cylinders</b>           | Standard type : No symbol<br>Adjustable clearance type : AJ<br>Open type : OP | For applicable models and sizes, see Table 1.   |  |
| <b>9 Accuracy class</b>                        | High : No symbol<br>Precision : P   | High class (no symbol) and precision class (P) are available for the accuracy class of LM and LMB standard type series.<br>For the adjustable clearance type and the open type, only high class (no symbol) is available, and the accuracy values are applicable only before cutting the external cylinders.<br>For details of accuracy, see the dimension table on pages II-147 to II-168. |  |

Note <sup>(1)</sup> It is specification with the dimensions and tolerances generally used in Europe.

<sup>(2)</sup> The cage will be always stainless steel even when high carbon steel (no symbol) is specified.

Table 1 Models and sizes of LM series

| External cylinder shape  | Dimensional series   | Material type          | Seal structure         | Model                             | Size (Shaft diameter)           |                          |
|--|--|------------------------|------------------------|-----------------------------------|---------------------------------|--------------------------|
| Standard type<br> | Metric series  | High carbon steel made | Without seal           | LM<br>LME                         | 6 ~150 mm<br>5 ~ 80 mm          |                          |
|  |  |                        | With one end seal      | LM ... U<br>LME ... U             | 6 ~150 mm<br>5 ~ 80 mm          |                          |
|  |  |                        | With two end seals     | LM ... UU<br>LME ... UU           | 6 ~150 mm<br>5 ~ 80 mm          |                          |
|  |  | Stainless steel made   | Without seal           | LM ... F<br>LME ... F             | 6 ~ 60 mm<br>5 ~ 60 mm          |                          |
|  |  |                        | With one end seal      | LM ... F U<br>LME ... F U         | 6 ~ 60 mm<br>5 ~ 60 mm          |                          |
|  |  |                        | With two end seals     | LM ... F UU<br>LME ... F UU       | 6 ~ 60 mm<br>5 ~ 60 mm          |                          |
|  | Inch series  | High carbon steel made | Without seal           | LMB                               | 6.350~101.6 mm (1/4~ 4in)       |                          |
|  | Adjustable clearance type<br> | Metric series          | High carbon steel made | Without seal                      | LM ... AJ<br>LME ... AJ         | 6 ~150 mm<br>5 ~ 80 mm   |
|  |  |                        |                        | With one end seal                 | LM ... U AJ<br>LME ... U AJ     | 6 ~150 mm<br>5 ~ 80 mm   |
|  |  |                        |                        | With two end seals                | LM ... UU AJ<br>LME ... UU AJ   | 6 ~150 mm<br>5 ~ 80 mm   |
|  |  |                        | Stainless steel made   | Without seal                      | LM ... F AJ<br>LME ... F AJ     | 6 ~ 60 mm<br>5 ~ 60 mm   |
|  |  |                        |                        | With one end seal                 | LM ... F U AJ<br>LME ... F U AJ | 6 ~ 60 mm<br>5 ~ 60 mm   |
| With two end seals   |  |                        |                        | LM ... F UU AJ<br>LME ... F UU AJ | 6 ~ 60 mm<br>5 ~ 60 mm          |                          |
| Inch series  |  | High carbon steel made | Without seal           | LMB ... AJ                        | 6.350~101.6 mm (1/4~ 4in)       |                          |
| Open type<br>   |  | Metric series          | High carbon steel made | Without seal                      | LM ... OP<br>LME ... OP         | 10 ~150 mm<br>12 ~ 80 mm |
|  |  |                        |                        | With one end seal                 | LM ... U OP<br>LME ... U OP     | 10 ~150 mm<br>12 ~ 80 mm |
|  |  |                        |                        | With two end seals                | LM ... UU OP<br>LME ... UU OP   | 10 ~150 mm<br>12 ~ 80 mm |
|  |  |                        | Stainless steel made   | Without seal                      | LM ... F OP<br>LME ... F OP     | 10 ~ 60 mm<br>12 ~ 60 mm |
|  |  |                        |                        | With one end seal                 | LM ... F U OP<br>LME ... F U OP | 10 ~ 60 mm<br>12 ~ 60 mm |
|  | With two end seals   |                        |                        | LM ... F UU OP<br>LME ... F UU OP | 10 ~ 60 mm<br>12 ~ 60 mm        |                          |
|  | Inch series  | High carbon steel made | Without seal           | LMB ... OP                        | 12.700~101.6 mm (1/2~ 4in)      |                          |

Standard type : Product with high accuracy used generally over a wide range

Adjustable clearance type : This type has a cut-away slit in an axial direction of external cylinder, which is capable of clearance adjustment. If installed in a housing whose inscribed circle diameter is adjustable, it enables radial clearance to be freely adjusted without optional fitting and also enables preloading to operate.

Open type : This type is in sectoral form with the external cylinder cut away in slit by one-row raceway or two-row raceways of ball in an axial direction. In order to avoid the occurrence of long shaft deflection, it is possible to accordingly add the shaft support block tailored to (E) dimension of the sectoral form shown in the dimension table, in a midway point. And, it is also capable of clearance adjustment.

## Relationship between Load Rating and Ball Raceway

The load rating of LM series varies according to the loading direction and position of ball raceway. The dimension table describes two types of values shown in Fig. 1.1 and Fig. 1.2 according to the loading direction and position of ball raceway.

Fig. 1.1 shows the case where the loading direction and ball raceway position coincides with each other, representing the loading direction A in the dimension table. Generally, this is applied when the ball raceway position cannot be specified to indeterminate direction load or loading direction.

Fig. 1.2 shows the case where the loading direction is positioned between ball raceways, representing the loading direction B in the dimension table. Generally, this can be subjected to load bigger than loading direction A.

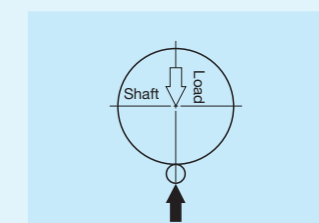


Fig. 1.1 Loading direction A

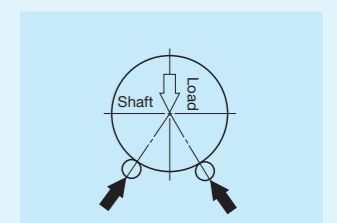


Fig. 1.2 Loading direction B

1N=0.102kgf=0.2248lbs.  
1mm=0.03937inch



# Lubrication

Grease is not pre-packed in the LM series, so please perform adequate lubrication as needed. Both of oil lubrication and grease lubrication are available in the LM series. For grease lubrication, use of high-quality lithium-soap base grease is recommended.

# Precaution for Use

## ①Fitting

For fitting with a housing hole, clearance fit is usually used but transition fit can also be used for special usage. For adjustable clearance type and open type, the shaft diameter shall be set as much as possible to less than the lower limit of the allowance of the inscribed circle diameter, and while the dimension of a housing hole shall be set to more than the upper limit of the allowance of the outside diameter of the external cylinder.

Table 2 Recommended fit

| Models and accuracy class | Tolerance class    |                  |               |                |    |
|---------------------------|--------------------|------------------|---------------|----------------|----|
|                           | Shaft              |                  | Housing hole  |                |    |
|                           | Ordinary clearance | Interference fit | Clearance fit | Transition fit |    |
| LM, LMB                   | High               | f6, g6           | h6            | H7             | J7 |
|                           | Precision          | f5, g5           | h5            | H6             | J6 |
| LME                       | —                  | h6               | j6            | H7             | J7 |

## ②Clearance

For adjustable clearance type and open type, clearance adjustment can be easily performed if the unit is mounted into a housing with the bore diameter dimension adjustable. However, if a large preload is produced due to the clearance adjustment, the deformation at the contact portion of the external cylinder and ball may become large, thereby deteriorating the life. Therefore, it is recommended to finish the shaft dimension within the allowance of the recommended fitting and set the clearance at zero or under a slightly-preloaded condition. Although the clearance adjustment is performed while measuring the clearance with a dial gauge after fitting in a shaft, a method is generally taken to rotate the shaft under unloaded condition during clearance adjustment and stop the adjustment at the timing when detecting a slight resistance. At this time, the Linear Bushing clearance is at zero or under a slight preload condition. Meanwhile, the clearance adjustment for open type with three-row ball raceways cannot be performed.

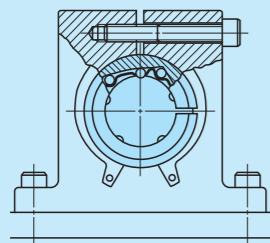


Fig. 2 Example of clearance adjustment

## ③Raceway

Since LM series operates with a shaft as a raceway surface, the shaft should be heat-treated and ground. Recommended values for surface hardness and roughness of the shaft are shown in Table 3 and the recommended value for the minimum effective hardening depth is shown in Table 4.

Table 3 Surface hardness and roughness of shaft

| Item              | Recommended value                     | Remark   |
|-------------------|---------------------------------------|--|
| Surface hardness  | 58~64HRC                              | When the surface hardness is low, multiply the load rating by hardness factor (1). |
| Surface roughness | 0.2 μmRa or lower (0.8 μmRy or lower) | Where accuracy standard is low, around 0.8 μmRa (3.2 μmRy) is also allowed.        |

Note (1) For hardness factor, refer to Fig. 3 in page III-5.

Table 4 Minimum effective hardening depth of shaft unit: mm

| Shaft diameter |       | Recommended value for minimum effective hardening depth |
|----------------|-------|---|
| Over           | Incl. |   |
| —              | 28    | 0.8   |
| 28             | 50    | 1.0   |
| 50             | 100   | 1.5   |
| 100            | 150   | 2.0   |

## ④When accompanied by rotational motion

LM series units support only linear motion but do not support rotational motion. When performing rotational motion and linear motion of short stroke length, IKO Stroke Rotary Bushing is recommended to be used. And, for the usage requiring rotational motion and linear motion of long stroke length, it is recommended to use in combination with IKO needle bearing as shown in Fig. 3.

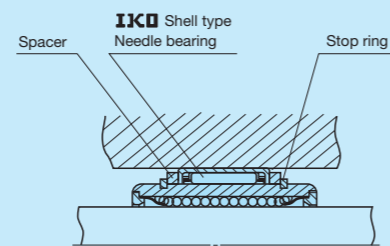


Fig. 3 Example of linear motion and rotational motion

## ⑤Precaution for use of open type with three-row linear bushing

The open type with three-row Linear Bushing of balls may only be used with load direction indicated in Fig. 4.1. In addition, if two of them are used in parallel, mount them as indicated in 4.2, taking into account the load distribution to rolling elements. And, note that the clearance adjustment cannot be performed.

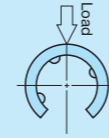


Fig. 4.1

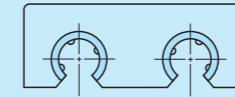


Fig. 4.2

## ⑥Operating temperature

If the retainer is made of carbon steel, it can withstand higher temperature. However, if you use it in an environment exceeding 100°C, please contact IKO. The maximum operating temperature of synthetic resin made products is 100°C and temperature up to 80°C is allowed for continuous operation.

## ⑦Mounting

When pressing an external cylinder into the housing hole, do it softly while applying a jig to the sides of the external cylinder not to hit the end plate (see Fig. 5). After pressing-in, use a stop ring or stopper plate to fix it in an axial direction. When inserting shaft after mounting the external cylinder, be careful not to shock the ball or retainer. In addition, when two shafts are used, mount one accurately and then the other by referring to the first one so as to ensure parallelism with it. Typical mounting example is shown in Fig. 6.

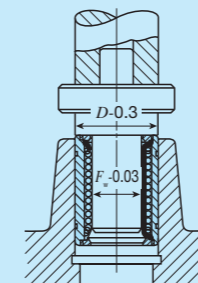


Fig. 5 Press-fitting of external cylinder

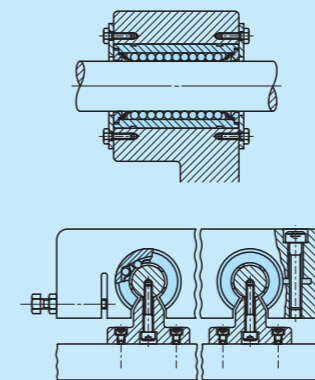


Fig. 6 Mounting example

# Related Products

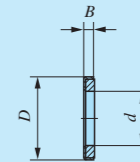
## Slide shaft

To make full use of performance of the LM series, we also offer shaft with high accuracy for Linear Bushing grounded after heat treatment. If you are interested, contact IKO. Conventional ordinary type shafts are also available.

## Felt seals for Linear Bushing




Though the type with seal is standardized for the LM series, the type without seal and felt seals may be used together when emphasis is put on rolling friction resistance. Dimensions for felt seals are shown in Table 5.

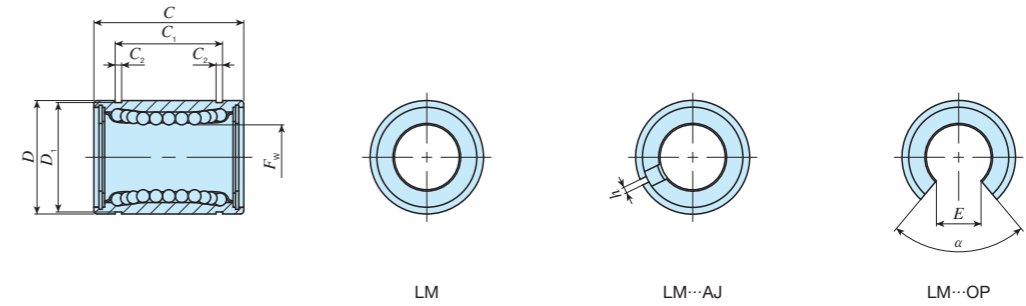
Table 5 Dimensions of felt seals for Linear Bushing



| Identification number | unit: mm |     |    |
|-----------------------|----------|-----|----|
|                       | d        | D   | B  |
| FLM 6                 | 6        | 12  | 2  |
| FLM 8                 | 8        | 15  | 2  |
| FLM 10                | 10       | 19  | 3  |
| FLM 13                | 13       | 23  | 3  |
| FLM 16                | 16       | 28  | 4  |
| FLM 20                | 20       | 32  | 4  |
| FLM 25                | 25       | 40  | 5  |
| FLM 30                | 30       | 45  | 5  |
| FLM 35                | 35       | 52  | 5  |
| FLM 40                | 40       | 60  | 5  |
| FLM 50                | 50       | 80  | 10 |
| FLM 60                | 60       | 90  | 10 |
| FLM 80                | 80       | 120 | 10 |
| FLM 100               | 100      | 150 | 10 |

Remark: For adjustable clearance type, open type and inch series felt seals, contact IKO.




|                | Standard type   |    |     |     |     | Adjustable clearance type   |    |     |     |     | Open type   |    |     |     |     |    |    |    |
|----------------|---|----|-----|-----|-----|---|----|-----|-----|-----|---|----|-----|-----|-----|----|----|----|
| Shape          | LM<br>LM...N  |    |     |     |     | LM...AJ<br>LM...N AJ  |    |     |     |     | LM...OP<br>LM...N OP  |    |     |     |     |    |    |    |
|                |  |    |     |     |     |  |    |     |     |     |  |    |     |     |     |    |    |    |
| Shaft diameter | 6   | 8  | 10  | 12  | 13  | 16  | 6  | 8   | 10  | 12  | 13  | 16 | —   | —   | 10  | 12 | 13 | 16 |
|                | 20  | 25 | 30  | 35  | 40  | 50  | 20 | 25  | 30  | 35  | 40  | 50 | 20  | 25  | 30  | 35 | 40 | 50 |
|                | 60  | 80 | 100 | 120 | 150 | 60  | 80 | 100 | 120 | 150 | 60  | 80 | 100 | 120 | 150 |    |    |    |

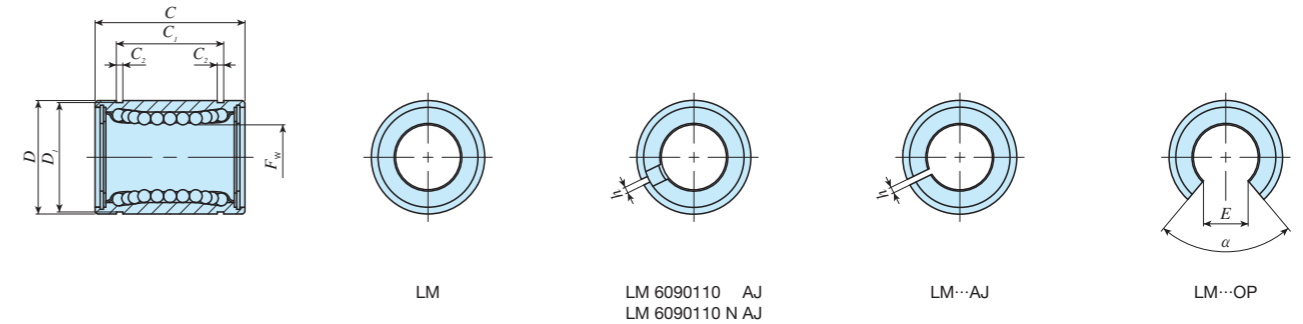


| Shaft diameter<br>mm | Identification number |           |              |                     |                           |               |              |                     |           |               | Nominal dimensions and tolerances mm |                     |       |  |     |     |  |     |  |                        | Eccentricity                             |       | Basic dynamic load rating |     | Basic static load rating |                    |                          |      |       |                          |                          |                          |                          |
|----------------------|-----------------------|-----------|--------------|---------------------|---------------------------|---------------|--------------|---------------------|-----------|---------------|--------------------------------------|---------------------|-------|--|-----|-----|--|-----|--|------------------------|--|-------|---------------------------|-----|--------------------------|--------------------|--------------------------|------|-------|--------------------------|--------------------------|--------------------------|--------------------------|
|                      | Standard type         |           | Ball raceway | Mass<br>(Ref.)<br>g | Adjustable clearance type |               | Ball raceway | Mass<br>(Ref.)<br>g | Open type |               | Ball raceway                         | Mass<br>(Ref.)<br>g | $F_w$ | Dim. $F_w$<br>tolerance<br>$\mu\text{m}$ |     | $D$ | Dim. $D$<br>tolerance<br>$\mu\text{m}$ | $C$ | Dim. $C$<br>tolerance<br>$\mu\text{m}$ | $C_1$ ( <sup>1</sup> ) | Dim. $C_1$<br>tolerance<br>$\mu\text{m}$ | $C_2$ | $D_1$                     | $h$ | $E$                      | $\alpha$<br>Degree | Maximum<br>$\mu\text{m}$ | P    | H     | Load<br>direction A<br>N | Load<br>direction B<br>N | Load<br>direction A<br>N | Load<br>direction B<br>N |
|                      |                       |           |              |                     |                           |               |              |                     |           |               |                                      |                     |       |  |     |     |  |     |  |                        |  |       |                           |     |                          |                    |                          |      |       |                          |                          |                          |                          |
| 6                    | LM                    | 61219     | 4            | 8                   | —                         | —             | —            | —                   | —         | —             | —                                    | —                   | 6     |  |     | 12  |  | 19  |  | 13.5                   |  | 1.1   | 11.5                      | —   | —                        |                    |                          | 80.7 | 92.7  | 167                      | 237                      |                          |                          |
|                      | LM                    | 61219 N   | 4            | 7.6                 | LM                        | 61219 N AJ*   | 4            | 7.5                 | —         | —             | —                                    | —                   |       |  |     |     |  |     |  |                        |  |       | 1                         | —   | —                        |                    |                          |      |       |                          |                          |                          |                          |
| 8                    | LM                    | 81517     | 4            | 13                  | —                         | —             | —            | —                   | —         | —             | —                                    | —                   | 8     |  |     | 15  | 0                                      | 17  |  | 11.5                   |  | 1.1   | 14.3                      | —   | —                        |                    |                          | 87.4 | 100   | 160                      | 226                      |                          |                          |
|                      | LM                    | 81517 N   | 4            | 10.4                | LM                        | 81517 N AJ*   | 4            | 10                  | —         | —             | —                                    | —                   |       |  |     |     |  |     |  |                        |  |       | 1                         | —   | —                        |                    |                          |      |       |                          |                          |                          |                          |
|                      | LM                    | 81524     | 4            | 18                  | —                         | —             | —            | —                   | —         | —             | —                                    | —                   | 8     |  |     | 15  |  | 24  |  | 17.5                   |  | 1.1   | 14.3                      | —   | —                        |                    |                          | 121  | 139   | 255                      | 361                      |                          |                          |
|                      | LM                    | 81524 N   | 4            | 15                  | LM                        | 81524 N AJ*   | 4            | 14.7                | —         | —             | —                                    | —                   |       |  |     |     |  |     |  |                        |  |       | 1                         | —   | —                        |                    |                          |      |       |                          |                          |                          |                          |
| 10                   | LM                    | 101929    | 4            | 30                  | —                         | —             | —            | —                   | —         | —             | —                                    | —                   | 10    | 0  | 0   | 19  |  | 29  |  | 22                     |  | 1.3   | 18                        | —   | —                        |                    |                          | 179  | 206   | 354                      | 501                      |                          |                          |
|                      | LM                    | 101929 N  | 4            | 27.5                | LM                        | 101929 N AJ*  | 4            | 26.5                | LM        | 101929 N OP*  | 3                                    | 18                  |       | -6                                       | -9  |     |  |     | 0                                      | 0                      |  |       | 1                         | 6.8 | 80                       | 8                  | 12                       |      |       |                          |                          |                          |                          |
| 12                   | LM                    | 122130    | 4            | 29                  | LM                        | 122130 AJ*    | 4            | 28                  | LM        | 122130 OP*    | 3                                    | 19                  | 12    |  |     | 21  | 0                                      | 30  | -200                                   | 23                     | -200                                     | 1.3   | 20                        | 1.5 | 8                        | 80                 |                          |      | 259   | 298                      | 503                      | 711                      |                          |
|                      | LM                    | 122130 N  | 4            | 31.5                | LM                        | 122130 N AJ*  | 4            | 30.5                | LM        | 122130 N OP*  | 3                                    | 22                  |       |  |     |     |  |     |  |                        |  |       |                           |     |                          |                    |                          |      |       |                          |                          |                          |                          |
| 13                   | LM                    | 132332    | 4            | 43                  | LM                        | 132332 AJ*    | 4            | 42                  | LM        | 132332 OP*    | 3                                    | 31                  | 13    |  |     | 23  | -13                                    | 32  |  | 23                     |  | 1.3   | 22                        | 1.5 | 9                        | 80                 |                          |      | 266   | 306                      | 506                      | 716                      |                          |
|                      | LM                    | 132332 N  | 4            | 42.5                | LM                        | 132332 N AJ*  | 4            | 41.5                | LM        | 132332 N OP*  | 3                                    | 31                  |       |  |     |     |  |     |  |                        |  |       |                           |     |                          |                    |                          |      |       |                          |                          |                          |                          |
| 16                   | LM                    | 162837    | 4            | 70                  | LM                        | 162837 AJ*    | 4            | 69.5                | LM        | 162837 OP*    | 3                                    | 58                  | 16    |  |     | 28  |  | 37  |  | 26.5                   |  | 1.6   | 27                        | 1.5 | 11                       | 80                 |                          |      | 426   | 489                      | 766                      | 1 080                    |                          |
|                      | LM                    | 162837 N  | 4            | 69                  | LM                        | 162837 N AJ*  | 4            | 68                  | LM        | 162837 N OP*  | 3                                    | 52                  |       |  |     |     |  |     |  |                        |  |       |                           |     |                          |                    |                          |      |       |                          |                          |                          |                          |
| 20                   | LM                    | 203242    | 5            | 92                  | LM                        | 203242 AJ*    | 5            | 91                  | LM        | 203242 OP*    | 4                                    | 79                  | 20    |  |     | 32  |  | 42  |  | 30.5                   |  | 1.6   | 30.5                      | 1.5 | 11                       | 60                 |                          |      | 562   | 668                      | 1 010                    | 1 470                    |                          |
|                      | LM                    | 203242 N  | 5            | 87                  | LM                        | 203242 N AJ*  | 5            | 85                  | LM        | 203242 N OP*  | 4                                    | 69                  |       |  |     |     |  |     |  |                        |  |       |                           |     |                          |                    |                          |      |       |                          |                          |                          |                          |
| 25                   | LM                    | 254059    | 6            | 226                 | LM                        | 254059 AJ*    | 6            | 222                 | LM        | 254059 OP*    | 5                                    | 203                 | 25    | 0  | 0   | 40  | 0                                      | 59  |  | 41                     |  | 1.85  | 38                        | 2   | 12                       | 50                 | 10                       | 15   | 920   | 974                      | 1 780                    | 2 280                    |                          |
|                      | LM                    | 254059 N  | 6            | 220                 | LM                        | 254059 N AJ*  | 6            | 216                 | LM        | 254059 N OP*  | 5                                    | 188                 |       | -7                                       | -10 |     | -16                                    |     |  |                        |  |       |                           |     |                          |                    |                          |      |       |                          |                          |                          |                          |
| 30                   | LM                    | 304564    | 6            | 253                 | LM                        | 304564 AJ*    | 6            | 250                 | LM        | 304564 OP*    | 5                                    | 228                 | 30    |  |     | 45  |  | 64  |  | 44.5                   |  | 1.85  | 43                        | 2.5 | 15                       | 50                 |                          |      | 1 460 | 1 540                    | 2 780                    | 3 560                    |                          |
|                      | LM                    | 304564 N  | 6            | 250                 | LM                        | 304564 N AJ*  | 6            | 245                 | LM        | 304564 N OP*  | 5                                    | 210                 |       |  |     |     |  |     |  |                        |  |       |                           |     |                          |                    |                          |      |       |                          |                          |                          |                          |
| 35                   | LM                    | 355270    | 6            | 388                 | LM                        | 355270 AJ*    | 6            | 380                 | LM        | 355270 OP*    | 5                                    | 355                 | 35    |  |     | 52  |  | 70  | 0                                      | 49.5                   | 0  | 2.1   | 49                        | 2.5 | 17                       | 50                 |                          |      | 1 610 | 1 710                    | 3 080                    | 3 940                    |                          |
|                      | LM                    | 355270 N  | 6            | 380                 | LM                        | 355270 N AJ*  | 6            | 375                 | LM        | 355270 N OP*  | 5                                    | 335                 |       |  |     |     |  |     |  |                        |  |       |                           |     |                          |                    |                          |      |       |                          |                          |                          |                          |
| 40                   | LM                    | 406080    | 6            | 596                 | LM                        | 406080 AJ*    | 6            | 585                 | LM        | 406080 OP*    | 5                                    | 546                 | 40    | 0  | 0   | 60  | 0                                      | 80  |  | 60.5                   |  | 2.1   | 57                        | 3   | 20                       | 50                 | 12                       | 20   | 2 030 | 2 150                    | 3 620                    | 4 640                    |                          |
|                      | LM                    | 406080 N  | 6            | 585                 | LM                        | 406080 N AJ*  | 6            | 579                 | LM        | 406080 N OP*  | 5                                    | 500                 |       | -8                                       | -12 |     | -19                                    |     |  |                        |  |       |                           |     |                          |                    |                          |      |       |                          |                          |                          |                          |
| 50                   | LM                    | 5080100   | 6            | 1 615               | LM                        | 5080100 AJ*   | 6            | 1 595               | LM        | 5080100 OP*   | 5                                    | 1 420               | 50    |  |     | 80  |  | 100 |  | 74                     |  | 2.6   | 76.5                      | 3   | 25                       | 50                 |                          |      | 3 940 | 4 180                    | 7 130                    | 9 120                    |                          |
|                      | LM                    | 5080100 N | 6            | 1 580               | LM                        | 5080100 N AJ* | 6            | 1 560               | LM        | 5080100 N OP* | 5                                    | 1 340               |       |  |     |     |  |     |  |                        |  |       |                           |     |                          |                    |                          |      |       |                          |                          |                          |                          |

Note (1) The width of hub for fixing with circlip should be the value obtained by subtracting a circlip width value times two from the  $C_1$  dimension.

- Remarks 1. "P" and "H" in Dim.  $F_w$  tolerance and Eccentricity represent precision and high, respectively.  
 2. Standard type and adjustable clearance type end plates are fixed with stop ring for holes.  
 3. The identification numbers with \* are our semi-standard items.

|                | Standard type   |    |     |     |     |    | Adjustable clearance type   |    |     |     |     |    | Open type   |    |     |     |     |    |
|----------------|---|----|-----|-----|-----|----|---|----|-----|-----|-----|----|---|----|-----|-----|-----|----|
| Shape          | LM<br>LM...N  |    |     |     |     |    | LM... AJ<br>LM...N AJ   |    |     |     |     |    | LM... OP<br>LM...N OP   |    |     |     |     |    |
|                |  |    |     |     |     |    |  |    |     |     |     |    |  |    |     |     |     |    |
| Shaft diameter | 6   | 8  | 10  | 12  | 13  | 16 | 6   | 8  | 10  | 12  | 13  | 16 | —   | —  | 10  | 12  | 13  | 16 |
|                | 20  | 25 | 30  | 35  | 40  | 50 | 20  | 25 | 30  | 35  | 40  | 50 | 20  | 25 | 30  | 35  | 40  | 50 |
|                | 60  | 80 | 100 | 120 | 150 |    | 60  | 80 | 100 | 120 | 150 |    | 60  | 80 | 100 | 120 | 150 |    |






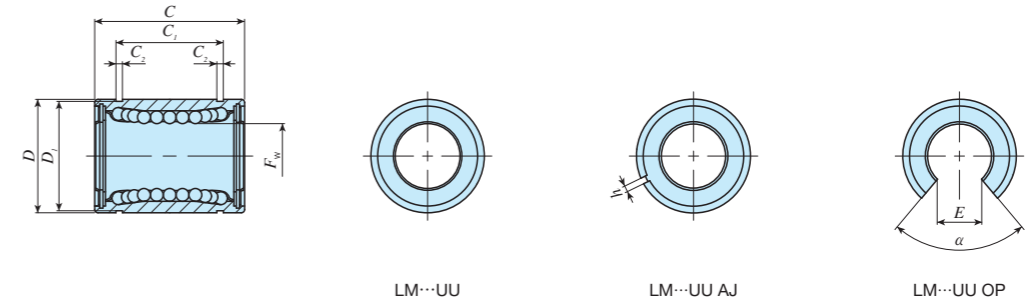
| Shaft diameter<br>mm | Identification number |   |              |                     |                           |        |                  |                     |           |  | Nominal dimensions and tolerances mm |                     |       |                                       |     |     |                                     |      |                                     |             |                                       |       |       | Eccentricity |     | Basic dynamic load rating |                          | Basic static load rating |        |                       |                       |                       |                       |
|----------------------|-----------------------|---|--------------|---------------------|---------------------------|--------|------------------|---------------------|-----------|--|--------------------------------------|---------------------|-------|---------------------------------------|-----|-----|-------------------------------------|------|-------------------------------------|-------------|---------------------------------------|-------|-------|--------------|-----|---------------------------|--------------------------|--------------------------|--------|-----------------------|-----------------------|-----------------------|-----------------------|
|                      | Standard type         |   | Ball raceway | Mass<br>(Ref.)<br>g | Adjustable clearance type |        | Ball raceway     | Mass<br>(Ref.)<br>g | Open type |  | Ball raceway                         | Mass<br>(Ref.)<br>g | $F_w$ | Dim. $F_w$ tolerance<br>$\mu\text{m}$ |     | $D$ | Dim. $D$ tolerance<br>$\mu\text{m}$ | $C$  | Dim. $C$ tolerance<br>$\mu\text{m}$ | $C_1^{(1)}$ | Dim. $C_1$ tolerance<br>$\mu\text{m}$ | $C_2$ | $D_1$ | $h$          | $E$ | $\alpha$<br>Degree        | Maximum<br>$\mu\text{m}$ | P                        | H      | Load direction A<br>N | Load direction B<br>N | Load direction A<br>N | Load direction B<br>N |
|                      |                       |   |              |                     |                           |        |                  |                     |           |  |                                      |                     |       |                                       |     |     |                                     |      |                                     |             |                                       |       |       |              |     |                           |                          |                          |        |                       |                       |                       |                       |
| 60                   | LM 6090110            | 6 | 1 817        | LM 6090110 AJ*      | 6                         | 1 788  | LM 6090110 OP*   | 5                   | 1 650     |  |                                      | 60                  | 0     | 0                                     | 90  | 0   | 110                                 | 0    | 85                                  | 0           | 3.15                                  | 86.5  | 3     | 30           | 50  | 17                        | 25                       | 4 760                    | 5 040  | 8 150                 | 10 400                |                       |                       |
|                      | LM 6090110 N          | 6 | 1 787        | LM 6090110 N AJ*    | 6                         | 1 757  | LM 6090110 N OP* | 5                   | 1 610     |  |                                      | 60                  | -9    | -15                                   | 120 | -22 | 140                                 |      |                                     |             |                                       |       |       |              |     |                           |                          |                          | 8 710  | 9 220                 | 14 500                | 18 500                |                       |
| 80                   | LM 80120140*          | 6 | 4 520        | LM 80120140 AJ*     | 6                         | 4 400  | LM 80120140 OP*  | 5                   | 3 750     |  |                                      | 80                  |       |                                       | 120 |     | 140                                 |      | 105.5                               |             | 4.15                                  | 116   | 3     | 40           | 50  |                           |                          | 14 500                   | 15 300 | 22 800                | 29 200                |                       |                       |
| 100                  | LM 100150175*         | 6 | 8 600        | LM 100150175 AJ*    | 6                         | 8 540  | LM 100150175 OP* | 5                   | 7 200     |  |                                      | 100                 | 0     | 0                                     | 150 | 0   | 175                                 | 0    | 125.5                               | 0           | 4.15                                  | 145   | 3     | 50           | 50  | 20                        | 30                       | 25 800                   | 25 500 | 44 300                | 49 400                |                       |                       |
| 120                  | LM 120180200*         | 8 | 15 000       | LM 120180200 AJ*    | 8                         | 14 900 | LM 120180200 OP* | 6                   | 11 600    |  |                                      | 120                 | -10   | -20                                   | 180 | -25 | 200                                 | -400 | 158.6                               | -400        | 4.15                                  | 175   | 3     | 85           | 80  |                           |                          | 35 600                   | 35 100 | 61 200                | 68 200                |                       |                       |
| 150                  | LM 150210240*         | 8 | 20 250       | LM 150210240 AJ*    | 8                         | 20 150 | LM 150210240 OP* | 6                   | 15 700    |  |                                      | 150                 | 0     | 0                                     | 210 | 0   | 240                                 |      | 170.6                               |             | 5.15                                  | 204   | 3     | 105          | 80  | 25                        | 40                       |                          |        |                       |                       |                       |                       |

Note (1) The width of hub for fixing with circlip should be the value obtained by subtracting a circlip width value times two from the  $C_1$  dimension.

- Remarks
- "P" and "H" in Dim.  $F_w$  tolerance and Eccentricity represent precision and high, respectively.
  - Standard type and adjustable clearance type (shaft diameter 60 mm) end plates are fixed with stop ring for holes.
  - The identification numbers with \* are our semi-standard items.

# IKO Linear Bushing With Seal

|                | Standard type   |    |     |     |     | Adjustable clearance type   |    |     |     |     | Open type   |    |     |     |     |    |    |    |
|----------------|---|----|-----|-----|-----|---|----|-----|-----|-----|---|----|-----|-----|-----|----|----|----|
| Shape          | LM... UU<br>LM...N UU   |    |     |     |     | LM... UU AJ<br>LM...N UU AJ   |    |     |     |     | LM... UU OP<br>LM...N UU OP   |    |     |     |     |    |    |    |
|                |  |    |     |     |     |  |    |     |     |     |  |    |     |     |     |    |    |    |
| Shaft diameter | 6   | 8  | 10  | 12  | 13  | 16  | 6  | 8   | 10  | 12  | 13  | 16 | —   | —   | 10  | 12 | 13 | 16 |
|                | 20  | 25 | 30  | 35  | 40  | 50  | 20 | 25  | 30  | 35  | 40  | 50 | 20  | 25  | 30  | 35 | 40 | 50 |
|                | 60  | 80 | 100 | 120 | 150 | 60  | 80 | 100 | 120 | 150 | 60  | 80 | 100 | 120 | 150 |    |    |    |






| Shaft diameter<br>mm | Identification number |   |              |                     |                           |       |                     |                  |           |   | Nominal dimensions and tolerances mm |                  |                |                                     |    |          |                        |      |                        |                                 |                                     |                |                | Eccentricity |    | Basic dynamic load rating |               | Basic static load rating |       |                       |                       |                       |                       |
|----------------------|-----------------------|---|--------------|---------------------|---------------------------|-------|---------------------|------------------|-----------|---|--------------------------------------|------------------|----------------|-------------------------------------|----|----------|------------------------|------|------------------------|---------------------------------|-------------------------------------|----------------|----------------|--------------|----|---------------------------|---------------|--------------------------|-------|-----------------------|-----------------------|-----------------------|-----------------------|
|                      | Standard type         |   | Ball raceway | Mass (Ref.)<br>g    | Adjustable clearance type |       | Ball raceway        | Mass (Ref.)<br>g | Open type |   | Ball raceway                         | Mass (Ref.)<br>g | F <sub>w</sub> | Dim. F <sub>w</sub> tolerance<br>μm |    | D        | Dim. D tolerance<br>μm | C    | Dim. C tolerance<br>μm | C <sub>1</sub> ( <sup>1</sup> ) | Dim. C <sub>1</sub> tolerance<br>μm | C <sub>2</sub> | D <sub>1</sub> | h            | E  | α                         | Maximum<br>μm | P                        | H     | Load direction A<br>N | Load direction B<br>N | Load direction A<br>N | Load direction B<br>N |
|                      |                       |   |              |                     |                           |       |                     |                  |           |   |                                      |                  |                |                                     |    |          |                        |      |                        |                                 |                                     |                |                |              |    |                           |               |                          |       |                       |                       |                       |                       |
| 6                    | LM 61219 UU           | 4 | 8            | —                   | —                         | —     | —                   | —                | —         | — | —                                    | 6                |                |                                     | 12 |          | 19                     |      | 13.5                   |                                 | 1.1                                 | 11.5           | —              | —            | —  |                           |               |                          | 80.7  | 92.7                  | 167                   | 237                   |                       |
|                      | LM 61219 N UU         | 4 | 7.6          | LM 61219 N UU AJ*   | 4                         | 7.5   | —                   | —                | —         | — | —                                    | 8                |                |                                     | 15 | 0<br>-11 | 17                     |      | 11.5                   |                                 | 1.1                                 | 14.3           | —              | —            | —  |                           |               |                          | 87.4  | 100                   | 160                   | 226                   |                       |
| 8                    | LM 81517 UU           | 4 | 13           | —                   | —                         | —     | —                   | —                | —         | — | —                                    | 8                |                |                                     | 15 |          | 24                     |      | 17.5                   |                                 | 1.1                                 | 14.3           | —              | —            | —  |                           |               |                          | 121   | 139                   | 255                   | 361                   |                       |
|                      | LM 81524 UU           | 4 | 18           | —                   | —                         | —     | —                   | —                | —         | — | —                                    | 8                |                |                                     | 15 |          | 24                     |      | 17.5                   |                                 | 1.1                                 | 14.3           | —              | —            | —  |                           |               |                          | 121   | 139                   | 255                   | 361                   |                       |
| 10                   | LM 101929 UU          | 4 | 30           | —                   | —                         | —     | —                   | —                | —         | — | —                                    | 10               | 0<br>-6        | 0<br>-9                             | 19 |          | 29                     |      | 22                     |                                 | 1.3                                 | 18             | —              | —            | —  | 8                         | 12            |                          | 179   | 206                   | 354                   | 501                   |                       |
|                      | LM 101929 N UU        | 4 | 27.5         | LM 101929 N UU AJ*  | 4                         | 26.5  | LM 101929 N UU OP*  | 3                | 18        | — | —                                    | 12               |                |                                     | 21 | 0        | 30                     | -200 | 23                     | -200                            | 1.3                                 | 20             | 1.5            | 8            | 80 |                           |               | 259                      | 298   | 503                   | 711                   |                       |                       |
| 12                   | LM 122130 UU          | 4 | 29           | LM 122130 UU AJ*    | 4                         | 28    | LM 122130 UU OP*    | 3                | 19        | — | —                                    | 12               |                |                                     | 21 | 0        | 30                     | -200 | 23                     | -200                            | 1.3                                 | 20             | 1.5            | 8            | 80 |                           |               | 259                      | 298   | 503                   | 711                   |                       |                       |
|                      | LM 122130 N UU        | 4 | 31.5         | LM 122130 N UU AJ*  | 4                         | 30.5  | LM 122130 N UU OP*  | 3                | 22        | — | —                                    | 13               |                |                                     | 23 | -13      | 32                     |      | 23                     |                                 | 1.3                                 | 22             | 1.5            | 9            | 80 |                           |               | 266                      | 306   | 506                   | 716                   |                       |                       |
| 13                   | LM 132332 UU          | 4 | 43           | LM 132332 UU AJ*    | 4                         | 42    | LM 132332 UU OP*    | 3                | 31        | — | —                                    | 13               |                |                                     | 23 |          | 32                     |      | 23                     |                                 | 1.3                                 | 22             | 1.5            | 9            | 80 |                           |               | 266                      | 306   | 506                   | 716                   |                       |                       |
|                      | LM 132332 N UU        | 4 | 42.5         | LM 132332 N UU AJ*  | 4                         | 41.5  | LM 132332 N UU OP*  | 3                | 31        | — | —                                    | 16               |                |                                     | 28 |          | 37                     |      | 26.5                   |                                 | 1.6                                 | 27             | 1.5            | 11           | 80 |                           |               | 426                      | 489   | 766                   | 1 080                 |                       |                       |
| 16                   | LM 162837 UU          | 4 | 70           | LM 162837 UU AJ*    | 4                         | 69.5  | LM 162837 UU OP*    | 3                | 58        | — | —                                    | 16               |                |                                     | 28 |          | 37                     |      | 26.5                   |                                 | 1.6                                 | 27             | 1.5            | 11           | 80 |                           |               | 426                      | 489   | 766                   | 1 080                 |                       |                       |
|                      | LM 162837 N UU        | 4 | 69           | LM 162837 N UU AJ*  | 4                         | 68    | LM 162837 N UU OP*  | 3                | 52        | — | —                                    | 20               |                |                                     | 32 |          | 42                     |      | 30.5                   |                                 | 1.6                                 | 30.5           | 1.5            | 11           | 60 |                           |               | 562                      | 668   | 1 010                 | 1 470                 |                       |                       |
| 20                   | LM 203242 UU          | 5 | 92           | LM 203242 UU AJ*    | 5                         | 91    | LM 203242 UU OP*    | 4                | 79        | — | —                                    | 20               |                |                                     | 32 |          | 42                     |      | 30.5                   |                                 | 1.6                                 | 30.5           | 1.5            | 11           | 60 |                           |               | 562                      | 668   | 1 010                 | 1 470                 |                       |                       |
|                      | LM 203242 N UU        | 5 | 87           | LM 203242 N UU AJ*  | 5                         | 85    | LM 203242 N UU OP*  | 4                | 69        | — | —                                    | 25               | 0<br>-7        | 0<br>-10                            | 40 | 0<br>-16 | 59                     |      | 41                     |                                 | 1.85                                | 38             | 2              | 12           | 50 | 10                        | 15            |                          | 920   | 974                   | 1 780                 | 2 280                 |                       |
| 25                   | LM 254059 UU          | 6 | 226          | LM 254059 UU AJ*    | 6                         | 222   | LM 254059 UU OP*    | 5                | 203       | — | —                                    | 25               | 0<br>-7        | 0<br>-10                            | 40 | 0<br>-16 | 59                     |      | 41                     |                                 | 1.85                                | 38             | 2              | 12           | 50 | 10                        | 15            |                          | 920   | 974                   | 1 780                 | 2 280                 |                       |
|                      | LM 254059 N UU        | 6 | 220          | LM 254059 N UU AJ*  | 6                         | 216   | LM 254059 N UU OP*  | 5                | 188       | — | —                                    | 30               |                |                                     | 45 |          | 64                     |      | 44.5                   |                                 | 1.85                                | 43             | 2.5            | 15           | 50 |                           |               | 1 460                    | 1 540 | 2 780                 | 3 560                 |                       |                       |
| 30                   | LM 304564 UU          | 6 | 253          | LM 304564 UU AJ*    | 6                         | 250   | LM 304564 UU OP*    | 5                | 228       | — | —                                    | 30               |                |                                     | 45 |          | 64                     |      | 44.5                   |                                 | 1.85                                | 43             | 2.5            | 15           | 50 |                           |               | 1 460                    | 1 540 | 2 780                 | 3 560                 |                       |                       |
|                      | LM 304564 N UU        | 6 | 250          | LM 304564 N UU AJ*  | 6                         | 245   | LM 304564 N UU OP*  | 5                | 210       | — | —                                    | 35               |                |                                     | 52 |          | 70                     | -300 | 49.5                   | -300                            | 2.1                                 | 49             | 2.5            | 17           | 50 |                           |               | 1 610                    | 1 710 | 3 080                 | 3 940                 |                       |                       |
| 35                   | LM 355270 UU          | 6 | 387          | LM 355270 UU AJ*    | 6                         | 380   | LM 355270 UU OP*    | 5                | 355       | — | —                                    | 35               |                |                                     | 52 |          | 70                     | -300 | 49.5                   | -300                            | 2.1                                 | 49             | 2.5            | 17           | 50 |                           |               | 1 610                    | 1 710 | 3 080                 | 3 940                 |                       |                       |
|                      | LM 355270 N UU        | 6 | 380          | LM 355270 N UU AJ*  | 6                         | 375   | LM 355270 N UU OP*  | 5                | 335       | — | —                                    | 40               | 0<br>-8        | 0<br>-12                            | 60 | 0<br>-19 | 80                     |      | 60.5                   |                                 | 2.1                                 | 57             | 3              | 20           | 50 | 12                        | 20            |                          | 2 030 | 2 150                 | 3 620                 | 4 640                 |                       |
| 40                   | LM 406080 UU          | 6 | 596          | LM 406080 UU AJ*    | 6                         | 585   | LM 406080 UU OP*    | 5                | 546       | — | —                                    | 40               | 0<br>-8        | 0<br>-12                            | 60 | 0<br>-19 | 80                     |      | 60.5                   |                                 | 2.1                                 | 57             | 3              | 20           | 50 | 12                        | 20            |                          | 2 030 | 2 150                 | 3 620                 | 4 640                 |                       |
|                      | LM 406080 N UU        | 6 | 585          | LM 406080 N UU AJ*  | 6                         | 579   | LM 406080 N UU OP*  | 5                | 500       | — | —                                    | 50               |                |                                     | 80 |          | 100                    |      | 74                     |                                 | 2.6                                 | 76.5           | 3              | 25           | 50 |                           |               | 3 940                    | 4 180 | 7 130                 | 9 120                 |                       |                       |
| 50                   | LM 5080100 UU         | 6 | 1 615        | LM 5080100 UU AJ*   | 6                         | 1 595 | LM 5080100 UU OP*   | 5                | 1 420     | — | —                                    | 50               |                |                                     | 80 |          | 100                    |      | 74                     |                                 | 2.6                                 | 76.5           | 3              | 25           | 50 |                           |               | 3 940                    | 4 180 | 7 130                 | 9 120                 |                       |                       |
|                      | LM 5080100 N UU       | 6 | 1 580        | LM 5080100 N UU AJ* | 6                         | 1 560 | LM 5080100 N UU OP* | 5                | 1 340     | — | —                                    |                  |                |                                     |    |          |                        |      |                        |                                 |                                     |                |                |              |    |                           |               |                          |       |                       |                       |                       |                       |

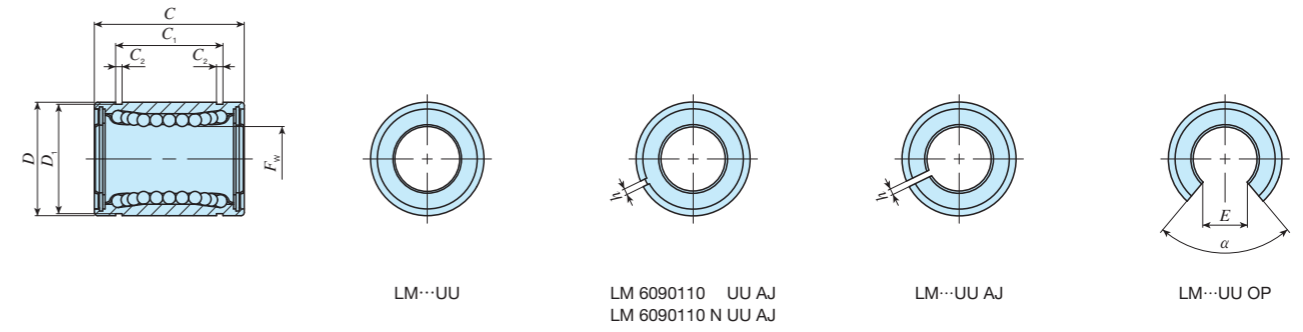
Note (1) The width of hub for fixing with circlip should be the value obtained by subtracting a circlip width value times two from the C<sub>1</sub> dimension.

- Remarks 1. "P" and "H" in Dim. F<sub>w</sub> tolerance and Eccentricity represent precision and high, respectively.  
 2. Standard type and adjustable clearance type end plates are fixed with stop ring for holes.  
 3. The identification numbers with \* are our semi-standard items.

LMG • LM • LMS

# IKO Linear Bushing With Seal

|                | Standard type   |    |     |     |     |    | Adjustable clearance type   |     |     |     |    |    | Open type   |     |     |    |    |    |  |
|----------------|---|----|-----|-----|-----|----|---|-----|-----|-----|----|----|---|-----|-----|----|----|----|--|
| Shape          | LM... UU<br>LM...N UU   |    |     |     |     |    | LM... UU AJ<br>LM...N UU AJ   |     |     |     |    |    | LM... UU OP<br>LM...N UU OP   |     |     |    |    |    |  |
|                |  |    |     |     |     |    |  |     |     |     |    |    |  |     |     |    |    |    |  |
| Shaft diameter | 6   | 8  | 10  | 12  | 13  | 16 | 6   | 8   | 10  | 12  | 13 | 16 | —   | —   | 10  | 12 | 13 | 16 |  |
|                | 20  | 25 | 30  | 35  | 40  | 50 | 20  | 25  | 30  | 35  | 40 | 50 | 20  | 25  | 30  | 35 | 40 | 50 |  |
|                | 60  | 80 | 100 | 120 | 150 | 60 | 80  | 100 | 120 | 150 | 60 | 80 | 100   | 120 | 150 |    |    |    |  |



| Shaft diameter<br>mm | Identification number |   |              |                     |                           |        |                     |             |           |   | Nominal dimensions and tolerances mm |             |                |                                  |     |     |                     |      |                     |                                 |                                  |                |                |     | Eccentricity |    | Basic dynamic load rating |        | Basic static load rating |                  |                  |                  |
|----------------------|-----------------------|---|--------------|---------------------|---------------------------|--------|---------------------|-------------|-----------|---|--------------------------------------|-------------|----------------|----------------------------------|-----|-----|---------------------|------|---------------------|---------------------------------|----------------------------------|----------------|----------------|-----|--------------|----|---------------------------|--------|--------------------------|------------------|------------------|------------------|
|                      | Standard type         |   | Ball raceway | Mass (Ref.)         | Adjustable clearance type |        | Ball raceway        | Mass (Ref.) | Open type |   | Ball raceway                         | Mass (Ref.) | F <sub>w</sub> | Dim. F <sub>w</sub> tolerance μm |     | D   | Dim. D tolerance μm | C    | Dim. C tolerance μm | C <sub>1</sub> ( <sup>1</sup> ) | Dim. C <sub>1</sub> tolerance μm | C <sub>2</sub> | D <sub>1</sub> | h   | E            | α  | Maximum μm                |        | Load direction A         | Load direction B | Load direction A | Load direction B |
|                      | P                     | H | P            | H                   | P                         | H      | P                   | H           | P         | H | P                                    | H           |                | P                                | H   |     |                     |      |                     |                                 |                                  |                |                |     |              |    | P                         | H      |                          |                  |                  |                  |
| 60                   | LM 6090110 UU         | 6 | 1 817        | LM 6090110 UU AJ*   | 6                         | 1 788  | LM 6090110 UU OP*   | 5           | 1 650     |   |                                      | 60          | 0              | 0                                | 90  | 0   | 110                 | 0    | 85                  | 0                               | 3.15                             | 86.5           | 3              | 30  | 50           | 17 | 25                        | 4 760  | 5 040                    | 8 150            | 10 400           |                  |
|                      | LM 6090110 N UU       | 6 | 1 787        | LM 6090110 N UU AJ* | 6                         | 1 757  | LM 6090110 N UU OP* | 5           | 1 610     |   |                                      | 80          | -9             | -15                              | 120 | -22 | 140                 |      |                     |                                 |                                  |                |                |     |              |    |                           |        |                          |                  |                  |                  |
| 80                   | LM 80120140 UU*       | 6 | 4 400        | LM 80120140 UU AJ*  | 6                         | 4 360  | LM 80120140 UU OP*  | 5           | 3 640     |   |                                      | 100         | 0              | 0                                | 150 | 0   | 175                 | 0    | 125.5               | 0                               | 4.15                             | 145            | 3              | 50  | 50           | 20 | 30                        | 14 500 | 15 300                   | 22 800           | 29 200           |                  |
| 120                  | LM 120180200 UU*      | 8 | 14 700       | LM 120180200 UU AJ* | 8                         | 14 600 | LM 120180200 UU OP* | 6           | 11 400    |   |                                      | 120         | -10            | -20                              | 180 | -25 | 200                 | -400 | 158.6               | -400                            | 4.15                             | 175            | 3              | 85  | 80           |    |                           | 25 800 | 25 500                   | 44 300           | 49 400           |                  |
| 150                  | LM 150210240 UU*      | 8 | 19 900       | LM 150210240 UU AJ* | 8                         | 19 800 | LM 150210240 UU OP* | 6           | 15 400    |   |                                      | 150         | 0              | 0                                | 210 | 0   | 240                 |      | 170.6               |                                 | 5.15                             | 204            | 3              | 105 | 80           | 25 | 40                        | 35 600 | 35 100                   | 61 200           | 68 200           |                  |

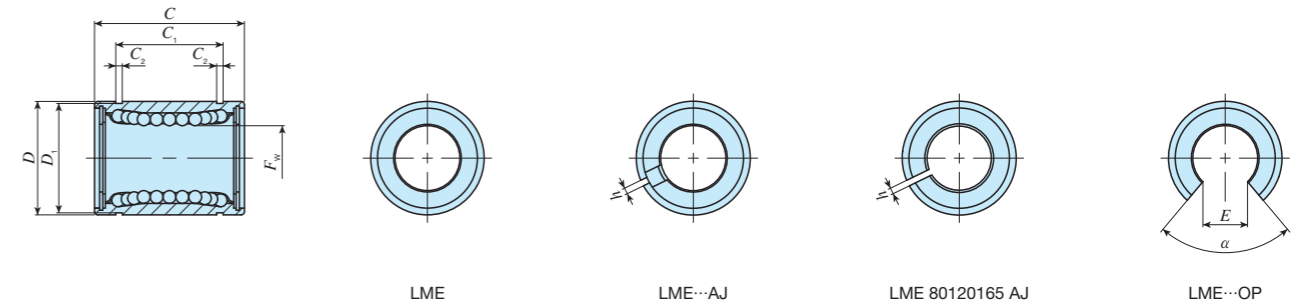
Note (1) The width of hub for fixing with circlip should be the value obtained by subtracting a circlip width value times two from the C<sub>1</sub> dimension.

- Remarks 1. "P" and "H" in Dim. F<sub>w</sub> tolerance and Eccentricity represent precision and high, respectively.  
 2. Standard type and adjustable clearance type (shaft diameter 60 mm) end plates are fixed with stop ring for holes.  
 3. The identification numbers with \* are our semi-standard items.

LMG • LM • LMS



|                | Standard type  |    |    |    |    | Adjustable clearance type |    |    |    |    | Open type               |    |    |    |    |    |    |    |  |
|----------------|----------------|----|----|----|----|---------------------------|----|----|----|----|-------------------------|----|----|----|----|----|----|----|--|
| Shape          | LME<br>LME...N |    |    |    |    | LME... AJ<br>LME...N AJ   |    |    |    |    | LME... OP<br>LME...N OP |    |    |    |    |    |    |    |  |
| Shaft diameter | 5              | 8  | 12 | 16 | 20 | 25                        | 5  | 8  | 12 | 16 | 20                      | 25 | —  | —  | 12 | 16 | 20 | 25 |  |
|                | 30             | 40 | 50 | 60 | 80 | 30                        | 40 | 50 | 60 | 80 | 30                      | 40 | 50 | 60 | 80 |    |    |    |  |



| Shaft diameter<br>mm | Identification number |            |              |                  |                           |               |              |                  |           |               | Nominal dimensions and tolerances mm |                  |                |  |          |                           |     |                           |                                 |  |                | Eccentricity<br>Maximum<br>μm | Basic dynamic load rating<br>C |      | Basic static load rating<br>C <sub>0</sub> |             |                          |                          |                          |                          |
|----------------------|-----------------------|------------|--------------|------------------|---------------------------|---------------|--------------|------------------|-----------|---------------|--------------------------------------|------------------|----------------|--|----------|---------------------------|-----|---------------------------|---------------------------------|--|----------------|-------------------------------|--------------------------------|------|--|-------------|--------------------------|--------------------------|--------------------------|--------------------------|
|                      | Standard type         |            | Ball raceway | Mass (Ref.)<br>g | Adjustable clearance type |               | Ball raceway | Mass (Ref.)<br>g | Open type |               | Ball raceway                         | Mass (Ref.)<br>g | F <sub>w</sub> | Dim. F <sub>w</sub><br>tolerance<br>μm | D        | Dim. D<br>tolerance<br>μm | C   | Dim. C<br>tolerance<br>μm | C <sub>1</sub> ( <sup>1</sup> ) | Dim. C <sub>1</sub><br>tolerance<br>μm | C <sub>2</sub> |                               | D <sub>1</sub>                 | h    | E  | α<br>Degree | Load<br>direction A<br>N | Load<br>direction B<br>N | Load<br>direction A<br>N | Load<br>direction B<br>N |
|                      |                       |            |              |                  |                           |               |              |                  |           |               |                                      |                  |                |  |          |                           |     |                           |                                 |  |                |                               |                                |      |  |             |                          |                          |                          |                          |
| 5                    | LME                   | 51222 N*   | 4            | 11               | LME                       | 51222 N AJ*   | 4            | 9.5              | —         | —             | —                                    | 5                |                | 12                                     |          | 22                        |     | 14.5                      |                                 | 1.1                                    | 11.5           | 1                             | —                              | —    | 12   | 90.8        | 104                      | 219                      | 310                      |                          |
| 8                    | LME                   | 81625 *    | 4            | 20               | —                         | —             | —            | —                | —         | —             | —                                    | 8                | + 8<br>0       | 16                                     | 0<br>- 8 | 25                        |     | 16.5                      |                                 | 1.1                                    | 15.2           | 1                             | —                              | —    | 12   | 121         | 139                      | 255                      | 361                      |                          |
|                      | LME                   | 81625 N*   | 4            | 20               | LME                       | 81625 N AJ*   | 4            | 19.5             | —         | —             | —                                    |                  |                |  |          |                           |     |                           |                                 |  |                |                               |                                |      |  |             |                          |                          |                          |                          |
| 12                   | LME                   | 122232 *   | 4            | 41.5             | LME                       | 122232 AJ*    | 4            | 40.5             | LME       | 122232 OP*    | 3                                    | 32               | 12             |  | 22       | 0                         | 32  | 0                         | 22.9                            | 0                                      | 1.3            | 21                            | 1.5                            | 7.5  | 78   | 12          | 259                      | 298                      | 503                      | 711                      |
|                      | LME                   | 122232 N*  | 4            | 40               | LME                       | 122232 N AJ*  | 4            | 39               | LME       | 122232 N OP*  | 3                                    | 30               |                |  |          |                           |     |                           |                                 |  |                |                               |                                |      |  |             |                          |                          |                          |                          |
| 16                   | LME                   | 162636 *   | 4            | 56.5             | LME                       | 162636 AJ*    | 4            | 55.5             | LME       | 162636 OP*    | 3                                    | 48               | 16             | + 9<br>- 1                             | 26       | - 9                       | 36  | -200                      | 24.9                            | -200                                   | 1.3            | 24.9                          | 1.5                            | 10   | 78   | 12          | 283                      | 325                      | 514                      | 726                      |
|                      | LME                   | 162636 N*  | 4            | 55               | LME                       | 162636 N AJ*  | 4            | 54               | LME       | 162636 N OP*  | 3                                    | 46               |                |  |          |                           |     |                           |                                 |  |                |                               |                                |      |  |             |                          |                          |                          |                          |
| 20                   | LME                   | 203245 *   | 5            | 97               | LME                       | 203245 AJ*    | 5            | 96               | LME       | 203245 OP*    | 4                                    | 84               | 20             |  | 32       |                           | 45  |                           | 31.5                            |  | 1.6            | 30.3                          | 2                              | 10   | 60   | 15          | 562                      | 668                      | 1 010                    | 1 470                    |
|                      | LME                   | 203245 N*  | 5            | 91               | LME                       | 203245 N AJ*  | 5            | 90               | LME       | 203245 N OP*  | 4                                    | 75               |                |  |          |                           |     |                           |                                 |  |                |                               |                                |      |  |             |                          |                          |                          |                          |
| 25                   | LME                   | 254058 *   | 6            | 222              | LME                       | 254058 AJ*    | 6            | 219              | LME       | 254058 OP*    | 5                                    | 195              | 25             | +11<br>- 1                             | 40       | 0<br>-11                  | 58  |                           | 44.1                            |  | 1.85           | 37.5                          | 2                              | 12.5 | 60   | 15          | 920                      | 974                      | 1 780                    | 2 280                    |
|                      | LME                   | 254058 N*  | 6            | 215              | LME                       | 254058 N AJ*  | 6            | 212              | LME       | 254058 N OP*  | 5                                    | 181              |                |  |          |                           |     |                           |                                 |  |                |                               |                                |      |  |             |                          |                          |                          |                          |
| 30                   | LME                   | 304768 *   | 6            | 338              | LME                       | 304768 AJ*    | 6            | 333              | LME       | 304768 OP*    | 5                                    | 309              | 30             |  | 47       |                           | 68  | 0                         | 52.1                            | 0                                      | 1.85           | 44.5                          | 2                              | 12.5 | 50   | 17          | 1 350                    | 1 430                    | 2 500                    | 3 200                    |
|                      | LME                   | 304768 N*  | 6            | 325              | LME                       | 304768 N AJ*  | 6            | 320              | LME       | 304768 N OP*  | 5                                    | 272              |                |  |          |                           |     |                           |                                 |  |                |                               |                                |      |  |             |                          |                          |                          |                          |
| 40                   | LME                   | 406280 *   | 6            | 712              | LME                       | 406280 AJ*    | 6            | 701              | LME       | 406280 OP*    | 5                                    | 665              | 40             |  | 62       | 0                         | 80  | -300                      | 60.6                            | -300                                   | 2.15           | 59                            | 3                              | 16.8 | 50   | 17          | 2 030                    | 2 150                    | 3 620                    | 4 640                    |
|                      | LME                   | 406280 N*  | 6            | 705              | LME                       | 406280 N AJ*  | 6            | 694              | LME       | 406280 N OP*  | 5                                    | 600              |                |  |          |                           |     |                           |                                 |  |                |                               |                                |      |  |             |                          |                          |                          |                          |
| 50                   | LME                   | 5075100 *  | 6            | 1 147            | LME                       | 5075100 AJ*   | 6            | 1 127            | LME       | 5075100 OP*   | 5                                    | 1 080            | 50             | +13<br>- 2                             | 75       | -13                       | 100 |                           | 77.6                            |  | 2.65           | 72                            | 3                              | 21   | 50   | 20          | 3 940                    | 4 180                    | 7 130                    | 9 120                    |
|                      | LME                   | 5075100 N* | 6            | 1 130            | LME                       | 5075100 N AJ* | 6            | 1 110            | LME       | 5075100 N OP* | 5                                    | 970              |                |  |          |                           |     |                           |                                 |  |                |                               |                                |      |  |             |                          |                          |                          |                          |
| 60                   | LME                   | 6090125 *  | 6            | 2 051            | LME                       | 6090125 AJ*   | 6            | 2 001            | LME       | 6090125 OP*   | 5                                    | 1 900            | 60             |  | 90       | 0                         | 125 | 0                         | 101.7                           | 0                                      | 3.15           | 86.5                          | 3                              | 27.2 | 54   | 20          | 4 760                    | 5 040                    | 8 150                    | 10 400                   |
|                      | LME                   | 6090125 N* | 6            | 2 050            | LME                       | 6090125 N AJ* | 6            | 2 000            | LME       | 6090125 N OP* | 5                                    | 1 580            |                |  |          |                           |     |                           |                                 |  |                |                               |                                |      |  |             |                          |                          |                          |                          |
| 80                   | LME                   | 80120165 * | 6            | 5 140            | LME                       | 80120165 AJ*  | 6            | 5 000            | LME       | 80120165 OP*  | 5                                    | 4 380            | 80             | +16<br>- 4                             | 120      | -15                       | 165 | -400                      | 133.7                           | -400                                   | 4.15           | 116                           | 3                              | 36.3 | 54   | 20          | 8 710                    | 9 220                    | 14 500                   | 18 500                   |




Note (1) The width of hub for fixing with circlip should be the value obtained by subtracting a circlip width value times two from the C<sub>1</sub> dimension.

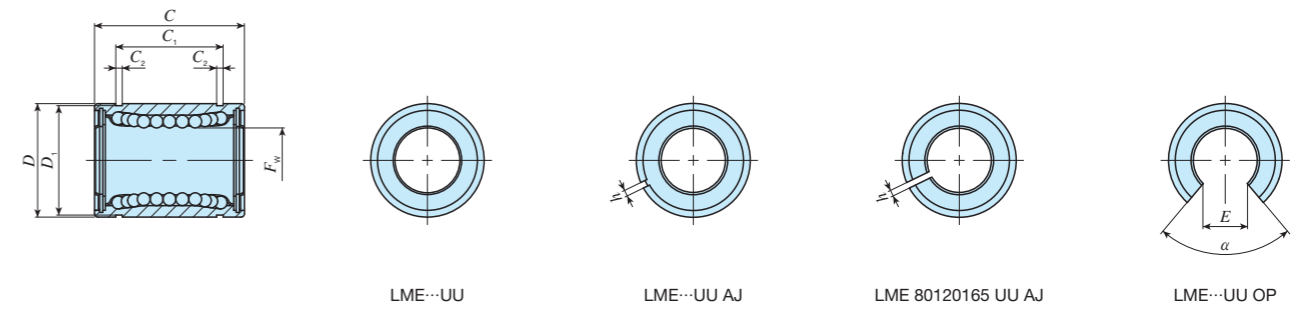
Remarks 1. High carbon steel-made retainer (shaft diameter 8 mm), and standard type and adjustable clearance type (shaft diameter 12 mm to 60 mm) end plates are fixed with stop ring for holes.  
2. The identification numbers with \* are our semi-standard items.

LMG • LM • LMS



# IKO Linear Bushing With Seal

|                | Standard type   |    |    |    |    | Adjustable clearance type   |    |    |    |    | Open type   |    |    |    |    |    |    |    |  |
|----------------|---|----|----|----|----|---|----|----|----|----|---|----|----|----|----|----|----|----|--|
| Shape          | LME... UU<br>LME...N UU   |    |    |    |    | LME... UU AJ<br>LME...N UU AJ   |    |    |    |    | LME... UU OP<br>LME...N UU OP   |    |    |    |    |    |    |    |  |
|                |  |    |    |    |    |  |    |    |    |    |  |    |    |    |    |    |    |    |  |
| Shaft diameter | 5   | 8  | 12 | 16 | 20 | 25  | 5  | 8  | 12 | 16 | 20  | 25 | —  | —  | 12 | 16 | 20 | 25 |  |
|                | 30  | 40 | 50 | 60 | 80 | 30  | 40 | 50 | 60 | 80 | 30  | 40 | 50 | 60 | 80 |    |    |    |  |



| Shaft diameter<br>mm | Identification number |   |              |                     |                           |       |                    |                     |           |   | Nominal dimensions and tolerances mm |                     |                |                            |          |                           |      |                           |                                 |  |                | Eccentricity<br>Maximum<br>μm | Basic dynamic load rating<br>C |    | Basic static load rating<br>C <sub>0</sub> |       |                          |                          |                          |                          |
|----------------------|-----------------------|---|--------------|---------------------|---------------------------|-------|--------------------|---------------------|-----------|---|--------------------------------------|---------------------|----------------|----------------------------|----------|---------------------------|------|---------------------------|---------------------------------|--|----------------|-------------------------------|--------------------------------|----|--|-------|--------------------------|--------------------------|--------------------------|--------------------------|
|                      | Standard type         |   | Ball raceway | Mass<br>(Ref.)<br>g | Adjustable clearance type |       | Ball raceway       | Mass<br>(Ref.)<br>g | Open type |   | Ball raceway                         | Mass<br>(Ref.)<br>g | F <sub>w</sub> | Dim. Fw<br>tolerance<br>μm | D        | Dim. D<br>tolerance<br>μm | C    | Dim. C<br>tolerance<br>μm | C <sub>1</sub> ( <sup>1</sup> ) | Dim. C <sub>1</sub><br>tolerance<br>μm | C <sub>2</sub> |                               | D <sub>1</sub>                 | h  | E  | α     | Load<br>direction A<br>N | Load<br>direction B<br>N | Load<br>direction A<br>N | Load<br>direction B<br>N |
|                      |                       |   |              |                     |                           |       |                    |                     |           |   |                                      |                     |                |                            |          |                           |      |                           |                                 |  |                |                               |                                |    |  |       |                          |                          |                          |                          |
| 5                    | LME 51222 N UU*       | 4 | 11           | LME 51222 N UU AJ*  | 4                         | 9.5   | —                  | —                   | —         | — | —                                    | 5                   |                | 12                         | 0        | 22                        |      | 14.5                      |                                 | 1.1                                    | 11.5           | 1                             | —                              | —  | 12   | 90.8  | 104                      | 219                      | 310                      |                          |
| 8                    | LME 81625 UU*         | 4 | 20           | —                   | —                         | —     | —                  | —                   | —         | — | —                                    | 8                   | +8<br>0        | 16                         | -8       | 25                        |      | 16.5                      |                                 | 1.1                                    | 15.2           | 1                             | —                              | —  | 12   | 121   | 139                      | 255                      | 361                      |                          |
| 12                   | LME 122232 UU*        | 4 | 41.5         | LME 122232 UU AJ*   | 4                         | 40.5  | LME 122232 UU OP*  | 3                   | 32        | — | —                                    | 12                  |                | 22                         | 0        | 32                        | 0    | 22.9                      | 0                               | 1.3                                    | 21             | 1.5                           | 7.5                            | 78 | 12   | 259   | 298                      | 503                      | 711                      |                          |
| 16                   | LME 162636 UU*        | 4 | 56.5         | LME 162636 UU AJ*   | 4                         | 55.5  | LME 162636 UU OP*  | 3                   | 48        | — | —                                    | 16                  |                | 26                         | -9       | 36                        | -200 | 24.9                      | -200                            | 1.3                                    | 24.9           | 1.5                           | 10                             | 78 | 12   | 283   | 325                      | 514                      | 726                      |                          |
| 20                   | LME 203245 UU*        | 5 | 97           | LME 203245 UU AJ*   | 5                         | 96    | LME 203245 UU OP*  | 4                   | 84        | — | —                                    | 20                  | +9<br>-1       | 32                         |          | 45                        |      | 31.5                      |                                 | 1.6                                    | 30.3           | 2                             | 10                             | 60 | 12   | 562   | 668                      | 1 010                    | 1 470                    |                          |
| 25                   | LME 254058 UU*        | 6 | 222          | LME 254058 UU AJ*   | 6                         | 219   | LME 254058 UU OP*  | 5                   | 195       | — | —                                    | 25                  | +11<br>-1      | 40                         | 0<br>-11 | 58                        |      | 44.1                      |                                 | 1.85                                   | 37.5           | 2                             | 12.5                           | 60 | 15   | 920   | 974                      | 1 780                    | 2 280                    |                          |
| 30                   | LME 304768 UU*        | 6 | 338          | LME 304768 UU AJ*   | 6                         | 333   | LME 304768 UU OP*  | 5                   | 309       | — | —                                    | 30                  |                | 47                         |          | 68                        | 0    | 52.1                      | 0                               | 1.85                                   | 44.5           | 2                             | 12.5                           | 50 | 12   | 1 350 | 1 430                    | 2 500                    | 3 200                    |                          |
| 40                   | LME 406280 UU*        | 6 | 712          | LME 406280 UU AJ*   | 6                         | 701   | LME 406280 UU OP*  | 5                   | 665       | — | —                                    | 40                  |                | 62                         | 0        | 80                        | -300 | 60.6                      | -300                            | 2.15                                   | 59             | 3                             | 16.8                           | 50 | 17   | 2 030 | 2 150                    | 3 620                    | 4 640                    |                          |
| 50                   | LME 5075100 UU*       | 6 | 1 147        | LME 5075100 UU AJ*  | 6                         | 1 127 | LME 5075100 UU OP* | 5                   | 1 080     | — | —                                    | 50                  | +13<br>-2      | 75                         | -13      | 100                       |      | 77.6                      |                                 | 2.65                                   | 72             | 3                             | 21                             | 50 | 17   | 3 940 | 4 180                    | 7 130                    | 9 120                    |                          |
| 60                   | LME 6090125 UU*       | 6 | 2 051        | LME 6090125 UU AJ*  | 6                         | 2 001 | LME 6090125 UU OP* | 5                   | 1 900     | — | —                                    | 60                  |                | 90                         | 0        | 125                       | 0    | 101.7                     | 0                               | 3.15                                   | 86.5           | 3                             | 27.2                           | 54 | 20   | 4 760 | 5 040                    | 8 150                    | 10 400                   |                          |
| 80                   | LME80120165 UU*       | 6 | 5 030        | LME80120165 UU AJ*  | 6                         | 4 930 | LME80120165 UU OP* | 5                   | 4 210     | — | —                                    | 80                  | +16<br>-4      | 120                        | -15      | 165                       | -400 | 133.7                     | -400                            | 4.15                                   | 116            | 3                             | 36.3                           | 54 | 20   | 8 710 | 9 220                    | 14 500                   | 18 500                   |                          |

Notes (1) The width of hub for fixing with circlip should be the value obtained by subtracting a circlip width value times two from the C<sub>1</sub> dimension.




(2) The seal is slightly off from the external cylinder end.

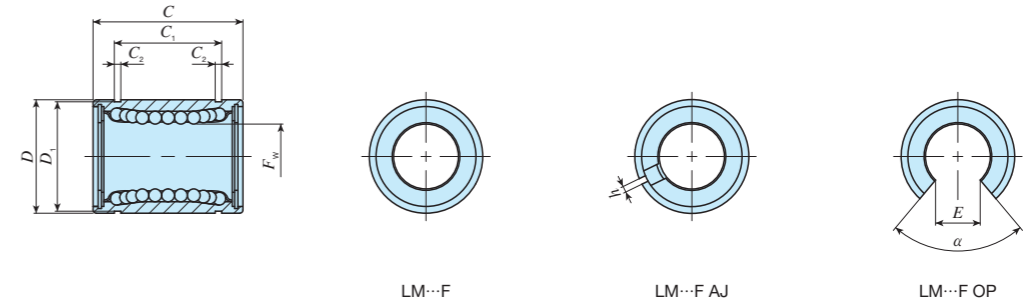
Remarks 1. High carbon steel-made retainer (shaft diameter 8 mm), and standard type and adjustable clearance type (shaft diameter 12 mm to 60 mm) end plates are fixed with stop ring for holes.

2. The identification numbers with \* are our semi-standard items.



# IKO Linear Bushing Stainless Steel Made

|                | Standard type   |    |    |    |    | Adjustable clearance type   |    |    |    |    | Open type   |    |    |    |    |
|----------------|---|----|----|----|----|---|----|----|----|----|---|----|----|----|----|
| Shape          | LM... F<br>LM...N F   |    |    |    |    | LM... FAJ<br>LM...N FAJ   |    |    |    |    | LM... F OP<br>LM...N F OP   |    |    |    |    |
|                |  |    |    |    |    |  |    |    |    |    |  |    |    |    |    |
| Shaft diameter | 6   | 8  | 10 | 12 | 13 | 6   | 8  | 10 | 12 | 13 | —   | —  | 10 | 12 | 13 |
|                | 16  | 20 | 25 | 30 | 35 | 16  | 20 | 25 | 30 | 35 | 16  | 20 | 25 | 30 | 35 |
|                | 40  | 50 | 60 |    |    | 40  | 50 | 60 |    |    | 40  | 50 | 60 |    |    |



| Shaft diameter<br>mm | Identification number |   |              |                    |                           |       |                    |                  |           |    | Nominal dimensions and tolerances mm |                  |                |                                     |    |           |                        |    |                        |                                 |                                     |                |                |    | Eccentricity |    | Basic dynamic load rating |    | Basic static load rating |                       |                       |                       |                       |
|----------------------|-----------------------|---|--------------|--------------------|---------------------------|-------|--------------------|------------------|-----------|----|--------------------------------------|------------------|----------------|-------------------------------------|----|-----------|------------------------|----|------------------------|---------------------------------|-------------------------------------|----------------|----------------|----|--------------|----|---------------------------|----|--------------------------|-----------------------|-----------------------|-----------------------|-----------------------|
|                      | Standard type         |   | Ball raceway | Mass (Ref.)<br>g   | Adjustable clearance type |       | Ball raceway       | Mass (Ref.)<br>g | Open type |    | Ball raceway                         | Mass (Ref.)<br>g | F <sub>w</sub> | Dim. F <sub>w</sub> tolerance<br>μm |    | D         | Dim. D tolerance<br>μm | C  | Dim. C tolerance<br>μm | C <sub>1</sub> ( <sup>1</sup> ) | Dim. C <sub>1</sub> tolerance<br>μm | C <sub>2</sub> | D <sub>1</sub> | h  | E            | α  | Maximum<br>μm             | P  | H                        | Load direction A<br>N | Load direction B<br>N | Load direction A<br>N | Load direction B<br>N |
|                      | P                     | H | μm           | μm                 | μm                        | μm    | μm                 | μm               | μm        | μm | μm                                   | μm               | μm             | μm                                  | μm | μm        | μm                     | μm | μm                     | μm                              | μm                                  | μm             | μm             | μm | μm           | μm | μm                        | μm | μm                       | μm                    | μm                    | μm                    | μm                    |
| 6                    | LM 61219 F            | 4 | 8            | —                  | —                         | —     | —                  | —                | —         | —  | —                                    | 6                |                |                                     | 12 |           | 19                     |    | 13.5                   |                                 | 1.1                                 | 11.5           | —              | —  | —            |    |                           |    | 80.7                     | 92.7                  | 167                   | 237                   |                       |
|                      | LM 61219 N F          | 4 | 7.6          | LM 61219 N F AJ*   | 4                         | 7.5   | —                  | —                | —         | —  | —                                    | 8                |                |                                     | 15 | 0<br>-11  | 17                     |    | 11.5                   |                                 | 1.1                                 | 14.3           | —              | —  | —            |    |                           |    | 87.4                     | 100                   | 160                   | 226                   |                       |
| 8                    | LM 81517 F            | 4 | 13           | —                  | —                         | —     | —                  | —                | —         | —  | —                                    | 8                |                |                                     | 15 |           | 24                     |    | 17.5                   |                                 | 1.1                                 | 14.3           | —              | —  | —            |    |                           |    | 121                      | 139                   | 255                   | 361                   |                       |
|                      | LM 81524 N F          | 4 | 15           | LM 81524 N F AJ*   | 4                         | 14.7  | —                  | —                | —         | —  | —                                    | 8                |                |                                     | 15 |           | 24                     |    | 17.5                   |                                 | 1.1                                 | 14.3           | —              | —  | —            |    |                           |    | 121                      | 139                   | 255                   | 361                   |                       |
| 10                   | LM 101929 F           | 4 | 30           | —                  | —                         | —     | —                  | —                | —         | —  | —                                    | 10               | 0<br>-6        | 0<br>-9                             | 19 |           | 29                     |    | 22                     |                                 | 1.3                                 | 18             | —              | —  | —            | 8  | 12                        |    | 179                      | 206                   | 354                   | 501                   |                       |
|                      | LM 101929 N F         | 4 | 27.5         | LM 101929 N F AJ*  | 4                         | 26.5  | LM 101929 N F OP*  | 3                | 18        | —  | —                                    | 12               |                |                                     | 21 | 0<br>-200 | 30                     |    | 23                     | 0<br>-200                       | 1.3                                 | 20             | 1.5            | 8  | 80           |    |                           |    | 259                      | 298                   | 503                   | 711                   |                       |
| 12                   | LM 122130 F           | 4 | 29           | LM 122130 F AJ*    | 4                         | 28    | LM 122130 F OP*    | 3                | 19        | —  | —                                    | 12               |                |                                     | 21 | 0<br>-13  | 30                     |    | 23                     |                                 | 1.3                                 | 22             | 1.5            | 9  | 80           |    |                           |    | 266                      | 306                   | 506                   | 716                   |                       |
|                      | LM 122130 N F         | 4 | 31.5         | LM 122130 N F AJ*  | 4                         | 30.5  | LM 122130 N F OP*  | 3                | 22        | —  | —                                    | 13               |                |                                     | 23 |           | 32                     |    | 23                     |                                 | 1.3                                 | 22             | 1.5            | 9  | 80           |    |                           |    | 266                      | 306                   | 506                   | 716                   |                       |
| 13                   | LM 132332 F           | 4 | 43           | LM 132332 F AJ*    | 4                         | 42    | LM 132332 F OP*    | 3                | 31        | —  | —                                    | 13               |                |                                     | 23 |           | 32                     |    | 23                     |                                 | 1.3                                 | 22             | 1.5            | 9  | 80           |    |                           |    | 266                      | 306                   | 506                   | 716                   |                       |
|                      | LM 132332 N F         | 4 | 42.5         | LM 132332 N F AJ*  | 4                         | 41.5  | LM 132332 N F OP*  | 3                | 31        | —  | —                                    | 16               |                |                                     | 28 |           | 37                     |    | 26.5                   |                                 | 1.6                                 | 27             | 1.5            | 11 | 80           |    |                           |    | 426                      | 489                   | 766                   | 1 080                 |                       |
| 16                   | LM 162837 F           | 4 | 70           | LM 162837 F AJ*    | 4                         | 69.5  | LM 162837 F OP*    | 3                | 58        | —  | —                                    | 16               |                |                                     | 28 |           | 37                     |    | 26.5                   |                                 | 1.6                                 | 27             | 1.5            | 11 | 80           |    |                           |    | 426                      | 489                   | 766                   | 1 080                 |                       |
|                      | LM 162837 N F         | 4 | 69           | LM 162837 N F AJ*  | 4                         | 68    | LM 162837 N F OP*  | 3                | 52        | —  | —                                    | 20               |                |                                     | 32 |           | 42                     |    | 30.5                   |                                 | 1.6                                 | 30.5           | 1.5            | 11 | 60           |    |                           |    | 562                      | 668                   | 1 010                 | 1 470                 |                       |
| 20                   | LM 203242 F           | 5 | 92           | LM 203242 F AJ*    | 5                         | 91    | LM 203242 F OP*    | 4                | 79        | —  | —                                    | 20               |                |                                     | 32 |           | 42                     |    | 30.5                   |                                 | 1.6                                 | 30.5           | 1.5            | 11 | 60           |    |                           |    | 562                      | 668                   | 1 010                 | 1 470                 |                       |
|                      | LM 203242 N F         | 5 | 87           | LM 203242 N F AJ*  | 5                         | 85    | LM 203242 N F OP*  | 4                | 69        | —  | —                                    | 25               | 0<br>-7        | 0<br>-10                            | 40 | 0<br>-16  | 59                     |    | 41                     |                                 | 1.85                                | 38             | 2              | 12 | 50           | 10 | 15                        |    | 920                      | 974                   | 1 780                 | 2 280                 |                       |
| 25                   | LM 254059 F           | 6 | 226          | LM 254059 F AJ*    | 6                         | 222   | LM 254059 F OP*    | 5                | 203       | —  | —                                    | 25               | 0<br>-7        | 0<br>-10                            | 40 | 0<br>-16  | 59                     |    | 41                     |                                 | 1.85                                | 38             | 2              | 12 | 50           | 10 | 15                        |    | 920                      | 974                   | 1 780                 | 2 280                 |                       |
|                      | LM 254059 N F         | 6 | 220          | LM 254059 N F AJ*  | 6                         | 216   | LM 254059 N F OP*  | 5                | 188       | —  | —                                    | 30               |                |                                     | 45 |           | 64                     |    | 44.5                   |                                 | 1.85                                | 43             | 2.5            | 15 | 50           |    |                           |    | 1 460                    | 1 540                 | 2 780                 | 3 560                 |                       |
| 30                   | LM 304564 F           | 6 | 253          | LM 304564 F AJ*    | 6                         | 250   | LM 304564 F OP*    | 5                | 228       | —  | —                                    | 30               |                |                                     | 45 |           | 64                     |    | 44.5                   |                                 | 1.85                                | 43             | 2.5            | 15 | 50           |    |                           |    | 1 460                    | 1 540                 | 2 780                 | 3 560                 |                       |
|                      | LM 304564 N F         | 6 | 250          | LM 304564 N F AJ*  | 6                         | 245   | LM 304564 N F OP*  | 5                | 210       | —  | —                                    | 35               |                |                                     | 52 |           | 70                     |    | 49.5                   |                                 | 2.1                                 | 49             | 2.5            | 17 | 50           |    |                           |    | 1 610                    | 1 710                 | 3 080                 | 3 940                 |                       |
| 35                   | LM 355270 F           | 6 | 387          | LM 355270 F AJ*    | 6                         | 380   | LM 355270 F OP*    | 5                | 355       | —  | —                                    | 35               |                |                                     | 52 |           | 70                     |    | 49.5                   |                                 | 2.1                                 | 49             | 2.5            | 17 | 50           |    |                           |    | 1 610                    | 1 710                 | 3 080                 | 3 940                 |                       |
|                      | LM 355270 N F         | 6 | 380          | LM 355270 N F AJ*  | 6                         | 375   | LM 355270 N F OP*  | 5                | 335       | —  | —                                    | 40               | 0<br>-8        | 0<br>-12                            | 60 | 0<br>-19  | 80                     |    | 60.5                   | 0<br>-300                       | 2.1                                 | 57             | 3              | 20 | 50           | 12 | 20                        |    | 2 030                    | 2 150                 | 3 620                 | 4 640                 |                       |
| 40                   | LM 406080 F           | 6 | 596          | LM 406080 F AJ*    | 6                         | 585   | LM 406080 F OP*    | 5                | 546       | —  | —                                    | 40               | 0<br>-8        | 0<br>-12                            | 60 | 0<br>-19  | 80                     |    | 60.5                   | 0<br>-300                       | 2.1                                 | 57             | 3              | 20 | 50           | 12 | 20                        |    | 2 030                    | 2 150                 | 3 620                 | 4 640                 |                       |
|                      | LM 406080 N F         | 6 | 585          | LM 406080 N F AJ*  | 6                         | 579   | LM 406080 N F OP*  | 5                | 500       | —  | —                                    | 50               |                |                                     | 80 |           | 100                    |    | 74                     |                                 | 2.6                                 | 76.5           | 3              | 25 | 50           |    |                           |    | 3 940                    | 4 180                 | 7 130                 | 9 120                 |                       |
| 50                   | LM 5080100 F          | 6 | 1 615        | LM 5080100 F AJ*   | 6                         | 1 595 | LM 5080100 F OP*   | 5                | 1 420     | —  | —                                    | 50               |                |                                     | 80 |           | 100                    |    | 74                     |                                 | 2.6                                 | 76.5           | 3              | 25 | 50           |    |                           |    | 3 940                    | 4 180                 | 7 130                 | 9 120                 |                       |
|                      | LM 5080100 N F        | 6 | 1 580        | LM 5080100 N F AJ* | 6                         | 1 560 | LM 5080100 N F OP* | 5                | 1 340     | —  | —                                    | 60               | 0<br>-9        | 0<br>-15                            | 90 | 0<br>-22  | 110                    |    | 85                     |                                 | 3.15                                | 86.5           | 3              | 30 | 50           | 17 | 25                        |    | 4 760                    | 5 040                 | 8 150                 | 10 400                |                       |
| 60                   | LM 6090110 F          | 6 | 1 817        | LM 6090110 F AJ*   | 6                         | 1 788 | LM 6090110 F OP*   | 5                | 1 650     | —  | —                                    | 60               | 0<br>-9        | 0<br>-15                            | 90 | 0<br>-22  | 110                    |    | 85                     |                                 | 3.15                                | 86.5           | 3              | 30 | 50           | 17 | 25                        |    | 4 760                    | 5 040                 | 8 150                 | 10 400                |                       |
|                      | LM 6090110 N F        | 6 | 1 787        | LM 6090110 N F AJ* | 6                         | 1 757 | LM 6090110 N F OP* | 5                | 1 610     | —  | —                                    |                  |                |                                     |    |           |                        |    |                        |                                 |                                     |                |                |    |              |    |                           |    |                          |                       |                       |                       |                       |

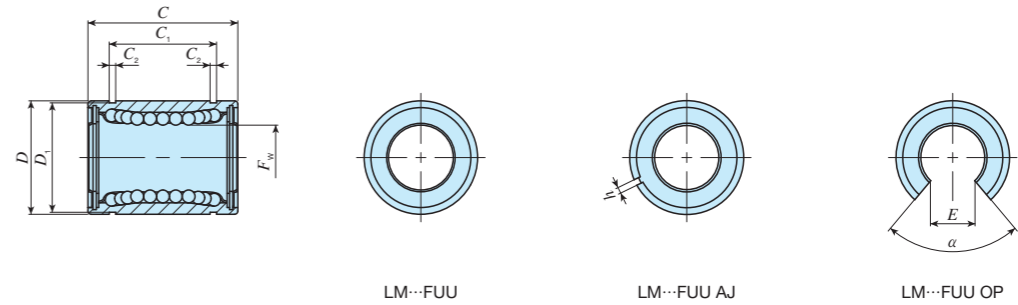
Note (1) The width of hub for fixing with circlip should be the value obtained by subtracting a circlip width value times two from the C<sub>1</sub> dimension.

- Remarks 1. "P" and "H" in Dim. F<sub>w</sub> tolerance and Eccentricity represent precision and high, respectively.  
 2. Standard type and adjustable clearance type end plates are fixed with stop ring for holes.  
 3. The identification numbers with \* are our semi-standard items.

LMG • LM • LMS

# IKO Linear Bushing Stainless Steel Made With Seal

| Shape          | Standard type              |    |    |    |    | Adjustable clearance type        |    |    |    |    | Open type                        |    |    |    |    |
|----------------|----------------------------|----|----|----|----|----------------------------------|----|----|----|----|----------------------------------|----|----|----|----|
|                | LM... F UU<br>LM... N F UU |    |    |    |    | LM... F UU AJ<br>LM... N F UU AJ |    |    |    |    | LM... F UU OP<br>LM... N F UU OP |    |    |    |    |
| Shaft diameter | 6                          | 8  | 10 | 12 | 13 | 6                                | 8  | 10 | 12 | 13 | —                                | —  | 10 | 12 | 13 |
|                | 16                         | 20 | 25 | 30 | 35 | 16                               | 20 | 25 | 30 | 35 | 16                               | 20 | 25 | 30 | 35 |
|                | 40                         | 50 | 60 |    |    | 40                               | 50 | 60 |    |    | 40                               | 50 | 60 |    |    |



| Shaft diameter<br>mm | Identification number |   |              |                       |                           |       |                       |                  |           |   | Nominal dimensions and tolerances mm |                  |                |                                     |    |          |                        |      |                        |                               |                                     |                |                | Eccentricity |    | Basic dynamic load rating |            | Basic static load rating |       |                       |                       |                       |                       |
|----------------------|-----------------------|---|--------------|-----------------------|---------------------------|-------|-----------------------|------------------|-----------|---|--------------------------------------|------------------|----------------|-------------------------------------|----|----------|------------------------|------|------------------------|-------------------------------|-------------------------------------|----------------|----------------|--------------|----|---------------------------|------------|--------------------------|-------|-----------------------|-----------------------|-----------------------|-----------------------|
|                      | Standard type         |   | Ball raceway | Mass (Ref.)<br>g      | Adjustable clearance type |       | Ball raceway          | Mass (Ref.)<br>g | Open type |   | Ball raceway                         | Mass (Ref.)<br>g | F <sub>w</sub> | Dim. F <sub>w</sub> tolerance<br>μm |    | D        | Dim. D tolerance<br>μm | C    | Dim. C tolerance<br>μm | C <sub>1</sub> <sup>(1)</sup> | Dim. C <sub>1</sub> tolerance<br>μm | C <sub>2</sub> | D <sub>1</sub> | h            | E  | α                         | Maximum μm | P                        | H     | Load direction A<br>N | Load direction B<br>N | Load direction A<br>N | Load direction B<br>N |
|                      |                       |   |              |                       |                           |       |                       |                  |           |   |                                      |                  |                |                                     |    |          |                        |      |                        |                               |                                     |                |                |              |    |                           |            |                          |       |                       |                       |                       |                       |
| 6                    | LM 61219 F UU         | 4 | 8            | —                     | —                         | —     | —                     | —                | —         | — | —                                    | 6                |                |                                     | 12 |          | 19                     |      | 13.5                   |                               | 1.1                                 | 11.5           | —              | —            | —  |                           |            |                          | 80.7  | 92.7                  | 167                   | 237                   |                       |
|                      | LM 61219 N F UU       | 4 | 7.6          | LM 61219 N F UU AJ*   | 4                         | 7.5   | —                     | —                | —         | — | —                                    | 8                |                |                                     | 15 | 0<br>-11 | 17                     |      | 11.5                   |                               | 1.1                                 | 14.3           | —              | —            | —  |                           |            |                          | 87.4  | 100                   | 160                   | 226                   |                       |
| 8                    | LM 81517 F UU         | 4 | 13           | —                     | —                         | —     | —                     | —                | —         | — | —                                    | 8                |                |                                     | 15 |          | 24                     |      | 17.5                   |                               | 1.1                                 | 14.3           | —              | —            | —  |                           |            |                          | 121   | 139                   | 255                   | 361                   |                       |
|                      | LM 81524 F UU         | 4 | 18           | —                     | —                         | —     | —                     | —                | —         | — | —                                    | 8                |                |                                     | 15 |          | 24                     |      | 17.5                   |                               | 1.1                                 | 14.3           | —              | —            | —  |                           |            |                          | 121   | 139                   | 255                   | 361                   |                       |
| 10                   | LM 101929 F UU        | 4 | 30           | —                     | —                         | —     | —                     | —                | —         | — | —                                    | 10               | 0<br>-6        | 0<br>9                              | 19 |          | 29                     |      | 22                     |                               | 1.3                                 | 18             | —              | —            | —  | 8                         | 12         |                          | 179   | 206                   | 354                   | 501                   |                       |
|                      | LM 101929 N F UU      | 4 | 27.5         | LM 101929 N F UU AJ*  | 4                         | 26.5  | LM 101929 N F UU OP*  | 3                | 18        | — | —                                    | 10               | 0<br>-6        | 0<br>9                              | 19 |          | 29                     |      | 22                     |                               | 1.3                                 | 18             | —              | —            | —  | 8                         | 12         |                          | 179   | 206                   | 354                   | 501                   |                       |
| 12                   | LM 122130 F UU        | 4 | 29           | LM 122130 F UU AJ*    | 4                         | 28    | LM 122130 F UU OP*    | 3                | 19        | — | —                                    | 12               |                |                                     | 21 | 0        | 30                     | -200 | 23                     | -200                          | 1.3                                 | 20             | 1.5            | 8            | 80 |                           |            | 259                      | 298   | 503                   | 711                   |                       |                       |
|                      | LM 122130 N F UU      | 4 | 31.5         | LM 122130 N F UU AJ*  | 4                         | 30.5  | LM 122130 N F UU OP*  | 3                | 22        | — | —                                    | 12               |                |                                     | 21 | 0        | 30                     | -200 | 23                     | -200                          | 1.3                                 | 20             | 1.5            | 8            | 80 |                           |            | 259                      | 298   | 503                   | 711                   |                       |                       |
| 13                   | LM 132332 F UU        | 4 | 43           | LM 132332 F UU AJ*    | 4                         | 42    | LM 132332 F UU OP*    | 3                | 31        | — | —                                    | 13               |                |                                     | 23 | -13      | 32                     |      | 23                     |                               | 1.3                                 | 22             | 1.5            | 9            | 80 |                           |            | 266                      | 306   | 506                   | 716                   |                       |                       |
|                      | LM 132332 N F UU      | 4 | 42.5         | LM 132332 N F UU AJ*  | 4                         | 41.5  | LM 132332 N F UU OP*  | 3                | 31        | — | —                                    | 13               |                |                                     | 23 | -13      | 32                     |      | 23                     |                               | 1.3                                 | 22             | 1.5            | 9            | 80 |                           |            | 266                      | 306   | 506                   | 716                   |                       |                       |
| 16                   | LM 162837 F UU        | 4 | 70           | LM 162837 F UU AJ*    | 4                         | 69.5  | LM 162837 F UU OP*    | 3                | 58        | — | —                                    | 16               |                |                                     | 28 |          | 37                     |      | 26.5                   |                               | 1.6                                 | 27             | 1.5            | 11           | 80 |                           |            | 426                      | 489   | 766                   | 1 080                 |                       |                       |
|                      | LM 162837 N F UU      | 4 | 69           | LM 162837 N F UU AJ*  | 4                         | 68    | LM 162837 N F UU OP*  | 3                | 52        | — | —                                    | 16               |                |                                     | 28 |          | 37                     |      | 26.5                   |                               | 1.6                                 | 27             | 1.5            | 11           | 80 |                           |            | 426                      | 489   | 766                   | 1 080                 |                       |                       |
| 20                   | LM 203242 F UU        | 5 | 92           | LM 203242 F UU AJ*    | 5                         | 91    | LM 203242 F UU OP*    | 4                | 79        | — | —                                    | 20               |                |                                     | 32 |          | 42                     |      | 30.5                   |                               | 1.6                                 | 30.5           | 1.5            | 11           | 60 |                           |            | 562                      | 668   | 1 010                 | 1 470                 |                       |                       |
|                      | LM 203242 N F UU      | 5 | 87           | LM 203242 N F UU AJ*  | 5                         | 85    | LM 203242 N F UU OP*  | 4                | 69        | — | —                                    | 20               |                |                                     | 32 |          | 42                     |      | 30.5                   |                               | 1.6                                 | 30.5           | 1.5            | 11           | 60 |                           |            | 562                      | 668   | 1 010                 | 1 470                 |                       |                       |
| 25                   | LM 254059 F UU        | 6 | 226          | LM 254059 F UU AJ*    | 6                         | 222   | LM 254059 F UU OP*    | 5                | 203       | — | —                                    | 25               | 0<br>-7        | 0<br>-10                            | 40 | 0<br>-16 | 59                     |      | 41                     |                               | 1.85                                | 38             | 2              | 12           | 50 | 10                        | 15         |                          | 920   | 974                   | 1 780                 | 2 280                 |                       |
|                      | LM 254059 N F UU      | 6 | 220          | LM 254059 N F UU AJ*  | 6                         | 216   | LM 254059 N F UU OP*  | 5                | 188       | — | —                                    | 25               | 0<br>-7        | 0<br>-10                            | 40 | 0<br>-16 | 59                     |      | 41                     |                               | 1.85                                | 38             | 2              | 12           | 50 | 10                        | 15         |                          | 920   | 974                   | 1 780                 | 2 280                 |                       |
| 30                   | LM 304564 F UU        | 6 | 253          | LM 304564 F UU AJ*    | 6                         | 250   | LM 304564 F UU OP*    | 5                | 228       | — | —                                    | 30               |                |                                     | 45 |          | 64                     |      | 44.5                   |                               | 1.85                                | 43             | 2.5            | 15           | 50 |                           |            | 1 460                    | 1 540 | 2 780                 | 3 560                 |                       |                       |
|                      | LM 304564 N F UU      | 6 | 250          | LM 304564 N F UU AJ*  | 6                         | 245   | LM 304564 N F UU OP*  | 5                | 210       | — | —                                    | 30               |                |                                     | 45 |          | 64                     |      | 44.5                   |                               | 1.85                                | 43             | 2.5            | 15           | 50 |                           |            | 1 460                    | 1 540 | 2 780                 | 3 560                 |                       |                       |
| 35                   | LM 355270 F UU        | 6 | 387          | LM 355270 F UU AJ*    | 6                         | 380   | LM 355270 F UU OP*    | 5                | 355       | — | —                                    | 35               |                |                                     | 52 |          | 70                     |      | 49.5                   |                               | 2.1                                 | 49             | 2.5            | 17           | 50 |                           |            | 1 610                    | 1 710 | 3 080                 | 3 940                 |                       |                       |
|                      | LM 355270 N F UU      | 6 | 380          | LM 355270 N F UU AJ*  | 6                         | 375   | LM 355270 N F UU OP*  | 5                | 335       | — | —                                    | 35               |                |                                     | 52 |          | 70                     |      | 49.5                   |                               | 2.1                                 | 49             | 2.5            | 17           | 50 |                           |            | 1 610                    | 1 710 | 3 080                 | 3 940                 |                       |                       |
| 40                   | LM 406080 F UU        | 6 | 596          | LM 406080 F UU AJ*    | 6                         | 585   | LM 406080 F UU OP*    | 5                | 546       | — | —                                    | 40               | 0<br>-8        | 0<br>-12                            | 60 | 0<br>-19 | 80                     | -300 | 60.5                   | -300                          | 2.1                                 | 57             | 3              | 20           | 50 | 12                        | 20         |                          | 2 030 | 2 150                 | 3 620                 | 4 640                 |                       |
|                      | LM 406080 N F UU      | 6 | 585          | LM 406080 N F UU AJ*  | 6                         | 579   | LM 406080 N F UU OP*  | 5                | 500       | — | —                                    | 40               | 0<br>-8        | 0<br>-12                            | 60 | 0<br>-19 | 80                     | -300 | 60.5                   | -300                          | 2.1                                 | 57             | 3              | 20           | 50 | 12                        | 20         |                          | 2 030 | 2 150                 | 3 620                 | 4 640                 |                       |
| 50                   | LM 5080100 F UU       | 6 | 1 615        | LM 5080100 F UU AJ*   | 6                         | 1 595 | LM 5080100 F UU OP*   | 5                | 1 420     | — | —                                    | 50               |                |                                     | 80 |          | 100                    |      | 74                     |                               | 2.6                                 | 76.5           | 3              | 25           | 50 |                           |            | 3 940                    | 4 180 | 7 130                 | 9 120                 |                       |                       |
|                      | LM 5080100 N F UU     | 6 | 1 580        | LM 5080100 N F UU AJ* | 6                         | 1 560 | LM 5080100 N F UU OP* | 5                | 1 340     | — | —                                    | 50               |                |                                     | 80 |          | 100                    |      | 74                     |                               | 2.6                                 | 76.5           | 3              | 25           | 50 |                           |            | 3 940                    | 4 180 | 7 130                 | 9 120                 |                       |                       |
| 60                   | LM 6090110 F UU       | 6 | 1 817        | LM 6090110 F UU AJ*   | 6                         | 1 788 | LM 6090110 F UU OP*   | 5                | 1 650     | — | —                                    | 60               | 0<br>-9        | 0<br>-15                            | 90 | 0<br>-22 | 110                    |      | 85                     |                               | 3.15                                | 86.5           | 3              | 30           | 50 | 17                        | 25         |                          | 4 760 | 5 040                 | 8 150                 | 10 400                |                       |
|                      | LM 6090110 N F UU     | 6 | 1 787        | LM 6090110 N F UU AJ* | 6                         | 1 757 | LM 6090110 N F UU OP* | 5                | 1 610     | — | —                                    | 60               | 0<br>-9        | 0<br>-15                            | 90 | 0<br>-22 | 110                    |      | 85                     |                               | 3.15                                | 86.5           | 3              | 30           | 50 | 17                        | 25         |                          | 4 760 | 5 040                 | 8 150                 | 10 400                |                       |

Note (1) The width of hub for fixing with circlip should be the value obtained by subtracting a circlip width value times two from the C<sub>1</sub> dimension.




Remarks 1. "P" and "H" in Dim. F<sub>w</sub> tolerance and Eccentricity represent precision and high, respectively.

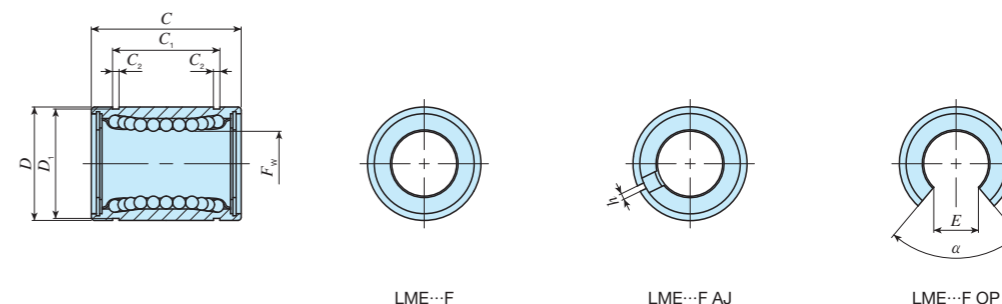
2. Standard type and adjustable clearance type end plates are fixed with stop ring for holes.

3. The identification numbers with \* are our semi-standard items.



# IKO Linear Bushing Stainless Steel Made

|                | Standard type   |    |    |    |    | Adjustable clearance type   |    |    |    |    | Open type   |    |    |    |    |
|----------------|---|----|----|----|----|---|----|----|----|----|---|----|----|----|----|
| Shape          | LME... F<br>LME... N F  |    |    |    |    | LME... F AJ<br>LME... N F AJ  |    |    |    |    | LME... F OP<br>LME... N F OP  |    |    |    |    |
|                |  |    |    |    |    |  |    |    |    |    |  |    |    |    |    |
| Shaft diameter | 5   | 8  | 12 | 16 | 20 | 5   | 8  | 12 | 16 | 20 | —   | —  | 12 | 16 | 20 |
|                | 25  | 30 | 40 | 50 | 60 | 25  | 30 | 40 | 50 | 60 | 25  | 30 | 40 | 50 | 60 |






| Shaft diameter<br>mm | Identification number |              |              |                     |                           |                 |              |                     |           |                 | Nominal dimensions and tolerances mm |                     |                |  |    |                           |     |                           |                                 |  |                |                |     | Eccentricity<br>Maximum<br>μm | Basic dynamic load rating<br>C |      | Basic static load rating<br>C <sub>0</sub> |                          |                          |                          |
|----------------------|-----------------------|--------------|--------------|---------------------|---------------------------|-----------------|--------------|---------------------|-----------|-----------------|--------------------------------------|---------------------|----------------|--|----|---------------------------|-----|---------------------------|---------------------------------|--|----------------|----------------|-----|-------------------------------|--------------------------------|------|--|--------------------------|--------------------------|--------------------------|
|                      | Standard type         |              | Ball raceway | Mass<br>(Ref.)<br>g | Adjustable clearance type |                 | Ball raceway | Mass<br>(Ref.)<br>g | Open type |                 | Ball raceway                         | Mass<br>(Ref.)<br>g | F <sub>w</sub> | Dim. F <sub>w</sub><br>tolerance<br>μm | D  | Dim. D<br>tolerance<br>μm | C   | Dim. C<br>tolerance<br>μm | C <sub>1</sub> ( <sup>1</sup> ) | Dim. C <sub>1</sub><br>tolerance<br>μm | C <sub>2</sub> | D <sub>1</sub> | h   |                               | E                              | α    | Load<br>direction A<br>N                   | Load<br>direction B<br>N | Load<br>direction A<br>N | Load<br>direction B<br>N |
|                      |                       |              |              |                     |                           |                 |              |                     |           |                 |                                      |                     |                |  |    |                           |     |                           |                                 |  |                |                |     |                               |                                |      |  |                          |                          |                          |
| 5                    | LME                   | 51222 N F*   | 4            | 11                  | LME                       | 51222 N F AJ*   | 4            | 9.5                 | —         | —               | —                                    | 5                   |                | 12                                     | 0  | 22                        |     | 14.5                      |                                 | 1.1                                    | 11.5           | 1              | —   | —                             | 12                             | 90.8 | 104  | 219                      | 310                      |                          |
| 8                    | LME                   | 81625 F*     | 4            | 20                  | —                         | —               | —            | —                   | —         | —               | —                                    | 8                   | +8<br>0        | 16                                     | -8 | 25                        |     | 16.5                      |                                 | 1.1                                    | 15.2           | 1              | —   | —                             | 12                             | 121  | 139  | 255                      | 361                      |                          |
|                      | LME                   | 81625 N F*   | 4            | 20                  | LME                       | 81625 N F AJ*   | 4            | 19.5                | —         | —               | —                                    |                     |                |  |    |                           |     |                           |                                 |  |                |                |     |                               |                                |      |  |                          |                          |                          |
| 12                   | LME                   | 122232 F*    | 4            | 41.5                | LME                       | 122232 F AJ*    | 4            | 40.5                | LME       | 122232 F OP*    | 3                                    | 32                  | 12             |  | 22 | 0                         | 32  | 0                         | 22.9                            | 0                                      | 1.3            | 21             | 1.5 | 7.5                           | 78                             | 12   | 259  | 298                      | 503                      | 711                      |
|                      | LME                   | 122232 N F*  | 4            | 40                  | LME                       | 122232 N F AJ*  | 4            | 39                  | LME       | 122232 N F OP*  | 3                                    | 30                  |                |  |    |                           |     |                           |                                 |  |                |                |     |                               |                                |      |  |                          |                          |                          |
| 16                   | LME                   | 162636 F*    | 4            | 56.5                | LME                       | 162636 F AJ*    | 4            | 55.5                | LME       | 162636 F OP*    | 3                                    | 48                  | 16             | +9<br>-1                               | 26 | -9                        | 36  | -200                      | 24.9                            | -200                                   | 1.3            | 24.9           | 1.5 | 10                            | 78                             | 12   | 283  | 325                      | 514                      | 726                      |
|                      | LME                   | 162636 N F*  | 4            | 55                  | LME                       | 162636 N F AJ*  | 4            | 54                  | LME       | 162636 N F OP*  | 3                                    | 46                  |                |  |    |                           |     |                           |                                 |  |                |                |     |                               |                                |      |  |                          |                          |                          |
| 20                   | LME                   | 203245 F*    | 5            | 97                  | LME                       | 203245 F AJ*    | 5            | 96                  | LME       | 203245 F OP*    | 4                                    | 84                  | 20             |  | 32 |                           | 45  |                           | 31.5                            |  | 1.6            | 30.3           | 2   | 10                            | 60                             | 15   | 562  | 668                      | 1 010                    | 1 470                    |
|                      | LME                   | 203245 N F*  | 5            | 91                  | LME                       | 203245 N F AJ*  | 5            | 90                  | LME       | 203245 N F OP*  | 4                                    | 75                  |                |  |    |                           |     |                           |                                 |  |                |                |     |                               |                                |      |  |                          |                          |                          |
| 25                   | LME                   | 254058 F*    | 6            | 222                 | LME                       | 254058 F AJ*    | 6            | 219                 | LME       | 254058 F OP*    | 5                                    | 195                 | 25             | +11<br>-1                              | 40 | 0                         | 58  |                           | 44.1                            |  | 1.85           | 37.5           | 2   | 12.5                          | 60                             | 15   | 920  | 974                      | 1 780                    | 2 280                    |
|                      | LME                   | 254058 N F*  | 6            | 215                 | LME                       | 254058 N F AJ*  | 6            | 212                 | LME       | 254058 N F OP*  | 5                                    | 181                 |                |  |    |                           |     |                           |                                 |  |                |                |     |                               |                                |      |  |                          |                          |                          |
| 30                   | LME                   | 304768 F*    | 6            | 338                 | LME                       | 304768 F AJ*    | 6            | 333                 | LME       | 304768 F OP*    | 5                                    | 309                 | 30             |  | 47 |                           | 68  | 0                         | 52.1                            | 0                                      | 1.85           | 44.5           | 2   | 12.5                          | 50                             | 17   | 1 350                                      | 1 430                    | 2 500                    | 3 200                    |
|                      | LME                   | 304768 N F*  | 6            | 325                 | LME                       | 304768 N F AJ*  | 6            | 320                 | LME       | 304768 N F OP*  | 5                                    | 272                 |                |  |    |                           |     |                           |                                 |  |                |                |     |                               |                                |      |  |                          |                          |                          |
| 40                   | LME                   | 406280 F*    | 6            | 712                 | LME                       | 406280 F AJ*    | 6            | 701                 | LME       | 406280 F OP*    | 5                                    | 665                 | 40             |  | 62 | 0                         | 80  | -300                      | 60.6                            | -300                                   | 2.15           | 59             | 3   | 16.8                          | 50                             | 17   | 2 030                                      | 2 150                    | 3 620                    | 4 640                    |
|                      | LME                   | 406280 N F*  | 6            | 705                 | LME                       | 406280 N F AJ*  | 6            | 694                 | LME       | 406280 N F OP*  | 5                                    | 600                 |                |  |    |                           |     |                           |                                 |  |                |                |     |                               |                                |      |  |                          |                          |                          |
| 50                   | LME                   | 5075100 F*   | 6            | 1 147               | LME                       | 5075100 F AJ*   | 6            | 1 127               | LME       | 5075100 F OP*   | 5                                    | 1 080               | 50             | +13<br>-2                              | 75 | -13                       | 100 |                           | 77.6                            |  | 2.65           | 72             | 3   | 21                            | 50                             | 17   | 3 940                                      | 4 180                    | 7 130                    | 9 120                    |
|                      | LME                   | 5075100 N F* | 6            | 1 130               | LME                       | 5075100 N F AJ* | 6            | 1 110               | LME       | 5075100 N F OP* | 5                                    | 970                 |                |  |    |                           |     |                           |                                 |  |                |                |     |                               |                                |      |  |                          |                          |                          |
| 60                   | LME                   | 6090125 F*   | 6            | 2 051               | LME                       | 6090125 F AJ*   | 6            | 2 001               | LME       | 6090125 F OP*   | 5                                    | 1 900               | 60             |  | 90 | 0                         | 125 | 0                         | 101.7                           | 0                                      | 3.15           | 86.5           | 3   | 27.2                          | 54                             | 20   | 4 760                                      | 5 040                    | 8 150                    | 10 400                   |
|                      | LME                   | 6090125 N F* | 6            | 2 050               | LME                       | 6090125 N F AJ* | 6            | 2 000               | LME       | 6090125 N F OP* | 5                                    | 1 580               |                |  |    |                           |     |                           |                                 |  |                |                |     |                               |                                |      |  |                          |                          |                          |

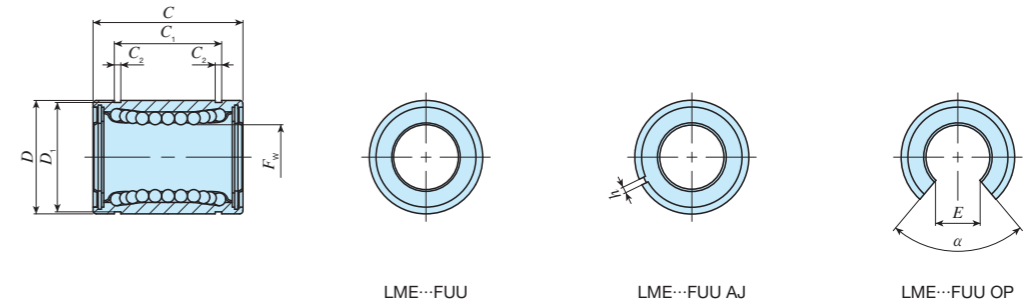
Note (1) The width of hub for fixing with circlip should be the value obtained by subtracting a circlip width value times two from the C<sub>1</sub> dimension.

- Remarks 1. Stainless steel-made retainer (shaft diameter 8 mm), and standard type and adjustable clearance type (shaft diameter 12 mm to 60 mm) end plates are fixed with stop ring for holes.  
2. The identification numbers with \* are our semi-standard items.

LMG • LM • LMS

# IKO Linear Bushing Stainless Steel Made With Seal

|                | Standard type   |   |    |    |    | Adjustable clearance type   |   |    |    |    | Open type   |   |    |    |    |    |    |    |    |    |
|----------------|---|---|----|----|----|---|---|----|----|----|---|---|----|----|----|----|----|----|----|----|
| Shape          | LME... F UU<br>LME... N F UU  |   |    |    |    | LME... F UU AJ<br>LME... N F UU AJ  |   |    |    |    | LME... F UU OP<br>LME... N F UU OP  |   |    |    |    |    |    |    |    |    |
|                |  |   |    |    |    |  |   |    |    |    |  |   |    |    |    |    |    |    |    |    |
| Shaft diameter | 5   | 8 | 12 | 16 | 20 | 5   | 8 | 12 | 16 | 20 | —   | — | 12 | 16 | 20 | 25 | 30 | 40 | 50 | 60 |



| Shaft diameter<br>mm | Identification number              |   |              |                                       |                           |       |                                       |                     |           |   | Nominal dimensions and tolerances mm |                     |                |                            |      |                           |       |                           |                                 |  |                |                |      | Eccentricity<br>Maximum<br>μm | Basic dynamic load rating<br>C |             | Basic static load rating<br>C <sub>0</sub> |                          |                          |                          |
|----------------------|------------------------------------|---|--------------|---------------------------------------|---------------------------|-------|---------------------------------------|---------------------|-----------|---|--------------------------------------|---------------------|----------------|----------------------------|------|---------------------------|-------|---------------------------|---------------------------------|--|----------------|----------------|------|-------------------------------|--------------------------------|-------------|--|--------------------------|--------------------------|--------------------------|
|                      | Standard type                      |   | Ball raceway | Mass<br>(Ref.)<br>g                   | Adjustable clearance type |       | Ball raceway                          | Mass<br>(Ref.)<br>g | Open type |   | Ball raceway                         | Mass<br>(Ref.)<br>g | F <sub>w</sub> | Dim. Fw<br>tolerance<br>μm | D    | Dim. D<br>tolerance<br>μm | C     | Dim. C<br>tolerance<br>μm | C <sub>1</sub> ( <sup>1</sup> ) | Dim. C <sub>1</sub><br>tolerance<br>μm | C <sub>2</sub> | D <sub>1</sub> | h    |                               | E                              | α<br>Degree | Load<br>direction A<br>N                   | Load<br>direction B<br>N | Load<br>direction A<br>N | Load<br>direction B<br>N |
|                      |                                    |   |              |                                       |                           |       |                                       |                     |           |   |                                      |                     |                |                            |      |                           |       |                           |                                 |  |                |                |      |                               |                                |             |  |                          |                          |                          |
| 5                    | LME 51222 N F UU*                  | 4 | 11           | LME 51222 N F UU AJ*                  | 4                         | 9.5   | —                                     | —                   | —         | — | —                                    | 5                   |                | 12                         | 0    | 22                        |       | 14.5                      |                                 | 1.1                                    | 11.5           | 1              | —    | —                             | 12                             | 90.8        | 104  | 219                      | 310                      |                          |
| 8                    | LME 81625 F UU*                    | 4 | 20           | —                                     | —                         | —     | —                                     | —                   | —         | — | —                                    | 8                   | + 8<br>0       | 16                         | - 8  | 25                        |       | 16.5                      |                                 | 1.1                                    | 15.2           | 1              | —    | —                             | 12                             | 121         | 139  | 255                      | 361                      |                          |
|                      | LME 81625 N F UU*                  | 4 | 20           | LME 81625 N F UU AJ*                  | 4                         | 19.5  | —                                     | —                   | —         | — | —                                    |                     |                |                            |      |                           |       |                           |                                 |  |                |                |      |                               |                                |             |  |                          |                          |                          |
| 12                   | LME 122232 F UU*                   | 4 | 41.5         | LME 122232 F UU AJ*                   | 4                         | 40.5  | LME 122232 F UU OP*                   | 3                   | 32        | 3 | 32                                   | 12                  |                | 22                         | 0    | 32                        | 0     | 22.9                      | 0                               | 1.3                                    | 21             | 1.5            | 7.5  | 78                            | 12                             | 259         | 298  | 503                      | 711                      |                          |
|                      | LME 122232 N F UU*                 | 4 | 40           | LME 122232 N F UU AJ*                 | 4                         | 39    | LME 122232 N F UU OP*                 | 3                   | 30        | 3 | 30                                   |                     |                |                            |      |                           |       |                           |                                 |  |                |                |      |                               |                                |             |  |                          |                          |                          |
| 16                   | LME 162636 F UU*                   | 4 | 56.5         | LME 162636 F UU AJ*                   | 4                         | 55.5  | LME 162636 F UU OP*                   | 3                   | 48        | 3 | 48                                   | 16                  | + 9<br>- 1     | 26                         | - 9  | 36                        | - 200 | 24.9                      | - 200                           | 1.3                                    | 24.9           | 1.5            | 10   | 78                            | 12                             | 283         | 325  | 514                      | 726                      |                          |
|                      | LME 162636 N F UU*                 | 4 | 55           | LME 162636 N F UU AJ*                 | 4                         | 54    | LME 162636 N F UU OP*                 | 3                   | 46        | 3 | 46                                   |                     |                |                            |      |                           |       |                           |                                 |  |                |                |      |                               |                                |             |  |                          |                          |                          |
| 20                   | LME 203245 F UU*                   | 5 | 97           | LME 203245 F UU AJ*                   | 5                         | 96    | LME 203245 F UU OP*                   | 4                   | 84        | 4 | 84                                   | 20                  | + 9<br>- 1     | 32                         |      | 45                        |       | 31.5                      |                                 | 1.6                                    | 30.3           | 2              | 10   | 60                            | 12                             | 562         | 668  | 1 010                    | 1 470                    |                          |
|                      | LME 203245 N F UU*                 | 5 | 91           | LME 203245 N F UU AJ*                 | 5                         | 90    | LME 203245 N F UU OP*                 | 4                   | 75        | 4 | 75                                   |                     |                |                            |      |                           |       |                           |                                 |  |                |                |      |                               |                                |             |  |                          |                          |                          |
| 25                   | LME 254058 F UU*                   | 6 | 222          | LME 254058 F UU AJ*                   | 6                         | 219   | LME 254058 F UU OP*                   | 5                   | 195       | 5 | 195                                  | 25                  | + 11<br>- 1    | 40                         | 0    | 58                        |       | 44.1                      |                                 | 1.85                                   | 37.5           | 2              | 12.5 | 60                            | 15                             | 920         | 974  | 1 780                    | 2 280                    |                          |
|                      | LME 254058 N F UU*( <sup>2</sup> ) | 6 | 215          | LME 254058 N F UU AJ*( <sup>2</sup> ) | 6                         | 212   | LME 254058 N F UU OP*( <sup>2</sup> ) | 5                   | 181       | 5 | 181                                  |                     |                |                            |      |                           |       |                           |                                 |  |                |                |      |                               |                                |             |  |                          |                          |                          |
| 30                   | LME 304768 F UU*                   | 6 | 338          | LME 304768 F UU AJ*                   | 6                         | 333   | LME 304768 F UU OP*                   | 5                   | 309       | 5 | 309                                  | 30                  | + 11<br>- 1    | 47                         | 0    | 68                        |       | 52.1                      | 0                               | 1.85                                   | 44.5           | 2              | 12.5 | 50                            | 17                             | 1 350       | 1 430                                      | 2 500                    | 3 200                    |                          |
|                      | LME 304768 N F UU*                 | 6 | 325          | LME 304768 N F UU AJ*                 | 6                         | 320   | LME 304768 N F UU OP*                 | 5                   | 272       | 5 | 272                                  |                     |                |                            |      |                           |       |                           |                                 |  |                |                |      |                               |                                |             |  |                          |                          |                          |
| 40                   | LME 406280 F UU*                   | 6 | 712          | LME 406280 F UU AJ*                   | 6                         | 701   | LME 406280 F UU OP*                   | 5                   | 665       | 5 | 665                                  | 40                  |                | 62                         | 0    | 80                        | - 300 | 60.6                      | - 300                           | 2.15                                   | 59             | 3              | 16.8 | 50                            | 17                             | 2 030       | 2 150                                      | 3 620                    | 4 640                    |                          |
|                      | LME 406280 N F UU*                 | 6 | 705          | LME 406280 N F UU AJ*                 | 6                         | 694   | LME 406280 N F UU OP*                 | 5                   | 600       | 5 | 600                                  |                     |                |                            |      |                           |       |                           |                                 |  |                |                |      |                               |                                |             |  |                          |                          |                          |
| 50                   | LME 5075100 F UU*                  | 6 | 1 147        | LME 5075100 F UU AJ*                  | 6                         | 1 127 | LME 5075100 F UU OP*                  | 5                   | 1 080     | 5 | 1 080                                | 50                  | + 13<br>- 2    | 75                         | - 13 | 100                       |       | 77.6                      |                                 | 2.65                                   | 72             | 3              | 21   | 50                            | 20                             | 3 940       | 4 180                                      | 7 130                    | 9 120                    |                          |
|                      | LME 5075100 N F UU*                | 6 | 1 130        | LME 5075100 N F UU AJ*                | 6                         | 1 110 | LME 5075100 N F UU OP*                | 5                   | 970       | 5 | 970                                  |                     |                |                            |      |                           |       |                           |                                 |  |                |                |      |                               |                                |             |  |                          |                          |                          |
| 60                   | LME 6090125 F UU*                  | 6 | 2 051        | LME 6090125 F UU AJ*                  | 6                         | 2 001 | LME 6090125 F UU OP*                  | 5                   | 1 900     | 5 | 1 900                                | 60                  |                | 90                         | 0    | 125                       | - 400 | 101.7                     | 0                               | 3.15                                   | 86.5           | 3              | 27.2 | 54                            | 20                             | 4 760       | 5 040                                      | 8 150                    | 10 400                   |                          |
|                      | LME 6090125 N F UU*                | 6 | 2 050        | LME 6090125 N F UU AJ*                | 6                         | 2 000 | LME 6090125 N F UU OP*                | 5                   | 1 580     | 5 | 1 580                                |                     |                |                            |      |                           |       |                           |                                 |  |                |                |      |                               |                                |             |  |                          |                          |                          |

Notes (<sup>1</sup>) The width of hub for fixing with circlip should be the value obtained by subtracting a circlip width value times two from the C<sub>1</sub> dimension.

(<sup>2</sup>) The seal is slightly off from the external cylinder end.

Remarks 1. Stainless steel-made retainer (shaft diameter 8 mm), and standard type and adjustable clearance type (shaft diameter 12 mm to 60 mm) end plates are fixed with stop ring for holes.

2. The identification numbers with \* are our semi-standard items.

LMG • LM • LMS