

Inner Diameter	Outer Diameter	Length	IKO	THK	SAMICK	NB	MISUMI
6	12	19	LM-6UU	LM-6UU	LM-6UU	SM6GUU	LMU6
8S	15	17	LM-8SUU	LM-8SUU	LM-8SUU	SM8sGUU	-
8	15	24	LM-8UU	LM-8UU	LM-8UU	SM8GUU	LMU8
10	19	29	LM-10UU	LM-10UU	LM-10UU	SM10GUU	LMU10
13	23	32	LM-13UU	LM-13UU	LM-13UU	SM13GUU	LMU13
16	28	37	LM-16UU	LM-16UU	LM-16UU	SM16GUU	LMU16
20	32	42	LM-20UU	LM-20UU	LM-20UU	SM20GUU	LMU20
25	40	59	LM-25UU	LM-25UU	LM-25UU	SM25GUU	LMU25
5	12	22	LME-5UU	LME-5UU	LME-5UU	KB5GUU	-
8	16	25	LME-8UU	LME-8UU	LME-8UU	KB8GUU	-
12	22	32	LME-12UU	LME-12UU	LME-12UU	KB12GUU	-
16	26	36	LME-16UU	LME-16UU	LME-16UU	KB16GUU	-
20	32	45	LME-20UU	LME-20UU	LME-20UU	KB20GUU	-
25	40	58	LME-25UU	LME-25UU	LME-25UU	KB25GUU	-
6.350 (1/4)	12.700 (1/2)	19.050 (3/4)	LMB-4UU	LMB-4UU	-	SW4GUU	-
9.525 (3/8)	15.875 (5/8)	22.225 (7/8)	LMB-6UU	LMB-6UU	-	SW6GUU	-
12.700 (1/2)	22.225 (7/8)	31.750 (1_1/4)	LMB-8UU	LMB-8UU	-	SW8GUU	-
15.875 (5/8)	28.575 (1_1/8)	38.100 (1_1/2)	LMB-10UU	LMB-10UU	-	SW10GUU	-
19.050 (3/4)	31.750 (1_1/4)	41.275 1 5/8	LMB-12UU	LMB-12UU	-	SW12GUU	-
25.400 (1)	39.688 (1_9/16)	57.150 (2_1/4)	LMB-16UU	LMB-16UU	-	SW16GUU	-
31.750 (1_1/4)	50.800 (2)	66.675 (2_5/8)	LMB-20UU	LMB-20UU	-	SW20GUU	-

Some dimensions may vary. Please inquire to **IKO** when replacing.

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ISO 9001 & 14001 Quality system registration certificate

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Linear Bushing  
**LM** series



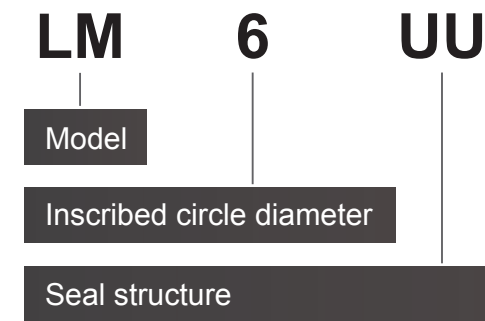


# Synthetic Resin Retainer Type Linear Bushing

# LM series

Reliable, high quality and affordable Japanese made is now offered!

## Identification Number



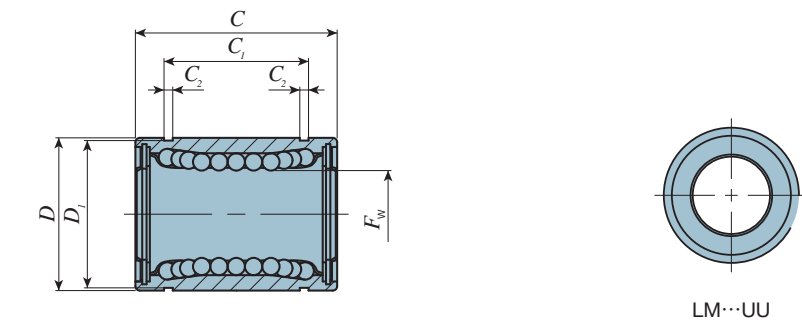
**Model**  
Linear Bushing (LM series) Metric series : LM  
LME (European specification<sup>(1)</sup>)  
Inch series : LMB

**Inscribed circle diameter**  
For the metric series, is designated in mm.  
For the inch series, is designated in units of 1/16 inch.

**Seal structure**  
With two end seals : UU  
End seals with superior dust protection performance for preventing intrusion of foreign substances are incorporated on the both side.

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

## Dimension table

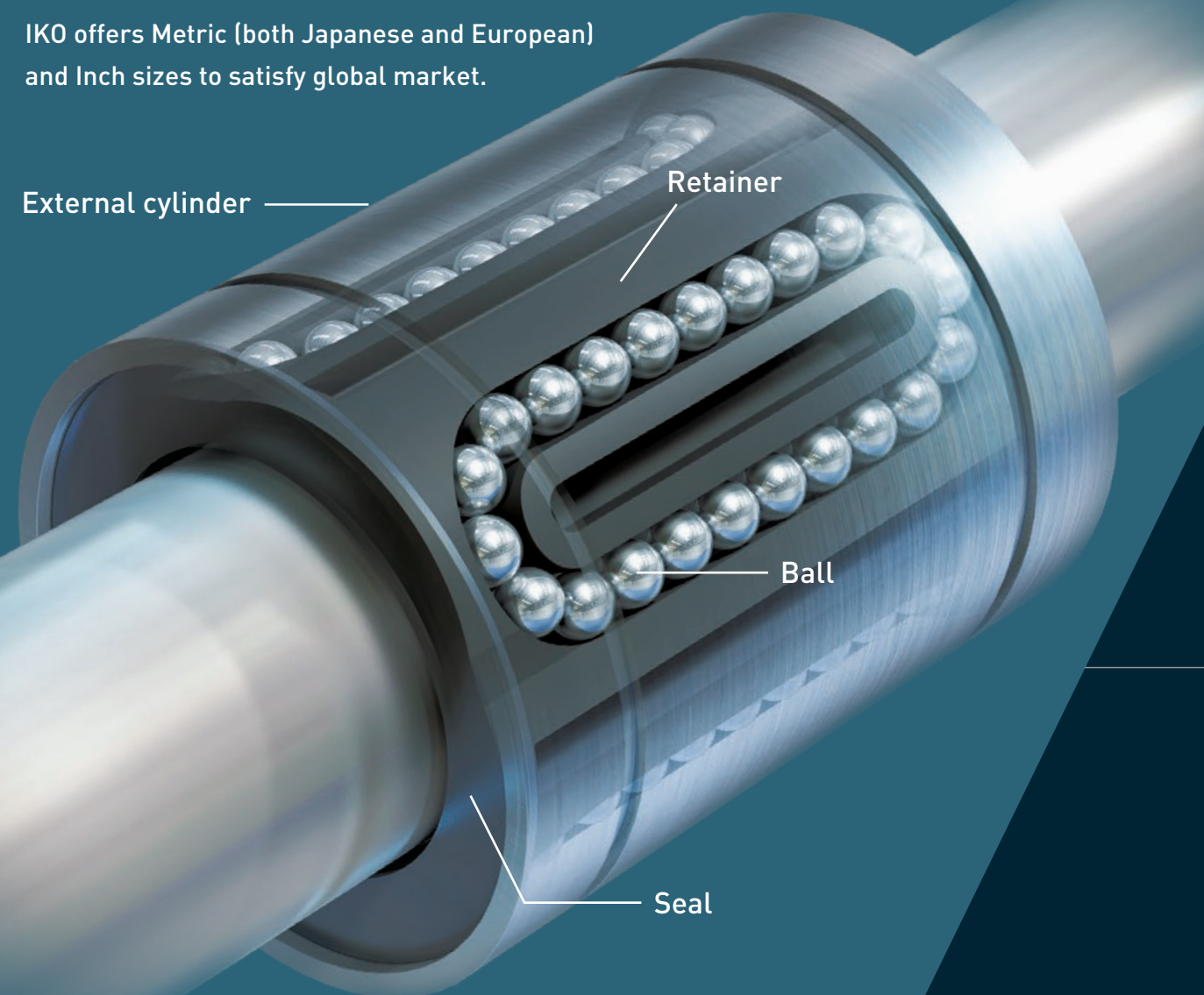


## Structure and Features

Synthetic Resin Retainer Type Linear Bushings are linear motion mechanisms that use balls for rolling motion. They can replace conventional sliding bushings without having to make major design changes.

Furthermore, coefficient of friction is extremely low. This reduces power consumption and lowers operating temperature. Also, Synthetic Resin Retainer helps reduce noise during operation.

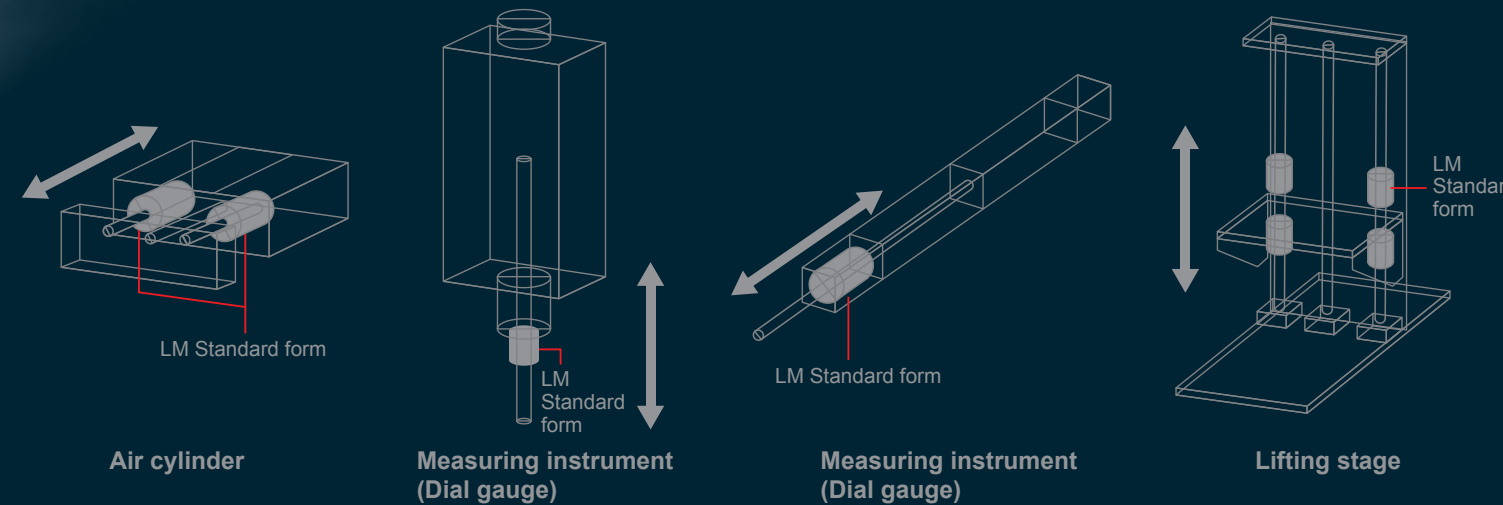
IKO offers Metric (both Japanese and European) and Inch sizes to satisfy global market.



## Advantages

- 1 By reassessing the whole manufacturing process and components, we can now provide a low-cost reliable Japanese made product.
- 2 In addition to Metric sizes (both Japanese and European), we also offer Inch sizes as well to meet various customers' needs.
- 3 Thorough management of the manufacturing process achieves an exceptional level of quality and smooth motion.

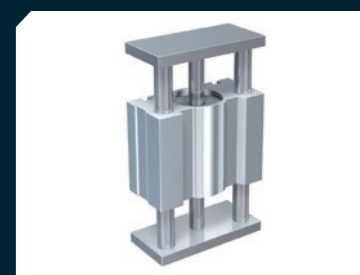
## Applications



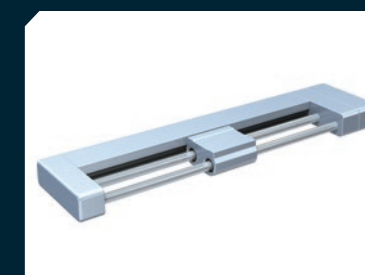
## Uses



Cutting plotter



Air cylinder



Electric actuator

## Metric series

Shaft diameter mm	Identification Number	Ball raceway (mm)	Mas (Ref.) g	F <sub>w</sub>	Dim. F <sub>w</sub> tolerance μm	Nominal dimensions and tolerance mm						Eccen- tricity Maxi- mum μm	Basic dynamic load rating C		Basic static load rating C <sub>0</sub>		
						D	Dim. D tolerance μm	C	Dim. C tolerance μm	C <sub>1</sub> (1)	Dim. C <sub>1</sub> tolerance μm		C <sub>2</sub>	D <sub>1</sub>	Load direction A N	Load direction B N	Load direction A N
6	LM-6 UU	4	8.0	6		12		19		13.5		1.1	11.5	67.3	77.3	146	206
8	LM-8S UU	4	9.3	8		15	0 -11	17		11.5		1.1	14.3	79.1	90.8	143	202
	LM-8 UU	4	13.5	8		15		24		17.5		1.1	14.3	128	148	286	405
10	LM-10 UU	4	25.0	10	0 -9	19		29	0 -200	22	0 -200	1.3	18	242	278	495	700
13	LM-13 UU	4	38.0	13		23	0 -13	32		23		1.3	22	292	336	578	818
16	LM-16 UU	5	78.0	16		28		37		26.5		1.6	27	373	444	730	1070
20	LM-20 UU	5	86.0	20	0 -10	32	0 -16	42		30.5		1.6	30.5	562	668	1010	1470
25	LM-25 UU	6	210	25		40		59	0 -300	41	0 -300	1.85	38	1110	1170	2320	2970

## Metric series (European specification)

Shaft diameter mm	Identification Number	Ball raceway (mm)	Mas (Ref.) g	F <sub>w</sub>	Dim. F <sub>w</sub> tolerance μm	Nominal dimensions and tolerance mm						Eccen- tricity Maxi- mum μm	Basic dynamic load rating C		Basic static load rating C <sub>0</sub>		
						D	Dim. D tolerance μm	C	Dim. C tolerance μm	C <sub>1</sub> (1)	Dim. C <sub>1</sub> tolerance μm		C <sub>2</sub>	D <sub>1</sub>	Load direction A N	Load direction B N	Load direction A N
5	LME-5 UU	4	11.4	5		12	0 -8	22		14.5		1.1	11.5	78.5	90.2	197	279
8	LME-8 UU	4	18.5	8	+8 0	16		25		16.5		1.1	15.2	110	126	229	324
12	LME-12 UU	4	37.0	12		22	0 -9	32	0 -200	22.9	0 -200	1.3	21	233	267	431	609
16	LME-16 UU	5	52.0	16	+9 -1	26		36		24.9		1.3	24.9	343	408	649	950
20	LME-20 UU	5	89.0	20		32	0 -11	45		31.5		1.6	30.3	562	668	1010	1470
25	LME-25 UU	6	203	25	+11 -1	40		58	0 -300	44.1	0 -300	1.85	37.5	1050	1110	2140	2740

## Inch series

Shaft diameter mm (inch)	Identification Number	Ball raceway (mm)	Mas (Ref.) g	F <sub>w</sub>	Dim. F <sub>w</sub> tolerance μm	Nominal dimensions and tolerance inch / mm						Eccen- tricity Maxi- mum μm	Basic dynamic load rating C		Basic static load rating C <sub>0</sub>		
						D	Dim. D tolerance μm	C	Dim. C tolerance μm	C <sub>1</sub> (1)	Dim. C <sub>1</sub> tolerance μm		C <sub>2</sub>	D <sub>1</sub>	Load direction A N	Load direction B N	Load direction A N
6.350 (1/4)	LMB-4 UU	4	8.4	1/4 6.350		12.700	0 -11	19.050		1.3		0.99	11.91	74.5	85.6	165	233
9.525 (3/8)	LMB-6 UU	4	11.8	3/8 9.525	0 -8	15.875		22.225		16.15		0.99	14.94	116	133	232	328
12.700 (1/2)	LMB-8 UU	4	34.2	1/2 12.700		22.225	0 -14	31.750	0 -200	24.46	0 -200	1.17	20.85	264	303	505	714
15.875 (5/8)	LMB-10 UU	4	71.2	5/8 15.875		28.575		38.100		28.04		1.42	26.90	424	488	766	1080
19.050 (3/4)	LMB-12 UU	5	88.4	3/4 19.050	0 -10	31.750	0 -15	41.275		29.61		1.42	29.87	554	659	1000	1470
25.400 (1)	LMB-16 UU	6	178	1 25.400		39.688		57.150		44.57		1.73	37.31	1050	1110	2140	2740
31.750 (1 1/4)	LMB-20 UU	6	363	1 1/4 31.750	0 -12	50.800	0 -17	66.675	0 -300	50.92	0 -300	1.73	47.90	1580	1670	3070	3920

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>.

## Relationship between Load Rating and Ball Raceway

The load rating of LM series varies according to the loading direction and position of the ball raceways. 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 the ball raceways.

Fig. 1.1 shows the case where the loading direction and ball raceway position coincide with each other, representing the loading direction A in the dimension table. Generally, these load ratings are applied when the ball raceway position cannot be specified or the load direction is unknown.

Fig. 1.2 shows the case where the loading direction is positioned between two (2) ball raceways, representing the loading direction B in the dimension table. Generally, this can be subjected to high load than loading direction A.

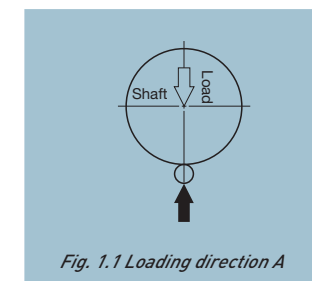


Fig. 1.1 Loading direction A

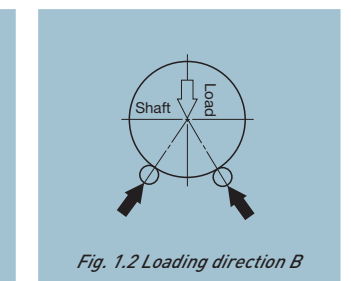


Fig. 1.2 Loading direction B