# Linear Bushings
## Short, Medium

= For customers selecting MISUMI original specifications =
The part enclosed in the red frame is as per standard specifications (Outer cylinder EN 1.3505 Equiv. equivalent, Retainer resin). Consider these specifications while selecting the product.

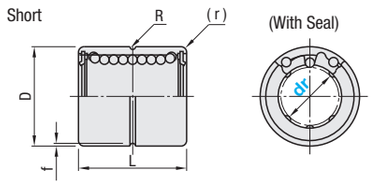
**Features:** Shorter length (L dim.) compared to Single Type enables length space savings.

**MISUMI Original**

**Short**

RoHS10

| Type | Outer Cylinder | | | Balls | Retainer | Ambient Operating Temp. | Accessory |
|---|---|---|---|---|---|---|---|
| Short | M Material | H Hardness | S Surface Treatment | M Material | M Material | | |
| LMUT | EN 1.3505 Equiv. | 58HRC~ | - | EN 1.3505 Equiv. | Plastic (Duracon M90 Equiv.) | -20~80°C | Seal M Material: Nitrile Rubber (-20~120°C) |
| SLMUT | EN 1.4125 Equiv. | 56HRC~ | | EN 1.4125 Equiv. | | | |




**Features of Short Type**
- The housing can be made more compact.
- The L dimensions are made to match MISUMI's standard plates.

**Short**

| Part Number Type | dr | Tolerance | D | Tolerance | L | Tolerance | R | f | (r) | Eccentricity (Max.) | Rows of Balls | Basic Load Rating C (Dynamic) N | Basic Load Rating Co (Static) N | Mass (g) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LMUT SLMUT | 6 | 0 -0.009 | 12 | 0 -0.011 | 16 | 0 -0.2 | 1 | 0.3 | 0.4 | 0.012 | 4 | 113 | 155 | 6.6 |
| | 8 | | 15 | | 20 | | | | | | | 155 | 226 | 14.7 |
| | 10 | | 19 | | | | 1.2 | 0.4 | 0.8 | | | 254 | 359 | 26.1 |
| | 12 | | 21 | 0 -0.013 | 25 | | | | | | | 317 | 407 | 28.6 |
| | 13 | | 23 | | | | | | | | | 320 | 413 | 36.3 |
| | 16 | | 28 | | 30 | | 1.5 | 0.5 | | | | 582 | 724 | 60.0 |
| | 20 | 0 -0.010 | 32 | 0 -0.016 | 35 | | | | | 0.015 | 5 | 777 | 1034 | 81.6 |

For Precautions for Use, see .☞P.303
Short guiding section not suitable for which large moment loads apply.

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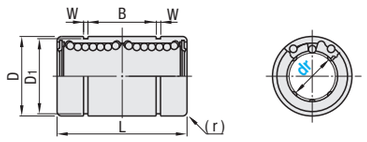
**Features**: Body length is approximately 1.5 times of single type, and allowable moment is approximately 4.3 times. Suitable for applications where there is no enough space for double type.

**MISUMI Original**

**Medium**

RoHS10

| Type | Outer Cylinder | | | Balls | Retainer | Ambient Operating Temp. | Accessory |
|---|---|---|---|---|---|---|---|
| Straight | M Material | H Hardness | S Surface Treatment | M Material | M Material | | |
| LMUD | EN 1.3505 Equiv. | 58HRC~ | - | EN 1.3505 Equiv. | Plastic (Duracon M90 Equiv.) | -20~80°C | Seal M Material Nitrile Rubber |
| LMUDM | | | Electroless Nickel Plating | EN 1.4125 Equiv. | | | |




Body length is approximately 1.5 times of single type, and allowable moment is approximately 4.3 times. (See Allowable Load Comparison)

**Medium**

| Part Number Type | dr | Tolerance | D Tolerance No Surface Treatment | D Tolerance Surface Treatment | L | Tolerance | B | Tolerance | W | D1 | (r) | Eccentricity (Max.) | Rows of Balls | Basic Load Rating C (Dynamic) N | Basic Load Rating Co (Static) N | Allowable Static Moment (N・m) | Mass (g) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LMUD LMUDM | 6 | 0 -0.010 | 12 | 0 -0.013 | 29 | 0 -0.3 | 20 | 0 -0.5 | 1.1 | 11.5 | 0.4 | 0.015 | 4 | 226 | 310 | 1.42 | 12 |
| | 8 | | 15 | -0.018 | 37 | | 25 | | | 14.3 | | | | 310 | 452 | 2.12 | 27 |
| | 10 | | 19 | 0 -0.016 | 47 | | 30 | | 1.3 | 18 | 0.8 | | | 508 | 718 | 4.37 | 49 |
| | 12 | | 21 | | | | | | | 20 | | | | 634 | 814 | 6.2 | 54 |
| | 13 | | 23 | 0 -0.021 | | | | | | 22 | | | | 640 | 826 | 6.2 | 69 |
| | 16 | | 28 | | 56 | | 35 | | 1.6 | 27 | | | | 1164 | 1448 | 13.1 | 112 |
| | 20 | 0 -0.012 | 32 | 0 -0.019 | 65 | | 40 | 0 -0.6 | | 30.5 | | 0.02 | 5 | 1554 | 2068 | 18.3 | 152 |
| | 25 | | 40 | -0.025 | 83 | | 55 | | 1.85 | 38 | 2.0 | | 6 | 1725 | 3068 | 25.3 | 332 |
| | 30 | | 45 | | 90 | | 71.3 | | | 42.5 | | | | 2440 | 3974 | 42.7 | 422 |

For Precautions for Use, see.☞P.303

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| dr | Unit Price Short LMUT | Unit Price Short SLMUT | Unit Price Medium LMUD | Unit Price Medium LMUDM |
|---|---|---|---|---|
| 6 | | | | |
| 8 | | | | |
| 10 | | | | |
| 12 | | | | |
| 13 | | | | |
| 16 | | | | |
| 20 | | | | |
| 25 | - | - | | |
| 30 | - | - | | |

**Part Number**

LMUT8
LMUD10
LMUDM12L (L Type Greased)

Alternative grease types available.
For Days to Ship, Price and Performance, see .☞P.304

# Linear Bushings - Compact
## Single / Double

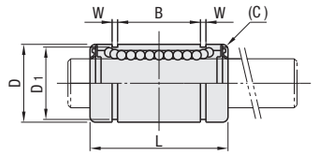
= For customers selecting MISUMI original specifications =
The products on this page are of standard specifications (Outer cylinder EN 1.3505 Equiv. equivalent, Retainer resin). Consider these specifications while selecting the product.

**Features:** 2mm smaller in O.D. (D dimension) than Standard.

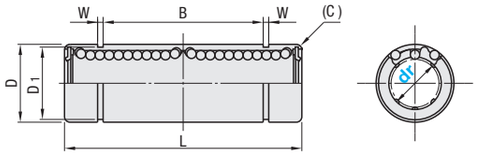
**MISUMI Original**

| Type Single | Type Double | Outer Cylinder M Material | Outer Cylinder H Hardness | Balls M Material | Retainer M Material | Ambient Operating Temp. | Accessory |
|---|---|---|---|---|---|---|---|
| LMK | LMKW | EN 1.3505 Equiv. | 58HRC~ | EN 1.3505 Equiv. | Plastic (Duracon M90 Equiv.) | -20~80°C | Seal M Material Nitrile Rubber (-20~120°C) |

Single




Double




**Single**

| Part Number Type | dr | Tolerance | D | Tolerance | L | Tolerance | B | Tolerance | W | D1 | (C) | Eccentricity (Max.) | Rows of Balls | Basic Load Rating C (Dynamic) N | Basic Load Rating Co (Static) N | Mass (g) | Unit Price |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LMK | 6 | 0 - 0.009 | 10 | 0 -0.009 | 19 | 0 - 0.2 | 11.3 | 0 - 0.4 | 1.15 | 9.6 | 0.1 | 0.012 | 6 | 131 | 155 | 6 | |
| | 8 | | 13 | 0 - 0.011 | 24 | | 15.3 | | | 12.4 | 0.2 | | | 235 | 277 | 12 | |
| | 10 | | 17 | | 29 | | 19.4 | | | 16.2 | | | | 368 | 433 | 26 | |
| | 12 | | 19 | 0 - 0.013 | 30 | | 20.4 | | 1.35 | 18 | | | | 381 | 449 | 32 | |
| | 16 | | 26 | | 37 | | 23.3 | | | 24.9 | 0.3 | | | 608 | 716 | 58 | |

**Double**

| Part Number Type | dr | Tolerance | D | Tolerance | L | Tolerance | B | Tolerance | W | D1 | (C) | Eccentricity (Max.) | Rows of Balls | Basic Load Rating C (Dynamic) N | Basic Load Rating Co (Static) N | Allowable Static Moment (N-m) | Mass (g) | Unit Price |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LMKW | 6 | 0 - 0.010 | 10 | 0 -0.009 | 35 | 0 - 0.3 | 24.8 | 0 - 0.5 | 1.15 | 9.6 | 0.1 | 0.015 | 6 | 206 | 309 | 2.46 | 12 | |
| | 8 | | 13 | 0 - 0.011 | 45 | | 32.8 | | | 12.4 | 0.2 | | | 383 | 555 | 5.76 | 24 | |
| | 10 | | 17 | | 55 | | 41.4 | | | 16.2 | | | | 585 | 867 | 10.99 | 52 | |
| | 12 | | 19 | 0 - 0.013 | 57 | | 43.4 | | 1.35 | 18 | | | | 608 | 899 | 11.85 | 64 | |
| | 16 | | 26 | | 70 | | 49.8 | | | 24.9 | 0.3 | | | 965 | 1431 | 23.48 | 116 | |

For Precautions for Use, see.☞P.303

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Ordering Example

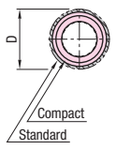
**Part Number**

LMK12
LMKW12
LMK12L (L Type Greased)
LMK12G (G Type Greased)
LMK12H (H Type Greased)

Alternative grease types available.
For Days to Ship, Price and Performance, see.☞P.304

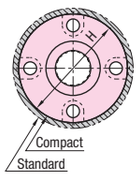
## Dimension comparison of Compact and Standard (When dr=6)

**Straight**



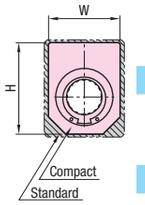

Standard O.D. 12 → (O.D. Dimension 16% Compact) → Compact O.D. 10

**Flanged(P.305~314)**




Standard Flange Dia. 28 → (Flange Dia. 11% Compact) → Compact Flange Dia. 25

**Housing Unit Type(P.321, 322)**




Standard H 22 → (Housing Height 10% Compact) → Compact H 20

**Standard and Compact Comparison**

| dr | Straight / Flanged O.D. (D) Compact | Standard | Difference | Flanged Flange Dia. (H) Compact | Standard | Difference | Housing Unit Width (W) Compact | Standard | Difference | Housing Unit Height (H) Compact | Standard | Difference | Rows of Balls Compact | Standard |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 6 | 10 | 12 | -2 | 25 | 28 | -3 | 14 | 16 | -2 | 20 | 22 | -2 | 6 | 4 |
| 8 | 13 | 15 | -2 | 28 | 32 | -4 | 17 | 20 | -3 | 24 | 26 | -2 | 6 | 4 |
| 10 | 17 | 19 | -2 | 35 | 40 | -5 | 23 | 26 | -3 | 30 | 32 | -2 | 6 | 4 |
| 12 | 19 | 21 | -2 | 38 | 42 | -4 | 25 | 28 | -3 | 32 | 34 | -2 | 6 | 4 |
| 16 | 26 | 28 | -2 | 44 | 48 | -4 | 33 | 36 | -3 | 43 | 49 | -6 | 6 | 4 |