

U.S. PATENTED

**IKO**

**Maintenance Free**

# C-Lube Linear Way

ML  
ME  
MH  
MUL

*Maintenance free for  
20,000 km or 5 years*

CAT-57168

**IKO** Clean Lubrication





# IKO

## Maintenance Free & Interchangeable

### C-Lube Linear Way

**IKO** strives to be a leader in Technology. Our primary source for development is listening to the customer wants and needs. Our performance and work separate us from others by utilizing our creative thinking and original technologies. **IKO** is constantly developing and implementing new and advanced technologies in pursuit of excellent motion performance and service for your cost savings.



**IKO** Clean Lubrication  
**C-Lube**   
Friendly to Maintenance  
Gentle to the Earth

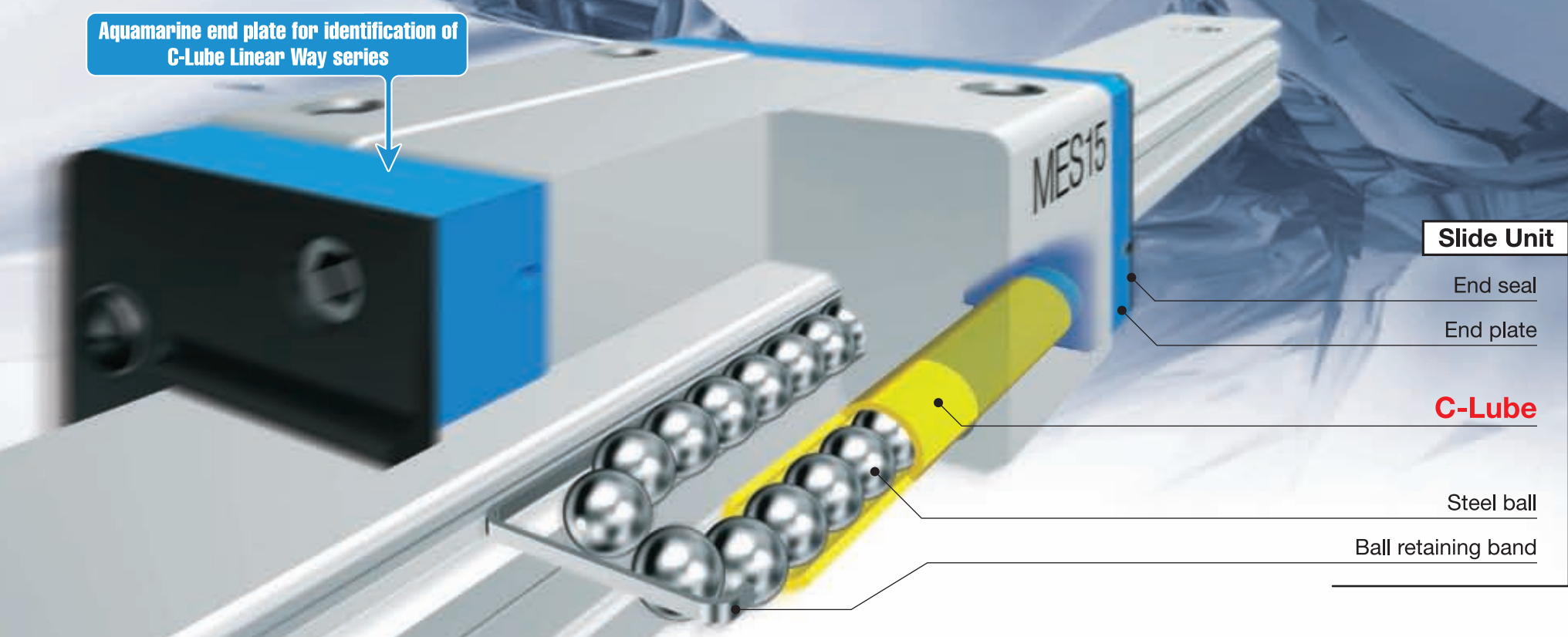


**IKO Maintenance Free**

# C-Lube Linear Way

Maintenance free for  
**20,000 km or 5 years!!**

Aquamarine end plate for identification of C-Lube Linear Way series



**Slide Unit**

- End seal
- End plate

**C-Lube**

- Steel ball
- Ball retaining band

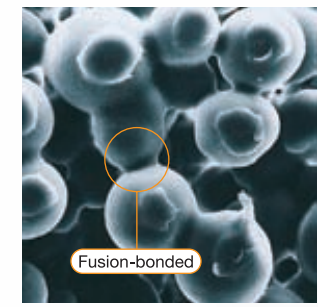
*Interchangeable spec. is available.*



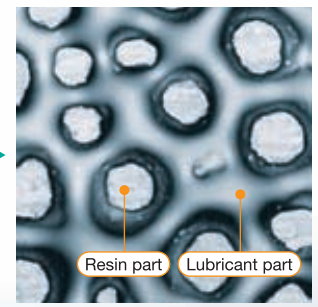
C-Lube slide units can be supplied separately, and can be matched, replaced and added freely to the interchangeable track rail. This series will be useful in machine design, facilitating standardization of product specification and a quick change of specification.

**Track Rail**

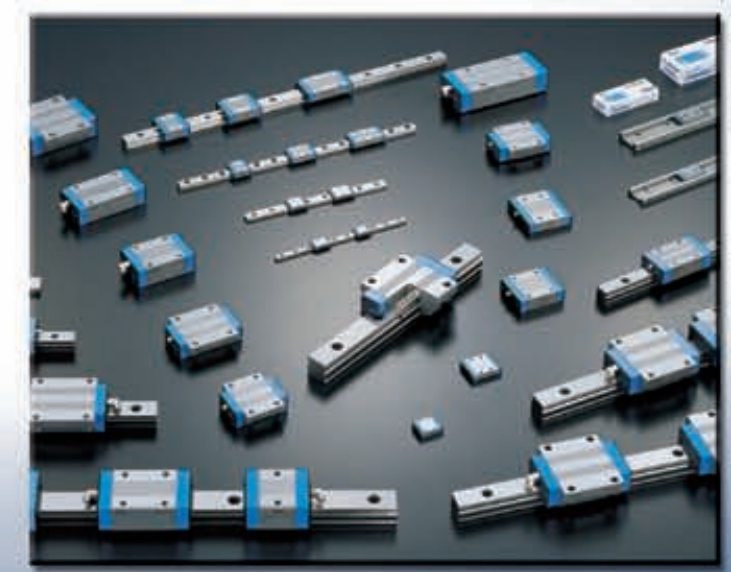
Capillary system **IKO** has developed is an innovational lubrication system. It is a porous resin sleeve with steel backing formed by sintering fine resin powder and impregnating a large amount of lubrication oil in its open pores. Capillary system always supplies proper amount of lubrication oil to the balls and lubrication condition of the raceway can be kept well for long period of time.



**Before impregnating oil**  
Resin particles are strongly fusion-bonded.



**After impregnating oil**  
(Capillary lubrication structure)  
Lubricant is retained in cavities amongst resin particles.



**U.S. PATENTED**

| C-Lube Linear Way ML |         | C-Lube Linear Way ME  |         |
|----------------------|---------|-----------------------|---------|
| No.                  | 6729761 | No.                   | 6729761 |
|                      | 6712511 |                       | 6712511 |
|                      | 5435649 |                       | 5564188 |
|                      | 5289779 |                       | 5374126 |
|                      | 5250126 |                       | 5356223 |
|                      | 4652147 |                       | 5324116 |
|                      | 4505522 |                       | 4652147 |
|                      |         |                       | 4505522 |
| C-Lube Linear Way MH |         | C-Lube Linear Way MUL |         |
| No.                  | 6729761 | No.                   | 6729761 |
|                      | 6712511 |                       | 6712511 |
|                      | 5622433 |                       | 6309107 |
|                      | 5564188 |                       | 5435649 |
|                      | 5374126 |                       | 5289779 |
|                      | 4652147 |                       | 5250126 |
|                      | 4610488 |                       | 4652147 |
|                      | 4505522 |                       | 4505522 |



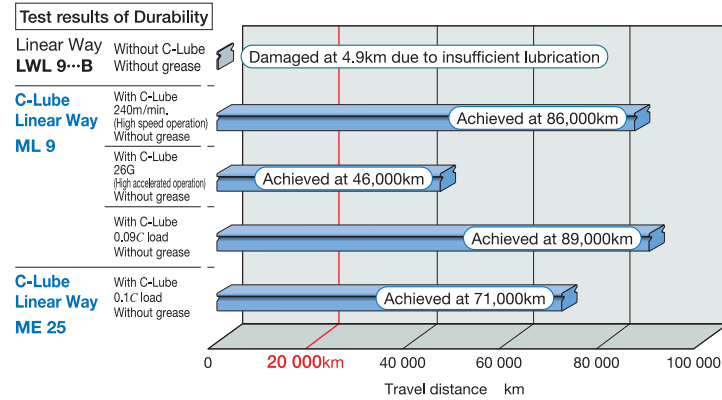
# Features of C-Lube Linear Way 1

~Four Technical Advantages~

## Maintenance free for saving-resources

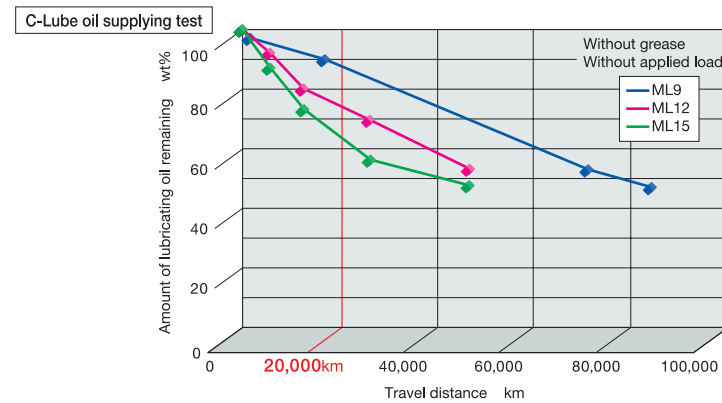
Maintenance free has the ability to maintain lubrication for a long time, reducing the amount of labor required for troublesome lubrication maintenance. The capillary lubrication body continuously to supply lubricant for long period of time even after original grease inside is completely exhausted.

※ This durability test has been simulated for general machine purpose. Re-lubrication is necessary if operating condition is extremely severe.



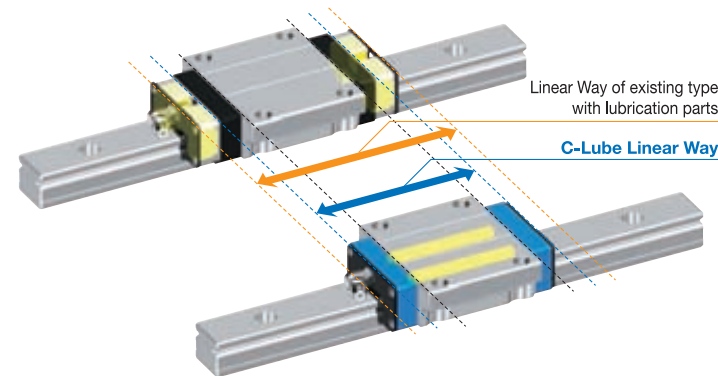
## Ecology contributes to the global environment by conserving oil

To accomplish this proposition, C-Lube applies only the minimal amount of lubricant required to properly lubricate the rolling parts. Since the oil consumption is small, C-Lube is able to maintain proper lubrication even in long-term operation.



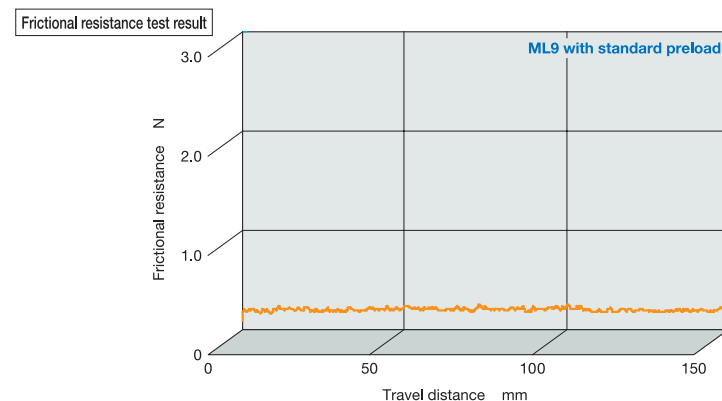
## Compact design for miniaturization

Incorporating C-Lube inside of the Linear Way provides a lightweight and compact size. C-Lube Linear Way having no external parts can be replaced from standard Linear Way without changing the external dimensions and it does not sacrifice the allowable stroke length.



## Smooth and light operation

C-Lube is not in contact with the track rail. This permits smooth and light sliding motion without increasing the rolling resistance. The power loss of a driving device can be minimized. Compatibility of quick response is superior and it contributes accuracy improvement and saving drive energy.

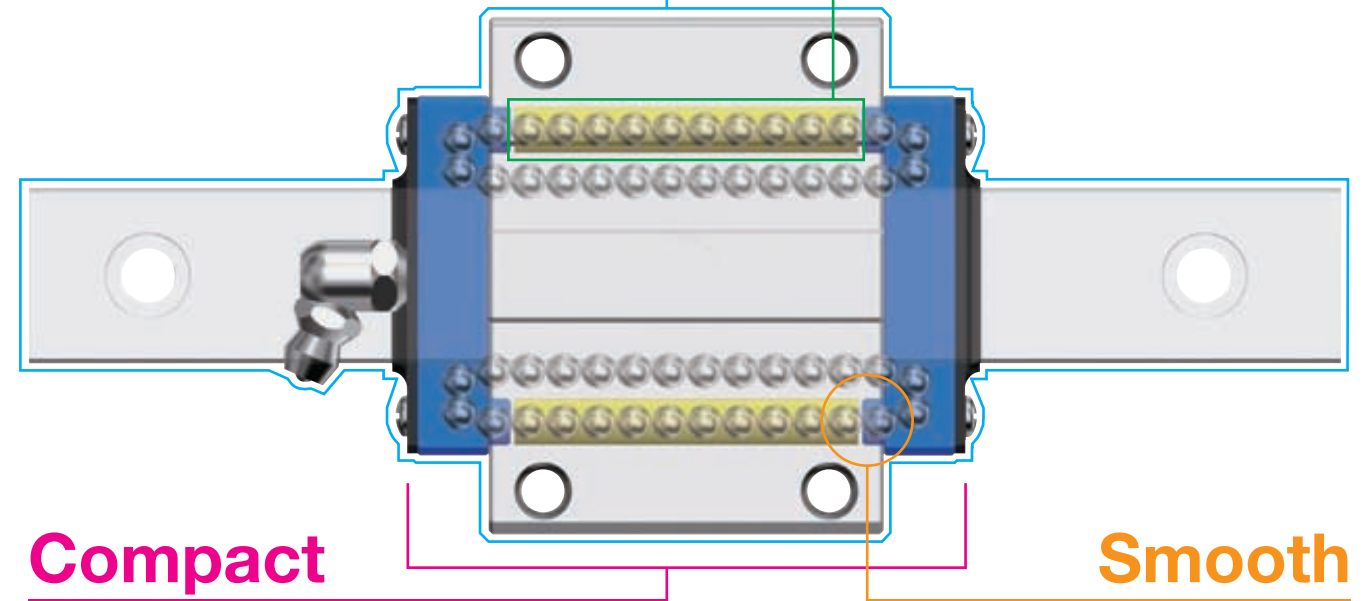


## Maintenance Free

Effectiveness of lubrication is maintained for long term, the cost of lubrication management and systems can be reduced.

## Ecology

C-Lube contributes to global environment protection because the amount of lubricant can be minimized.



## Compact

No increase in carriage length unlike attached-on external lubrication parts. No loss of available stroke length when replacing standard units.

## Smooth

Light and smooth running is achieved by the improvement of design. It is designed not to have direct contact to track rail bringing very smooth friction.

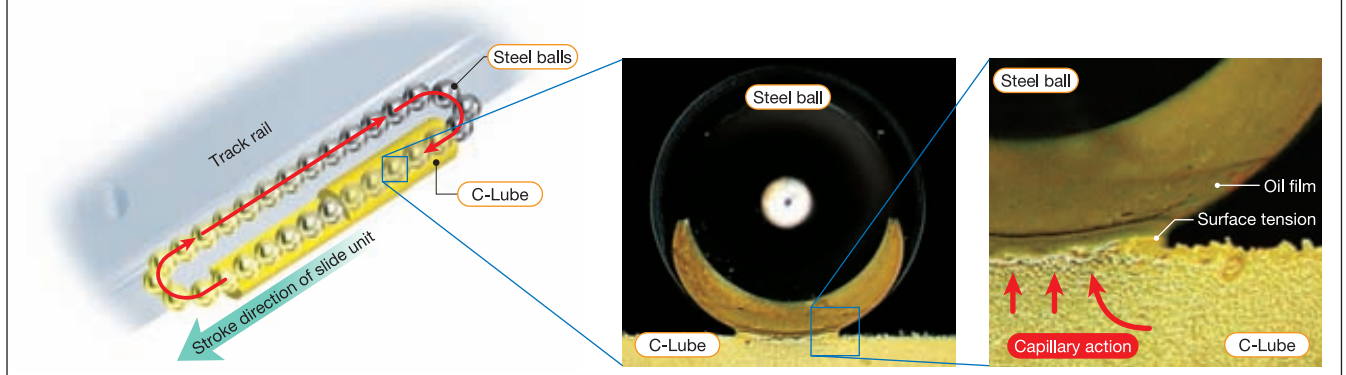
## Lubricant supply mechanism of C-Lube system

### The circulation of the steel balls distributes lubricant.

Lubricant is supplied directly to the steel balls. As the steel balls circulate, the lubricant is distributed to the loading area along the track rail. This results in adequate lubrication being properly maintained in the loading area for a long time.

### Lubricant is deposited directly to the surface of the steel balls.

The surface of C-Lube is always covered with the lubricant. Lubricant is continuously supplied to the surface of steel ball by surface tension in the contact of C-Lube surface and steel balls. New oil permeates automatically from the core of C-Lube to the internal surface that comes in contact with steel balls.



# Interchangeable specification is newly available.

- 1 The slide unit and track rail can be ordered separately and can be assembled to make a set as required.
- 2 High level of flexibility as combination of any kinds of shape of the unit, accuracy classes and preload classes can be realized.
- 3 Slide units and track rails can be selected separately and it promises short delivery time when required.



The interchangeable specification is produced by **IKO** original precision manufacturing technology and the dimensional accuracy of both slide unit and track rail is strictly controlled to achieve the interchangeability of higher standard.

### Requirements of ;

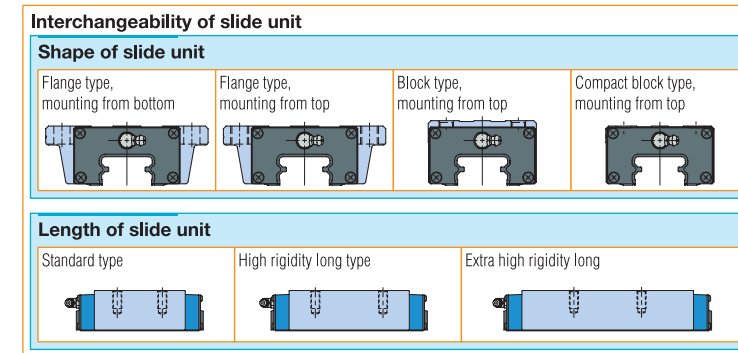
- Extending machine life and increase rigidity
- Improving machine accuracy
- Replace only the slide unit
- Increase number of slide unit
- Replace the track rail
- Extend length of the track rail
- Stock slide unit only as spare

### Interchangeable specification realizes ;

- Quick design change.
- Giving higher accuracy and changing preload class.
- Slide unit and track rail can be assembled to other mechanical part individually.
- Any shape, accuracy and preload class of slide unit and track rail can be assembled.
- Slide unit and track rail can be stocked separately and it contributes minimum storage space.

## Interchangeability among types of slide unit

Various types of slide units with different sectional shapes and length are prepared. These entire slide units can be mounted on the same track rails freely when required.

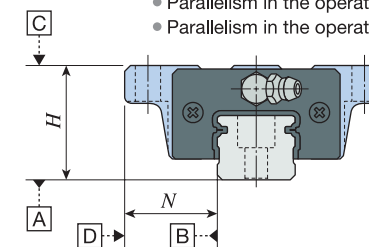


## Interchangeability in accuracy class

Two accuracy classes, High and Precision class are prepared and they can be used for application requiring high running accuracy. Furthermore, height variation among multiple sets is also controlled as well with high level of accuracy, ensuring that these products can be used for parallel track rail arrangement requires the degree of level strictly.

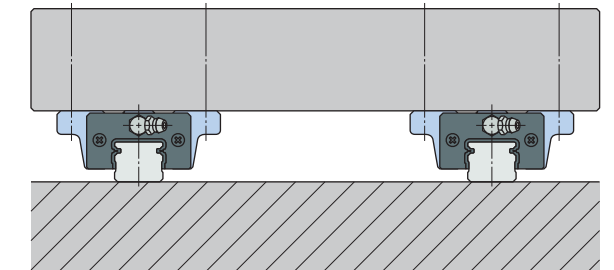
### Three accuracy grades are available.

- Dimension  $H$  and  $N$
- Dimensional variation of  $H$  and  $N$  among in the one set
- Parallelism in the operation of  $C$  surface to  $A$  surface
- Parallelism in the operation of  $D$  surface to  $B$  surface



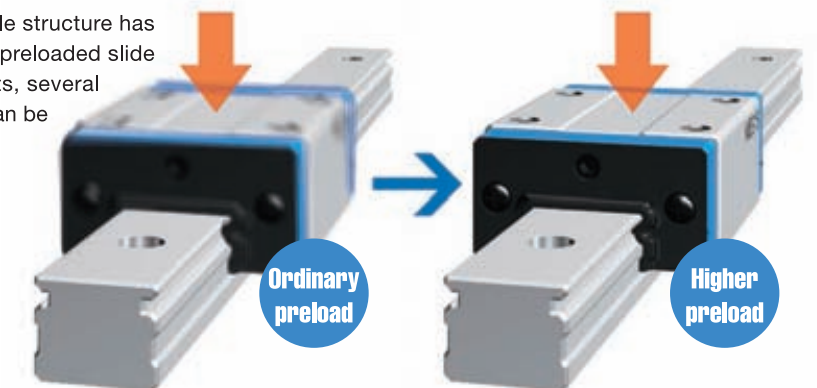
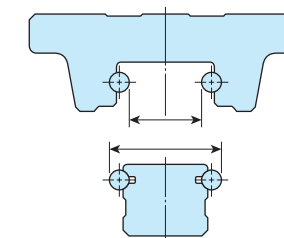
### Suitable for using in the parallel.

- Dimensional variation of  $H$  dimension for multiple assembled sets



## Interchangeability in preload classes

High accuracy dimensional control owing to a simple structure has made it possible to realize the interchangeability in preloaded slide units. In the interchangeable specification products, several preload types are prepared so that these products can be used for application requiring increase rigidity.



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

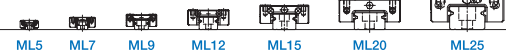
# Features of C-Lube Linear Way 3

~Wide Variation~

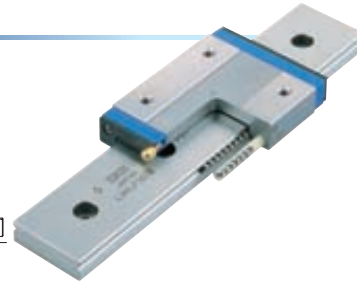
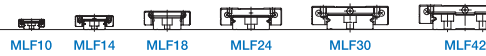
## C-Lube Linear Way ML

Miniature type Linear Way from the smallest 5mm of track rail width.  
(Miniature size)

[Standard type]



[Wide type]



| Material        | Shape of slide unit        | Length of slide unit | Model code  | Size |   |   |    |    |    |    |
|-----------------|----------------------------|----------------------|-------------|------|---|---|----|----|----|----|
|                 |                            |                      |             | 5    | 7 | 9 | 12 | 15 | 20 | 25 |
| Stainless steel | Standard type<br><b>ML</b> | Short                | <b>MLC</b>  | ☆    | ☆ | ☆ | ☆  | ☆  | ☆  | ☆  |
|                 |                            | Standard             | <b>ML</b>   | ☆    | ☆ | ☆ | ☆  | ☆  | ☆  | ☆  |
|                 |                            | High rigidity long   | <b>MLG</b>  | —    | ☆ | ☆ | ☆  | ☆  | ☆  | ☆  |
|                 | Wide type<br><b>MLF</b>    | Short                | <b>MLFC</b> | ☆    | ☆ | ☆ | ☆  | ☆  | ☆  | ☆  |
|                 |                            | Standard             | <b>MLF</b>  | ☆    | ☆ | ☆ | ☆  | ☆  | ☆  | ☆  |
|                 |                            | High rigidity long   | <b>MLFG</b> | —    | ☆ | ☆ | ☆  | ☆  | ☆  | ☆  |

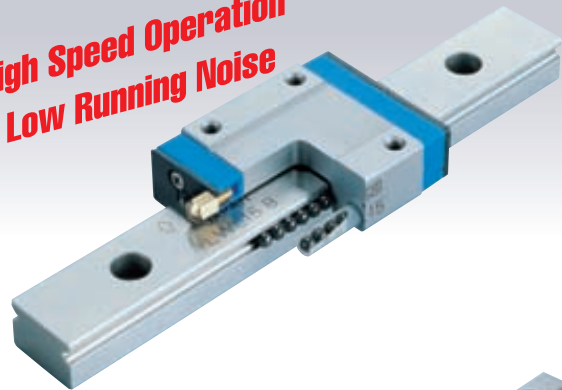
Remark : ☆ marks indicates that interchangeable products are available.

## C-Lube Linear Way ML for special environment

### ML with Ceramic Ball Specification

Silicon nitride ceramics balls are incorporated in the slide unit to realize high-speed operation and low running noise. In addition, the rigidity has been improved because of the minimal elastic deformation of ceramic characteristic.

**High Speed Operation**  
**Low Running Noise**

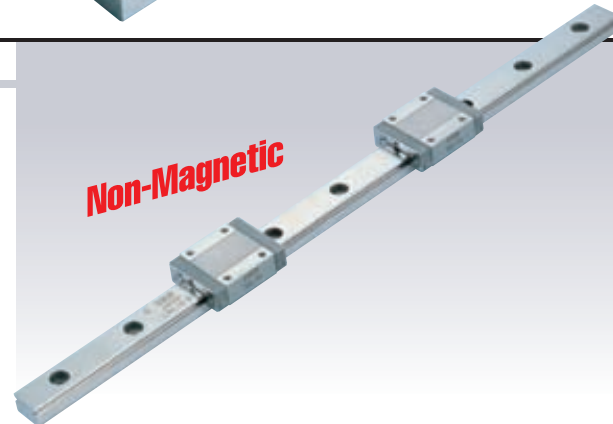


### Non-Magnetic ML

Linear Motion Rolling Guides that are used in semiconductor and liquid crystal manufacturing equipment and inspection equipment may be operated within a magnetic field or in a place that must avoid the influence of magnetic force in the equipment using electron beams.

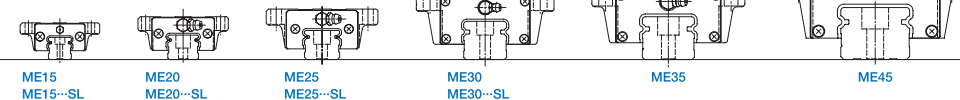
Non-Magnetic Linear Motion Rolling Guides consist of a combination of non-magnetic stainless steel body and silicon nitride ceramic balls for these applications.

**Non-Magnetic**



## C-Lube Linear Way ME

Useful compact sizes are suitable for general application.  
(Compact model)



| Material        | Shape of slide unit                                  | Length of slide unit | Model code        | Size |    |    |    |    |    |
|-----------------|------------------------------------------------------|----------------------|-------------------|------|----|----|----|----|----|
|                 |                                                      |                      |                   | 15   | 20 | 25 | 30 | 35 | 45 |
| Carbon steel    | Flange type, mounting from bottom<br><b>ME</b>       | Short                | <b>MEC</b>        | ☆    | ☆  | ☆  | ☆  | ☆  | —  |
|                 |                                                      | Standard             | <b>ME</b>         | ☆    | ☆  | ☆  | ☆  | ☆  | ☆  |
|                 |                                                      | High rigidity long   | <b>MEG</b>        | ☆    | ☆  | ☆  | ☆  | —  | —  |
|                 | Flange type, mounting from top<br><b>MET</b>         | Short                | <b>METC</b>       | ☆    | ☆  | ☆  | ☆  | ☆  | —  |
|                 |                                                      | Standard             | <b>MET</b>        | ☆    | ☆  | ☆  | ☆  | ☆  | ☆  |
|                 |                                                      | High rigidity long   | <b>METG</b>       | ☆    | ☆  | ☆  | ☆  | —  | —  |
|                 | Block type, mounting from top<br><b>MES</b>          | Short                | <b>MESC</b>       | ☆    | ☆  | ☆  | ☆  | ☆  | —  |
|                 |                                                      | Standard             | <b>MES</b>        | ☆    | ☆  | ☆  | ☆  | ☆  | ☆  |
|                 |                                                      | High rigidity long   | <b>MESG</b>       | ☆    | ☆  | ☆  | ☆  | —  | —  |
| Stainless steel | Flange type, mounting from bottom<br><b>ME ...SL</b> | Short                | <b>MEC ...SL</b>  | ☆    | ☆  | ☆  | ☆  | —  | —  |
|                 |                                                      | Standard             | <b>ME ...SL</b>   | ☆    | ☆  | ☆  | ☆  | —  | —  |
|                 |                                                      | High rigidity long   | <b>MEG ...SL</b>  | ☆    | ☆  | ☆  | ☆  | —  | —  |
|                 | Flange type, mounting from top<br><b>MET ...SL</b>   | Short                | <b>METC ...SL</b> | ☆    | ☆  | ☆  | ☆  | —  | —  |
|                 |                                                      | Standard             | <b>MET ...SL</b>  | ☆    | ☆  | ☆  | ☆  | —  | —  |
|                 |                                                      | High rigidity long   | <b>METG ...SL</b> | ☆    | ☆  | ☆  | ☆  | —  | —  |
|                 | Block type, mounting from top<br><b>MES ...SL</b>    | Short                | <b>MESC ...SL</b> | ☆    | ☆  | ☆  | ☆  | —  | —  |
|                 |                                                      | Standard             | <b>MES ...SL</b>  | ☆    | ☆  | ☆  | ☆  | —  | —  |
|                 |                                                      | High rigidity long   | <b>MESG ...SL</b> | ☆    | ☆  | ☆  | ☆  | —  | —  |

Remark : ☆ marks indicates that interchangeable products are available.

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

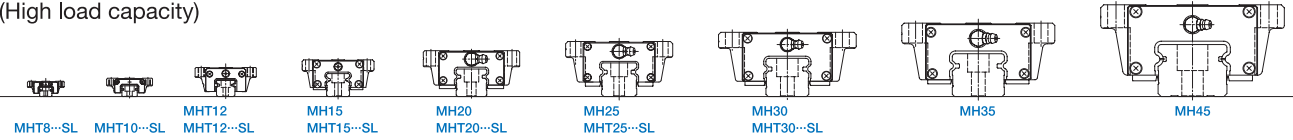


# Features of C-Lube Linear Way 3

~Wide Variation~

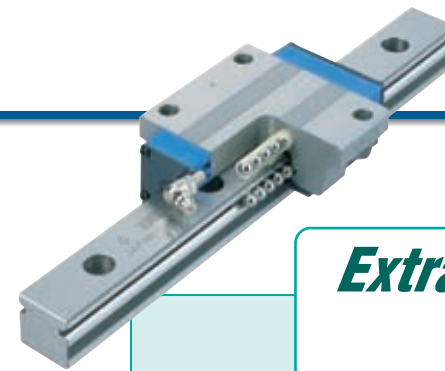
## C-Lube Linear Way MH

High rigidity and high load capacity model having bigger size of rolling element.  
(High load capacity)



| Material                                                 | Shape of slide unit                                 | Length of slide unit                              | Model code       | Size             |    |    |    |    |    |    |    |    |   |   |
|----------------------------------------------------------|-----------------------------------------------------|---------------------------------------------------|------------------|------------------|----|----|----|----|----|----|----|----|---|---|
|                                                          |                                                     |                                                   |                  | 8                | 10 | 12 | 15 | 20 | 25 | 30 | 35 | 45 |   |   |
| Carbon steel                                             | Flange type, mounting from bottom<br><b>MH</b>      | Standard                                          | <b>MH</b>        | —                | —  | —  | ☆  | ☆  | ☆  | ☆  | ☆  | ☆  | ☆ | ☆ |
|                                                          |                                                     | High rigidity long                                | <b>MHG</b>       | —                | —  | —  | —  | ☆  | ☆  | ☆  | ☆  | ☆  | ☆ | ☆ |
|                                                          | Flange type, mounting from top<br><b>MHT</b>        | Standard                                          | <b>MHT</b>       | —                | —  | ☆  | ☆  | ☆  | ☆  | ☆  | ☆  | ☆  | ☆ | ☆ |
|                                                          |                                                     | High rigidity long                                | <b>MHTG</b>      | —                | —  | —  | —  | ☆  | ☆  | ☆  | ☆  | ☆  | ☆ | ☆ |
|                                                          |                                                     | Extra high rigidity long<br><b>NEW</b>            | <b>MHTL</b>      | —                | —  | —  | —  | —  | —  | ☆  | ☆  | ☆  | ☆ | ☆ |
|                                                          | Blocke type, mounting from top<br><b>MHD</b>        | Standard                                          | <b>MHD</b>       | —                | —  | ☆  | ☆  | —  | ☆  | ☆  | ☆  | ☆  | ☆ | ☆ |
|                                                          |                                                     | High rigidity long                                | <b>MHDG</b>      | —                | —  | —  | —  | —  | ☆  | ☆  | ☆  | ☆  | ☆ | ☆ |
|                                                          |                                                     | Extra high rigidity long<br><b>NEW</b>            | <b>MHDL</b>      | —                | —  | —  | —  | —  | —  | —  | ☆  | ☆  | ☆ | ☆ |
|                                                          | Compact block type, mounting from top<br><b>MHS</b> | Standard                                          | <b>MHS</b>       | —                | —  | —  | ☆  | ☆  | ☆  | ☆  | —  | —  | — | — |
|                                                          |                                                     | High rigidity long                                | <b>MHSG</b>      | —                | —  | —  | —  | ☆  | ☆  | ☆  | —  | —  | — | — |
|                                                          | Stainless steel                                     | Flange type, mounting from top<br><b>MHT...SL</b> | Standard         | <b>MHT...SL</b>  | ☆  | ☆  | ☆  | ☆  | ☆  | ☆  | ☆  | —  | — | — |
|                                                          |                                                     | Blocke type, mounting from top<br><b>MHD...SL</b> | Short            | <b>MHDC...SL</b> | ☆  | ☆  | ☆  | —  | —  | —  | —  | —  | — | — |
| Standard                                                 |                                                     |                                                   | <b>MHD...SL</b>  | ☆                | ☆  | ☆  | —  | —  | —  | —  | —  | —  | — |   |
| High rigidity long                                       |                                                     |                                                   | <b>MHDG...SL</b> | ☆                | ☆  | ☆  | —  | —  | —  | —  | —  | —  | — |   |
| Compact block type, mounting from top<br><b>MHS...SL</b> | Standard<br><b>NEW</b>                              | <b>MHS...SL</b>                                   | —                | —                | —  | ☆  | ☆  | ☆  | ☆  | —  | —  | —  |   |   |

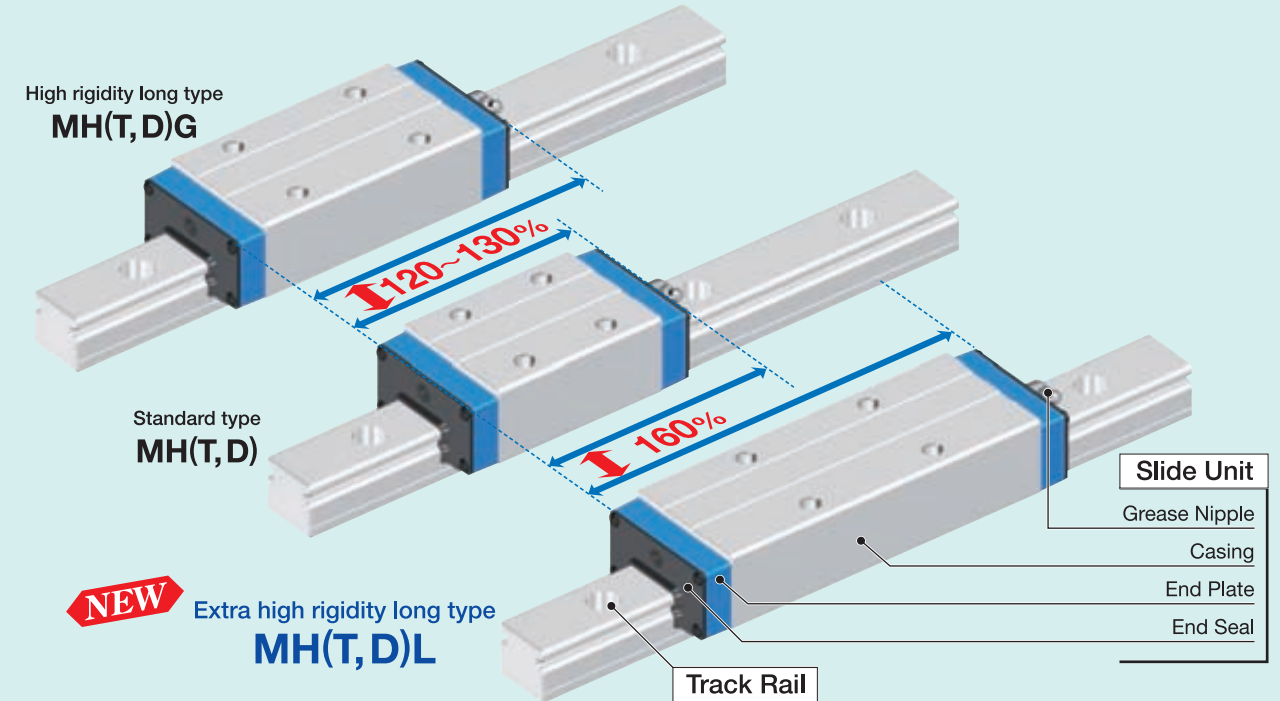
Remark : ☆ marks indicates that interchangeable products are available.



**Extra high rigidity long slide unit is newly available!**

**NEW**

New longer slide unit having the length 1.6 times of standard type is available.  
Large quantity of steel balls contributes superior running accuracy and higher rigidity.



### Upgrading of your machine ---- Load capacity

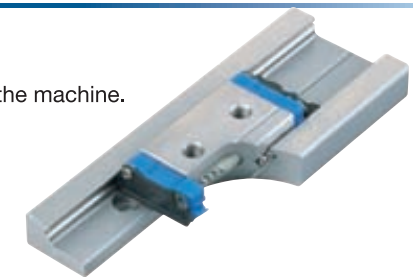
Basic dynamic load rating could be 120% ~ 129%.  
Longer machine life and increasing reliability of the machine are possible.

### Upgrading of your machine ---- Rigidity

Displacement against load could be reduced.  
It makes machine's rigidity higher and improvement in accuracy, also allows avoiding resonance.

## C-Lube Linear Way MUL

High rigidity U-shaped track rail can be used as structural member of the machine.  
(High rigidity track rail)



| Material        | Shape of slide unit        | Length of slide unit | Model code | Size |    |
|-----------------|----------------------------|----------------------|------------|------|----|
|                 |                            |                      |            | 25   | 30 |
| Stainless steel | Miniature type, <b>MUL</b> | Standard             | <b>MUL</b> | ○    | ○  |

# Identification number

The specification of C-Lube Linear Way is identified by the identification number, which consists of a model code, a size, a part code, a material code, a preload symbol, a classification symbol, interchangeable code and supplemental codes.

### Example of identification number

#### Interchangeable specification

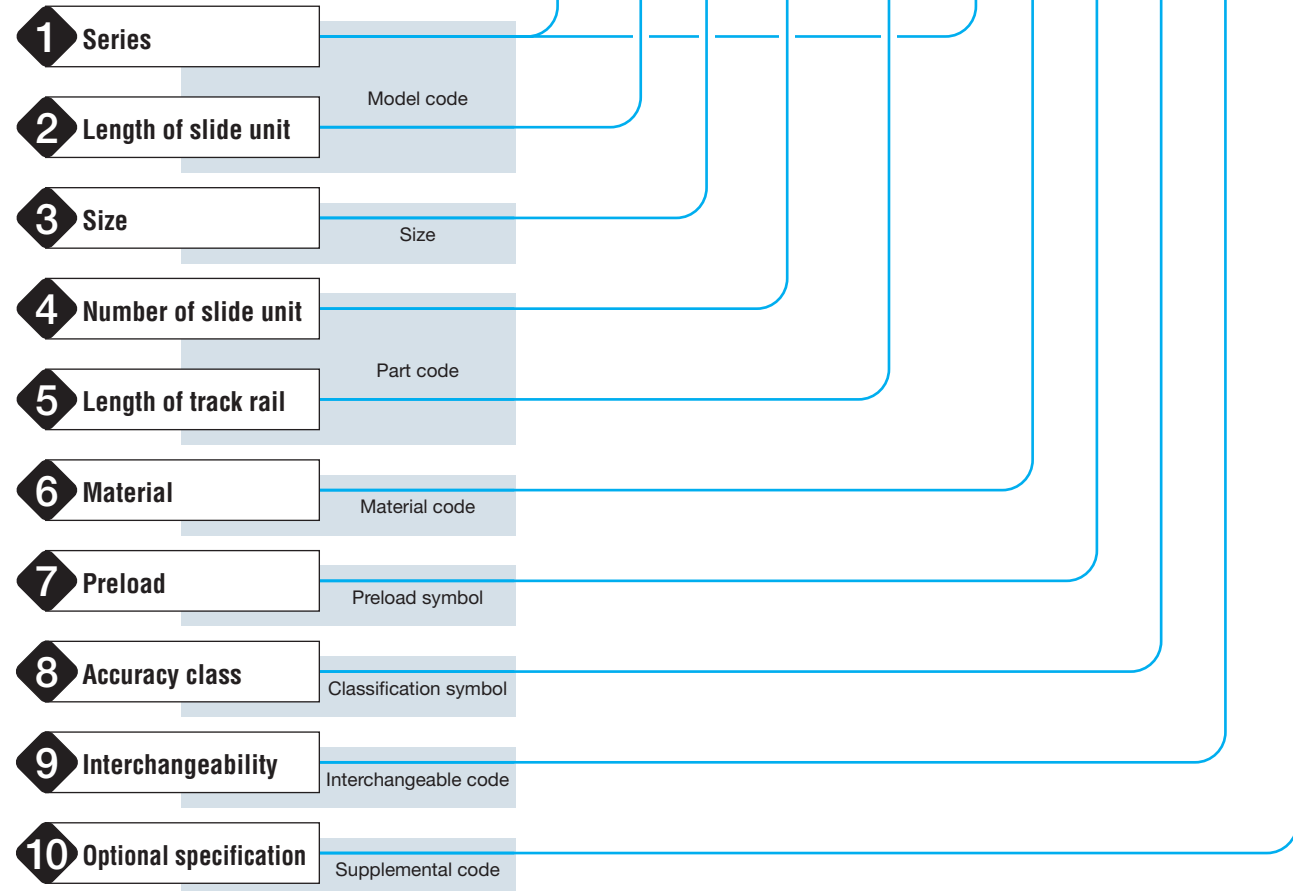
Slide unit only **ML C 12 C1** **T<sub>1</sub> P S2 /U**

Track rail only <sup>(1)</sup> **LWL 12 R200 B** **P S2**

Set product **ML C 12 C2 R200** **T<sub>1</sub> P S2 /U**

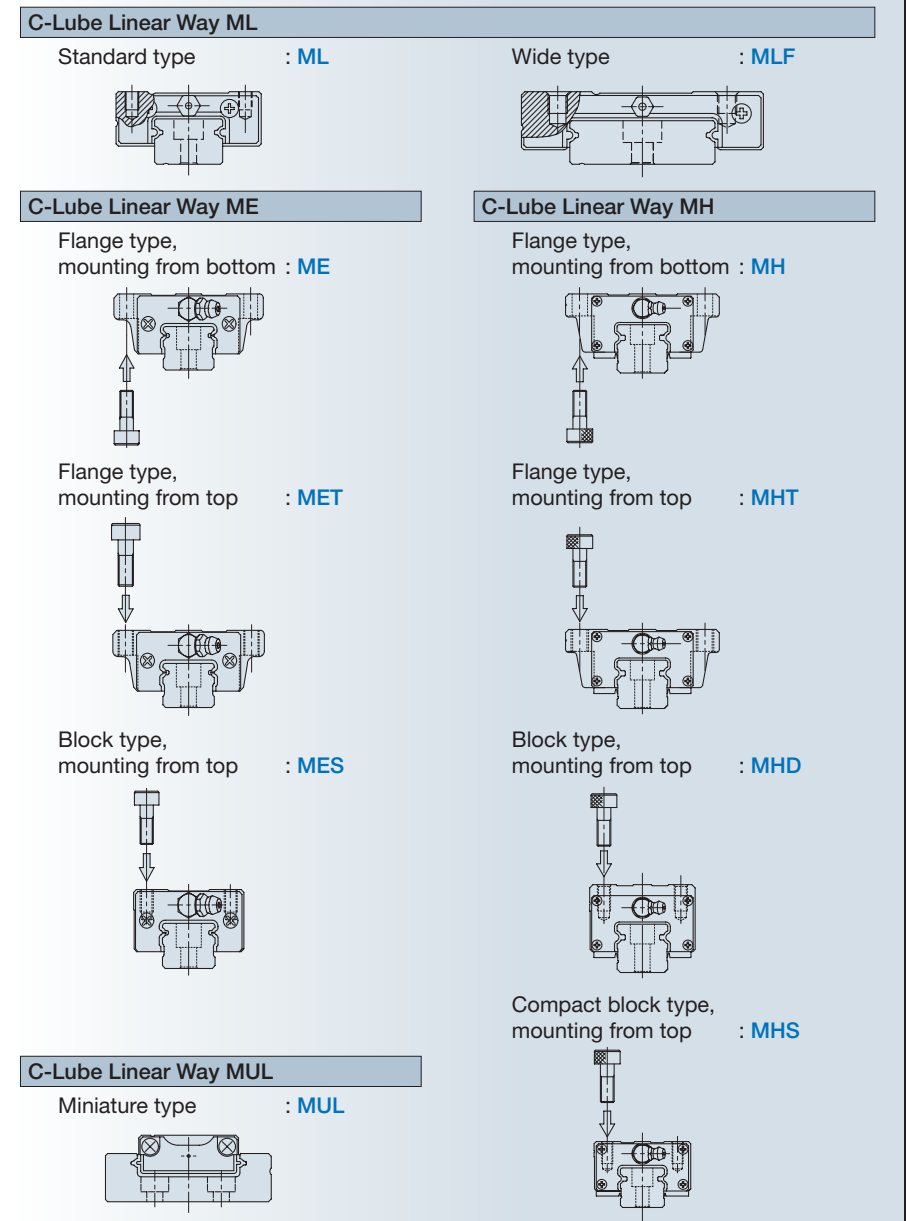
#### Non-interchangeable specification

Set product **ML C 12 C2 R200** **T<sub>1</sub> P /U**



Note <sup>(1)</sup> : In case ordering track rail only, model code is changed as shown below. Please Refer Table 1.  
 Track rail of interchangeable ML → Model code LWL-B (Ex: LWL9R160BPS2)  
 Track rail of interchangeable MLF → Model code LWLF-B (Ex: LWLF42R320BPS2)  
 Track rail of interchangeable ME → Model code LWE (Ex: LWE20R820PS2)  
 Track rail of interchangeable MH → Model code LWH (Ex: LWH25R480BPS2)

## 1 Series



Applicable types and size are shown in Table 2.1 to 2.4 on the next page. Mode codes for ordering track rail only are shown in Table 1.

Table 1 Model codes for ordering track rail only

| Series                               | Material                         | Model code of track rail | 材料記号 <sup>(1)</sup> |
|--------------------------------------|----------------------------------|--------------------------|---------------------|
| C-Lube Linear Way ML                 | Standard type<br>Stainless steel | LWL...B                  | (No symbol)         |
|                                      | Wide type<br>Stainless steel     | LWLF...B                 | (No symbol)         |
| C-Lube Linear Way ME                 | Carbon steel                     | LWE                      | (No symbol)         |
|                                      | Stainless steel                  | LWE                      | SL                  |
| C-Lube Linear Way MH (Size 8 to 12)  | Carbon steel                     | LWH                      | (No symbol)         |
|                                      | Stainless steel                  | LWH                      | SL                  |
| C-Lube Linear Way MH (Size 15 to 45) | Carbon steel                     | LWH...B                  | (No symbol)         |
|                                      | Stainless steel                  | LWH                      | SL                  |

Note <sup>(1)</sup> : Applicable material and code are shown in Table 3 on page 16.

## 2 Length of slide unit

Short : C (Ex: MLC15C1S2)  
 Standard : No symbol  
 High rigidity long : G (Ex: MHG25C2R840H)  
 Extra High rigidity long : L (Ex: MHTL45C2R1470H)



Identification number

**3 Size**

Applicable types and size are shown in Table 2.1 to 2.4.

**Table 2.1 Types and sizes of C-Lube Linear Way ML**

| Material        | Shape of the slide unit | Length of the slide unit | Model code | Size |   |   |    |    |    |    |
|-----------------|-------------------------|--------------------------|------------|------|---|---|----|----|----|----|
|                 |                         |                          |            | 5    | 7 | 9 | 12 | 15 | 20 | 25 |
| Stainless steel | Standard type           | Short                    | MLC        | ☆    | ☆ | ☆ | ☆  | ☆  | ☆  | ☆  |
|                 |                         | Standard                 | ML         | ☆    | ☆ | ☆ | ☆  | ☆  | ☆  | ☆  |
|                 |                         | High rigidity long       | MLG        | —    | ☆ | ☆ | ☆  | ☆  | ☆  | ☆  |
|                 | Wide type               | Short                    | MLFC       | ☆    | ☆ | ☆ | ☆  | ☆  | ☆  | ☆  |
|                 |                         | Standard                 | MLF        | ☆    | ☆ | ☆ | ☆  | ☆  | ☆  | ☆  |
|                 |                         | High rigidity long       | MLFG       | —    | ☆ | ☆ | ☆  | ☆  | ☆  | ☆  |

Remark: ☆ marks indicates that interchangeable products are available.

**Table 2.2 Types and sizes of C-Lube Linear Way ME**

| Material        | Shape of the slide unit           | Length of the slide unit | Model code | Size |    |    |    |    |    |
|-----------------|-----------------------------------|--------------------------|------------|------|----|----|----|----|----|
|                 |                                   |                          |            | 15   | 20 | 25 | 30 | 35 | 45 |
| Carbon steel    | Flange type, mounting from bottom | Short                    | MEC        | ☆    | ☆  | ☆  | ☆  | ☆  | —  |
|                 |                                   | Standard                 | ME         | ☆    | ☆  | ☆  | ☆  | ☆  | ☆  |
|                 |                                   | High rigidity long       | MEG        | ☆    | ☆  | ☆  | ☆  | —  | —  |
|                 | Flange type, mounting from top    | Short                    | METC       | ☆    | ☆  | ☆  | ☆  | ☆  | —  |
|                 |                                   | Standard                 | MET        | ☆    | ☆  | ☆  | ☆  | ☆  | ☆  |
|                 |                                   | High rigidity long       | METG       | ☆    | ☆  | ☆  | ☆  | —  | —  |
|                 | Block type, mounting from top     | Short                    | MESC       | ☆    | ☆  | ☆  | ☆  | ☆  | —  |
|                 |                                   | Standard                 | MES        | ☆    | ☆  | ☆  | ☆  | ☆  | ☆  |
|                 |                                   | High rigidity long       | MESG       | ☆    | ☆  | ☆  | ☆  | —  | —  |
| Stainless steel | Flange type, mounting from bottom | Short                    | MEC        | ☆    | ☆  | ☆  | ☆  | —  | —  |
|                 |                                   | Standard                 | ME         | ☆    | ☆  | ☆  | ☆  | —  | —  |
|                 |                                   | High rigidity long       | MEG        | ☆    | ☆  | ☆  | ☆  | —  | —  |
|                 | Flange type, mounting from top    | Short                    | METC       | ☆    | ☆  | ☆  | ☆  | —  | —  |
|                 |                                   | Standard                 | MET        | ☆    | ☆  | ☆  | ☆  | —  | —  |
|                 |                                   | High rigidity long       | METG       | ☆    | ☆  | ☆  | ☆  | —  | —  |
|                 | Block type, mounting from top     | Short                    | MESC       | ☆    | ☆  | ☆  | ☆  | —  | —  |
|                 |                                   | Standard                 | MES        | ☆    | ☆  | ☆  | ☆  | —  | —  |
|                 |                                   | High rigidity long       | MESG       | ☆    | ☆  | ☆  | ☆  | —  | —  |

Remark: ☆ marks indicates that interchangeable products are available.

**Table 2.3 Types and sizes of C-Lube Linear Way MH**

| Material                              | Shape of the slide unit               | Length of the slide unit | Model code          | Size |    |    |    |    |    |    |    |    |
|---------------------------------------|---------------------------------------|--------------------------|---------------------|------|----|----|----|----|----|----|----|----|
|                                       |                                       |                          |                     | 8    | 10 | 12 | 15 | 20 | 25 | 30 | 35 | 45 |
| Carbon steel                          | Flange type, mounting from bottom     | Standard                 | MH                  | —    | —  | —  | ☆  | ☆  | ☆  | ☆  | ☆  | ☆  |
|                                       |                                       | High rigidity long       | MHG                 | —    | —  | —  | —  | ☆  | ☆  | ☆  | ☆  | ☆  |
|                                       | Flange type, mounting from top        | Standard                 | MHT <sup>(1)</sup>  | —    | —  | ☆  | ☆  | ☆  | ☆  | ☆  | ☆  | ☆  |
|                                       |                                       | High rigidity long       | MHTG                | —    | —  | —  | —  | ☆  | ☆  | ☆  | ☆  | ☆  |
|                                       |                                       | Extra high rigidity long | MHTL <sup>(2)</sup> | —    | —  | —  | —  | —  | —  | ☆  | ☆  | ☆  |
|                                       | Block type, mounting from top         | Standard                 | MHD                 | —    | —  | ☆  | ☆  | —  | ☆  | ☆  | ☆  | ☆  |
| High rigidity long                    |                                       | MHDG                     | —                   | —    | —  | —  | —  | ☆  | ☆  | ☆  | ☆  |    |
| Extra high rigidity long              |                                       | MHDL                     | —                   | —    | —  | —  | —  | —  | ☆  | ☆  | ☆  |    |
| Stainless steel                       | Compact block type, mounting from top | Standard                 | MHS                 | —    | —  | —  | ☆  | ☆  | ☆  | ☆  | —  | —  |
|                                       |                                       | High rigidity long       | MHSG                | —    | —  | —  | —  | ☆  | ☆  | ☆  | —  | —  |
|                                       | Flange type, mounting from bottom     | Standard                 | MHT <sup>(1)</sup>  | ☆    | ☆  | ☆  | ☆  | ☆  | ☆  | ☆  | —  | —  |
|                                       |                                       | Short                    | MHDC                | ☆    | ☆  | ☆  | —  | —  | —  | —  | —  | —  |
|                                       | Block type, mounting from top         | Standard                 | MHD                 | ☆    | ☆  | ☆  | —  | —  | —  | —  | —  | —  |
|                                       |                                       | High rigidity long       | MHDG                | ☆    | ☆  | ☆  | —  | —  | —  | —  | —  | —  |
| Compact block type, mounting from top | Standard                              | MHS                      | —                   | —    | —  | ☆  | ☆  | ☆  | ☆  | —  | —  |    |

Note (1): Size 8, 10 and 12 can be mounted also from bottom.

Note (2): This can be mounted also from bottom.

Remark: ☆ marks indicates that interchangeable products are available.

**Table 2.4 Type and sizes of C-Lube Linear Way MUL**

| Material        | Shape of the slide unit | Length of the slide unit | Model code | Size |    |
|-----------------|-------------------------|--------------------------|------------|------|----|
|                 |                         |                          |            | 25   | 30 |
| Stainless steel | Miniature type          | Standard                 | MUL        | ○    | ○  |

Remark: Interchangeable model is not available in MUL series.

**4 Number of slide unit**

Set product (with track rail) : C○ (Ex: ME15C2R220)  
 Slide unit only (Interchangeable series) : C1 (Ex: ME15C1S2)  
 Track rail only : No symbol  
 For an assembled set, indicate the number of slide units assembled on one track rail. For an interchangeable slide unit only, "C1" shall be indicated.

**5 Length of track rail**

Set product (with slide unit) : R○ (Ex:ME15C2R220)  
 Slide unit only : No symbol  
 Track rail only (Interchangeable series) : R○ (Ex:LWE15R220S2)  
 Indicate the length of track rail in mm. For standard and maximum lengths, see "Track rail length" in Table 30.1 to 30.5 on page 34 to 36.

**6 Material**

Carbon steel : No symbol  
 Stainless steel : SL  
 For available model and size, see Table 2.1 to 2.3.

**Table 3 Material codes of C-Lube Linear Ways**

| Series                | Material     |                 |
|-----------------------|--------------|-----------------|
|                       | Carbon steel | Stainless steel |
| C-Lube Linear Way ML  | —            | (No symbol)     |
| C-Lube Linear Way ME  | (No symbol)  | SL              |
| C-Lube Linear Way MH  | (No symbol)  | SL              |
| C-Lube Linear Way MUL | —            | (No symbol)     |

**7 Preload**

Clearance for ME : T<sub>c</sub>  
 Clearance for ML : T<sub>0</sub>  
 Standard : No symbol  
 Light preload : T<sub>1</sub>  
 Medium preload : T<sub>2</sub>  
 Heavy preload : T<sub>3</sub>  
 Specify this items for an assembled set or an interchangeable single slide unit. Applicable preload and size are shown in Table 4. For details of preload amount, see Table 15 on page 22.

**8 Accuracy class**

Ordinary class : No symbol  
 High class : H  
 Precision class : P  
 Super precision class : SP  
 For applicable accuracy, see Table 5. In the interchangeable specification, please combine same accuracy codes on both slide unit and track rail. For details of accuracy, see Table 14.1 to 14.3 on page 21 to 22.

**Table 4 Preload of C-Lube Linear Way**

| Series                              | Preload class and symbol           |                                    |                      |                                 |                                  |                                 |
|-------------------------------------|------------------------------------|------------------------------------|----------------------|---------------------------------|----------------------------------|---------------------------------|
|                                     | Clearance for ME (T <sub>c</sub> ) | Clearance for ML (T <sub>0</sub> ) | Standard (No symbol) | Light preload (T <sub>1</sub> ) | Medium preload (T <sub>2</sub> ) | Heavy preload (T <sub>3</sub> ) |
| C-Lube Linear Way ML                | —                                  | ☆ <sup>(1)</sup>                   | ☆                    | ☆ <sup>(2)</sup>                | —                                | —                               |
| C-Lube Linear Way ME <sup>(3)</sup> | ☆                                  | —                                  | ☆                    | ☆                               | ○                                | —                               |
| C-Lube Linear Way MH                | —                                  | ○ <sup>(4)</sup>                   | ☆                    | ☆ <sup>(5)</sup>                | ○ <sup>(6)</sup>                 | ○ <sup>(6)</sup>                |
| C-Lube Linear Way MUL               | —                                  | —                                  | ○                    | ○                               | —                                | —                               |

Remark: ☆ marks are also applicable for interchangeable series.

Note (1): Not applicable to supplemental code /HB (Ceramic ball specification)  
 (2): Not applicable to size 5 and 10.  
 (3): In ME series, applicable combination of the preload and accuracy is limited and shown in Table 5.  
 (4): Applicable to size 8, 10 and 12.  
 (5): Not applicable to interchangeable specification of size 8, 10 and 12.  
 (6): Not applicable to size 8, 10 and 12.

**Table 5 Accuracy of C-Lube Linear Way**

| Series                              | Accuracy class and symbol  |                |                     |                            |
|-------------------------------------|----------------------------|----------------|---------------------|----------------------------|
|                                     | Ordinary class (No symbol) | High class (H) | Precision class (P) | Super precision class (SP) |
| C-Lube Linear Way ML                | —                          | ☆              | ☆                   | —                          |
| C-Lube Linear Way ME <sup>(1)</sup> | ☆                          | ☆              | ☆                   | ○                          |
| C-Lube Linear Way MH                | —                          | ☆              | ☆                   | ○ <sup>(2)</sup>           |
| C-Lube Linear Way MUL               | ○                          | ○              | —                   | —                          |

Note (1): In ME series, applicable combination of the preload and accuracy is limited and shown in Table 6.  
 (2): Not applicable to size 8, 10 and 12.

Remark: ☆ marks are also applicable for interchangeable series.

**Table 6 C-Lube Linear Way ME Combination of accuracy and preload**

| Preload class and symbol           | Accuracy class and symbol | Ordinary class (No symbol) | High class (H) | Precision class (P) | Super precision class (SP) |
|------------------------------------|---------------------------|----------------------------|----------------|---------------------|----------------------------|
|                                    |                           | (No symbol)                | (H)            | (P)                 | (SP)                       |
| Clearance for ME (T <sub>c</sub> ) | (T <sub>c</sub> )         | ☆                          | —              | —                   | —                          |
| Standard (No symbol)               | (No symbol)               | ☆                          | ☆              | ☆                   | ○                          |
| Light preload (T <sub>1</sub> )    | (T <sub>1</sub> )         | —                          | ☆              | ☆                   | ○                          |
| Medium preload (T <sub>2</sub> )   | (T <sub>2</sub> )         | —                          | ○              | ○                   | ○                          |

Remark: ☆ marks are also applicable for interchangeable series.

## Identification number

## 9 Interchangeability

|                     |             |                                                      |
|---------------------|-------------|------------------------------------------------------|
| Interchangeable     | : S2        | Slide unit and track rail can be supplied separately |
| Non-interchangeable | : No symbol | by indicating interchangeable code S2.               |

## 10 Optional specification

Applicable special specifications are shown in Table 7.1 to 7.4. When a combination of several special specifications (Table 8.1 to 8.4) is required, arrange their supplemental codes in alphabetical order. For detail of special specifications, see page 23 to 29.

Table 7.1 C-Lube Linear Way ML Applicable optional specifications

| Specifications                                | Supplemental code | Set product      | Track rail only | Slide unit only  |
|-----------------------------------------------|-------------------|------------------|-----------------|------------------|
| Butt jointing track rail                      | /A                | ○                | —               | —                |
| Opposite reference surfaces arrangement       | /D                | ☆                | —               | —                |
| Specified rail mounting hole positions        | /E                | ☆                | ☆               | —                |
| Ceramic balls                                 | /HB               | ○ <sup>(1)</sup> | —               | —                |
| Appending inspection sheet                    | /I                | ○                | —               | —                |
| Black chrome surface treatment                | /LR               | ○ <sup>(2)</sup> | —               | —                |
| Without track rail mounting bolts             | /MN               | ☆                | ☆               | —                |
| No rubber end seals                           | /N                | ☆                | —               | ☆                |
| Track rail with stopper pins                  | /S                | ○                | —               | —                |
| Under seals                                   | /U                | ☆ <sup>(3)</sup> | —               | ☆ <sup>(3)</sup> |
| Matched sets to be used as an assembled group | /W○               | ○                | —               | —                |

Note<sup>(1)</sup>: Applicable to size 7, 9, 12 and 15.  
<sup>(2)</sup>: Not applicable to size 5 and 10.  
<sup>(3)</sup>: Not applicable to size 5, 7, 10 and 14.  
 Remark: ☆ marks indicates that interchangeable products are available.

Table 7.2 C-Lube Linear Way ME Applicable optional specifications

| Specifications                                | Supplemental code | Set product      | Track rail only  | Slide unit only  |
|-----------------------------------------------|-------------------|------------------|------------------|------------------|
| Butt jointing track rail                      | /A                | ○                | —                | —                |
| Opposite reference surfaces arrangement       | /D                | ☆                | —                | —                |
| Specified rail mounting hole positions        | /E                | ☆                | ☆                | —                |
| Caps for rail mounting holes                  | /F                | ☆                | ☆                | —                |
| Append an inspection sheet                    | /I                | ○                | —                | —                |
| Female threads for bellows                    | /J○               | ☆ <sup>(1)</sup> | ☆ <sup>(1)</sup> | ☆ <sup>(1)</sup> |
| Black chrome surface treatment                | /L○               | ☆                | —                | —                |
| Fluoric black chrome surface treatment        | /LFO              | ☆                | —                | —                |
| With track rail mounting bolts                | /MA               | ☆                | ☆                | —                |
| Change of mounting hole size                  | /M4               | ☆ <sup>(2)</sup> | ☆ <sup>(2)</sup> | —                |
| No rubber end seals                           | /N                | ☆                | —                | ☆                |
| Butt jointing interchangeable track rail      | /T                | ☆ <sup>(3)</sup> | ☆                | —                |
| Under seals                                   | /U                | ☆                | —                | ☆                |
| Double end seals                              | /V○               | ☆                | —                | ☆                |
| Matched sets to be used as an assembled group | /W○               | ○                | —                | —                |
| Scrapers                                      | /Z○               | ☆                | —                | ☆                |

Note<sup>(1)</sup>: Not applicable to interchangeable specification of stainless steel model.  
<sup>(2)</sup>: Applicable to size 15.  
<sup>(3)</sup>: Not applicable to on interchangeable specification.  
 Remark: ☆ marks indicates that interchangeable products are available.

Table 7.3.1 C-Lube Linear Way MH Applicable optional specifications (For size 8, 10 and 12)

| Specifications                                                     | Supplemental code | Set product      | Track rail only  | Slide unit only |
|--------------------------------------------------------------------|-------------------|------------------|------------------|-----------------|
| Butt jointing track rail                                           | /A                | ○ <sup>(1)</sup> | —                | —               |
| Opposite reference surfaces arrangement                            | /D                | ☆                | —                | —               |
| Specified rail mounting hole positions                             | /E                | ☆                | ☆                | —               |
| Caps for rail mounting holes                                       | /F                | ☆ <sup>(2)</sup> | ☆ <sup>(2)</sup> | —               |
| Append an inspection sheet                                         | /I                | ○                | —                | —               |
| Black chrome surface treatment                                     | /L○               | ○ <sup>(3)</sup> | —                | —               |
| With track rail mounting bolts (Applicable to set order)           | /MA               | ☆                | —                | —               |
| Without track rail mounting bolts (Applicable to track rail order) | /MN               | —                | ☆                | —               |
| No rubber end seals                                                | /N                | ☆                | —                | ☆               |
| Under seals                                                        | /U                | ☆                | —                | ☆               |
| Matched sets to be used as an assembled group                      | /W○               | ○                | —                | —               |

Note<sup>(1)</sup>: Applicable to size 12 of carbon steel product.  
<sup>(2)</sup>: Applicable to size 12.  
<sup>(3)</sup>: Applicable to only track rail. (Supplemental code "LR")  
 Remark: ☆ marks indicate that interchangeable products are available.

Table 7.3.2 C-Lube Linear Way MH Applicable optional specifications (For size 15 and bigger)

| Specifications                                                     | Supplemental code | Set product      | Track rail only  | Slide unit only  |
|--------------------------------------------------------------------|-------------------|------------------|------------------|------------------|
| Butt jointing track rail                                           | /A                | ○                | —                | —                |
| Opposite reference surfaces arrangement                            | /D                | ☆                | —                | —                |
| Specified rail mounting hole positions                             | /E                | ☆                | ☆                | —                |
| Caps for rail mounting holes                                       | /F                | ☆                | ☆                | —                |
| Append an inspection sheet                                         | /I                | ○                | —                | —                |
| Female threads for bellows                                         | /J○               | ☆ <sup>(1)</sup> | ☆ <sup>(1)</sup> | ☆ <sup>(1)</sup> |
| Black chrome surface treatment                                     | /L○               | ☆                | ☆                | —                |
| Fluoric black chrome surface treatment                             | /LFO              | ☆                | —                | —                |
| With track rail mounting bolts (Applicable to set order)           | /MA               | ☆                | —                | —                |
| Without track rail mounting bolts (Applicable to track rail order) | /MN               | —                | ☆                | —                |
| No rubber end seals                                                | /N                | ☆                | —                | ☆                |
| Rail cover plate                                                   | /PS               | ○ <sup>(2)</sup> | —                | —                |
| Butt jointing interchangeable track rail                           | /T                | ☆ <sup>(3)</sup> | ☆                | —                |
| Double end seals                                                   | /V○               | ☆                | —                | ☆                |
| Matched sets to be used as an assembled group                      | /W○               | ○                | —                | —                |
| Scrapers                                                           | /Z○               | ☆                | —                | ☆                |

Note<sup>(1)</sup>: Not applicable to stainless steel interchangeable specification.  
<sup>(2)</sup>: Applicable to carbon steel size 25 and bigger.  
<sup>(3)</sup>: Not applicable to non interchangeable specification.  
 Remark: ☆ marks indicate that interchangeable products are available.

Table 7.4 C-Lube Linear Way MUL Applicable optional specifications

| Specifications                                | Supplemental code | Non-interchangeable specification |
|-----------------------------------------------|-------------------|-----------------------------------|
| Specified rail mounting hole positions        | /E                | ○                                 |
| Black chrome surface treatment                | /LR               | ○                                 |
| With track rail mounting bolts                | /MA               | ○                                 |
| Upper seals                                   | /U                | ○                                 |
| Matched sets to be used as an assembled group | /W○               | ○                                 |

Table 8.1 C-Lube Linear Way ML Combination of optional specifications

|    |   |   |   |    |   |    |    |   |   |   |  |  |
|----|---|---|---|----|---|----|----|---|---|---|--|--|
| D  | ○ |   |   |    |   |    |    |   |   |   |  |  |
| E  | — | — |   |    |   |    |    |   |   |   |  |  |
| HB | ○ | ○ | ○ |    |   |    |    |   |   |   |  |  |
| I  | ○ | ○ | ○ | ○  |   |    |    |   |   |   |  |  |
| LR | — | ○ | ○ | ○  | ○ |    |    |   |   |   |  |  |
| MN | ○ | ☆ | ☆ | ○  | ○ | ○  |    |   |   |   |  |  |
| N  | ○ | ☆ | ☆ | ○  | ○ | ○  | ☆  |   |   |   |  |  |
| S  | ○ | ○ | ○ | ○  | ○ | ○  | ○  | ○ |   |   |  |  |
| U  | ○ | ☆ | ☆ | ○  | ○ | ○  | ☆  | — | ○ |   |  |  |
| W  | ○ | ○ | — | ○  | ○ | ○  | ○  | ○ | ○ | ○ |  |  |
|    | A | D | E | HB | I | LR | MN | N | S | U |  |  |

Remark 1: ○ marks indicates that this combination can be made.  
 2: ☆ marks indicates that the combination is available for also interchangeable specification.

Table 8.3 C-Lube Linear Way MH Combination of optional specifications

|    |   |   |   |   |   |   |   |    |    |    |   |    |   |   |   |   |
|----|---|---|---|---|---|---|---|----|----|----|---|----|---|---|---|---|
| D  | ○ |   |   |   |   |   |   |    |    |    |   |    |   |   |   |   |
| E  | — | — |   |   |   |   |   |    |    |    |   |    |   |   |   |   |
| F  | ○ | ☆ | ☆ |   |   |   |   |    |    |    |   |    |   |   |   |   |
| I  | ○ | ○ | ○ | ○ |   |   |   |    |    |    |   |    |   |   |   |   |
| J  | ○ | ☆ | ☆ | ☆ | ○ |   |   |    |    |    |   |    |   |   |   |   |
| L  | ○ | ☆ | ☆ | ☆ | ○ | ☆ |   |    |    |    |   |    |   |   |   |   |
| LF | ○ | ☆ | ☆ | ☆ | ○ | ☆ | — |    |    |    |   |    |   |   |   |   |
| MA | ○ | ☆ | ☆ | ☆ | ○ | ☆ | ☆ | ☆  |    |    |   |    |   |   |   |   |
| MN | ○ | — | ☆ | ☆ | ○ | ☆ | — | —  | —  |    |   |    |   |   |   |   |
| N  | ○ | ☆ | ☆ | — | ○ | — | ☆ | ☆  | —  |    |   |    |   |   |   |   |
| PS | — | ○ | ○ | — | ○ | — | — | ○  | —  | —  |   |    |   |   |   |   |
| T  | — | ☆ | ☆ | ☆ | — | — | ☆ | ☆  | ☆  | —  |   |    |   |   |   |   |
| U  | ○ | ☆ | ☆ | ☆ | ○ | — | ○ | —  | ☆  | —  | — |    |   |   |   |   |
| V  | ○ | ☆ | ☆ | ☆ | ○ | ★ | ☆ | ☆  | ☆  | —  | ○ | ☆  | — |   |   |   |
| W  | ○ | ○ | — | ○ | ○ | ○ | ○ | ○  | ○  | ○  | — | ○  | ○ |   |   |   |
| Z  | ○ | ☆ | ☆ | ☆ | ○ | ★ | ☆ | ☆  | ☆  | —  | — | ☆  | ○ |   |   |   |
|    | A | D | E | F | I | J | L | LF | MA | MN | N | PS | T | U | V | W |

Remark 1: ○ marks indicates that this combination can be made.  
 2: ☆ marks indicates that the combination is available for also interchangeable specification.  
 3: Please consult 図 8.4 when ★ marks required.

Table 8.2 C-Lube Linear Way ME Combination of optional specifications

|    |   |   |   |   |   |   |   |    |    |                  |   |   |   |   |   |
|----|---|---|---|---|---|---|---|----|----|------------------|---|---|---|---|---|
| D  | ○ |   |   |   |   |   |   |    |    |                  |   |   |   |   |   |
| E  | — | — |   |   |   |   |   |    |    |                  |   |   |   |   |   |
| F  | ○ | ☆ | ☆ |   |   |   |   |    |    |                  |   |   |   |   |   |
| I  | ○ | ○ | ○ | ○ |   |   |   |    |    |                  |   |   |   |   |   |
| J  | ○ | ☆ | ☆ | ☆ | ○ |   |   |    |    |                  |   |   |   |   |   |
| L  | ○ | ☆ | ☆ | ☆ | ○ | ☆ |   |    |    |                  |   |   |   |   |   |
| LF | ○ | ☆ | ☆ | ☆ | ○ | ☆ | — |    |    |                  |   |   |   |   |   |
| MA | ○ | ☆ | ☆ | ☆ | ○ | ☆ | ☆ | ☆  | ☆  |                  |   |   |   |   |   |
| M4 | ○ | ☆ | ☆ | ☆ | ○ | ☆ | ☆ | ☆  | ☆  | ☆ <sup>(1)</sup> |   |   |   |   |   |
| N  | ○ | ☆ | ☆ | — | ○ | — | ☆ | ☆  | ☆  | ☆                |   |   |   |   |   |
| T  | — | ☆ | ☆ | ☆ | — | — | ☆ | ☆  | ☆  | ☆                | ☆ |   |   |   |   |
| U  | ○ | ☆ | ☆ | ☆ | ○ | ☆ | ☆ | ☆  | ☆  | ☆                | — | ☆ |   |   |   |
| V  | ○ | ☆ | ☆ | ☆ | ○ | ★ | ☆ | ☆  | ☆  | ☆                | — | ☆ | ☆ |   |   |
| W  | ○ | ○ | — | ○ | ○ | ○ | ○ | ○  | ○  | ○                | — | ○ | ○ |   |   |
| Z  | ○ | ☆ | ☆ | ☆ | ○ | ★ | ☆ | ☆  | ☆  | ☆                | — | ☆ | ☆ | ★ | ○ |
|    | A | D | E | F | I | J | L | LF | MA | M4               | N | T | U | V | W |

Note<sup>(1)</sup>: When a combination of "MA" and "M4" is necessary, indicate "MA4".  
 Remark 1: ○ marks indicates that this combination can be made.  
 2: ☆ marks indicates that the combination is available for also interchangeable specification.  
 3: Please consult 図 8.4 when ★ marks required.

Table 8.4 C-Lube Linear Way MUL Combination of optional specifications

|    |   |    |    |   |
|----|---|----|----|---|
| LR | ○ |    |    |   |
| MA | ○ | ○  |    |   |
| U  | ○ | ○  | ○  |   |
| W  | — | ○  | ○  |   |
|    | E | LR | MA | U |

Remark 1: ○ marks indicates that this combination can be made.



# Load Ratings and Life

## Basic dynamic load rating $C$

Conforming to ISO/FDIS 14728-1

The basic dynamic load rating is defined as a constant load both in direction and magnitude under which a group of identical C-Lube Linear Ways are individually operated and 90% of those in the group can travel  $50 \times 10^3$  m free from material damage due to rolling contact fatigue.

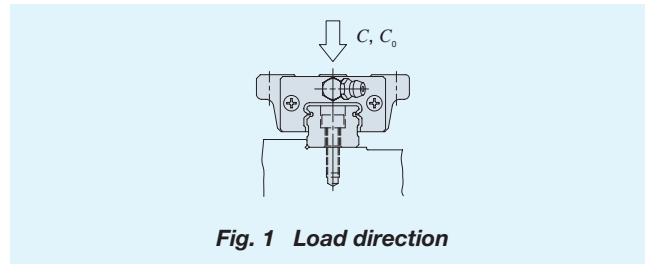


Fig. 1 Load direction

## Basic static load rating $C_0$

Conforming to ISO/FDIS 14728-2

The basic static load rating is defined as a static load that gives a prescribed constant contact stress at the center of the contact area between rolling elements and raceways receiving the maximum load.

## Static moment rating $T_0, T_x, T_y$

The static moment rating is defined as a static moment load (See Fig.2) that gives a prescribed constant contact stress at the center of the contact area between rolling elements and raceways receiving the maximum load.

The static moment rating is used in combination with the static safety factor to give the limiting load for normal rolling motion.

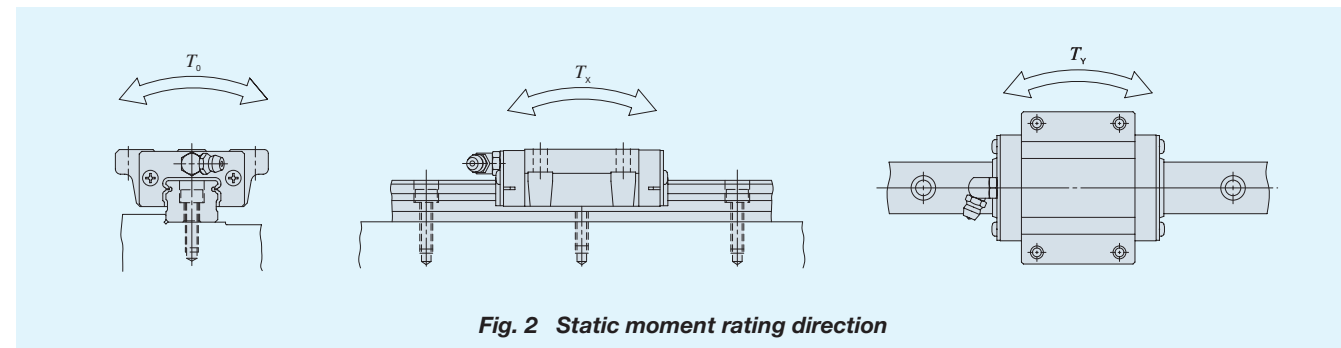


Fig. 2 Static moment rating direction

## Life

The rating life of C-Lube Linear Way series is obtained from the following calculation formula.

$$L = 50 \left( \frac{C}{P} \right)^3 \dots\dots\dots (1)$$

where,  $L$  : Rating life,  $10^3$ m  
 $C$  : Basic dynamic load rating, N  
 $P$  : Equivalent load, N

If the stroke length and the number or strokes per minute are known, the life in hours must be corrected by the following formula.

$$L_h = \frac{10^6 L}{2Sn_1 \times 60} \dots\dots\dots (2)$$

where,  $L_h$  : Rating life in hours, hours  
 $S$  : Stroke length, mm  
 $n_1$  : Number of strokes per minute, cpm

## Static safety factor

The static safety factor  $f_s$  of C-Lube Linear Way series is given in the following formula, and general values of this factor are shown in Table 9.

$$f_s = \frac{C_0}{P_0} \dots\dots\dots (3)$$

where,  $f_s$  : Static safety factor  
 $C_0$  : Basic static load rating, N  
 $P_0$  : Static load, N

Table 9 Static safety factor

| Operating conditions                   | $f_s$ |
|----------------------------------------|-------|
| Operation with vibration and/or shocks | 3 ~ 5 |
| High operating performance             | 2 ~ 4 |
| Normal operation                       | 1 ~ 3 |

## Load factor

Actual loads applied to the linear motion rolling guide sometimes exceed the theoretically calculated load due to vibration and shocks caused by machine operation. The actual life is calculated from the following formula while considering the load factor.

Table 10 Load factor

| Condition                                          | $f_w$     |
|----------------------------------------------------|-----------|
| Smooth operation free from vibration and/or shocks | 1 ~ 1.2   |
| Normal operation                                   | 1.2 ~ 1.5 |
| Operation with shock loads                         | 1.5 ~ 3   |

## Dynamic equivalent load

When there is any load in the direction other than basic dynamic load rating or combined load, dynamic equivalent load is obtained for life calculation.

From each directional load, converted load equal to downward or lateral is given by following formulae.

$$F_{re} = k_r |F_r| + \frac{C_0}{T_0} |M_0| + \frac{C_0}{T_x} |M_x| \dots\dots\dots (4)$$

$$F_{ae} = k_a |F_a| + \frac{C_0}{T_y} |M_y| \dots\dots\dots (5)$$

where,  $F_{re}$  : Converted downward load, N  
 $F_{ae}$  : Converted lateral load, N  
 $F_r$  : Downward load, N  
 $F_a$  : Lateral load, N  
 $M_0$  :  $T_0$  moment, N·m  
 $M_x$  :  $T_x$  moment, N·m  
 $M_y$  :  $T_y$  moment, N·m  
 $k_r, k_a$  : Conversion factor by load direction (See Table 11)  
 $C_0$  : Basic static load rating, N  
 $T_0$  :  $T_0$  static moment, N·m  
 $T_x$  :  $T_x$  static moment, N·m  
 $T_y$  :  $T_y$  static moment, N·m

Table 11 Conversion factor by load direction

| Series                | Conversion factor |           |       |
|-----------------------|-------------------|-----------|-------|
|                       | $k_r$             |           | $k_a$ |
|                       | $F_r \geq 0$      | $F_r < 0$ |       |
| C-Lube Linear Way ML  | 1                 | 1         | 1.19  |
| C-Lube Linear Way ME  | 15~30             | 1         | 1     |
|                       | 35~45             | 1         | 1.19  |
| C-Lube Linear Way MH  | 8~12              | 1         | 1     |
|                       | 15~30             | 1         | 1     |
| C-Lube Linear Way MUL | 35~45             | 1         | 1.19  |
|                       |                   | 1         | 1     |

From the converted downward and lateral load, mean equivalent dynamic load must be corrected by the following formula.

$$P = XF_{re} + YF_{ae} \dots\dots\dots (6)$$

where,  $P$  : Mean equivalent dynamic load, N  
 $X, Y$  : Mean equivalent dynamic load factor (See Table 12)  
 $F_{re}$  : Converted downward load, N  
 $F_{ae}$  : Converted lateral load, N

Table 12 Mean equivalent dynamic load factor

| Condition                | X   | Y   |
|--------------------------|-----|-----|
| $ F_{re}  \geq  F_{ae} $ | 1   | 0.6 |
| $ F_{re}  <  F_{ae} $    | 0.6 | 1   |

## Static equivalent load

When there is any load in the direction other than basic dynamic load rating or combined load, mean equivalent static load is obtained for static safety factor calculation.

From each directional load, converted load equal to downward or lateral is given by following formula.

$$P_0 = k_{or} |F_r| + k_{oa} |F_a| + \frac{C_0}{T_0} |M_0| + \frac{C_0}{T_x} |M_x| + \frac{C_0}{T_y} |M_y| \dots\dots\dots (7)$$

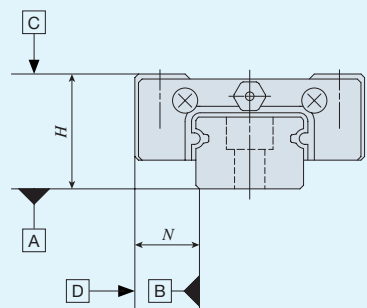
where,  $P_0$  : Static equivalent load, N  
 $F_r$  : Downward load, N  
 $F_a$  : Lateral load, N  
 $M_0$  :  $T_0$  moment, N·m  
 $M_x$  :  $T_x$  moment, N·m  
 $M_y$  :  $T_y$  moment, N·m  
 $k_{or}, k_{oa}$  : Conversion factor by load direction (See Table 13)  
 $C_0$  : Basic static load rating, N  
 $T_0$  :  $T_0$  static moment, N·m  
 $T_x$  :  $T_x$  static moment, N·m  
 $T_y$  :  $T_y$  static moment, N·m

Table 13 Conversion factor by load direction

| Series                | Conversion factor |           |          |
|-----------------------|-------------------|-----------|----------|
|                       | $k_{or}$          |           | $k_{oa}$ |
|                       | $F_r \geq 0$      | $F_r < 0$ |          |
| C-Lube Linear Way ML  | 1                 | 1         | 1.19     |
| C-Lube Linear Way ME  | 15~30             | 1         | 1        |
|                       | 35~45             | 1         | 1.19     |
| C-Lube Linear Way MH  | 8~12              | 1         | 1        |
|                       | 15~30             | 1         | 1        |
| C-Lube Linear Way MUL | 35~45             | 1         | 1.19     |
|                       |                   | 1         | 1        |

Accuracy of the assembled set of C-Lube Linear Way are shown in Table 14.1 to 14.3.

Table 14.1 Accuracy of C-Lube Linear Way ML

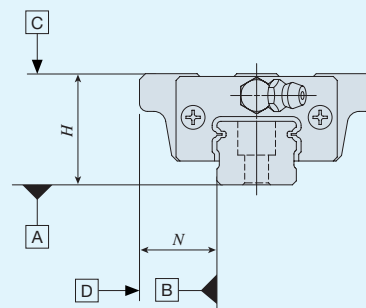


| Item                                                        | Classification (Symbol) | High (H)          | Precision (P) |
|-------------------------------------------------------------|-------------------------|-------------------|---------------|
| Dim. <i>H</i> Tolerance                                     |                         | ±0.020            | ±0.010        |
| Dim. <i>N</i> Tolerance                                     |                         | ±0.025            | ±0.015        |
| Dim. variation of <i>H</i> <sup>(1)</sup>                   |                         | 0.015             | 0.007         |
| Dim. variation of <i>N</i> <sup>(1)</sup>                   |                         | 0.020             | 0.010         |
| Dim. variation of <i>H</i> <sup>(2)</sup> for multiple sets |                         | 0.030             | 0.020         |
| Parallelism in operation of <i>C</i> to <i>A</i>            |                         | Refer to Fig. 3.1 |               |
| Parallelism in operation of <i>D</i> to <i>B</i>            |                         | Refer to Fig. 3.1 |               |

unit : mm

Note (1) : Dimensional variation of dimension means the size variation between the slide units mounted on the same track rail when the dimension *H* is measured at the same measuring position of track rail.  
 (2) : Applicable for Interchangeable series.  
 Remark : Also applicable to size 8 to 12 of C-Lube Linear Way MH.

Table 14.2 Accuracy of C-Lube Linear Way ME and MH

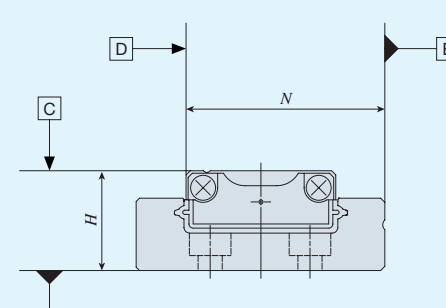


| Item                                                        | Classification (Symbol) | Ordinary (No symbol) | High (H) | Precision (P) | Super precision (SP) |
|-------------------------------------------------------------|-------------------------|----------------------|----------|---------------|----------------------|
| Dim. <i>H</i> Tolerance                                     |                         | ±0.080               | ±0.040   | ±0.020        | ±0.010               |
| Dim. <i>N</i> Tolerance                                     |                         | ±0.100               | ±0.050   | ±0.025        | ±0.015               |
| Dim. variation of <i>H</i> <sup>(1)</sup>                   |                         | 0.025                | 0.015    | 0.007         | 0.005                |
| Dim. variation of <i>N</i> <sup>(1)</sup>                   |                         | 0.030                | 0.020    | 0.010         | 0.007                |
| Dim. variation of <i>H</i> <sup>(2)</sup> for multiple sets |                         | 0.045                | 0.035    | 0.025         | —                    |
| Parallelism in operation of <i>C</i> to <i>A</i>            |                         | Refer to Fig. 3.2    |          |               |                      |
| Parallelism in operation of <i>D</i> to <i>B</i>            |                         | Refer to Fig. 3.2    |          |               |                      |

unit : mm

Note (1) : Dimensional variation of dimension means the size variation between the slide units mounted on the same track rail when the dimension *H* is measured at the same measuring position of track rail.  
 (2) : Applicable for Interchangeable series.  
 Remark : For size 8 to 12 of C-Lube Linear Way MH, see Table 14.1.

Table 14.3 Accuracy of C-Lube Linear Way MUL



| Item                                             | Classification (Symbol) | Ordinary (No symbol) | High (H) |
|--------------------------------------------------|-------------------------|----------------------|----------|
| Dim. <i>H</i> Tolerance                          |                         | ±0.100               | ±0.050   |
| Dim. <i>N</i> Tolerance                          |                         | ±0.100               | ±0.050   |
| Dim. variation of <i>H</i> <sup>(1)</sup>        |                         | 0.050                | 0.040    |
| Dim. variation of <i>N</i> <sup>(1)</sup>        |                         | 0.050                | 0.040    |
| Parallelism in operation of <i>C</i> to <i>A</i> |                         | Refer to Fig. 3.3    |          |
| Parallelism in operation of <i>D</i> to <i>B</i> |                         | Refer to Fig. 3.3    |          |

unit : mm

Note (1) : Dimensional variation of dimension means the size variation between the slide units mounted on the same track rail when the dimension *H* is measured at the same measuring position of track rail.

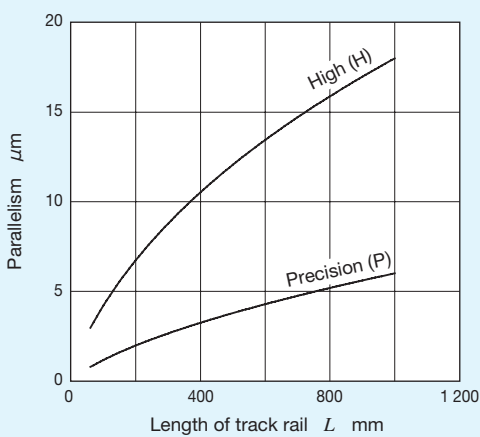


Fig. 3.1 C-Lube Linear Way ML Parallelism in operation

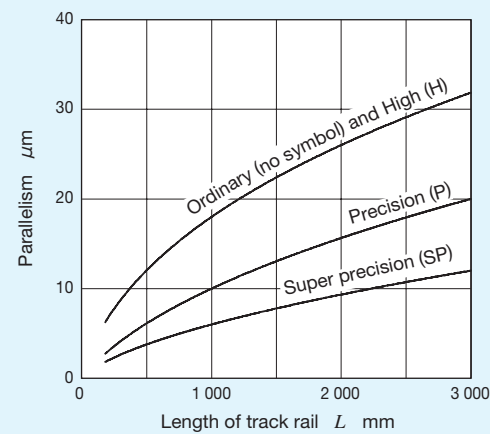


Fig. 3.2 C-Lube Linear Way ME and MH Parallelism in operation

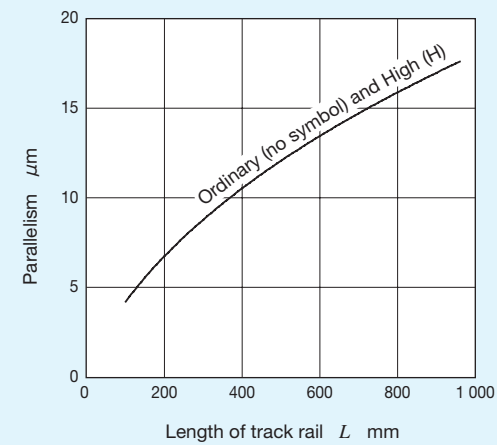


Fig. 3.3 C-Lube Linear Way MUL Parallelism in operation

Average amount of preload for C-Lube Linear Way series is shown in Table 15. In case, high rigidity and/or damping are needed, the preload amount is recommended to be 1/3 of the external force. However, excessive preload will cause short life.

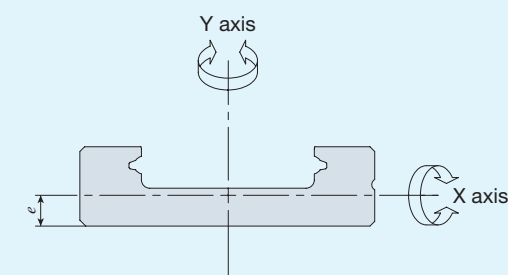
Table 15 Preload amount

| Preload class    | Item Symbol          | Preload amount <i>N</i>   | Typical application                                                               |
|------------------|----------------------|---------------------------|-----------------------------------------------------------------------------------|
| Clearance        | <i>T<sub>C</sub></i> | 0 <sup>(1)</sup>          | • Smooth motion<br>• To absorb slight misalignment                                |
|                  | <i>T<sub>0</sub></i> | 0 <sup>(2)</sup>          | • Smooth motion                                                                   |
| Standard preload | (No symbol)          | 0 <sup>(3)</sup>          | • Smooth and precise motion                                                       |
| Light preload    | <i>T<sub>1</sub></i> | 0.02 <i>C<sub>0</sub></i> | • Minimum vibration<br>• Load is equally balanced.<br>• Smooth and precise motion |
|                  | <i>T<sub>2</sub></i> | 0.05 <i>C<sub>0</sub></i> | • Medium vibration<br>• Medium overhung load                                      |
| Heavy preload    | <i>T<sub>3</sub></i> | 0.08 <i>C<sub>0</sub></i> | • Vibration and/or shocks<br>• Large overhung load<br>• Heavy cutting             |

Note (1) : Approx. 10µm clearance  
 (2) : Zero or minimal amount of clearance  
 (3) : Zero or minimal amount of preload  
 Remark : *C<sub>0</sub>* means basic static load rating.

High rigidity design of C-Lube Linear Way MUL is achieved by adopting a U-shaped track rail. Table 16 shows the moment of inertia of sectional area of track rails.

Table 16 C-Lube Linear Way MUL Moment of inertia of sectional area of track rails



| Model number | Moment of inertia of sectional area mm <sup>4</sup> |                      | Center of gravity <i>e</i> mm |
|--------------|-----------------------------------------------------|----------------------|-------------------------------|
|              | <i>I<sub>x</sub></i>                                | <i>I<sub>y</sub></i> |                               |
| MUL 25       | 3.7×10 <sup>2</sup>                                 | 7.5×10 <sup>3</sup>  | 2.6                           |
| MUL 30       | 9.3×10 <sup>2</sup>                                 | 1.7×10 <sup>4</sup>  | 3.3                           |



# Optional special specifications for use under special environment

C-Lube Linear Way series with the special specifications shown in Table 7.1 to 7.4 are optionally available for various applications. When ordering, add any supplemental codes onto the identification number.

If a combination of special specifications is required, indicate the supplemental codes in alphabetical order. These optional items can be combined to achieve further improvements in performance.

## Butt jointing track rails

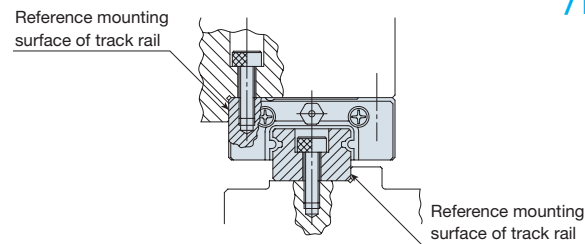
/A



When the required length of non-interchangeable track rail exceeds the maximum length shown in page 34 to 36, two or more track rails can be used by butt jointing them in the direction of linear motion. For the length and the number of butt jointing track rails, please consult IKO.

## Opposite reference surfaces arrangement

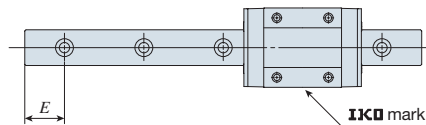
/D



The reference mounting surface of track rail is made opposite to the standard side. The accuracy of dimension *N* including parallelism in operation is the same with that of standard specification.

## Specified track rail mounting hole positions

/E



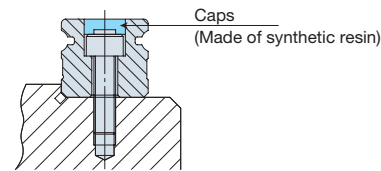
The mounting hole positions of track rail can be specified by specifying dimension *E* at the left end, which is the distance from the mounting hole nearest to the left end of the track rail to the left end face of the track rail in sight of IKO mark on the slide unit.

When ordering, add the dimension (in mm) after "/E". Dimension *E* can be specified in a limited range. Consult IKO for further information. If long *E* dimension is required, imperfect mounting hole may remain.

## With caps for rail mounting holes

(for ME and MH series)

/F



Specify prepared caps for track rail mounting holes are appended. These caps cover the track rail mounting holes to improve the sealing performance in the linear motion direction. Aluminum caps are also available. Consult IKO for further information.

## Ceramic ball specification

(for ML series)

/HB

Steel balls in the slide unit are changed to ceramic (silicon nitride) material.

Load ratings and static moment ratings are shown in Table 17.

Table 17 Load ratings and static moment ratings of ceramic ball specification C-Lube Linear Way ML

| Model number | <i>C</i><br>N | <i>C</i> <sub>0</sub><br>N | <i>T</i> <sub>0</sub><br>N·m | <i>T</i> <sub>x</sub> <sup>(1)</sup><br>N·m | <i>T</i> <sub>y</sub> <sup>(1)</sup><br>N·m |
|--------------|---------------|----------------------------|------------------------------|---------------------------------------------|---------------------------------------------|
| MLC 7.../HB  | 937           | 965                        | 3.5                          | 1.6<br>12.6                                 | 1.3<br>10.6                                 |
| ML 7.../HB   | 1 330         | 1 610                      | 5.9                          | 4.0<br>23.9                                 | 3.3<br>20.1                                 |
| MLG 7.../HB  | 1 690         | 2 250                      | 8.2                          | 7.5<br>43.1                                 | 6.3<br>36.2                                 |
| MLC 9.../HB  | 1 180         | 1 260                      | 5.9                          | 2.4<br>18.2                                 | 2.1<br>15.3                                 |
| ML 9.../HB   | 1 810         | 2 340                      | 10.9                         | 7.7<br>43.4                                 | 6.5<br>36.4                                 |
| MLG 9.../HB  | 2 370         | 3 420                      | 15.9                         | 15.9<br>83.6                                | 13.4<br>70.1                                |
| MLC 12.../HB | 2 210         | 2 030                      | 12.6                         | 4.5<br>35.5                                 | 3.8<br>29.8                                 |
| ML 12.../HB  | 3 330         | 3 650                      | 22.6                         | 13.1<br>79.2                                | 11.0<br>66.4                                |
| MLG 12.../HB | 4 310         | 5 270                      | 32.7                         | 26.0<br>143                                 | 21.9<br>120                                 |
| MLC 15.../HB | 3 490         | 3 310                      | 25.5                         | 9.9<br>71.8                                 | 8.3<br>60.3                                 |
| ML 15.../HB  | 4 980         | 5 520                      | 42.5                         | 25.3<br>146                                 | 21.2<br>122                                 |
| MLG 15.../HB | 6 620         | 8 280                      | 63.7                         | 54.3<br>288                                 | 45.5<br>241                                 |

Note (1): The upper values in the *T<sub>x</sub>* and *T<sub>y</sub>* column apply to one slide unit, and the lower values apply to two slide units in close contact.

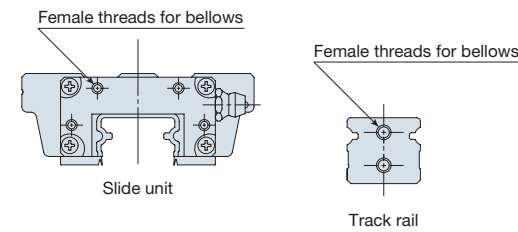
## With inspection sheet

/I

The inspection sheet recording dimensions *H* and *N* (See Accuracy), dimensional variations of *H* and *N*, and parallelism in operation of the slide unit is attached to each set.

## With female threads for bellows

(for ME and MH Interchangeable series) /J /JR /JL



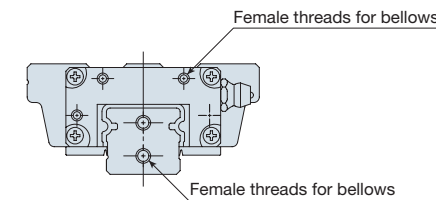
Female threads for mounting bellows are provided on the interchangeable slide unit or the interchangeable track rail of C-Lube Linear Way ME and MH series. For details of related dimensions, see Table 18.1 and 18.2.

- ① /J Female threads are provided at both ends of the slide unit or the track rail.
- ② /JR Female threads are provided at the right end of the slide unit in sight of IKO mark.
- ③ /JL Female threads are provided at the left end of the slide unit in sight of IKO mark.

## With female threads for bellows

(for assembled set of ME and MH series)

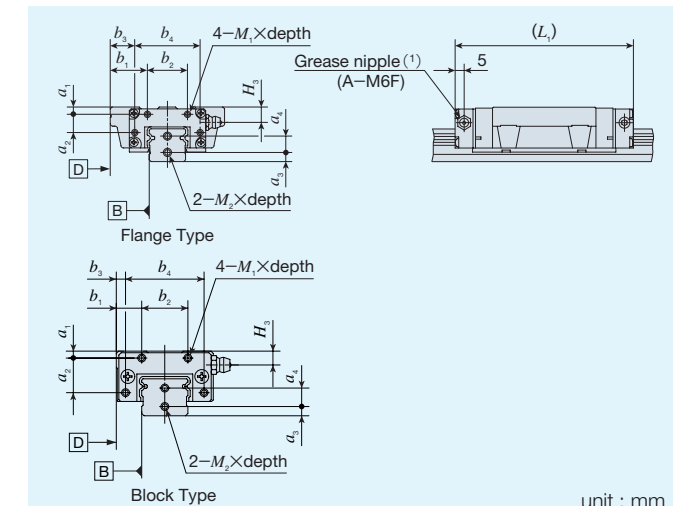
/J /JJ /JR /JS /JJS



For an assembled set of interchangeable or non-interchangeable specification, female threads for mounting bellows are provided on the slide unit and the track rail. For the details of related dimensions, see Table 18.1 and 18.2.

- ① /J Female threads are provided at both ends of the track rail, and at the slide unit ends which are the closest to the track rail ends. (In case only one slide unit is assembled, female threads are provided at both ends.)
- ② /JJ Female threads are provided at both ends of the track rail, and at all ends of all slide units. (Applicable, when the number of slide units is two or more. In case only one slide unit is assembled, indicate "/J".)
- ③ /JR Female threads are provided at both ends of the track rail.
- ④ /JS Female threads are provided at the slide unit ends which are the closest to the track rail ends. (In case only one slide unit is assembled, female threads are provided at both ends.)
- ⑤ /JJS Female threads are provided at all ends of all slide units. (Applicable, when the number of slide units is two or more. In case only one slide unit is assembled, indicate "/JS".)

Table 18.1 C-Lube Linear Way ME Dimension of female threads for bellows



| Model number             | Slide unit            |                       |                       |                       |                       |                       | Track rail                    |                       |                       |                       |                       |                               |
|--------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-------------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-------------------------------|
|                          | <i>a</i> <sub>1</sub> | <i>a</i> <sub>2</sub> | <i>b</i> <sub>1</sub> | <i>b</i> <sub>2</sub> | <i>b</i> <sub>3</sub> | <i>b</i> <sub>4</sub> | <i>M</i> <sub>1</sub> × depth | <i>L</i> <sub>1</sub> | <i>H</i> <sub>3</sub> | <i>a</i> <sub>3</sub> | <i>a</i> <sub>4</sub> | <i>M</i> <sub>2</sub> × depth |
| ME(T)C 15 <sup>(1)</sup> |                       |                       |                       |                       |                       |                       |                               | 58                    |                       |                       |                       |                               |
| ME(T) 15 <sup>(1)</sup>  |                       |                       | 18                    |                       | 12                    |                       |                               | 74                    |                       |                       |                       |                               |
| ME(T)G 15 <sup>(1)</sup> | 3                     | 12                    |                       | 16                    |                       | 28                    | M3 × 6                        | 87                    | 5.7                   | 4                     | 7                     | M3 × 6                        |
| MESC 15 <sup>(1)</sup>   |                       |                       |                       |                       |                       |                       |                               | 58                    |                       |                       |                       |                               |
| MES 15 <sup>(1)</sup>    |                       |                       | 9                     |                       | 3                     |                       |                               | 74                    |                       |                       |                       |                               |
| MESG 15 <sup>(1)</sup>   |                       |                       |                       |                       |                       |                       |                               | 87                    |                       |                       |                       |                               |
| ME(T)C 20                |                       |                       |                       |                       |                       |                       |                               | 64                    |                       |                       |                       |                               |
| ME(T) 20                 |                       |                       | 19.5                  |                       | 12.5                  |                       |                               | 83                    |                       |                       |                       |                               |
| ME(T)G 20                | 3                     | 15                    |                       | 20                    |                       | 34                    | M3 × 6                        | 99                    | 6                     | 4                     | 8                     | M3 × 6                        |
| MESC 20                  |                       |                       |                       |                       |                       |                       |                               | 64                    |                       |                       |                       |                               |
| MES 20                   |                       |                       | 11                    |                       | 4                     |                       |                               | 83                    |                       |                       |                       |                               |
| MESG 20                  |                       |                       |                       |                       |                       |                       |                               | 99                    |                       |                       |                       |                               |
| ME(T)C 25                |                       |                       |                       |                       |                       |                       |                               | 76                    |                       |                       |                       |                               |
| ME(T) 25                 |                       |                       | 23.5                  |                       | 16.5                  |                       |                               | 100                   |                       |                       |                       |                               |
| ME(T)G 25                | 3.5                   | 17                    |                       | 26                    |                       | 40                    | M3 × 6                        | 119                   | 7                     | 5                     | 9                     | M4 × 8                        |
| MESC 25                  |                       |                       |                       |                       |                       |                       |                               | 76                    |                       |                       |                       |                               |
| MES 25                   |                       |                       | 11                    |                       | 4                     |                       |                               | 100                   |                       |                       |                       |                               |
| MESG 25                  |                       |                       |                       |                       |                       |                       |                               | 119                   |                       |                       |                       |                               |
| ME(T)C 30                |                       |                       |                       |                       |                       |                       |                               | 83                    |                       |                       |                       |                               |
| ME(T) 30                 |                       |                       | 28                    |                       | 20                    |                       |                               | 112                   |                       |                       |                       |                               |
| ME(T)G 30                | 5                     | 17                    |                       | 34                    |                       | 50                    | M3 × 6                        | 144                   | 11                    | 6                     | 14                    | M4 × 8                        |
| MESC 30                  |                       |                       |                       |                       |                       |                       |                               | 83                    |                       |                       |                       |                               |
| MES 30                   |                       |                       | 13                    |                       | 5                     |                       |                               | 112                   |                       |                       |                       |                               |
| MESG 30                  |                       |                       |                       |                       |                       |                       |                               | 144                   |                       |                       |                       |                               |
| ME(T)C 35                |                       |                       | 30                    |                       | 20                    |                       |                               | 93                    |                       |                       |                       |                               |
| ME(T) 35                 | 6                     | 20                    |                       | 40                    |                       | 60                    | M3 × 6                        | 126                   | 13                    | 7                     | 15                    | M4 × 8                        |
| MESC 35                  |                       |                       |                       |                       |                       |                       |                               | 93                    |                       |                       |                       |                               |
| MES 35                   |                       |                       | 15                    |                       | 5                     |                       |                               | 126                   |                       |                       |                       |                               |
| ME(T) 45                 | 7                     | 26                    | 35                    | 50                    | 23                    | 74                    | M4 × 8                        | 138                   | 15                    | 8                     | 19                    | M5 × 10                       |
| MES 45                   |                       |                       | 18                    |                       | 6                     |                       |                               | 126                   |                       |                       |                       |                               |

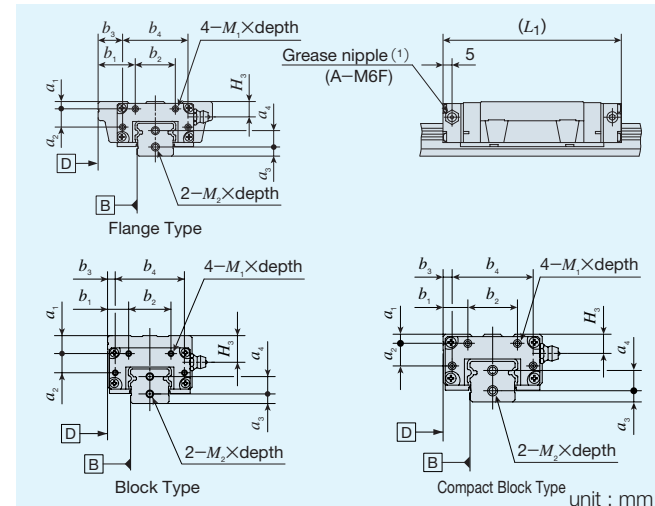
Note (1): The specification and mounting position of grease nipple are different from those of the standard specification product. Size 15 models are provided with a special specification grease nipple (NPB2 type). For details of dimension, consult IKO for further information.

(2): The values are for the slide unit with female threads for bellows at both ends.

Remark: The table shows representative model numbers but is also applicable to stainless steel models.

Optional special specifications for use under special environment

Table 18.2 C-Lube Linear Way MH  
Dimension of female threads for bellows



| Model number            | Slide unit |       |       |       |       |       | Track rail                |             |       |       |       |                           |
|-------------------------|------------|-------|-------|-------|-------|-------|---------------------------|-------------|-------|-------|-------|---------------------------|
|                         | $a_1$      | $a_2$ | $b_1$ | $b_2$ | $b_3$ | $b_4$ | $M_1 \times \text{depth}$ | $L_1^{(2)}$ | $H_3$ | $a_3$ | $a_4$ | $M_2 \times \text{depth}$ |
| MH(T) 15 <sup>(1)</sup> | 3          |       | 15.5  | 16    | 9.5   |       |                           |             | 6.5   |       |       |                           |
| MHD 15 <sup>(1)</sup>   | 7          | 7     | 9     | 16    | 3     | 28    | M3×6                      | 83          | 10.5  | 4     | 8     | M3×6                      |
| MHS 15 <sup>(1)</sup>   | 3          |       |       |       |       |       |                           |             | 6.5   |       |       |                           |
| MH(T) 20                |            |       | 20.5  | 22    | 13.5  |       |                           |             | 99    |       |       |                           |
| MH(T)G20                | 4          | 10    |       |       |       | 36    | M3×6                      | 128         | 8.5   | 5     | 9     | M4×8                      |
| MHS 20                  |            |       | 11    | 22    | 4     |       |                           | 99          |       |       |       |                           |
| MHSG 20                 |            |       |       |       |       |       |                           | 128         |       |       |       |                           |
| MH(T) 25                |            |       | 22    | 26    | 15    |       |                           | 110         | 8.5   |       |       |                           |
| MH(T)G25                | 4          |       |       |       |       |       |                           | 133         |       |       |       |                           |
| MHD 25                  |            |       |       |       |       |       |                           | 110         | 12.5  | 5     | 12    | M4×8                      |
| MHDG 25                 | 8          | 13    |       |       |       | 40    | M3×6                      | 133         |       |       |       |                           |
| MHS 25                  |            |       | 11    | 26    | 4     |       |                           | 110         | 8.5   |       |       |                           |
| MHSG 25                 |            |       |       |       |       |       |                           | 133         |       |       |       |                           |
| MH(T) 30                |            |       |       |       |       |       |                           | 128         |       |       |       |                           |
| MH(T)G30                | 5          |       | 28    |       | 20    |       |                           | 154         | 11    |       |       |                           |
| MHTL 30                 |            |       |       |       |       |       |                           | 200         |       |       |       |                           |
| MHD 30                  |            |       |       |       |       |       |                           | 128         |       |       |       |                           |
| MHDG 30                 | 8          | 17    |       | 34    |       | 50    | M3×6                      | 154         | 14    | 6     | 14    | M4×8                      |
| MHDL 30                 |            |       |       |       |       |       |                           | 200         |       |       |       |                           |
| MHS 30                  |            |       | 13    |       | 5     |       |                           | 128         | 11    |       |       |                           |
| MHSG 30                 |            |       |       |       |       |       |                           | 154         |       |       |       |                           |
| MH(T) 35                |            |       |       |       |       |       |                           | 137         |       |       |       |                           |
| MH(T)G35                | 6          |       | 30    |       | 20    |       |                           | 165         | 13    |       |       |                           |
| MHTL 35                 |            |       |       |       |       |       |                           | 213         |       |       |       |                           |
| MHD 35                  |            |       | 20    |       | 40    | 60    | M3×6                      | 137         |       | 7     | 15    | M4×8                      |
| MHDG 35                 | 13         |       | 15    |       | 5     |       |                           | 165         | 20    |       |       |                           |
| MHDL 35                 |            |       |       |       |       |       |                           | 213         |       |       |       |                           |
| MH(T) 45                |            |       |       |       |       |       |                           | 160         |       |       |       |                           |
| MH(T)G45                | 7          |       | 35    |       | 23    |       |                           | 203         | 15    |       |       |                           |
| MHTL 45                 |            |       |       |       |       |       |                           | 251         |       |       |       |                           |
| MHD 45                  |            |       | 26    |       | 50    | 74    | M4×8                      | 160         |       | 8     | 19    | M5×10                     |
| MHDG 45                 | 17         |       | 18    |       | 6     |       |                           | 203         | 25    |       |       |                           |
| MHDL 45                 |            |       |       |       |       |       |                           | 251         |       |       |       |                           |

Note (1) : The specification and the mounting position of grease nipple are different from those of the standard specification product. Size 15 models are provided with a special specification grease nipple (NPB2 type). For details of dimension, consult for further information.

(2) : The values are for the slide unit with female threads for bellows at both ends.

Remark : The table shows representative model numbers but is also applicable to stainless steel models.

**Black chrome surface treatment**  
/LC /LR /LCR

A black permeable chrome film is formed to improve corrosion resistance.

- ① /LC Treatment is applied to the casing.
  - ② /LR Treatment is applied to the track rail.
  - ③ /LCR Treatment is applied to the casing and the track rail.
- ※For detail of applicability, see Table 7.1 to 7.4 on page 17 to 18.

**Fluorine black chrome surface treatment**  
(for ME and MH series)  
/LFC /LFR /LFCR

After forming a black permeable chrome film, the surface is coated with fluorine resin for further improvement in corrosion resistance. This treatment is also effective in preventing the adhesion of foreign substances on the surface.

- ① /LFC Treatment is applied to the body of slide unit.
  - ② /LFR Treatment is applied to the track rail.
  - ③ /LFCR Treatment is applied to the body of slide unit and the track rail.
- ※For detail of applicability, see Table 7.1 to 7.4 on page 17 to 18.

**With track rail mounting bolts**  
(for ME, MUL and set order of MH)  
/MA

Track rail mounting bolts are appended according to the number of mounting holes.

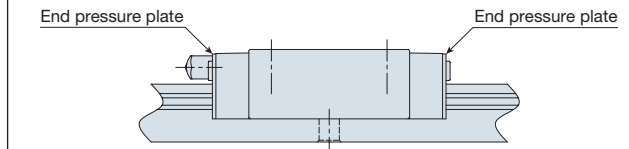
**Without track rail mounting bolts**  
(for ML and interchangeable track rail order of MH)  
/MN

Track rail mounting bolts are not appended.

**Change of mounting hole size and female threads size**  
(for ME15 and ME15...SL)  
/M4

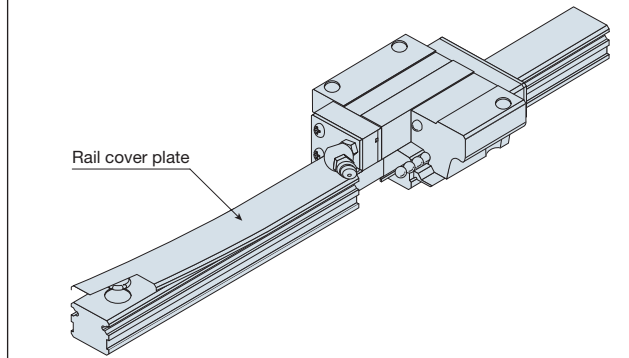
The track rail mounting holes for M3 of ME15 is changed to M4. If "with track rail mounting bolts" is also required, specify /MA4.

**No end seal**  
(for ML, ME and MH series)  
/N



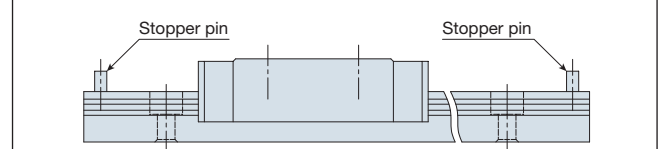
End rubber seals at both ends of slide unit are replaced by steel end pressure plates (not in contact with the track rail) to reduce frictional resistance. The under seals are not assembled. This specification is not effective for dust protection.

**Rail cover plate for track rail**  
(for non-interchangeable MH series)  
/PS



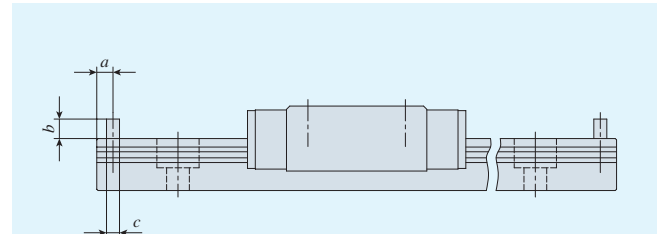
After mounting the track rail, the top surface of track rail is covered with a U-shaped thin stainless steel plate for further improvement in sealing performance. The rail cover plate is delivered as assembled on the track rail. Standard end seals must be replaced with the special end seals. When mounting the cover plate, refer to the attached instruction manual for rail cover plate.

**Track rail with stopper pins**  
(for non-interchangeable ML series)  
/S



To prevent the slide unit of C-Lube Linear Way ML from slipping off of the track rail, a stopper pins are provided at both ends of the track rail. For related dimensions, see Table 19 below.

Table 19 C-Lube Linear Way ML  
Track rail with stopper pins (Supplemental code /S)



| unit : mm    |     |     |     |              |     |   |     |
|--------------|-----|-----|-----|--------------|-----|---|-----|
| Model number | a   | b   | c   | Model number | a   | b | c   |
| ML 5         | 2   | 2   | 1.6 | MLF 10       | 2.5 | 2 | 1.6 |
| ML 7         | 2.5 | 2.5 | 2   | MLF 14       |     | 3 | 2   |
| ML 9         |     | 3   |     | MLF 18       |     |   |     |
| ML 12        |     | 4   |     | MLF 24       |     |   |     |
| ML 15        |     | 5   |     | MLF 30       |     |   |     |
| ML 20        |     |     |     | MLF 42       |     |   |     |
| ML 25        |     | 3.5 |     |              |     |   |     |

Remark : The table shows representative model numbers but is also applicable to all the models in the same size of ML and MLF series.

**Butt-jointing interchangeable track rail**  
(for interchangeable specification of ME and MH series)  
/T

A special interchangeable track rail of which both ends are finished for butt jointing in the direction of linear motion is provided. Use the track rails having the same interchangeable code for butt jointing. For the butt jointing for non-interchangeable specification, indicate butt-jointing track rail "/A".



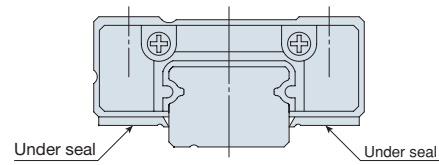
Optional special specifications for use under special environment

**With under seals**

(for ML and ME series)

※ Under seals are attached to MH series as standard specification.

/U

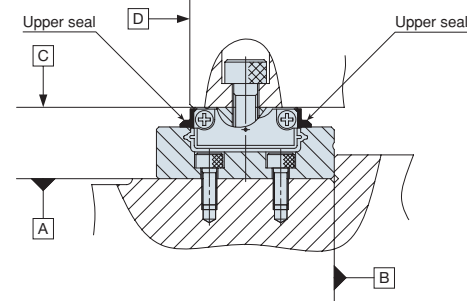


To prevent foreign substances intruding from the lower side of Linear Way, rubber seals are provided on the bottom faces of slide unit. For size  $H_1$ , see Table 20.

**With upper seals**

(for MUL series)

/U

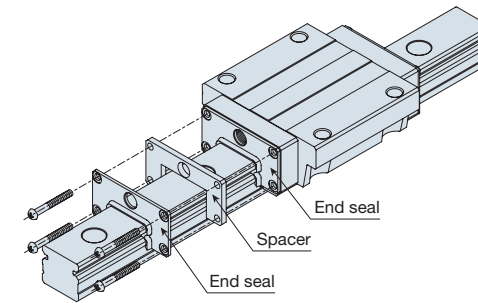


Rubber seals are attached to the upper side face of the slide unit to prevent foreign materials from entering from the upper side, so that the mounting reference surface  $\square$  cannot be used. Table 21 shows sizes of the slide unit when upper seals are attached.

**With double end seals**

(for assembled set of ME and MH series)

/V /VV



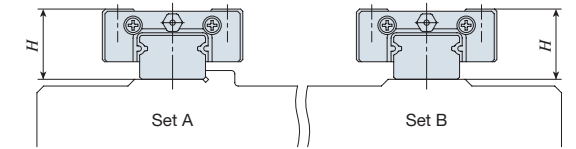
Double end seals are provided on the slide unit of assembled set of interchangeable specification or non-interchangeable specification for more effective dust protection. For the total length of the slide unit with double end seals, see the Table 22.

- ① /V Double end seals are provided at the ends of slide units which are the closest to the ends of the track rail. (In case only one slide unit is assembled, double end seals are provided at both ends.)
- ② /VV Double end seals are provided at all ends of all slide units. (Applicable when the number of slide units is two or more. In case only one slide unit is assembled, indicate "/V".)

**Matched sets to be used as an assembled group**

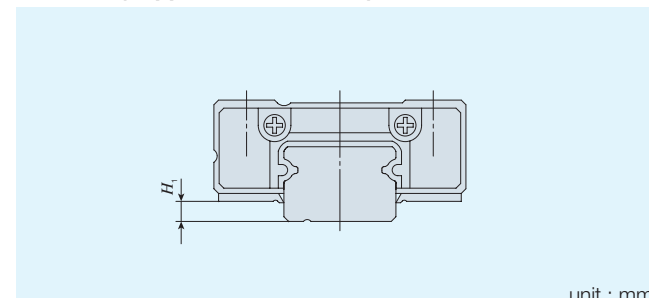
(Applicable to non-interchangeable spec.)

/W



For two or more sets of C-Lube Linear Way used on the same plane, the dimensional variation of  $H$  of C-Lube Linear Way is kept within the specified range. The dimensional variation of dimension  $H$  in matched sets is the same as that of a single set. Indicate the number of sets after "/W". (Ex: ML9C2R160H/W2)

Table 20  $H_1$  dimension of slide unit with under seals (Supplemental code /U)

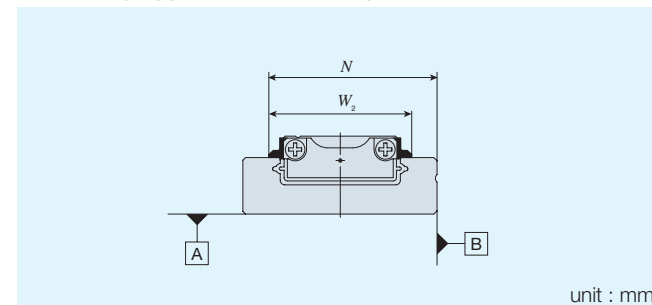


| Model number | $H_1$              |
|--------------|--------------------|
| ML 9         | 1                  |
| ML 12        | 2                  |
| ML 15        | 3                  |
| ML 20        | 4                  |
| ML 25        | 5 <sup>(1)</sup>   |
| MLF 18       | 2                  |
| MLF 24       |                    |
| MLF 30       |                    |
| MLF 42       | 3                  |
| ME 15        | 5                  |
| ME 20        |                    |
| ME 25        | 6                  |
| ME 30        | 7                  |
| ME 35        | 8                  |
| ME 45        | 10                 |
| MHT 8...SL   | 1.5                |
| MHT 10...SL  | 1.8                |
| MHT 12       | 3.2 <sup>(1)</sup> |

Note (1):  $H_1$  dimension of ML25 and MHT12 models is the same as the dimension without under seals.

Remark: The table shows representative model numbers but is also applicable to all the models in the same size of ML, MLF, ME and MHT series.

Table 21 Dimension of the slide unit with upper seals (Supplemental code /U)



| Model number | $N$  | $W_2$ |
|--------------|------|-------|
| MUL 25       | 21.4 | 18    |
| MUL 30       | 25.9 | 22    |

Remark: In case upper seals specification, the reference surface of slide unit can not be used.

**With double end seals**

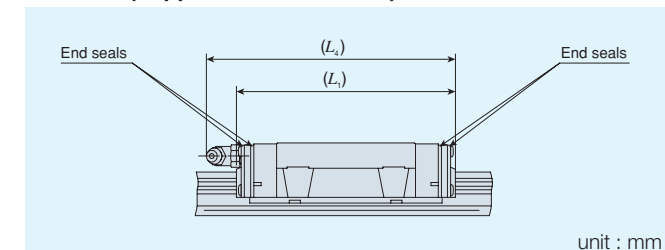
(for interchangeable single slide unit of ME and MH series)

/V /VR /VL

Double rubber end seals are provided on the interchangeable slide unit for more effective dust protection. For the total length of the slide unit with double end seals, see the Table 22.

- ① /V Double end seals are provided at both ends of the slide unit.
- ② /VR Double end seals are provided at the right end of the slide unit in sight of  $\square$  mark.
- ③ /VL Double end seals are provided at the left end of the slide unit in sight of  $\square$  mark.

Table 22 Dimension of the slide unit with double end seals (Supplemental code /VV)



| Model number | $L_1$ | $L_4$ | Model number | $L_1$ | $L_4$ |
|--------------|-------|-------|--------------|-------|-------|
| MEC 15       | 48    | 50    | MH 15        | 72    | 77    |
| ME 15        | 64    | 66    | MH 20        | 91    | 104   |
| MEG 15       | 76    | 78    | MHG 20       | 119   | 133   |
| MEC 20       | 54    | 68    | MH 25        | 104   | 116   |
| ME 20        | 73    | 87    | MHG 25       | 127   | 139   |
| MEG 20       | 89    | 103   | MH 30        | 122   | 134   |
| MEC 25       | 67    | 80    | MHG 30       | 148   | 160   |
| ME 25        | 91    | 104   | MHTL 30      | 194   | 206   |
| MEG 25       | 110   | 123   | MH 35        | 133   | 146   |
| MEC 30       | 78    | 89    | MHG 35       | 161   | 173   |
| ME 30        | 107   | 118   | MHTL 35      | 209   | 222   |
| MEG 30       | 138   | 150   | MH 45        | 159   | 170   |
| MEC 35       | 88    | 101   | MHG 45       | 202   | 213   |
| ME 35        | 121   | 134   | MHTL 45      | 251   | 261   |
| ME 45        | 137   | 148   |              |       |       |

Remark 1: The above table shows representative model numbers but is applicable to all models of the same size.

2: The values are for the slide unit with double end seals at both ends.

**With scrapers**

(for interchangeable single slide unit of ME and MH series)

/Z /ZR /ZL

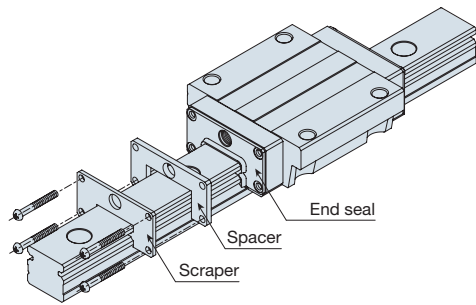
Metal scrapers are provided on the slide unit of interchangeable specification. The scraper (non-contact type) is used to effectively remove large particles of dust or foreign matter adhering to the track rail. For the total length of the slide unit with scrapers, see Table 23.

- ① /Z Scrapers are provided at both ends of the slide unit.
- ② /ZR A scraper is provided at the right end of the slide unit in sight of  $\square$  mark.
- ③ /ZL A scraper is provided at the left end of the slide unit in sight of  $\square$  mark.

Optional special specifications for use under special environment

**With scrapers**  
(for assembled set of ME and MH series)

/Z /ZZ

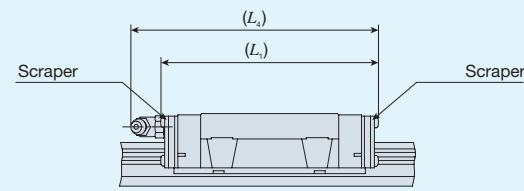


Metal scrapers are provided on the slide units of assembled set of interchangeable specification or non-interchangeable specification.

Scrapers (non-contact type) are used to effectively remove large particles of dust or foreign matter adhering to the track rail. For the total length of the slide unit with scrapers, see Table 23.

- ① /Z Scrapers are provided at the ends of slide units which are the closest to the ends of the track rail. (In case only one slide unit is assembled, scrapers are provided at both ends.)
- ② /ZZ Scrapers are provided at all ends of all slide units. (Applicable when the number of slide units is two or more. In case only one slide unit is assembled, indicate "/Z".)

**Table 23 Dimension of the slide unit with scrapers**  
(Supplemental code /Z /ZZ)



unit : mm

| Model number | $L_1$ | $L_2$ | Model number | $L_1$ | $L_2$ |
|--------------|-------|-------|--------------|-------|-------|
| MEC 15       | 48    | 50    | MH 15        | 73    | 75    |
| ME 15        | 64    | 66    | MH 20        | 91    | 104   |
| MEG 15       | 77    | 79    | MHG 20       | 119   | 133   |
| MEC 20       | 55    | 69    | MH 25        | 104   | 116   |
| ME 20        | 75    | 88    | MHG 25       | 126   | 138   |
| MEG 20       | 90    | 104   | MH 30        | 124   | 135   |
| MEC 25       | 69    | 81    | MHG 30       | 150   | 161   |
| ME 25        | 93    | 105   | MHTL 30      | 196   | 206   |
| MEG 25       | 112   | 124   | MH 35        | 133   | 146   |
| MEC 30       | 79    | 90    | MHG 35       | 161   | 174   |
| ME 30        | 108   | 119   | MHTL 35      | 209   | 222   |
| MEG 30       | 140   | 151   | MH 45        | 160   | 170   |
| MEC 35       | 89    | 101   | MHG 45       | 203   | 214   |
| ME 35        | 122   | 134   | MHTL 45      | 251   | 262   |
| ME 45        | 138   | 148   |              |       |       |

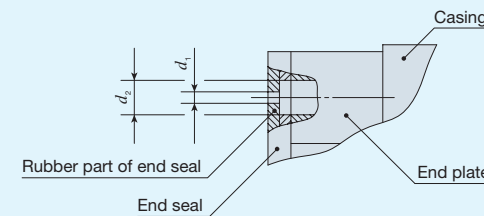
Remark 1: The above table shows representative model numbers but is applicable to all models of the same size.  
2: The values are for the slide unit with scrapers at both ends.

**Lubrication and Dust protection**

Lithium-soap base grease (MULTEMP PS No.2 : KYODO YUSHI) is pre-packed in C-Lube Linear Way ML and lithium-soap base grease containing extreme pressure additive (ALVANIA grease EP 2: SHELL) is pre-packed C-Lube Linear Way ME, MH and MUL. Additionally, C-Lube (Capillary sleeve) a component part is placed in the ball recirculation path, thereby extending the re-lubrication (greasing) interval time and maintenance work for a long period. C-Lube Linear Way is provided with an oil hole and with grease nipple shown in Table 24 and 25. Supply nozzles matching the size of grease nipple are available. For these parts for lubrication, consult for further information.

C-Lube Linear Way is dust protected with special rubber seals. But, if large amount of fine contaminants may present, or if large particles of foreign matter such as dust or chips may fall on the track rail, it is recommended to provide protective covers such as bellows for the entire linear motion mechanism. Bellows to match the dimensions of C-Lube Linear Way are optionally available. They are easy to mount and highly effective for dust protection. If required, consult .

**Table 24 Oil hole**



unit : mm

| Model number | Dimension of oil hole |       |
|--------------|-----------------------|-------|
|              | $d_1$                 | $d_2$ |
| ML 5         | 0.5                   | 1.1   |
| ML 7         |                       | 1.2   |
| ML 9         |                       | 1.5   |
| ML 12        |                       | 2     |
| MLF 10       |                       | 1.1   |
| MLF 14       |                       | 1.2   |
| MLF 18       |                       | 1.5   |
| MLF 24       |                       | 2     |
| MHT 8...SL   |                       | 1.5   |
| MHT 10...SL  |                       | 1.5   |
| MUL 25       |                       | 1.2   |
| MUL 30       |                       | 1.5   |

Remark : The table shows representative model numbers but is also applicable to all the models in the same size.

**Table 25 Grease nipple**

unit : mm

| Model number                                       | Type       | Grease nipple       |
|----------------------------------------------------|------------|---------------------|
|                                                    |            | Shape and dimension |
| ML 15<br>ML 20<br>MLF 30<br>MLF 42<br>MHT12        | A-M3       |                     |
| ML 25                                              | B-M4       |                     |
| ME 15<br>MH 15                                     | A-M4       |                     |
| ME 20<br>ME 25<br>ME 30<br>MH 20<br>MH 25<br>MH 30 | B-M6       |                     |
| ME 35<br>ME 45<br>MH 35<br>MH 45                   | JIS 4 type |                     |

Remark : The table shows representative model numbers but is also applicable to all the models in the same size.



# Precautions for use

## 1 Mounting surface, reference mounting surface, and general mounting structure

To mount C-Lube linear way, correctly fit the reference mounting surfaces **B** and **D** of the slide unit and track rail to the reference mounting surfaces of the table and the bed, and then fix them tightly. (See Fig.4.1 and 4.2)

The reference mounting surfaces **B** and **D** and the mounting surfaces **A** and **C** of C-Lube Linear Way are accurately finished by grinding. Stable and high accuracy liner motion can be obtained by finishing the mating mounting surfaces of machines or equipment with high accuracy and correctly mounting the guide on these surfaces.

The slide unit reference mounting surface is always the side surface opposite to the **IKO** mark. The track rail reference mounting surface is identified by locating the **IKO** mark on the top surface of the track rail. The track rail reference mounting surface is the side surface above the **IKO** mark (in the direction of the arrow). (See Fig.5.1 and 5.2)

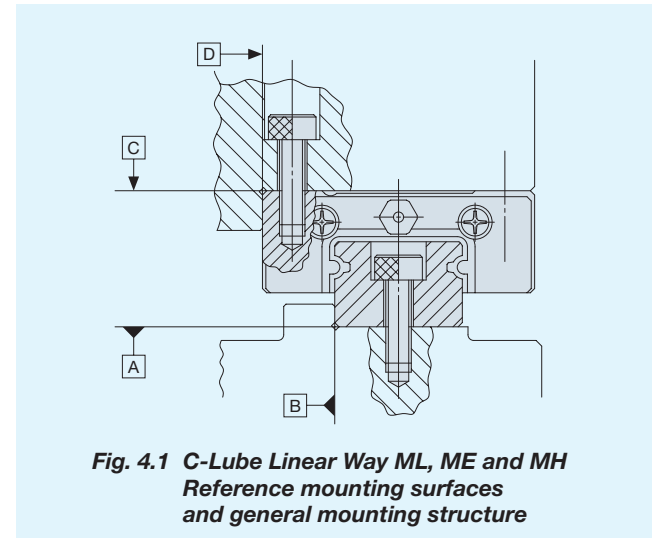


Fig. 4.1 C-Lube Linear Way ML, ME and MH Reference mounting surfaces and general mounting structure

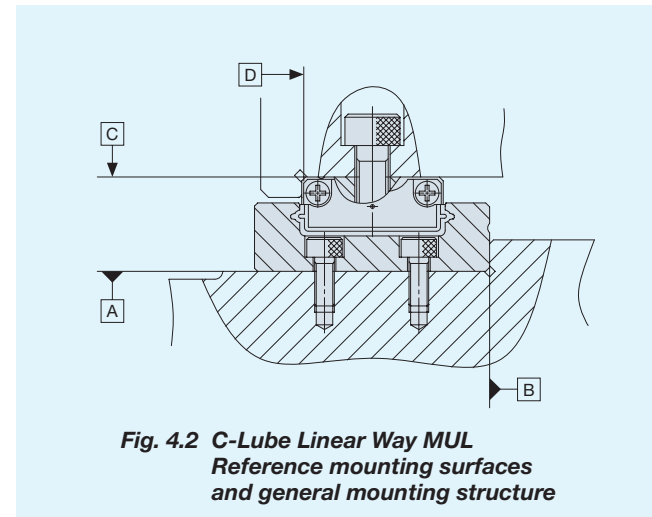


Fig. 4.2 C-Lube Linear Way MUL Reference mounting surfaces and general mounting structure

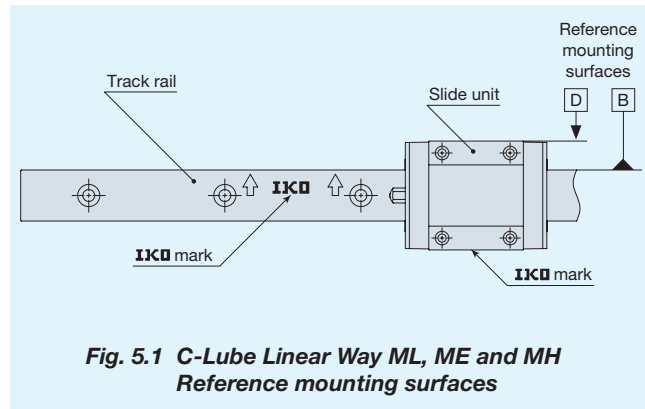


Fig. 5.1 C-Lube Linear Way ML, ME and MH Reference mounting surfaces

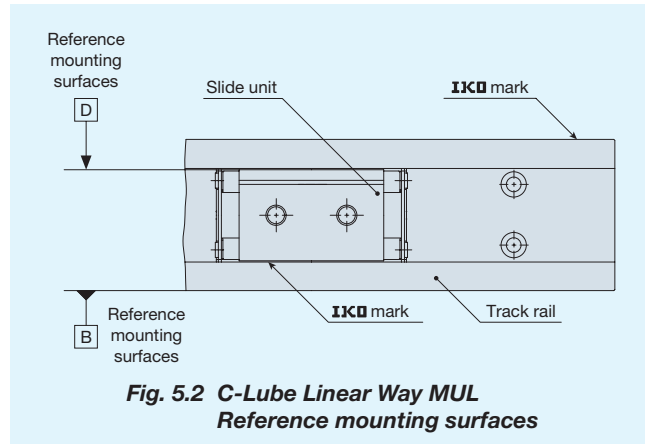


Fig. 5.2 C-Lube Linear Way MUL Reference mounting surfaces

## 2 Corner radius and shoulder height of reference mounting surfaces

It is recommended to make a relieved fillet at the corner of the mating reference mounting surfaces as shown in Fig.6. Otherwise, corner radius  $R_1$  and  $R_2$  are recommended shown in Table 26.1 and 26.2. Table 26.1 and 26.2 shows recommended shoulder heights and radius of the reference mounting surfaces.

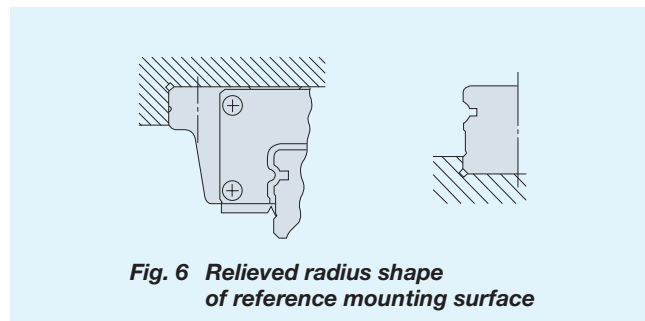


Fig. 6 Relieved radius shape of reference mounting surface

Table 26.1 C-Lube Linear Way ML and ME Shoulder height and radius of the reference mounting surfaces

unit : mm

| Model number | Slide unit            |                              | Track rail            |                              |   |     |   |   |
|--------------|-----------------------|------------------------------|-----------------------|------------------------------|---|-----|---|---|
|              | Shoulder height $h_1$ | Relieved radius $R_1$ (max.) | Shoulder height $h_2$ | Relieved radius $R_2$ (max.) |   |     |   |   |
| ML 5         | 2                     | 0.3                          | 0.8                   | 0.2                          |   |     |   |   |
| ML 7         | 2.5                   | 0.2                          | 1.2                   |                              |   |     |   |   |
| ML 9         | 3                     |                              | 1.5 <sup>(1)</sup>    |                              |   |     |   |   |
| ML 12        | 4                     |                              | 2.5 <sup>(2)</sup>    |                              |   |     |   |   |
| ML 15        | 4.5                   |                              | 3 <sup>(2)</sup>      |                              |   |     |   |   |
| ML 20        | 5                     |                              | 4 <sup>(2)</sup>      |                              |   |     |   |   |
| ML 25        | 6.5                   |                              | 0.7                   | 0.7                          |   |     |   |   |
| MLF 10       | 2                     | 0.3                          | 1.2                   | 0.2                          |   |     |   |   |
| MLF 14       | 2.5                   | 0.2                          | 2.5 <sup>(2)</sup>    |                              |   |     |   |   |
| MLF 18       | 3                     |                              |                       |                              |   |     |   |   |
| MLF 24       | 4                     |                              |                       |                              |   |     |   |   |
| MLF 30       | 4.5                   |                              |                       |                              |   |     |   |   |
| MLF 42       | 5                     |                              |                       |                              |   |     |   |   |
| ME(T) 15     | 4                     |                              |                       | 1                            | 3 | 0.5 |   |   |
| MES 15       |                       | 0.5                          |                       | 0.5                          |   |     |   |   |
| ME(T) 20     |                       | 1                            |                       |                              |   |     |   |   |
| MES 20       | 5                     | 0.5                          |                       |                              |   |     |   |   |
| ME(T) 25     | 6                     | 1                            | 4                     | 1                            |   |     |   |   |
| MES 25       |                       |                              | 1                     | 5                            | 1 |     |   |   |
| ME(T) 30     | 8                     |                              |                       |                              |   |     |   |   |
| MES 30       |                       |                              |                       |                              |   |     |   |   |
| ME(T) 35     | 8                     |                              |                       |                              |   | 1.5 | 6 | 1 |
| MES 35       |                       |                              |                       |                              |   |     |   | 7 |
| ME(T) 45     |                       |                              |                       |                              |   |     |   |   |
| MES 45       |                       |                              |                       |                              |   |     |   |   |

Note (1) : For "with under seals" of the size 9 models, 0.8mm is recommended.  
 (2) : For "with under seals" (supplemental code "U"), it is recommended to use a value obtained by subtracting 1mm from the value  $h_2$  shown in the table.  
 Remark : The table shows representative model numbers but is also applicable to all the models in the same size.

Table 26.2 C-Lube Linear Way MH and MUL Shoulder height and radius of the reference mounting surfaces

unit : mm

| Model number | Slide unit            |                              | Track rail            |                              |
|--------------|-----------------------|------------------------------|-----------------------|------------------------------|
|              | Shoulder height $h_1$ | Relieved radius $R_1$ (max.) | Shoulder height $h_2$ | Relieved radius $R_2$ (max.) |
| MHT 8 ...SL  | 3.5                   | 0.5                          | 1.6 <sup>(1)</sup>    | 0.2                          |
| MHD 8 ...SL  | 4                     |                              | 1.9 <sup>(1)</sup>    |                              |
| MHT 10 ...SL | 4.5                   |                              |                       |                              |
| MHD 10 ...SL | 5                     |                              |                       | 2.7 <sup>(1)</sup>           |
| MHT 12       | 6                     |                              | 3                     | 0.5                          |
| MHD 12       |                       |                              |                       |                              |
| MH 15        | 4                     |                              |                       |                              |
| MH 20        | 5                     | 4                            | 1                     |                              |
| MH 25        | 6                     |                              |                       |                              |
| MH 30        | 8                     |                              |                       | 5                            |
| MH 35        |                       | 6                            |                       |                              |
| MH 45        |                       | 7                            | 1.5                   |                              |
| MUL 25       | 1.5                   | 0.2                          | 2.5                   | - <sup>(2)</sup>             |
| MUL 30       | 2.5                   |                              | 3                     | - <sup>(2)</sup>             |

Note (1) : For "with under seals" (supplemental code "U"), it is recommended to use a value obtained by subtracting 0.6mm from the value  $h_2$  shown in the table.  
 (2) : Provide a relieved fillet as shown Fig. 6.  
 Remark : The table shows representative model numbers but is also applicable to all the models in the same size.

## 3 Multiple slide units mounted in close distance

When using multiple slide units in close distance to each other, actual load may be greater than the calculated load depending on the mounting accuracy of the slide units on the mounting surfaces and the reference mounting surfaces of the machine. It is suggested in such cases to assume a greater load than the calculated load.

## 4 Operating temperature

The C-Lube Linear Way must be used under 80°C (maximum).

## 5 Cleaning

Do not wash C-Lube Linear Way with organic solvent and/or white kerosene, which have the ability of removing fat nor leave them in contact with the above agents.

## Mounting

### 1 Assembling two or more sets of C-Lube Linear Way

#### • Interchangeable specification

In the case of an interchangeable specification product, assemble a slide unit and a track rail with the same interchangeable code. ("S2" slide unit + "S2" track rail)

#### • Non-interchangeable specification

Use an assembly of slide unit and track rail as delivered without changing the combination.


#### • Matched sets to be used as an assembled group

Special specification products of matched sets (by supplemental code "/W") are delivered as a group in which dimensional variations are specially controlled. Mount them without mixing with the sets of another group.

### 2 Assembling a slide unit and a track rail

When assembling C-Lube Linear Way, correctly fit the slide unit mounted on a steel ball holder to the groove of the track rail, and then move the slide unit gently from the steel ball holder to the track rail in parallel direction.

Steel balls are retained in C-Lube Linear Way, so the slide unit can be separated freely from the track rail. However, the slide unit can be assembled on the track rail much easier by using the steel ball holder.

Steel ball holder is appended as an accessory to the interchangeable slide unit of C-Lube Linear Way ML as shown in Table 27. The steel ball holder for another models is also available. If required, consult  for further information.

**Table 27 C-Lube Linear Way ML and MH Models to which a steel ball holder is appended**

| C-Lube Linear Way ML |              | C-Lube Linear Way MH |         |
|----------------------|--------------|----------------------|---------|
| ML(C) 5              | MLF(C) 10    | MHT                  | 8...SL  |
| ML(C, G) 7           | MLF(C, G) 14 | MHT                  | 10...SL |
| ML(C, G) 9           | MLF(C, G) 18 | MHT                  | 12...SL |
| MLG 12               | MLFG 24      | MHD(C, G) 8...SL     |         |
| MLG 15               | MLFG 30      | MHD(C, G) 10...SL    |         |
| MLG 20               | MLFG 42      | MHD(C, G) 12...SL    |         |
| MLG 25               | —            | MHT                  | 12      |
| —                    | —            | MHD                  | 12      |

### 3 Machining accuracy of mounting surfaces

Inadequate mounting accuracy of C-Lube Linear Way will affect the operating accuracy and life adversely, so mounting must be carried out with care. When multiple sets are mounted, the parallelism between the two mounting surfaces of machines must be prepared, in general, as shown in Table 28. If mounting parallelism is poor, frictional resistance will steeply increase giving a warning signal, which can be used to perform high accuracy mounting.

**Table 28 Parallelism between two mounting surfaces**

unit :  $\mu\text{m}$

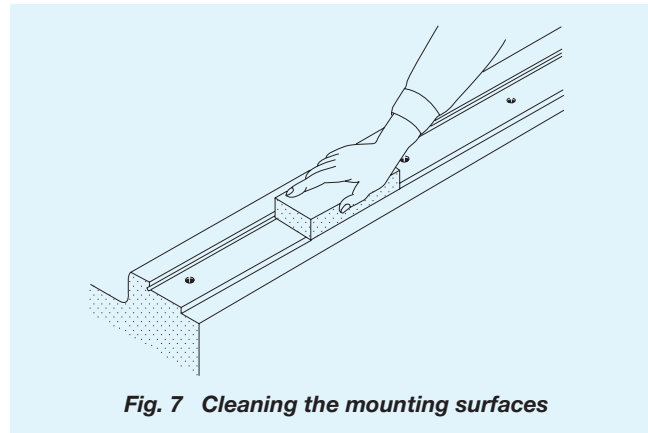
| Class       | Ordinary<br>(No symbol) | High<br>(H) | Precision<br>(P) | Super<br>precision<br>(SP) |
|-------------|-------------------------|-------------|------------------|----------------------------|
| Parallelism | 30                      |             | 20               | 10                         |

### 4 Cleaning the mounting surfaces

When mounting C-Lube Linear Way, first clean all mounting and reference mounting surfaces. (See Fig.7)

Remove burrs and blemishes from the reference mounting surfaces and mounting surfaces of the machine using an oil-stone, etc., and then wipe the surfaces with clean cloth.

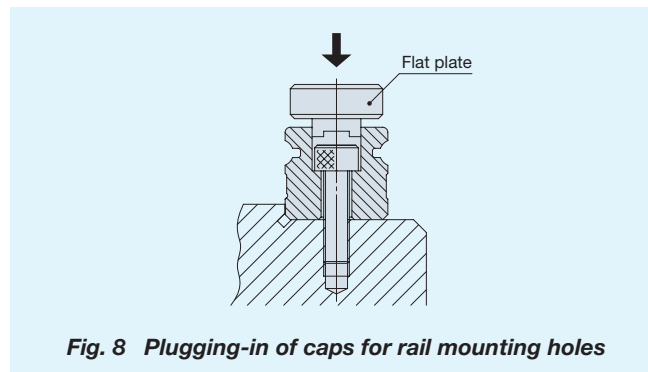
Remove rust preventive oil and dirt from the reference mounting surfaces and mounting surfaces with clean cloth.



**Fig. 7 Cleaning the mounting surfaces**

### 5 Plugging-in of caps for rail mounting holes

When plugging the caps for rail mounting holes (supplemental code "/F") into the mounting holes of track rail, tap in the cap gently by applying a flat plate on the top face of the cap until the top face of the cap becomes level with the top face of the track rail.



**Fig. 8 Plugging-in of caps for rail mounting holes**

### 6 Tightening torque of mounting bolts

The standard torque values for C-Lube Linear Way mounting bolts are shown in Table 29.1 and 29.2. When machines or equipment are subjected to serve vibration, shock, large fluctuating load, or moment load, the bolts should be tightened with a torque 1.2 to 1.5 times higher than the standard torque values shown. When the mating member material is cast iron or aluminum, tightening torque should be lowered in accordance with the strength characteristics of the material.

**Table 29.1 C-Lube Linear Way ME and MH Tightening torque of mounting bolts**

| Bolt size  | Tightening torque N·m                         |                                                   |
|------------|-----------------------------------------------|---------------------------------------------------|
|            | Carbon steel bolt<br>(Strength division 12.9) | Stainless steel bolt<br>(Property division A2-70) |
| M3 × 0.5   | 1.7                                           | 1.1                                               |
| M4 × 0.7   | 4.0                                           | 2.5                                               |
| M5 × 0.8   | 7.9                                           | 5.0                                               |
| M6 × 1     | 13.3                                          | 8.5                                               |
| M8 × 1.25  | 32.0                                          | 20.4                                              |
| M10 × 1.5  | 62.7                                          | —                                                 |
| M12 × 1.75 | 108                                           | —                                                 |


Remark : For C-Lube Linear Way ML, MH (size 8, 10 and 12) and MUL, see Table 29.2.

**Table 29.2 C-Lube Linear Way ML, MH (size 8, 10 and 12) and MUL Tightening torque of mounting bolts**

| Bolt size   | Tightening torque N·m                         |                                                   |
|-------------|-----------------------------------------------|---------------------------------------------------|
|             | Carbon steel bolt<br>(Strength division 12.9) | Stainless steel bolt<br>(Property division A2-70) |
| M2 × 0.4    | —                                             | 0.31                                              |
| M2.3 × 0.4  | —                                             | 0.48                                              |
| M2.5 × 0.45 | —                                             | 0.62                                              |
| M2.6 × 0.45 | —                                             | 0.70                                              |
| M3 × 0.5    | 1.2                                           | 1.1                                               |
| M4 × 0.7    | 2.8                                           | 2.5                                               |
| M5 × 0.8    | —                                             | 5.0                                               |
| M6 × 1.0    | —                                             | 8.5                                               |

## Track rail lengths

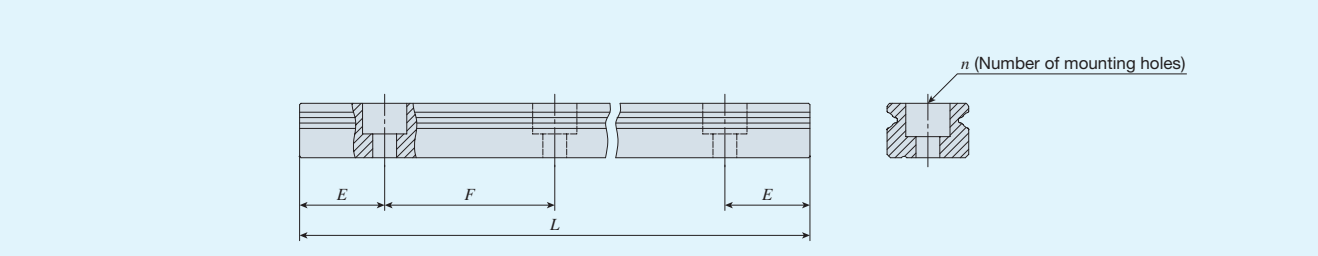
Standard and maximum lengths of track rails are shown in Table 30.1 to 30.5.

Track rail in any length are also available. Simply indicate the necessary length of track rail in millimeter (mm) in the identification number. For the tolerance of  $E$  dimension and Track rail length, consult  for further information.

• In non-interchangeable specification, for track rail longer than the maximum length shown in Table 30.1 to 30.5, butt-jointing track rails are available upon request. In this case, indicate supplemental code "/A" in the identification number.

•  $E$  dimensions at both ends are the same unless otherwise specified. To change these dimensions, specify the specified rail mounting hole positions (supplemental code "/E") of special specification.


**Table 30.1 C-Lube Linear Way ML (standard type) Standard and maximum lengths of track rails**



| Item                                                | Model number           | ML 5         | ML 7                                                   | ML 9                                                               | ML 12                                                              | ML 15                                                                | ML 20                                                                | ML 25                                                                |
|-----------------------------------------------------|------------------------|--------------|--------------------------------------------------------|--------------------------------------------------------------------|--------------------------------------------------------------------|----------------------------------------------------------------------|----------------------------------------------------------------------|----------------------------------------------------------------------|
|                                                     | Standard length $L(n)$ |              | 60 ( 4)<br>90 ( 6)<br>105 ( 7)<br>120 ( 8)<br>150 (10) | 60 ( 4)<br>90 ( 6)<br>120 ( 8)<br>150 (10)<br>180 (12)<br>240 (16) | 60 ( 3)<br>80 ( 4)<br>120 ( 6)<br>160 ( 8)<br>220 (11)<br>280 (14) | 100 ( 4)<br>150 ( 6)<br>200 ( 8)<br>275 (11)<br>350 (14)<br>475 (19) | 160 ( 4)<br>240 ( 6)<br>320 ( 8)<br>440 (11)<br>560 (14)<br>680 (17) | 180 ( 3)<br>240 ( 4)<br>360 ( 6)<br>480 ( 8)<br>660 (11)<br>840 (14) |
| Mounting hole pitch $F$                             |                        | 15           | 15                                                     | 20                                                                 | 25                                                                 | 40                                                                   | 60                                                                   | 60                                                                   |
| $E$                                                 |                        | 7.5          | 7.5                                                    | 10                                                                 | 12.5                                                               | 20                                                                   | 30                                                                   | 30                                                                   |
| Reference dimension $E$ (1)                         | Over (Incl.)           | 4            | 4.5                                                    | 4.5                                                                | 5                                                                  | 5.5                                                                  | 8                                                                    | 9                                                                    |
|                                                     | Under                  | 11.5         | 12                                                     | 14.5                                                               | 17.5                                                               | 25.5                                                                 | 38                                                                   | 39                                                                   |
| Maximum length (2)                                  |                        | 210<br>(510) | 300<br>(990)                                           | 860<br>(1 200)                                                     | 1 000<br>(1 450)                                                   | 1 000<br>(1 480)                                                     | 960<br>(1 800)                                                       | 960<br>(1 800)                                                       |
| Maximum number of track rails for butt jointing (3) |                        | 5            | 7                                                      | 2                                                                  | 2                                                                  | 2                                                                    | 2                                                                    | 2                                                                    |
| Maximum length of butt jointing track rails (3)     |                        | 915          | 1 905                                                  | 1 660                                                              | 1 925                                                              | 1 880                                                                | 1 740                                                                | 1 740                                                                |

unit : mm

Note (1) : Not applied to optional specification "track rail stopper pins" (supplemental code "/S").

(2) : The track rails can be manufactured up to the maximum length shown in parentheses. If required, please consult  for further information.

(3) : Not applicable to interchangeable specification.

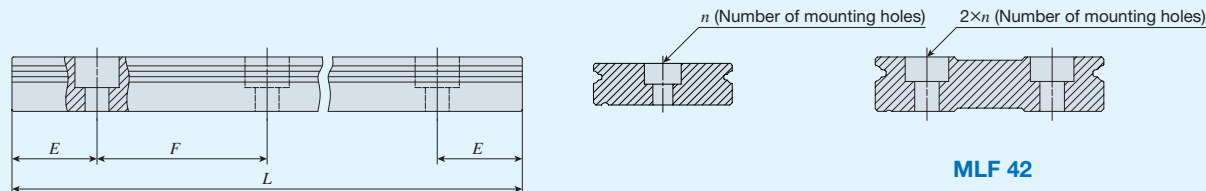
Remark : The table shows representative model numbers but is also applicable to all the models in the same size.

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




Track rail lengths

**Table 30.2 C-Lube Linear Way MLF (wide type)**  
Standard and maximum lengths of track rails

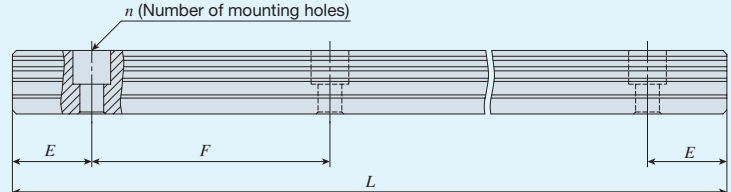


| Item                                                | Model number | MLF 10    | MLF 14    | MLF 18      | MLF 24      | MLF 30      | MLF 42      |
|-----------------------------------------------------|--------------|-----------|-----------|-------------|-------------|-------------|-------------|
| Standard length $L(n)$                              |              | 60 ( 3)   | 90 ( 3)   | 90 ( 3)     | 120 ( 3)    | 160 ( 4)    | 160 ( 4)    |
|                                                     |              | 80 ( 4)   | 120 ( 4)  | 120 ( 4)    | 160 ( 4)    | 240 ( 6)    | 240 ( 6)    |
|                                                     |              | 120 ( 6)  | 150 ( 5)  | 150 ( 5)    | 240 ( 6)    | 320 ( 8)    | 320 ( 8)    |
|                                                     |              | 160 ( 8)  | 180 ( 6)  | 180 ( 6)    | 320 ( 8)    | 440 (11)    | 440 (11)    |
|                                                     |              | 220 (11)  | 240 ( 8)  | 240 ( 8)    | 400 (10)    | 560 (14)    | 560 (14)    |
|                                                     |              | 280 (14)  | 300 (10)  | 300 (10)    | 480 (12)    | 680 (17)    | 680 (17)    |
| Mounting hole pitch $F$                             |              | 20        | 30        | 30          | 40          | 40          | 40          |
| $E$                                                 |              | 10        | 15        | 15          | 20          | 20          | 20          |
| Reference dimension $E$ (1)                         | Over (Incl.) | 4.5       | 5.5       | 5.5         | 6.5         | 6.5         | 6.5         |
|                                                     | Under        | 14.5      | 20.5      | 20.5        | 26.5        | 26.5        | 26.5        |
| Maximum length (2)                                  |              | 300 (500) | 300 (990) | 690 (1 860) | 680 (1 960) | 680 (2 000) | 680 (2 000) |
| Maximum number of track rails for butt jointing (3) |              | 7         | 8         | 3           | 3           | 3           | 3           |
| Maximum length of butt jointing track rails (3)     |              | 1 840     | 1 950     | 1 920       | 1 840       | 1 840       | 1 840       |

unit : mm


Note (1) : Not applied to optional specification "track rail stopper pins" (supplemental code "/S").  
 (2) : The track rails can be manufactured up to the maximum length shown in parentheses. If required, please consult  for further information.  
 (3) : Not applicable to interchangeable specification.  
 Remark : The table shows representative model numbers but is also applicable to all the models in the same size.

**Table 30.3 C-Lube Linear Way ME**  
Standard and maximum lengths of track rails

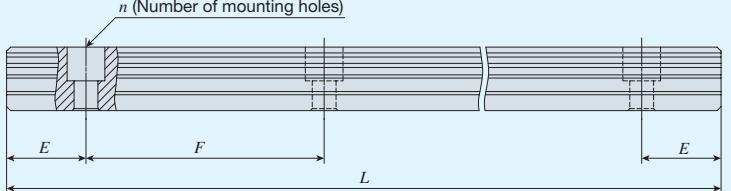


| Item                        | Model number | ME 15         | ME 20         | ME 25         | ME 30         | ME 35         | ME 45         | ME15...SL     | ME20...SL     | ME25...SL     | ME30...SL     |
|-----------------------------|--------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| Standard length $L(n)$      |              | 160 ( 3)      | 220 ( 4)      | 220 ( 4)      | 280 ( 4)      | 280 ( 4)      | 570 ( 6)      | 160 ( 3)      | 220 ( 4)      | 220 ( 4)      | 280 ( 4)      |
|                             |              | 220 ( 4)      | 280 ( 5)      | 280 ( 5)      | 440 ( 6)      | 440 ( 6)      | 885 ( 9)      | 220 ( 4)      | 280 ( 5)      | 280 ( 5)      | 440 ( 6)      |
|                             |              | 280 ( 5)      | 340 ( 6)      | 340 ( 6)      | 600 ( 8)      | 600 ( 8)      | 1 200 (12)    | 280 ( 5)      | 340 ( 6)      | 340 ( 6)      | 600 ( 8)      |
|                             |              | 340 ( 6)      | 460 ( 8)      | 460 ( 8)      | 760 (10)      | 760 (10)      | 1 620 (16)    | 340 ( 6)      | 460 ( 8)      | 460 ( 8)      | 760 (10)      |
|                             |              | 460 ( 8)      | 640 (11)      | 640 (11)      | 1 000 (13)    | 1 000 (13)    | 2 040 (20)    | 460 ( 8)      | 640 (11)      | 640 (11)      | 1 000 (13)    |
|                             |              | 640 (11)      | 820 (14)      | 820 (14)      | 1 240 (16)    | 1 240 (16)    | 2 460 (24)    | 640 (11)      | 820 (14)      | 820 (14)      | 1 240 (16)    |
|                             |              | 820 (14)      | 1 000 (17)    | 1 000 (17)    | 1 640 (21)    | 1 640 (21)    | 2 985 (29)    | 820 (14)      | 1 000 (17)    | 1 000 (17)    | 1 640 (21)    |
|                             |              |               | 1 240 (21)    | 1 240 (21)    | 2 040 (26)    | 2 040 (26)    |               |               |               |               |               |
| Mounting hole pitch $F$     |              | 60            | 60            | 60            | 80            | 80            | 105           | 60            | 60            | 60            | 80            |
| $E$ (1)                     |              | 20            | 20            | 20            | 20            | 20            | 22.5          | 20            | 20            | 20            | 20            |
| Reference dimension $E$ (2) | Over (Incl.) | 6             | 8             | 9             | 9             | 10            | 12            | 6             | 8             | 9             | 9             |
|                             | Under        | 36            | 38            | 39            | 49            | 50            | 64.5          | 36            | 38            | 39            | 49            |
| Maximum length (3)(4)       |              | 1 600 (2 980) | 2 200 (2 980) | 2 980 (4 000) | 3 000 (3 960) | 3 000 (3 960) | 2 985 (3 930) | 1 200 (1 600) | 1 200 (1 960) | 1 200 (1 960) | 1 200 (1 960) |

unit : mm

Note (1) : When specifying a butt-jointing interchangeable track rail (supplemental code "/T"), pay attention to the  $E$  dimension at the butt-jointing part.  
 (2) : Not applicable to the track rail with female threads for bellows (Supplemental code "/J").  
 (3) : The dimension "E" of stainless steel product is the half value of dimension "F".  
 (4) : The track rails can be manufactured up to the maximum length shown in parentheses. If required, please consult  for further information.  
 Remark : The table shows representative model numbers but is also applicable to all the models in the same size.


**Table 30.4 C-Lube Linear Way MH**  
Standard and maximum lengths of track rails



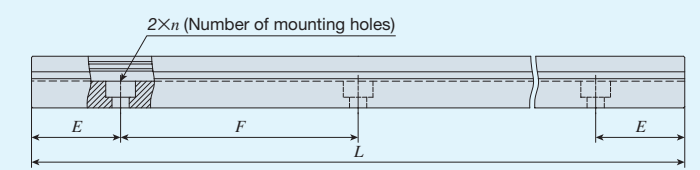
| Item                        | Model number            | MH 12    | MH 15         | MH 20         | MH 25         | MH 30         | MH 35         | MH 45         |
|-----------------------------|-------------------------|----------|---------------|---------------|---------------|---------------|---------------|---------------|
| Standard length $L(n)$      |                         | 80 ( 2)  | 180 ( 3)      | 240 ( 4)      | 240 ( 4)      | 480 ( 6)      | 480 ( 6)      | 840 ( 8)      |
|                             |                         | 160 ( 4) | 240 ( 4)      | 480 ( 8)      | 480 ( 8)      | 640 ( 8)      | 640 ( 8)      | 1 050 (10)    |
|                             |                         | 240 ( 6) | 360 ( 6)      | 660 (11)      | 660 (11)      | 800 (10)      | 800 (10)      | 1 260 (12)    |
|                             |                         | 320 ( 8) | 480 ( 8)      | 840 (14)      | 840 (14)      | 1 040 (13)    | 1 040 (13)    | 1 470 (14)    |
|                             |                         | 400 (10) | 660 (11)      | 1 020 (17)    | 1 020 (17)    | 1 200 (15)    | 1 200 (15)    | 1 995 (19)    |
|                             |                         | 480 (12) | 900 (15)      | 1 200 (20)    | 1 200 (20)    | 1 520 (19)    | 1 520 (19)    |               |
|                             |                         | 560 (14) | 1 200 (20)    | 1 500 (25)    | 1 500 (25)    | 2 000 (25)    |               |               |
|                             |                         | 640 (16) |               |               | 1 980 (33)    |               |               |               |
|                             |                         | 720 (18) |               |               |               |               |               |               |
|                             | Mounting hole pitch $F$ |          | 40            | 60            | 60            | 60            | 80            | 80            |
| $E$                         |                         | 20       | 30            | 30            | 30            | 40            | 40            | 52.5          |
| Reference dimension $E$ (1) | Over (Incl.)            | 5.5      | 7             | 8             | 9             | 10            | 10            | 12.5          |
|                             | Under                   | 25.5     | 37            | 38            | 39            | 50            | 50            | 65            |
| Maximum length (2)          |                         | 1 480    | 1 500 (3 000) | 1 980 (3 000) | 3 000 (3 960) | 2 960 (4 000) | 2 960 (4 000) | 2 940 (3 990) |

unit : mm

| Item                        | Model number | MH 8...SL   | MH10...SL   | MH12...SL     | MH15...SL     | MH20...SL     | MH25...SL     | MH30...SL     |
|-----------------------------|--------------|-------------|-------------|---------------|---------------|---------------|---------------|---------------|
| Standard length $L(n)$      |              | 40 ( 2)     | 50 ( 2)     | 80 ( 2)       | 180 ( 3)      | 240 ( 4)      | 240 ( 4)      | 480 ( 6)      |
|                             |              | 80 ( 4)     | 100 ( 4)    | 160 ( 4)      | 240 ( 4)      | 480 ( 8)      | 480 ( 8)      | 640 ( 8)      |
|                             |              | 120 ( 6)    | 150 ( 6)    | 240 ( 6)      | 360 ( 6)      | 660 (11)      | 660 (11)      | 800 (10)      |
|                             |              | 160 ( 8)    | 200 ( 8)    | 320 ( 8)      | 480 ( 8)      | 840 (14)      | 840 (14)      | 1 040 (13)    |
|                             |              | 200 (10)    | 250 (10)    | 400 (10)      | 660 (11)      |               |               |               |
|                             |              | 240 (12)    | 300 (12)    | 480 (12)      |               |               |               |               |
|                             |              | 280 (14)    | 350 (14)    | 560 (14)      |               |               |               |               |
|                             |              |             | 400 (16)    | 640 (16)      |               |               |               |               |
| Mounting hole pitch $F$     |              | 20          | 25          | 40            | 60            | 60            | 60            | 80            |
| $E$                         |              | 10          | 12.5        | 20            | 30            | 30            | 30            | 40            |
| Reference dimension $E$ (1) | Over (Incl.) | 4.5         | 5           | 5.5           | 7             | 8             | 9             | 10            |
|                             | Under        | 14.5        | 17.5        | 25.5          | 37            | 38            | 39            | 50            |
| Maximum length (2)          |              | 480 (1 000) | 850 (1 000) | 1 000 (1 480) | 1 200 (1 500) | 1 200 (3 000) | 1 200 (3 000) | 1 200 (2 960) |


Note (1) : Not applicable to the track rail with female threads for bellows (Supplemental code "/J").  
 (2) : The track rails can be manufactured up to the maximum length shown in parentheses. If required, please consult  for further information.  
 Remark : The table shows representative model numbers but is also applicable to all the models in the same size.

**Table 30.5 C-Lube Linear Way MUL**  
Standard and maximum lengths of track rails



| Item                        | Model number | MUL 25    | MUL 30    |
|-----------------------------|--------------|-----------|-----------|
| Standard length $L(n)$      |              | 105 (3)   | 120 (3)   |
|                             |              | 140 (4)   | 160 (4)   |
|                             |              | 175 (5)   | 200 (5)   |
|                             |              | 210 (6)   | 240 (6)   |
|                             |              | 245 (7)   | 280 (7)   |
| Mounting hole pitch $F$     |              | 35        | 40        |
| $E$                         |              | 17.5      | 20        |
| Reference dimension $E$ (1) | Over (Incl.) | 4.5       | 4.5       |
|                             | Under        | 22        | 24.5      |
| Maximum length (1)          |              | 420 (840) | 480 (960) |

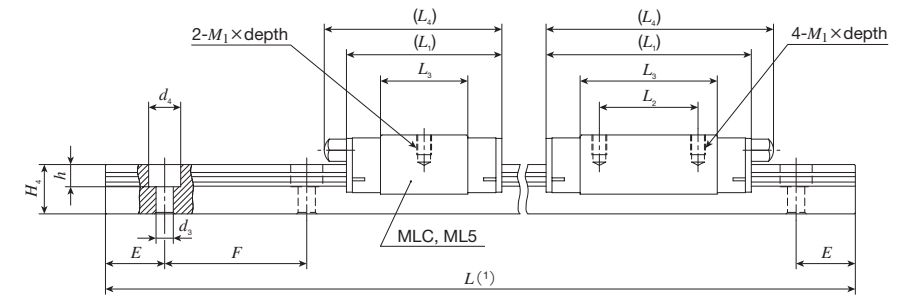
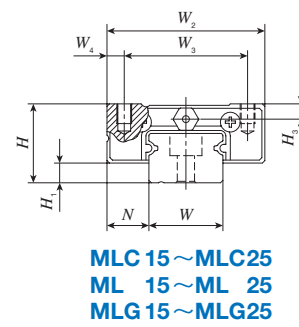
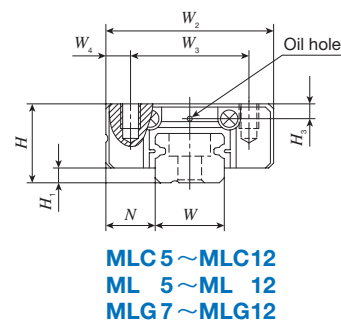
unit : mm

Note (1) : The track rails can be supplied with up to the length shown in parentheses as maximum. If required, please consult  for further information.

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

# IKO G-Lube Linear Way ML Standard type

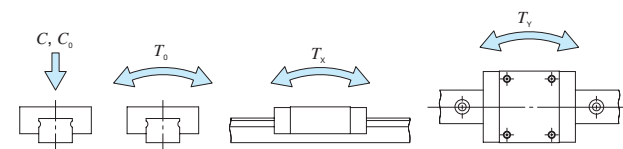
MLC · ML · MLG



| Model number | Interchangeable | Mass (Reference) g |                        | Dimension of assembly mm |                |      | Dimension of slide unit mm |                |                |                |                |                |                | Dimension of track rail mm |                |    |                |                |                | Appended mounting bolt for track rail mm<br>Bolt size x length | Basic dynamic load rating C N | Basic static load rating C <sub>0</sub> N | Static moment rating <sup>(2)</sup> N·m                  |        |        | Model number |                |                |                |
|--------------|-----------------|--------------------|------------------------|--------------------------|----------------|------|----------------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------------------|----------------|----|----------------|----------------|----------------|----------------------------------------------------------------|-------------------------------|-------------------------------------------|----------------------------------------------------------|--------|--------|--------------|----------------|----------------|----------------|
|              |                 | Slide unit         | Track rail (per 100mm) | H                        | H <sub>1</sub> | N    | W <sub>2</sub>             | W <sub>3</sub> | W <sub>4</sub> | L <sub>1</sub> | L <sub>2</sub> | L <sub>3</sub> | L <sub>4</sub> | M <sub>1</sub> x depth     | H <sub>3</sub> | W  | H <sub>4</sub> | d <sub>3</sub> | d <sub>4</sub> |                                                                |                               |                                           | h                                                        | E      | F      |              | T <sub>0</sub> | T <sub>x</sub> | T <sub>y</sub> |
| MLC 5        | ☆               | 3.4                | 12                     | 6                        | 1              | 3.5  | 12                         | 8              | 2              | 16             | -              | 9.6            | -              | M2 x 1.5                   | 1.2            | 5  | 3.7            | 2.4            | 3.6            | 0.8                                                            | 7.5                           | 15                                        | Cross-recessed head screw for precision equipment M2 x 6 | 562    | 841    | 2.2          | 1.4            | 1.2            | MLC 5          |
| ML 5         | ☆               | 4.3                |                        | 6                        | 1              | 3.5  | 12                         | 8              | 2              | 19             | -              | 12.6           | -              | M2 x 1.5                   | 1.2            | 5  | 3.7            | 2.4            | 3.6            | 0.8                                                            | 7.5                           | 15                                        |                                                          | 676    | 1 090  | 2.9          | 2.3            | 1.9            | ML 5           |
| MLC 7        | ☆               | 6.7                | 22                     | 8                        | 1.5            | 5    | 17                         | 12             | 2.5            | 19             | -              | 9.6            | -              | M2 x 2.5                   | 1.5            | 7  | 5              | 2.4            | 4.2            | 2.3                                                            | 7.5                           | 15                                        | Hexagon socket head bolt M2 x 6                          | 937    | 1 140  | 4.1          | 1.8            | 1.5            | MLC 7          |
| ML 7         | ☆               | 9.1                |                        | 8                        | 1.5            | 5    | 17                         | 12             | 2.5            | 23.5           | 8              | 14.3           | -              | M2 x 2.5                   | 1.5            | 7  |                |                |                |                                                                |                               |                                           |                                                          | 1 330  | 1 890  | 6.9          | 4.7            | 3.9            | ML 7           |
| MLG 7        | ☆               | 13                 |                        | 8                        | 1.5            | 5    | 17                         | 12             | 2.5            | 31             | 12             | 21.6           | -              | M2 x 2.5                   | 1.5            | 7  |                |                |                |                                                                |                               |                                           |                                                          | 1 690  | 2 650  | 9.7          | 8.8            | 7.4            | MLG 7          |
| MLC 9        | ☆               | 11                 | 35                     | 10                       | 2              | 5.5  | 20                         | 15             | 2.5            | 21.5           | -              | 11.9           | -              | M3 x 3                     | 2.2            | 9  | 6              | 3.5            | 6              | 3.5                                                            | 10                            | 20                                        | Hexagon socket head bolt M3 x 8                          | 1 180  | 1 480  | 6.9          | 2.9            | 2.4            | MLC 9          |
| ML 9         | ☆               | 18                 |                        | 10                       | 2              | 5.5  | 20                         | 15             | 2.5            | 30             | 10             | 20.8           | -              | M3 x 3                     | 2.2            | 9  |                |                |                |                                                                |                               |                                           |                                                          | 1 810  | 2 760  | 12.8         | 9.1            | 7.6            | ML 9           |
| MLG 9        | ☆               | 26                 |                        | 10                       | 2              | 5.5  | 20                         | 15             | 2.5            | 40.5           | 15             | 30.9           | -              | M3 x 3                     | 2.2            | 9  |                |                |                |                                                                |                               |                                           |                                                          | 2 370  | 4 030  | 18.7         | 18.7           | 15.7           | MLG 9          |
| MLC 12       | ☆               | 22                 | 65                     | 13                       | 3              | 7.5  | 27                         | 20             | 3.5            | 25             | -              | 13             | -              | M3 x 3.5                   | 2.7            | 12 | 8              | 3.5            | 6.5            | 4.5                                                            | 12.5                          | 25                                        | Hexagon socket head bolt M3 x 8                          | 2 210  | 2 380  | 14.8         | 5.3            | 4.5            | MLC 12         |
| ML 12        | ☆               | 34                 |                        | 13                       | 3              | 7.5  | 27                         | 20             | 3.5            | 34             | 15             | 21.6           | -              | M3 x 3.5                   | 2.7            | 12 |                |                |                |                                                                |                               |                                           |                                                          | 3 330  | 4 290  | 26.6         | 15.4           | 12.9           | ML 12          |
| MLG 12       | ☆               | 48                 |                        | 13                       | 3              | 7.5  | 27                         | 20             | 3.5            | 44             | 20             | 32             | -              | M3 x 3.5                   | 2.7            | 12 |                |                |                |                                                                |                               |                                           |                                                          | 4 310  | 6 200  | 38.4         | 30.6           | 25.7           | MLG 12         |
| MLC 15       | ☆               | 43                 | 107                    | 16                       | 4              | 8.5  | 32                         | 25             | 3.5            | 32             | -              | 17.8           | 36             | M3 x 4                     | 3.1            | 15 | 10             | 3.5            | 6.5            | 4.5                                                            | 20                            | 40                                        | Hexagon socket head bolt M3 x 10                         | 3 490  | 3 890  | 30.0         | 11.7           | 9.8            | MLC 15         |
| ML 15        | ☆               | 63                 |                        | 16                       | 4              | 8.5  | 32                         | 25             | 3.5            | 42             | 20             | 27.9           | 47             | M3 x 4                     | 3.1            | 15 |                |                |                |                                                                |                               |                                           |                                                          | 4 980  | 6 490  | 50.0         | 29.7           | 24.9           | ML 15          |
| MLG 15       | ☆               | 93                 |                        | 16                       | 4              | 8.5  | 32                         | 25             | 3.5            | 57             | 25             | 42.8           | 62             | M3 x 4                     | 3.1            | 15 |                |                |                |                                                                |                               |                                           |                                                          | 6 620  | 9 740  | 75.0         | 63.9           | 53.6           | MLG 15         |
| MLC 20       | ☆               | 89                 | 156                    | 20                       | 5              | 10   | 40                         | 30             | 5              | 38             | -              | 22.3           | 42             | M4 x 6                     | 4.2            | 20 | 11             | 6              | 9.5            | 5.5                                                            | 30                            | 60                                        | Hexagon socket head bolt M5 x 14                         | 4 580  | 5 300  | 54.0         | 19.4           | 16.3           | MLC 20         |
| ML 20        | ☆               | 130                |                        | 20                       | 5              | 10   | 40                         | 30             | 5              | 50             | 25             | 34.6           | 55             | M4 x 6                     | 4.2            | 20 |                |                |                |                                                                |                               |                                           |                                                          | 6 650  | 9 080  | 92.6         | 52.7           | 44.2           | ML 20          |
| MLG 20       | ☆               | 189                |                        | 20                       | 5              | 10   | 40                         | 30             | 5              | 68             | 30             | 52.3           | 72             | M4 x 6                     | 4.2            | 20 |                |                |                |                                                                |                               |                                           |                                                          | 8 510  | 12 900 | 131          | 102            | 85.7           | MLG 20         |
| MLC 25       | ☆               | 189                | 243                    | 25                       | 5              | 12.5 | 48                         | 35             | 6.5            | 55             | -              | 31.9           | 65             | M6 x 7                     | 5              | 23 | 15             | 7              | 11.0           | 9.0                                                            | 30                            | 60                                        | Hexagon socket head bolt M6 x 16                         | 9 120  | 10 600 | 128          | 57.4           | 48.1           | MLC 25         |
| ML 25        | ☆               | 305                |                        | 25                       | 5              | 12.5 | 48                         | 35             | 6.5            | 78             | 35             | 55.7           | 89             | M6 x 7                     | 5              | 23 |                |                |                |                                                                |                               |                                           |                                                          | 13 500 | 18 500 | 223          | 163            | 137            | ML 25          |
| MLG 25       | ☆               | 405                |                        | 25                       | 5              | 12.5 | 48                         | 35             | 6.5            | 98             | 40             | 75.5           | 108            | M6 x 7                     | 5              | 23 |                |                |                |                                                                |                               |                                           |                                                          | 16 700 | 25 200 | 303          | 293            | 246            | MLG 25         |

Note (1): Track rail lengths L are shown in Table 30.1.

(2): The directions of basic dynamic load rating (C), basic static load rating (C<sub>0</sub>) and static moment rating (T<sub>0</sub>, T<sub>x</sub> and T<sub>y</sub>) are shown in the sketches below.



The upper values in the T<sub>x</sub> and T<sub>y</sub> column apply to one slide unit, and the lower values apply to two units in close contact.

Remark 1: The appended bolts for mounting track rails are hexagon socket head bolts of JIS B 1176 or equivalent, or cross-recessed head cap screws for precision equipment.

2: Oil hole is provided for ML(C)5 to ML(C, G)12 models.

### Example of identification number for assembled set

|                                   |                                                                                      |                                        |                                                                                 |                                     |                                                                                                                |                                                                    |
|-----------------------------------|--------------------------------------------------------------------------------------|----------------------------------------|---------------------------------------------------------------------------------|-------------------------------------|----------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------|
| Model code                        | Size                                                                                 | Part code                              | Preload symbol                                                                  | Class symbol                        | Interchangeable code                                                                                           | Supplemental code                                                  |
| <b>ML G 9 C2 R160 T1 P S2 /U</b>  |                                                                                      |                                        |                                                                                 |                                     |                                                                                                                |                                                                    |
| <b>Series</b><br>ML Standard type | <b>Length of slide unit</b><br>C Short<br>No symbol Standard<br>G High rigidity long | <b>Size</b><br>5, 7, 9, 12, 15, 20, 25 | <b>Number of slide unit (two slide units)</b>                                   | <b>Length of track rail (160mm)</b> | <b>Interchangeable code</b><br>S2 Interchangeable specification<br>No symbol Non interchangeable specification | <b>Special specification</b><br>A, D, E, HB, I, LR, MN, N, S, U, W |
|                                   |                                                                                      |                                        | <b>Preload amount</b><br>To Clearance<br>No symbol Standard<br>T1 Light preload |                                     | <b>Accuracy class</b><br>H High<br>P Precision                                                                 |                                                                    |

In case ordering track rail only, model code is changed as shown below.

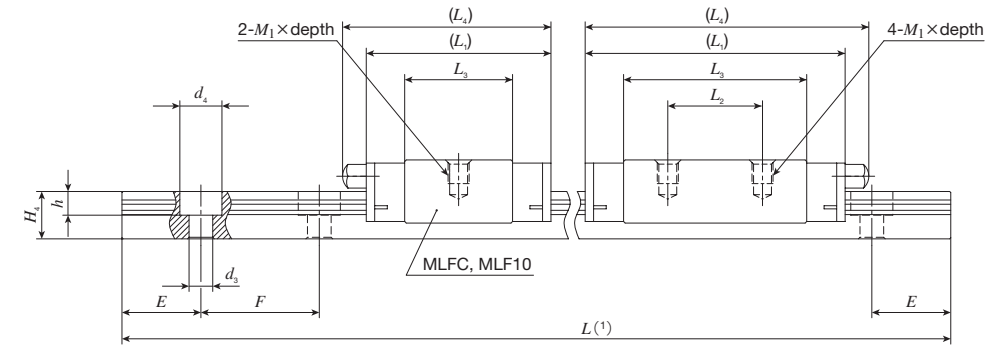
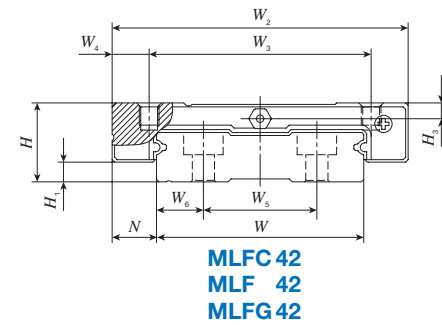
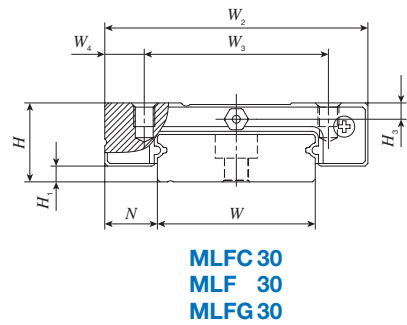
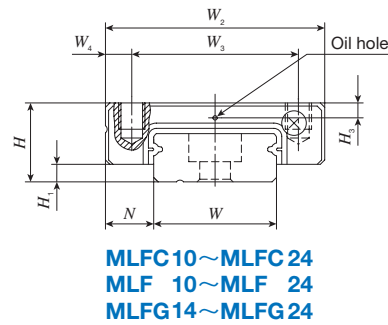
Track rail of interchangeable ML → Model code LWL-B (Ex: LWL9R160BPS2)

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



# IKO G-Lube Linear Way MLF Wide type

## MLFC · MLF · MLFG



| Model number | Interchangeable | Mass (Reference) g |                        | Dimension of assembly mm |                |     | Dimension of slide unit mm |                |                |                |                |                |                |                        |                |    | Dimension of track rail mm |                |                |                |                |     | Appended mounting bolt for track rail mm<br>Bolt size x length | Basic (2) dynamic load rating C | Basic (2) static load rating C <sub>0</sub>                | Static moment rating (2) |       |                | Model number |                |                |
|--------------|-----------------|--------------------|------------------------|--------------------------|----------------|-----|----------------------------|----------------|----------------|----------------|----------------|----------------|----------------|------------------------|----------------|----|----------------------------|----------------|----------------|----------------|----------------|-----|----------------------------------------------------------------|---------------------------------|------------------------------------------------------------|--------------------------|-------|----------------|--------------|----------------|----------------|
|              |                 | Slide unit         | Track rail (per 100mm) | H                        | H <sub>1</sub> | N   | W <sub>2</sub>             | W <sub>3</sub> | W <sub>4</sub> | L <sub>1</sub> | L <sub>2</sub> | L <sub>3</sub> | L <sub>4</sub> | M <sub>1</sub> x depth | H <sub>3</sub> | W  | H <sub>4</sub>             | W <sub>5</sub> | W <sub>6</sub> | d <sub>5</sub> | d <sub>4</sub> | h   |                                                                |                                 |                                                            | E                        | F     | T <sub>0</sub> |              | T <sub>x</sub> | T <sub>y</sub> |
| MLFC 10      | ☆               | 6.1                | 28                     | 6.5                      | 1.5            | 3.5 | 17                         | 13             | 2              | 20.5           | -              | 13.6           | -              | M2.5 x 1.5             | 1.3            | 10 | 4                          | -              | -              | 2.9            | 4.8            | 1.6 | 10                                                             | 20                              | Cross-recessed head screw for precision equipment M2.5 x 7 | 712                      | 1 180 | 6.1            | 2.6          | 2.2            | MLFC 10        |
| MLF 10       | ☆               | 7.6                |                        |                          |                |     |                            |                |                | 24.5           |                | 17.6           |                |                        |                |    |                            |                |                |                |                |     |                                                                |                                 |                                                            | 14.9                     | 12.5  |                |              |                |                |
| MLFC 14      | ☆               | 13                 | 54                     | 9                        | 2              | 5.5 | 25                         | 19             | 3              | 22.5           | -              | 13             | -              | M3 x 3                 | 1.7            | 14 | 5.5                        | -              | -              | 3.5            | 6              | 3.2 | 15                                                             | 30                              | Hexagon socket head bolt M3 x 8                            | 1 240                    | 1 700 | 12.2           | 3.8          | 3.2            | MLFC 14        |
| MLF 14       | ☆               | 20                 |                        |                          |                |     |                            |                |                | 31.5           |                | 10             |                |                        |                |    |                            |                |                |                |                |     |                                                                |                                 |                                                            | 22                       | 24.6  | 20.7           |              |                |                |
| MLFG 14      | ☆               | 29                 | 90                     | 12                       | 3              | 6   | 30                         | 21             | 4.5            | 42             | 19             | 32.5           | -              | M3 x 3                 | 2.5            | 18 | 7                          | -              | -              | 3.5            | 6.5            | 4.5 | 15                                                             | 30                              | Hexagon socket head bolt M3 x 8                            | 2 320                    | 4 160 | 29.8           | 21.0         | 17.6           | MLFG 14        |
| MLFC 18      | ☆               | 26                 |                        |                          |                |     |                            |                |                | 26.5           |                | 16.6           |                |                        |                |    |                            |                |                |                |                |     |                                                                |                                 |                                                            | 35.9                     | 30.1  |                |              |                |                |
| MLF 18       | ☆               | 42                 | 139                    | 14                       | 3              | 8   | 40                         | 28             | 6              | 39             | 12             | 28.6           | -              | M3 x 3                 | 2.5            | 18 | 7                          | -              | -              | 3.5            | 6.5            | 4.5 | 15                                                             | 30                              | Hexagon socket head bolt M3 x 8                            | 2 280                    | 3 810 | 34.9           | 16.9         | 14.2           | MLF 18         |
| MLFG 18      | ☆               | 59                 |                        |                          |                |     |                            |                |                | 50.5           |                | 24             |                |                        |                |    |                            |                |                |                |                |     |                                                                |                                 |                                                            | 40.4                     | 90.1  | 75.6           |              |                |                |
| MLFC 24      | ☆               | 46                 | 139                    | 14                       | 3              | 8   | 40                         | 28             | 6              | 30.5           | -              | 17.7           | -              | M3 x 3.5               | 3.2            | 24 | 8                          | -              | -              | 4.5            | 8              | 4.5 | 20                                                             | 40                              | Hexagon socket head bolt M4 x 10                           | 2 800                    | 3 340 | 40.7           | 9.7          | 8.2            | MLFC 24        |
| MLF 24       | ☆               | 74                 |                        |                          |                |     |                            |                |                | 44             |                | 15             |                |                        |                |    |                            |                |                |                |                |     |                                                                |                                 |                                                            | 31                       | 67.6  | 56.8           |              |                |                |
| MLFG 24      | ☆               | 108                | 198                    | 15                       | 3              | 10  | 50                         | 35             | 7.5            | 59             | 28             | 46.3           | -              | M3 x 3.5               | 3.2            | 24 | 8                          | -              | -              | 4.5            | 8              | 4.5 | 20                                                             | 40                              | Hexagon socket head bolt M4 x 10                           | 5 620                    | 9 060 | 111            | 63.3         | 53.1           | MLFG 24        |
| MLFC 30      | ☆               | 70                 |                        |                          |                |     |                            |                |                | 35.5           |                | 20.5           |                |                        |                |    |                            |                |                |                |                |     |                                                                |                                 |                                                            | 107                      | 13.0  | 89.9           |              |                |                |
| MLF 30       | ☆               | 111                | 294                    | 16                       | 4              | 9   | 60                         | 45             | 7.5            | 50             | 18             | 34.8           | 54             | M4 x 4.5               | 3.1            | 30 | 9                          | -              | -              | 4.5            | 8              | 4.5 | 20                                                             | 40                              | Hexagon socket head bolt M4 x 12                           | 5 970                    | 8 440 | 128            | 48.7         | 40.8           | MLF 30         |
| MLFG 30      | ☆               | 167                |                        |                          |                |     |                            |                |                | 68.5           |                | 35             |                |                        |                |    |                            |                |                |                |                |     |                                                                |                                 |                                                            | 53.8                     | 217   | 84.3           |              |                |                |
| MLFC 42      | ☆               | 95                 | 294                    | 16                       | 4              | 9   | 60                         | 45             | 7.5            | 41.5           | -              | 25.7           | 46             | M4 x 4.5               | 3.2            | 42 | 10                         | 23             | 9.5            | 4.5            | 8              | 4.5 | 20                                                             | 40                              | Hexagon socket head bolt M4 x 12                           | 5 440                    | 6 810 | 144            | 30.8         | 25.8           | MLFC 42        |
| MLF 42       | ☆               | 138                |                        |                          |                |     |                            |                |                | 55             |                | 20             |                |                        |                |    |                            |                |                |                |                |     |                                                                |                                 |                                                            | 39.4                     | 426   | 51.4           |              |                |                |
| MLFG 42      | ☆               | 200                | 74.5                   | 35                       | 58.7           | 79  | 140                        | 117            | 674            | 565            | MLFG 42        |                |                |                        |                |    |                            |                |                |                |                |     |                                                                |                                 |                                                            |                          |       |                |              |                |                |

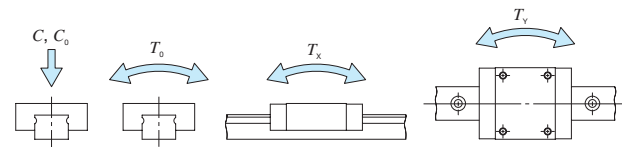
Note (1): Track rail lengths L are shown in Table 30.2.

(2): The directions of basic dynamic load rating (C), basic static load rating (C<sub>0</sub>) and static moment rating (T<sub>0</sub>, T<sub>x</sub> and T<sub>y</sub>) are shown in the sketches below.

The upper values in the T<sub>x</sub> and T<sub>y</sub> column apply to one slide unit, and the lower values apply to two units in close contact.

Remark 1: The appended bolts for mounting track rails are hexagon socket head bolts of JIS B 1176 or equivalent, or cross-recessed head cap screws for precision equipment.

2: Oil hole is provided for MLF(C, G)10 to MLF(C, G)24 models.



### Example of identification number for assembled set

|                                |                                                                                      |                                       |                                               |                                     |                                                                                                                         |                                                                |
|--------------------------------|--------------------------------------------------------------------------------------|---------------------------------------|-----------------------------------------------|-------------------------------------|-------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------|
| Model code                     | Size                                                                                 | Part code                             | Preload symbol                                | Class symbol                        | Interchangeable code                                                                                                    | Supplemental code                                              |
| <b>MLF G</b>                   | <b>42</b>                                                                            | <b>C2 R320</b>                        | <b>T1</b>                                     | <b>P</b>                            | <b>S2</b>                                                                                                               | <b>/U</b>                                                      |
| <b>Series</b><br>MLF Wide type | <b>Length of slide unit</b><br>C Short<br>No symbol Standard<br>G High rigidity long | <b>Size</b><br>10, 14, 18, 24, 30, 42 | <b>Number of slide unit (two slide units)</b> | <b>Length of track rail (320mm)</b> | <b>Interchangeable specification</b><br>S2 Interchangeable specification<br>No symbol Non interchangeable specification | <b>Special specification</b><br>A, D, E, I, LR, MN, N, S, U, W |
|                                |                                                                                      |                                       |                                               |                                     | <b>Preload amount</b><br>T0 Clearance<br>No symbol Standard<br>T1 Light preload                                         | <b>Accuracy class</b><br>H High<br>P Precision                 |

In case ordering track rail only, model code is changed as shown below.

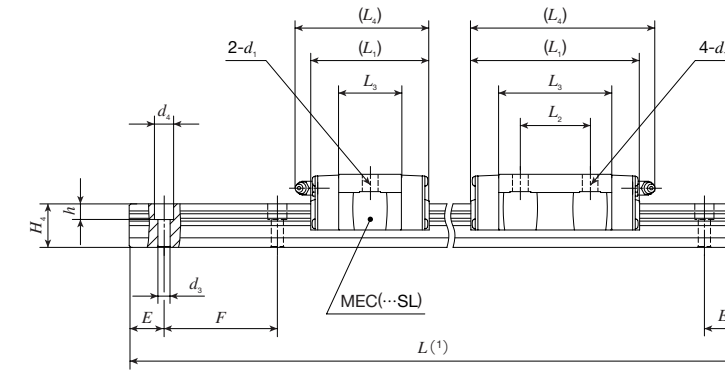
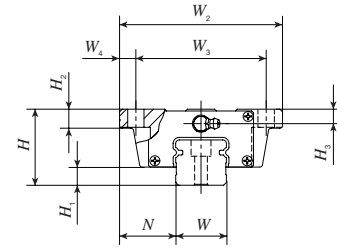
Track rail of interchangeable MLF → Model code LWLF-B (Ex: LWLF42R320BPS2)

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

# IKO G-Lube Linear Way ME

Flange type,  
mounting from bottom

Short : MEC  
Standard : ME  
High rigidity long : MEG



| Model number | Interchangeable | Mass (Reference) |                 | Dimension of assembly mm |                |      | Dimension of slide unit mm |                |                |                |                |                |                | Dimension of track rail mm |                |                |    |                |                |                | Recommended mounting bolt for track rail mm<br>Bolt size × length | Basic dynamic load rating C | Basic static load rating C <sub>0</sub> | Static moment rating <sup>(3)</sup> |        |        | Model number |                |                |                |
|--------------|-----------------|------------------|-----------------|--------------------------|----------------|------|----------------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------------------|----------------|----------------|----|----------------|----------------|----------------|-------------------------------------------------------------------|-----------------------------|-----------------------------------------|-------------------------------------|--------|--------|--------------|----------------|----------------|----------------|
|              |                 | Slide unit kg    | Track rail kg/m | H                        | H <sub>1</sub> | N    | W <sub>2</sub>             | W <sub>3</sub> | W <sub>4</sub> | L <sub>1</sub> | L <sub>2</sub> | L <sub>3</sub> | L <sub>4</sub> | d <sub>1</sub>             | H <sub>2</sub> | H <sub>3</sub> | W  | H <sub>4</sub> | d <sub>3</sub> | d <sub>4</sub> |                                                                   |                             |                                         | h                                   | E      | F      |              | T <sub>0</sub> | T <sub>x</sub> | T <sub>y</sub> |
| MEC 15       | ☆               | 0.11             | 1.57            | 24                       | 5.8            | 18.5 | 52                         | 41             | 5.5            | 41             | -              | 22.4           | 45             | 4.5                        | 7              | 4.5            | 15 | 14.5           | 3.6 (4.5)      | 6.5 (8)        | 4.5 (6)                                                           | 20                          | 60                                      | M3 × 16 (M4 × 16)                   | 5 240  | 5 480  | 43.8         | 21.3 149       | 21.3 149       | MEC 15         |
| MEC 15...SL  | ☆               |                  |                 |                          |                |      |                            |                |                | MEC 15...SL    |                |                |                |                            |                |                |    |                |                |                |                                                                   |                             |                                         |                                     |        |        |              |                |                |                |
| ME 15        | ☆               | 0.18             | 1.57            | 24                       | 5.8            | 18.5 | 52                         | 41             | 5.5            | 57             | 26             | 38.4           | 61             | 4.5                        | 7              | 4.5            | 15 | 14.5           | 3.6 (4.5)      | 6.5 (8)        | 4.5 (6)                                                           | 20                          | 60                                      | M3 × 16 (M4 × 16)                   | 7 640  | 9 390  | 75.1         | 57.6 333       | 57.6 333       | ME 15          |
| ME 15...SL   | ☆               |                  |                 |                          |                |      |                            |                |                | ME 15...SL     |                |                |                |                            |                |                |    |                |                |                |                                                                   |                             |                                         |                                     |        |        |              |                |                |                |
| MEG 15       | ☆               | 0.24             | 1.57            | 24                       | 5.8            | 18.5 | 52                         | 41             | 5.5            | 70             | 36             | 51.1           | 74             | 4.5                        | 7              | 4.5            | 15 | 14.5           | 3.6 (4.5)      | 6.5 (8)        | 4.5 (6)                                                           | 20                          | 60                                      | M3 × 16 (M4 × 16)                   | 9 340  | 12 500 | 100          | 99.5 533       | 99.5 533       | MEG 15         |
| MEG 15...SL  | ☆               |                  |                 |                          |                |      |                            |                |                | MEG 15...SL    |                |                |                |                            |                |                |    |                |                |                |                                                                   |                             |                                         |                                     |        |        |              |                |                |                |
| MEC 20       | ☆               | 0.18             | 2.28            | 28                       | 6              | 19.5 | 59                         | 49             | 5              | 47             | -              | 24.7           | 59             | 5.5                        | 9              | 5.5            | 20 | 16             | 6              | 9.5            | 8.5                                                               | 20                          | 60                                      | M5 × 16                             | 7 580  | 7 340  | 78.9         | 31.5 235       | 31.5 235       | MEC 20         |
| MEC 20...SL  | ☆               |                  |                 |                          |                |      |                            |                |                | MEC 20...SL    |                |                |                |                            |                |                |    |                |                |                |                                                                   |                             |                                         |                                     |        |        |              |                |                |                |
| ME 20        | ☆               | 0.30             | 2.28            | 28                       | 6              | 19.5 | 59                         | 49             | 5              | 66.5           | 32             | 44.2           | 79             | 5.5                        | 9              | 5.5            | 20 | 16             | 6              | 9.5            | 8.5                                                               | 20                          | 60                                      | M5 × 16                             | 11 600 | 13 400 | 145          | 95.6 561       | 95.6 561       | ME 20          |
| ME 20...SL   | ☆               |                  |                 |                          |                |      |                            |                |                | ME 20...SL     |                |                |                |                            |                |                |    |                |                |                |                                                                   |                             |                                         |                                     |        |        |              |                |                |                |
| MEG 20       | ☆               | 0.39             | 2.28            | 28                       | 6              | 19.5 | 59                         | 49             | 5              | 82             | 45             | 60.1           | 95             | 5.5                        | 9              | 5.5            | 20 | 16             | 6              | 9.5            | 8.5                                                               | 20                          | 60                                      | M5 × 16                             | 14 400 | 18 300 | 197          | 172 918        | 172 918        | MEG 20         |
| MEG 20...SL  | ☆               |                  |                 |                          |                |      |                            |                |                | MEG 20...SL    |                |                |                |                            |                |                |    |                |                |                |                                                                   |                             |                                         |                                     |        |        |              |                |                |                |
| MEC 25       | ☆               | 0.33             | 3.09            | 33                       | 7              | 25   | 73                         | 60             | 6.5            | 59             | -              | 32             | 71             | 7                          | 10             | 6.5            | 23 | 19             | 7              | 11             | 9                                                                 | 20                          | 60                                      | M6 × 20                             | 12 400 | 12 300 | 153          | 71.8 480       | 71.8 480       | MEC 25         |
| MEC 25...SL  | ☆               |                  |                 |                          |                |      |                            |                |                | MEC 25...SL    |                |                |                |                            |                |                |    |                |                |                |                                                                   |                             |                                         |                                     |        |        |              |                |                |                |
| ME 25        | ☆               | 0.54             | 3.09            | 33                       | 7              | 25   | 73                         | 60             | 6.5            | 83             | 35             | 56             | 95             | 7                          | 10             | 6.5            | 23 | 19             | 7              | 11             | 9                                                                 | 20                          | 60                                      | M6 × 20                             | 18 100 | 21 100 | 262          | 195 1 090      | 195 1 090      | ME 25          |
| ME 25...SL   | ☆               |                  |                 |                          |                |      |                            |                |                | ME 25...SL     |                |                |                |                            |                |                |    |                |                |                |                                                                   |                             |                                         |                                     |        |        |              |                |                |                |
| MEG 25       | ☆               | 0.72             | 3.09            | 33                       | 7              | 25   | 73                         | 60             | 6.5            | 102            | 50             | 75             | 114            | 7                          | 10             | 6.5            | 23 | 19             | 7              | 11             | 9                                                                 | 20                          | 60                                      | M6 × 20                             | 22 200 | 28 200 | 349          | 336 1 740      | 336 1 740      | MEG 25         |
| MEG 25...SL  | ☆               |                  |                 |                          |                |      |                            |                |                | MEG 25...SL    |                |                |                |                            |                |                |    |                |                |                |                                                                   |                             |                                         |                                     |        |        |              |                |                |                |

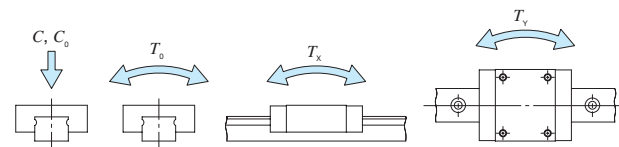
Note (1) : Track rail lengths L are shown in Table 30.3.

(2) : Track rail mounting bolts are not appended. Hexagon socket bolts of JIS B 1176 strength division 12.9 or equivalent are recommended. Values in parentheses are applicable to the track rail of supplemental code "/M4" of special specification.

(3) : The directions of basic dynamic load rating (C), basic static load rating (C<sub>0</sub>) and static moment rating (T<sub>0</sub>, T<sub>x</sub> and T<sub>y</sub>) are shown in the sketches below.

The upper values in the T<sub>x</sub> and T<sub>y</sub> column apply to one slide unit, and the lower values apply to two units in close contact.

Remark : Values in parentheses are applicable to the track rail of supplemental code "/M4" of special specification.



### Example of identification number for assembled set

|                                                       |                                                                                      |                           |                                               |                                     |                                                                                                                                          |                                                                                                                |                                                                                   |
|-------------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------|-----------------------------------------------|-------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|
| Model code                                            | Size                                                                                 | Part code                 | Material code                                 | Preload symbol                      | Class symbol                                                                                                                             | Interchangeable code                                                                                           | Supplemental code                                                                 |
| <b>ME G 20 C2 R820</b>                                |                                                                                      |                           |                                               | <b>T<sub>1</sub></b>                | <b>P</b>                                                                                                                                 | <b>S2</b>                                                                                                      | <b>/U</b>                                                                         |
| <b>Series</b><br>ME Flange type, mounting from bottom | <b>Length of slide unit</b><br>C Short<br>No symbol Standard<br>G High rigidity long | <b>Size</b><br>15, 20, 25 | <b>Number of slide unit (two slide units)</b> | <b>Length of track rail (820mm)</b> | <b>Material</b><br>No symbol High carbon steel<br>SL Stainless steel                                                                     | <b>Interchangeable code</b><br>S2 Interchangeable specification<br>No symbol Non interchangeable specification | <b>Special specification</b><br>A, D, E, F, I, J, L, LF, MA, M4, N, T, U, V, W, Z |
|                                                       |                                                                                      |                           |                                               |                                     | <b>Preload amount</b><br>T <sub>2</sub> Clearance<br>No symbol Standard<br>T <sub>1</sub> Light preload<br>T <sub>2</sub> Medium preload | <b>Accuracy class</b><br>No symbol Ordinary<br>H High<br>P Precision<br>SP Super precision                     |                                                                                   |

In case ordering track rail only, model code is changed as shown below.  
Track rail of interchangeable ME → Model code LWE (Ex: LWE20R820PS2)

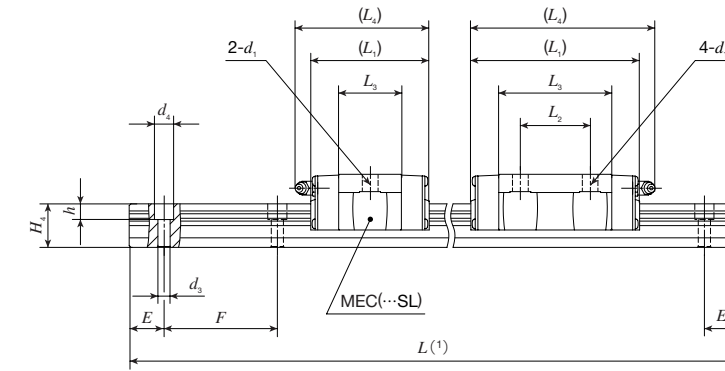
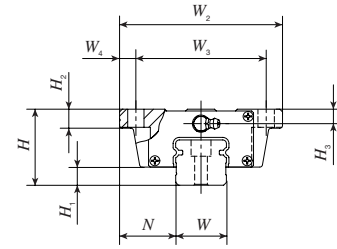
1N=0.102kgf=0.2248lbs.  
1mm=0.03937inch



# IKO G-Lube Linear Way ME

Flange type,  
mounting from bottom

Short : MEC  
Standard : ME  
High rigidity long : MEG

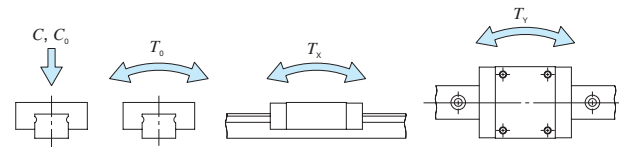


| Model number | Interchangeable | Mass (Reference) |                 | Dimension of assembly mm |                |      | Dimension of slide unit mm |                |                |                |                |                |                |                |                | Dimension of track rail mm |    |                |                |                |    |      | Recommended mounting bolt for track rail mm<br>Bolt size × length | Basic dynamic load rating C<br>N | Basic static load rating C <sub>0</sub><br>N | Static moment rating <sup>(3)</sup> |                       |                       | Model number |                       |
|--------------|-----------------|------------------|-----------------|--------------------------|----------------|------|----------------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------------------|----|----------------|----------------|----------------|----|------|-------------------------------------------------------------------|----------------------------------|----------------------------------------------|-------------------------------------|-----------------------|-----------------------|--------------|-----------------------|
|              |                 | Slide unit kg    | Track rail kg/m | H                        | H <sub>1</sub> | N    | W <sub>2</sub>             | W <sub>3</sub> | W <sub>4</sub> | L <sub>1</sub> | L <sub>2</sub> | L <sub>3</sub> | L <sub>4</sub> | d <sub>1</sub> | H <sub>2</sub> | H <sub>3</sub>             | W  | H <sub>4</sub> | d <sub>3</sub> | d <sub>4</sub> | h  | E    |                                                                   |                                  |                                              | F                                   | T <sub>0</sub><br>N·m | T <sub>x</sub><br>N·m |              | T <sub>y</sub><br>N·m |
| MEC 30       | ☆               | 0.58             | 5.09            | 42                       | 10             | 31   | 90                         | 72             | 9              | 68             | -              | 36             | 78             | 9              | 10             | 8                          | 28 | 25             | 7              | 11             | 9  | 20   | 80                                                                | M 6 × 25                         | 20 600                                       | 18 800                              | 287                   | 129 855               | 129 855      | MEC 30                |
| MEC 30...SL  | ☆               |                  |                 |                          |                |      |                            |                |                | MEC 30...SL    |                |                |                |                |                |                            |    |                |                |                |    |      |                                                                   |                                  |                                              |                                     |                       |                       |              |                       |
| ME 30        | ☆               | ME 30            |                 |                          |                |      |                            |                |                |                |                |                |                |                |                |                            |    |                |                |                |    |      |                                                                   |                                  |                                              |                                     |                       |                       |              |                       |
| ME 30...SL   | ☆               | ME 30...SL       |                 |                          |                |      |                            |                |                |                |                |                |                |                |                |                            |    |                |                |                |    |      |                                                                   |                                  |                                              |                                     |                       |                       |              |                       |
| MEG 30       | ☆               | MEG 30           |                 |                          |                |      |                            |                |                |                |                |                |                |                |                |                            |    |                |                |                |    |      |                                                                   |                                  |                                              |                                     |                       |                       |              |                       |
| MEG 30...SL  | ☆               | 1.50             | 128.5           | 60                       | 96.5           | 139  | MEG 30...SL                |                |                |                |                |                |                |                |                |                            |    |                |                |                |    |      |                                                                   |                                  |                                              |                                     |                       |                       |              |                       |
| MEC 35       | ☆               | 0.84             | 6.85            | 48                       | 11             | 33   | 100                        | 82             | 9              | 78             | -              | 41.6           | 90             | 9              | 13             | 10                         | 34 | 28             | 9              | 14             | 12 | 20   | 80                                                                | M 8 × 30                         | 29 900                                       | 26 800                              | 412                   | 176 190               | 162 100      | MEC 35                |
| ME 35        | ☆               | 1.52             |                 |                          |                |      |                            |                |                | 111            | 50             | 74.6           | 123            |                |                |                            |    |                |                |                |    |      |                                                                   |                                  |                                              |                                     |                       |                       |              | ME 35                 |
| ME 45        | ☆               | 2.46             | 11.2            | 60                       | 14             | 37.5 | 120                        | 100            | 10             | 125            | 60             | 81.4           | 136            | 11             | 15             | 13                         | 45 | 34             | 11             | 17.5           | 14 | 22.5 | 105                                                               | M10 × 35                         | 61 100                                       | 60 200                              | 1 210                 | 672 4 070             | 618 3 750    | ME 45                 |

Note (1) : Track rail lengths L are shown in Table 30.3.

(2) : Track rail mounting bolts are not appended. Hexagon socket bolts of JIS B 1176 strength division 12.9 or equivalent are recommended.

(3) : The directions of basic dynamic load rating (C), basic static load rating (C<sub>0</sub>) and static moment rating (T<sub>0</sub>, T<sub>x</sub> and T<sub>y</sub>) are shown in the sketches below.  
The upper values in the T<sub>x</sub> and T<sub>y</sub> column apply to one slide unit, and the lower values apply to two units in close contact.



### Example of identification number for assembled set

| Model code                                            | Size                                                                                 | Part code                 | Material code                                 | Preload symbol                                                                                                                           | Class symbol                                                                               | Interchangeable code                                                                                           | Supplemental code                                                             |
|-------------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------|-----------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------|
| ME G 30 C2 R440                                       |                                                                                      |                           |                                               | T <sub>1</sub>                                                                                                                           | P                                                                                          | S2                                                                                                             | /U                                                                            |
| <b>Series</b><br>ME Flange type, mounting from bottom | <b>Length of slide unit</b><br>C Short<br>No symbol Standard<br>G High rigidity long | <b>Size</b><br>30, 35, 45 | <b>Number of slide unit (two slide units)</b> | <b>Length of track rail (440mm)</b>                                                                                                      | <b>Material</b><br>No symbol High carbon steel<br>SL Stainless steel                       | <b>Interchangeable code</b><br>S2 Interchangeable specification<br>No symbol Non interchangeable specification | <b>Special specification</b><br>A, D, E, F, I, J, L, LF, MA, N, T, U, V, W, Z |
|                                                       |                                                                                      |                           |                                               | <b>Preload amount</b><br>T <sub>2</sub> Clearance<br>No symbol Standard<br>T <sub>1</sub> Light preload<br>T <sub>2</sub> Medium preload | <b>Accuracy class</b><br>No symbol Ordinary<br>H High<br>P Precision<br>SP Super precision |                                                                                                                |                                                                               |

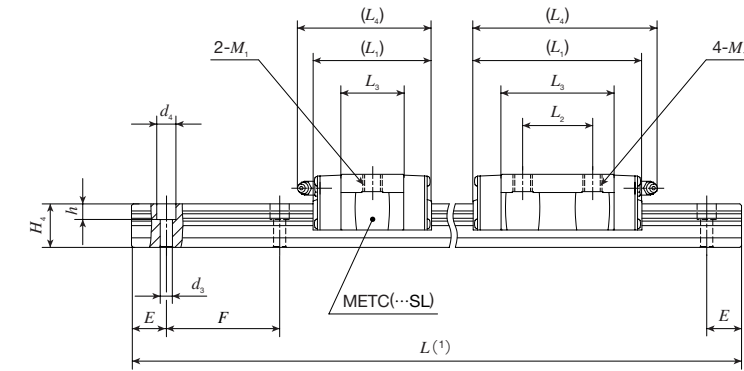
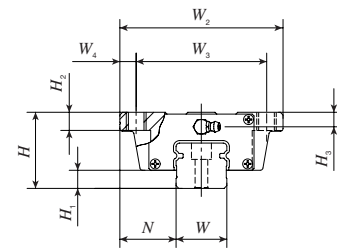
In case ordering track rail only, model code is changed as shown below.  
Track rail of interchangeable ME → Model code LWE (Ex: LWE30R440PS2)

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

# IKO G-Lube Linear Way ME

Flange type, mounting from top

Short : METC  
 Standard : MET  
 High rigidity long : METG



| Model number | Interchangeable | Mass (Reference) |                 | Dimension of assembly mm |                |      | Dimension of slide unit mm |                |                |                |                |                |                | Dimension of track rail mm |                |                |    |                |                |                | Recommended mounting bolt for track rail mm<br>Bolt size × length | Basic dynamic load rating C | Basic static load rating C <sub>0</sub> | Static moment rating <sup>(3)</sup> |        |        | Model number |                |                |                |
|--------------|-----------------|------------------|-----------------|--------------------------|----------------|------|----------------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------------------|----------------|----------------|----|----------------|----------------|----------------|-------------------------------------------------------------------|-----------------------------|-----------------------------------------|-------------------------------------|--------|--------|--------------|----------------|----------------|----------------|
|              |                 | Slide unit kg    | Track rail kg/m | H                        | H <sub>1</sub> | N    | W <sub>2</sub>             | W <sub>3</sub> | W <sub>4</sub> | L <sub>1</sub> | L <sub>2</sub> | L <sub>3</sub> | L <sub>4</sub> | M <sub>1</sub>             | H <sub>2</sub> | H <sub>3</sub> | W  | H <sub>4</sub> | d <sub>3</sub> | d <sub>4</sub> |                                                                   |                             |                                         | h                                   | E      | F      |              | T <sub>0</sub> | T <sub>x</sub> | T <sub>y</sub> |
| METC 15      | ☆               | 0.11             | 1.57            | 24                       | 5.8            | 18.5 | 52                         | 41             | 5.5            | 41             | -              | 22.4           | 45             | M5                         | 7              | 4.5            | 15 | 14.5           | 3.6 (4.5)      | 6.5 (8)        | 4.5 (6)                                                           | 20                          | 60                                      | M3 × 16 (M4 × 16)                   | 5 240  | 5 480  | 43.8         | 21.3 149       | 21.3 149       | METC 15        |
| METC 15...SL | ☆               |                  |                 |                          |                |      |                            |                |                | METC 15...SL   |                |                |                |                            |                |                |    |                |                |                |                                                                   |                             |                                         |                                     |        |        |              |                |                |                |
| MET 15       | ☆               | 0.18             | 1.57            | 24                       | 5.8            | 18.5 | 52                         | 41             | 5.5            | 57             | 26             | 38.4           | 61             | M5                         | 7              | 4.5            | 15 | 14.5           | 3.6 (4.5)      | 6.5 (8)        | 4.5 (6)                                                           | 20                          | 60                                      | M3 × 16 (M4 × 16)                   | 7 640  | 9 390  | 75.1         | 57.6 333       | 57.6 333       | MET 15         |
| MET 15...SL  | ☆               |                  |                 |                          |                |      |                            |                |                | MET 15...SL    |                |                |                |                            |                |                |    |                |                |                |                                                                   |                             |                                         |                                     |        |        |              |                |                |                |
| METG 15      | ☆               | 0.24             | 1.57            | 24                       | 5.8            | 18.5 | 52                         | 41             | 5.5            | 70             | 36             | 51.1           | 74             | M5                         | 7              | 4.5            | 15 | 14.5           | 3.6 (4.5)      | 6.5 (8)        | 4.5 (6)                                                           | 20                          | 60                                      | M3 × 16 (M4 × 16)                   | 9 340  | 12 500 | 100          | 99.5 533       | 99.5 533       | METG 15        |
| METG 15...SL | ☆               |                  |                 |                          |                |      |                            |                |                | METG 15...SL   |                |                |                |                            |                |                |    |                |                |                |                                                                   |                             |                                         |                                     |        |        |              |                |                |                |
| METC 20      | ☆               | 0.18             | 2.28            | 28                       | 6              | 19.5 | 59                         | 49             | 5              | 47             | -              | 24.7           | 59             | M6                         | 9              | 5.5            | 20 | 16             | 6              | 9.5            | 8.5                                                               | 20                          | 60                                      | M5 × 16                             | 7 580  | 7 340  | 78.9         | 31.5 235       | 31.5 235       | METC 20        |
| METC 20...SL | ☆               |                  |                 |                          |                |      |                            |                |                | METC 20...SL   |                |                |                |                            |                |                |    |                |                |                |                                                                   |                             |                                         |                                     |        |        |              |                |                |                |
| MET 20       | ☆               | 0.30             | 2.28            | 28                       | 6              | 19.5 | 59                         | 49             | 5              | 66.5           | 32             | 44.2           | 79             | M6                         | 9              | 5.5            | 20 | 16             | 6              | 9.5            | 8.5                                                               | 20                          | 60                                      | M5 × 16                             | 11 600 | 13 400 | 145          | 95.6 561       | 95.6 561       | MET 20         |
| MET 20...SL  | ☆               |                  |                 |                          |                |      |                            |                |                | MET 20...SL    |                |                |                |                            |                |                |    |                |                |                |                                                                   |                             |                                         |                                     |        |        |              |                |                |                |
| METG 20      | ☆               | 0.39             | 2.28            | 28                       | 6              | 19.5 | 59                         | 49             | 5              | 82             | 45             | 60.1           | 95             | M6                         | 9              | 5.5            | 20 | 16             | 6              | 9.5            | 8.5                                                               | 20                          | 60                                      | M5 × 16                             | 14 400 | 18 300 | 197          | 172 918        | 172 918        | METG 20        |
| METG 20...SL | ☆               |                  |                 |                          |                |      |                            |                |                | METG 20...SL   |                |                |                |                            |                |                |    |                |                |                |                                                                   |                             |                                         |                                     |        |        |              |                |                |                |
| METC 25      | ☆               | 0.33             | 3.09            | 33                       | 7              | 25   | 73                         | 60             | 6.5            | 59             | -              | 32             | 71             | M8                         | 10             | 6.5            | 23 | 19             | 7              | 11             | 9                                                                 | 20                          | 60                                      | M6 × 20                             | 12 400 | 12 300 | 153          | 71.8 480       | 71.8 480       | METC 25        |
| METC 25...SL | ☆               |                  |                 |                          |                |      |                            |                |                | METC 25...SL   |                |                |                |                            |                |                |    |                |                |                |                                                                   |                             |                                         |                                     |        |        |              |                |                |                |
| MET 25       | ☆               | 0.54             | 3.09            | 33                       | 7              | 25   | 73                         | 60             | 6.5            | 83             | 35             | 56             | 95             | M8                         | 10             | 6.5            | 23 | 19             | 7              | 11             | 9                                                                 | 20                          | 60                                      | M6 × 20                             | 18 100 | 21 100 | 262          | 195 1 090      | 195 1 090      | MET 25         |
| MET 25...SL  | ☆               |                  |                 |                          |                |      |                            |                |                | MET 25...SL    |                |                |                |                            |                |                |    |                |                |                |                                                                   |                             |                                         |                                     |        |        |              |                |                |                |
| METG 25      | ☆               | 0.72             | 3.09            | 33                       | 7              | 25   | 73                         | 60             | 6.5            | 102            | 50             | 75             | 114            | M8                         | 10             | 6.5            | 23 | 19             | 7              | 11             | 9                                                                 | 20                          | 60                                      | M6 × 20                             | 22 200 | 28 200 | 349          | 336 1 740      | 336 1 740      | METG 25        |
| METG 25...SL | ☆               |                  |                 |                          |                |      |                            |                |                | METG 25...SL   |                |                |                |                            |                |                |    |                |                |                |                                                                   |                             |                                         |                                     |        |        |              |                |                |                |

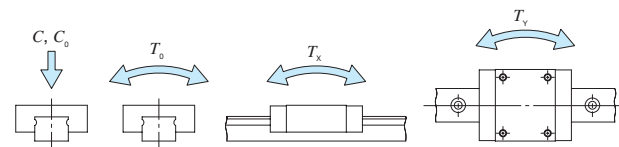
Note (1) : Track rail lengths L are shown in Table 30.3.

(2) : Track rail mounting bolts are not appended. Hexagon socket bolts of JIS B 1176 strength division 12.9 or equivalent are recommended. Values in parentheses are applicable to the track rail of supplemental code "/M4" of special specification.

(3) : The directions of basic dynamic load rating (C), basic static load rating (C<sub>0</sub>) and static moment rating (T<sub>0</sub>, T<sub>x</sub> and T<sub>y</sub>) are shown in the sketches below.

The upper values in the T<sub>x</sub> and T<sub>y</sub> column apply to one slide unit, and the lower values apply to two units in close contact.

Remark : Values in parentheses are applicable to the track rail of supplemental code "/M4" of special specification.



### Example of identification number for assembled set

|                                                     |                                                                                      |                           |                                               |                                     |                                                                                                                                          |                                                                                                                |                                                                                   |
|-----------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------|-----------------------------------------------|-------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|
| Model code                                          | Size                                                                                 | Part code                 | Material code                                 | Preload symbol                      | Class symbol                                                                                                                             | Interchangeable code                                                                                           | Supplemental code                                                                 |
| <b>MET G</b>                                        | <b>20</b>                                                                            | <b>C2 R820</b>            |                                               | <b>T<sub>1</sub></b>                | <b>P</b>                                                                                                                                 | <b>S2</b>                                                                                                      | <b>/U</b>                                                                         |
| <b>Series</b><br>MET Flange type, mounting from top | <b>Length of slide unit</b><br>C Short<br>No symbol Standard<br>G High rigidity long | <b>Size</b><br>15, 20, 25 | <b>Number of slide unit (two slide units)</b> | <b>Length of track rail (820mm)</b> | <b>Material</b><br>No symbol High carbon steel<br>SL Stainless steel                                                                     | <b>Interchangeable code</b><br>S2 Interchangeable specification<br>No symbol Non interchangeable specification | <b>Special specification</b><br>A, D, E, F, I, J, L, LF, MA, M4, N, T, U, V, W, Z |
|                                                     |                                                                                      |                           |                                               |                                     | <b>Preload amount</b><br>T <sub>2</sub> Clearance<br>No symbol Standard<br>T <sub>1</sub> Light preload<br>T <sub>2</sub> Medium preload | <b>Accuracy class</b><br>No symbol Ordinary<br>H High<br>P Precision<br>SP Super precision                     |                                                                                   |

In case ordering track rail only, model code is changed as shown below.

Track rail of interchangeable ME → Model code LWE (Ex: LWE20R820PS2)

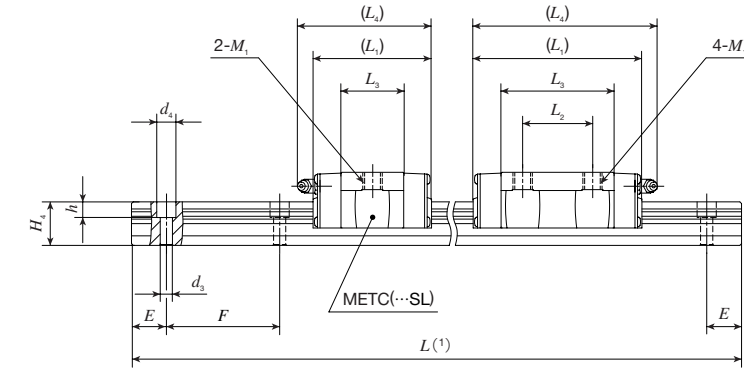
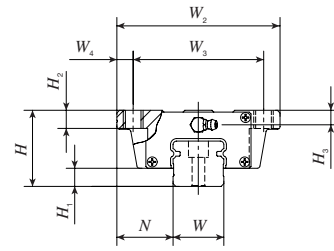
1N=0.102kgf=0.2248lbs.  
1mm=0.03937inch



# IKO G-Lube Linear Way ME

Flange type, mounting from top

Short : METC  
 Standard : MET  
 High rigidity long : METG

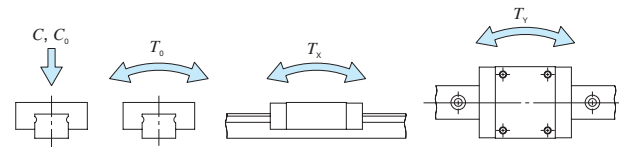


| Model number | Interchangeable | Mass (Reference) |                 | Dimension of assembly mm |                |      | Dimension of slide unit mm |                |                |                |                |                |                |                |                | Dimension of track rail mm |    |                |                |                |    |      | Recommended mounting bolt for track rail mm<br>Bolt size × length | Basic <sup>(3)</sup> dynamic load rating C<br>N | Basic <sup>(3)</sup> static load rating C <sub>0</sub><br>N | Static moment rating <sup>(3)</sup> |                       |                       | Model number |                       |
|--------------|-----------------|------------------|-----------------|--------------------------|----------------|------|----------------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------------------|----|----------------|----------------|----------------|----|------|-------------------------------------------------------------------|-------------------------------------------------|-------------------------------------------------------------|-------------------------------------|-----------------------|-----------------------|--------------|-----------------------|
|              |                 | Slide unit kg    | Track rail kg/m | H                        | H <sub>1</sub> | N    | W <sub>2</sub>             | W <sub>3</sub> | W <sub>4</sub> | L <sub>1</sub> | L <sub>2</sub> | L <sub>3</sub> | L <sub>4</sub> | M <sub>1</sub> | H <sub>2</sub> | H <sub>3</sub>             | W  | H <sub>4</sub> | d <sub>3</sub> | d <sub>4</sub> | h  | E    |                                                                   |                                                 |                                                             | F                                   | T <sub>0</sub><br>N·m | T <sub>x</sub><br>N·m |              | T <sub>y</sub><br>N·m |
| METC 30      | ☆               | 0.58             | 5.09            | 42                       | 10             | 31   | 90                         | 72             | 9              | 68             | -              | 36             | 78             | M10            | 10             | 8                          | 28 | 25             | 7              | 11             | 9  | 20   | 80                                                                | M 6 × 25                                        | 20 600                                                      | 18 800                              | 287                   | 129 855               | 129 855      | METC 30               |
| METC 30...SL | ☆               |                  |                 |                          |                |      |                            |                |                | METC 30...SL   |                |                |                |                |                |                            |    |                |                |                |    |      |                                                                   |                                                 |                                                             |                                     |                       |                       |              |                       |
| MET 30       | ☆               | MET 30           |                 |                          |                |      |                            |                |                |                |                |                |                |                |                |                            |    |                |                |                |    |      |                                                                   |                                                 |                                                             |                                     |                       |                       |              |                       |
| MET 30...SL  | ☆               | MET 30...SL      |                 |                          |                |      |                            |                |                |                |                |                |                |                |                |                            |    |                |                |                |    |      |                                                                   |                                                 |                                                             |                                     |                       |                       |              |                       |
| METG 30      | ☆               | METG 30          |                 |                          |                |      |                            |                |                |                |                |                |                |                |                |                            |    |                |                |                |    |      |                                                                   |                                                 |                                                             |                                     |                       |                       |              |                       |
| METG 30...SL | ☆               | METG 30...SL     |                 |                          |                |      |                            |                |                |                |                |                |                |                |                |                            |    |                |                |                |    |      |                                                                   |                                                 |                                                             |                                     |                       |                       |              |                       |
| METC 35      | ☆               | 0.84             | 6.85            | 48                       | 11             | 33   | 100                        | 82             | 9              | 78             | -              | 41.6           | 90             | M10            | 13             | 10                         | 34 | 28             | 9              | 14             | 12 | 20   | 80                                                                | M 8 × 30                                        | 29 900                                                      | 26 800                              | 412                   | 176 190               | 162 100      | METC 35               |
| MET 35       | ☆               | 1.52             |                 |                          |                |      |                            |                |                | MET 35         |                |                |                |                |                |                            |    |                |                |                |    |      |                                                                   |                                                 |                                                             |                                     |                       |                       |              |                       |
| MET 45       | ☆               | 2.46             | 11.2            | 60                       | 14             | 37.5 | 120                        | 100            | 10             | 125            | 60             | 81.4           | 136            | M12            | 15             | 13                         | 45 | 34             | 11             | 17.5           | 14 | 22.5 | 105                                                               | M10 × 35                                        | 61 100                                                      | 60 200                              | 1 210                 | 672 4 070             | 618 3 750    | MET 45                |

Note (1) : Track rail lengths L are shown in Table 30.3.

(2) : Track rail mounting bolts are not appended. Hexagon socket bolts of JIS B 1176 strength division 12.9 or equivalent are recommended.

(3) : The directions of basic dynamic load rating (C), basic static load rating (C<sub>0</sub>) and static moment rating (T<sub>0</sub>, T<sub>x</sub> and T<sub>y</sub>) are shown in the sketches below.  
 The upper values in the T<sub>x</sub> and T<sub>y</sub> column apply to one slide unit, and the lower values apply to two units in close contact.



### Example of identification number for assembled set

| Model code                                          | Size                                                                                 | Part code                 | Material code                                                                 | Preload symbol                                                       | Class symbol                                                                                                                             | Interchangeable code                                                                                           | Supplemental code                                                             |
|-----------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------|-------------------------------------------------------------------------------|----------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------|
| MET G 30 C2 R440                                    |                                                                                      |                           |                                                                               | T <sub>1</sub>                                                       | P                                                                                                                                        | S2                                                                                                             | /U                                                                            |
| <b>Series</b><br>MET Flange type, mounting from top | <b>Length of slide unit</b><br>C Short<br>No symbol Standard<br>G High rigidity long | <b>Size</b><br>30, 35, 45 | <b>Number of slide unit (two slide units)</b><br>Length of track rail (440mm) | <b>Material</b><br>No symbol High carbon steel<br>SL Stainless steel | <b>Preload amount</b><br>T <sub>2</sub> Clearance<br>No symbol Standard<br>T <sub>1</sub> Light preload<br>T <sub>2</sub> Medium preload | <b>Interchangeable code</b><br>S2 Interchangeable specification<br>No symbol Non interchangeable specification | <b>Special specification</b><br>A, D, E, F, I, J, L, LF, MA, N, T, U, V, W, Z |
|                                                     |                                                                                      |                           |                                                                               |                                                                      |                                                                                                                                          | <b>Accuracy class</b><br>No symbol Ordinary<br>H High<br>P Precision<br>SP Super precision                     |                                                                               |

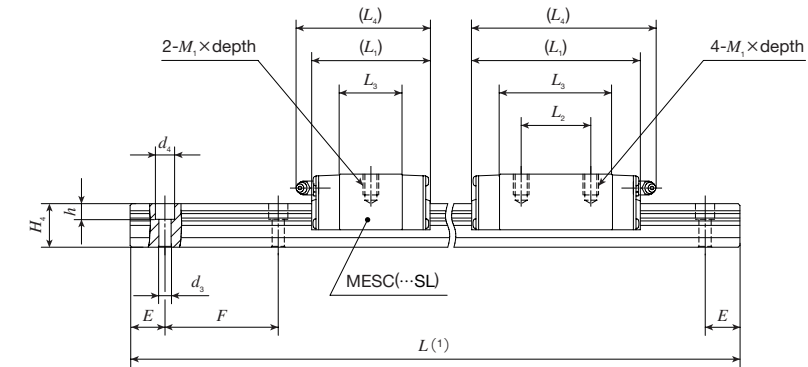
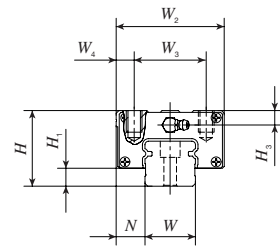
In case ordering track rail only, model code is changed as shown below.  
 Track rail of interchangeable ME → Model code LWE (Ex: LWE30R440PS2)

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

# IKO G-Lube Linear Way ME

Block type,  
mounting from top

Short : MESG  
Standard : MES  
High rigidity long : MESG



| Model number | Interchangeable | Mass (Reference) |                 | Dimension of assembly mm |                |      | Dimension of slide unit mm |                |                |                |                |                |                | Dimension of track rail mm |                |    |                |                |                |            | Recommended <sup>(2)</sup> mounting bolt for track rail mm<br>Bolt size x length | Basic <sup>(3)</sup> dynamic load rating C | Basic <sup>(3)</sup> static load rating C <sub>0</sub> | Static moment rating <sup>(3)</sup> |        |                | Model number |                |                |
|--------------|-----------------|------------------|-----------------|--------------------------|----------------|------|----------------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------------------|----------------|----|----------------|----------------|----------------|------------|----------------------------------------------------------------------------------|--------------------------------------------|--------------------------------------------------------|-------------------------------------|--------|----------------|--------------|----------------|----------------|
|              |                 | Slide unit kg    | Track rail kg/m | H                        | H <sub>1</sub> | N    | W <sub>2</sub>             | W <sub>3</sub> | W <sub>4</sub> | L <sub>1</sub> | L <sub>2</sub> | L <sub>3</sub> | L <sub>4</sub> | M <sub>1</sub> x depth     | H <sub>3</sub> | W  | H <sub>4</sub> | d <sub>3</sub> | d <sub>4</sub> | h          |                                                                                  |                                            |                                                        | E                                   | F      | T <sub>0</sub> |              | T <sub>x</sub> | T <sub>y</sub> |
| MESC 15      | ☆               | 0.09             | 1.57            | 24                       | 5.8            | 9.5  | 34                         | 26             | 4              | 41             | -              | 22.4           | 45             | M4 x 7                     | 4.5            | 15 | 14.5           | 3.6<br>(4.5)   | 6.5<br>(8)     | 4.5<br>(6) | 20                                                                               | 60                                         | M3 x 16<br>(M4 x 16)                                   | 5 240                               | 5 480  | 43.8           | 21.3<br>149  | 21.3<br>149    | MESC 15        |
| MESC 15...SL | ☆               |                  |                 |                          |                |      |                            |                |                | MESC 15...SL   |                |                |                |                            |                |    |                |                |                |            |                                                                                  |                                            |                                                        |                                     |        |                |              |                |                |
| MES 15       | ☆               | MES 15           |                 |                          |                |      |                            |                |                |                |                |                |                |                            |                |    |                |                |                |            |                                                                                  |                                            |                                                        |                                     |        |                |              |                |                |
| MES 15...SL  | ☆               | MES 15...SL      |                 |                          |                |      |                            |                |                |                |                |                |                |                            |                |    |                |                |                |            |                                                                                  |                                            |                                                        |                                     |        |                |              |                |                |
| MESG 15      | ☆               | MESG 15          |                 |                          |                |      |                            |                |                |                |                |                |                |                            |                |    |                |                |                |            |                                                                                  |                                            |                                                        |                                     |        |                |              |                |                |
| MESG 15...SL | ☆               | MESG 15...SL     |                 |                          |                |      |                            |                |                |                |                |                |                |                            |                |    |                |                |                |            |                                                                                  |                                            |                                                        |                                     |        |                |              |                |                |
| MESC 20      | ☆               | 0.15             | 2.28            | 28                       | 6              | 11   | 42                         | 32             | 5              | 47             | -              | 24.7           | 59             | M5 x 8                     | 5.5            | 20 | 16             | 6              | 9.5            | 8.5        | 20                                                                               | 60                                         | M5 x 16                                                | 7 580                               | 7 340  | 78.9           | 31.5<br>235  | 31.5<br>235    | MESC 20        |
| MESC 20...SL | ☆               |                  |                 |                          |                |      |                            |                |                | MESC 20...SL   |                |                |                |                            |                |    |                |                |                |            |                                                                                  |                                            |                                                        |                                     |        |                |              |                |                |
| MES 20       | ☆               | MES 20           |                 |                          |                |      |                            |                |                |                |                |                |                |                            |                |    |                |                |                |            |                                                                                  |                                            |                                                        |                                     |        |                |              |                |                |
| MES 20...SL  | ☆               | MES 20...SL      |                 |                          |                |      |                            |                |                |                |                |                |                |                            |                |    |                |                |                |            |                                                                                  |                                            |                                                        |                                     |        |                |              |                |                |
| MESG 20      | ☆               | MESG 20          |                 |                          |                |      |                            |                |                |                |                |                |                |                            |                |    |                |                |                |            |                                                                                  |                                            |                                                        |                                     |        |                |              |                |                |
| MESG 20...SL | ☆               | MESG 20...SL     |                 |                          |                |      |                            |                |                |                |                |                |                |                            |                |    |                |                |                |            |                                                                                  |                                            |                                                        |                                     |        |                |              |                |                |
| MESC 25      | ☆               | 0.26             | 3.09            | 33                       | 7              | 12.5 | 48                         | 35             | 6.5            | 59             | -              | 32             | 71             | M6 x 9                     | 6.5            | 23 | 19             | 7              | 11             | 9          | 20                                                                               | 60                                         | M6 x 20                                                | 12 400                              | 12 300 | 153            | 71.8<br>480  | 71.8<br>480    | MESC 25        |
| MESC 25...SL | ☆               |                  |                 |                          |                |      |                            |                |                | MESC 25...SL   |                |                |                |                            |                |    |                |                |                |            |                                                                                  |                                            |                                                        |                                     |        |                |              |                |                |
| MES 25       | ☆               | MES 25           |                 |                          |                |      |                            |                |                |                |                |                |                |                            |                |    |                |                |                |            |                                                                                  |                                            |                                                        |                                     |        |                |              |                |                |
| MES 25...SL  | ☆               | MES 25...SL      |                 |                          |                |      |                            |                |                |                |                |                |                |                            |                |    |                |                |                |            |                                                                                  |                                            |                                                        |                                     |        |                |              |                |                |
| MESG 25      | ☆               | MESG 25          |                 |                          |                |      |                            |                |                |                |                |                |                |                            |                |    |                |                |                |            |                                                                                  |                                            |                                                        |                                     |        |                |              |                |                |
| MESG 25...SL | ☆               | MESG 25...SL     |                 |                          |                |      |                            |                |                |                |                |                |                |                            |                |    |                |                |                |            |                                                                                  |                                            |                                                        |                                     |        |                |              |                |                |
| MESC 25      | ☆               | 0.54             | 3.09            | 33                       | 7              | 12.5 | 48                         | 35             | 6.5            | 102            | 50             | 75             | 114            | M6 x 9                     | 6.5            | 23 | 19             | 7              | 11             | 9          | 20                                                                               | 60                                         | M6 x 20                                                | 22 200                              | 28 200 | 349            | 336<br>1 740 | 336<br>1 740   | MESC 25        |
| MESC 25...SL | ☆               |                  |                 |                          |                |      |                            |                |                | MESC 25...SL   |                |                |                |                            |                |    |                |                |                |            |                                                                                  |                                            |                                                        |                                     |        |                |              |                |                |
| MES 25       | ☆               | MES 25           |                 |                          |                |      |                            |                |                |                |                |                |                |                            |                |    |                |                |                |            |                                                                                  |                                            |                                                        |                                     |        |                |              |                |                |
| MES 25...SL  | ☆               | MES 25...SL      |                 |                          |                |      |                            |                |                |                |                |                |                |                            |                |    |                |                |                |            |                                                                                  |                                            |                                                        |                                     |        |                |              |                |                |
| MESG 25      | ☆               | MESG 25          |                 |                          |                |      |                            |                |                |                |                |                |                |                            |                |    |                |                |                |            |                                                                                  |                                            |                                                        |                                     |        |                |              |                |                |
| MESG 25...SL | ☆               | MESG 25...SL     |                 |                          |                |      |                            |                |                |                |                |                |                |                            |                |    |                |                |                |            |                                                                                  |                                            |                                                        |                                     |        |                |              |                |                |

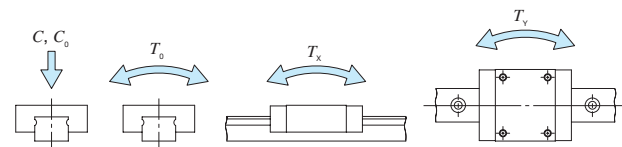
Note (1) : Track rail lengths L are shown in Table 30.3.

(2) : Track rail mounting bolts are not appended. Hexagon socket bolts of JIS B 1176 strength division 12.9 or equivalent are recommended. Values in parentheses are applicable to the track rail of supplemental code "/M4" of special specification.

(3) : The directions of basic dynamic load rating (C), basic static load rating (C<sub>0</sub>) and static moment rating (T<sub>0</sub>, T<sub>x</sub> and T<sub>y</sub>) are shown in the sketches below.

The upper values in the T<sub>x</sub> and T<sub>y</sub> column apply to one slide unit, and the lower values apply to two units in close contact.

Remark : Values in parentheses are applicable to the track rail of supplemental code "/M4" of special specification.



### Example of identification number for assembled set

| Model code                        | Size                                                  | Part code   | Material code                                     | Preload symbol                                                | Class symbol                                                                    | Interchangeable code                              | Supplemental code                                                 |
|-----------------------------------|-------------------------------------------------------|-------------|---------------------------------------------------|---------------------------------------------------------------|---------------------------------------------------------------------------------|---------------------------------------------------|-------------------------------------------------------------------|
| MES                               | G                                                     | 20          | C2                                                | R820                                                          | T <sub>1</sub>                                                                  | P                                                 | S2 /U                                                             |
| <b>Series</b>                     | <b>Length of slide unit</b>                           | <b>Size</b> | <b>Number of slide unit (two slide units)</b>     | <b>Length of track rail (820mm)</b>                           | <b>Material</b>                                                                 | <b>Interchangeable code</b>                       | <b>Special specification</b>                                      |
| MES Block type, mounting from top | C Short<br>No symbol Standard<br>G High rigidity long | 15, 20, 25  | No symbol High carbon steel<br>SL Stainless steel | T <sub>1</sub> Light preload<br>T <sub>2</sub> Medium preload | S2 Interchangeable specification<br>No symbol Non interchangeable specification | A, D, E, F, I, J, L, LF, MA, M4, N, T, U, V, W, Z | No symbol Ordinary<br>H High<br>P Precision<br>SP Super precision |

In case ordering track rail only, model code is changed as shown below.

Track rail of interchangeable ME → Model code LWE (Ex: LWE20R820PS2)

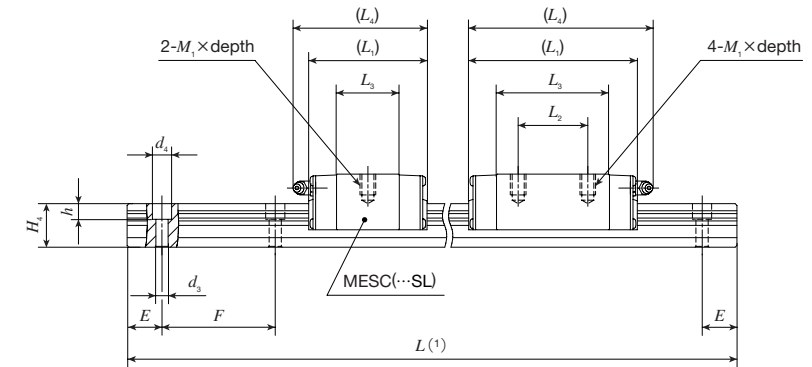
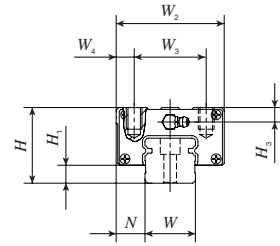
1N=0.102kgf=0.2248lbs.  
1mm=0.03937inch



# IKO G-Lube Linear Way ME

Block type, mounting from top

Short : MESC  
 Standard : MES  
 High rigidity long : MESG

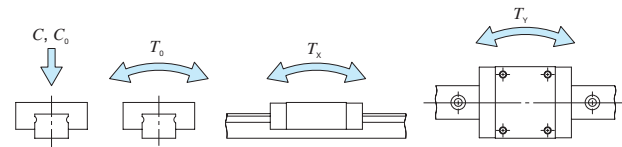


| Model number | Interchangeable | Mass (Reference) |                 | Dimension of assembly mm |                |      | Dimension of slide unit mm |                |                |                |                |                |                | Dimension of track rail mm |                |    |                |                |                |    | Recommended mounting bolt for track rail mm<br>Bolt size x length | Basic dynamic load rating C | Basic static load rating C <sub>0</sub> | Static moment rating <sup>(3)</sup> |        |                | Model number |                |                |
|--------------|-----------------|------------------|-----------------|--------------------------|----------------|------|----------------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------------------|----------------|----|----------------|----------------|----------------|----|-------------------------------------------------------------------|-----------------------------|-----------------------------------------|-------------------------------------|--------|----------------|--------------|----------------|----------------|
|              |                 | Slide unit kg    | Track rail kg/m | H                        | H <sub>1</sub> | N    | W <sub>2</sub>             | W <sub>3</sub> | W <sub>4</sub> | L <sub>1</sub> | L <sub>2</sub> | L <sub>3</sub> | L <sub>4</sub> | M <sub>1</sub> x depth     | H <sub>3</sub> | W  | H <sub>4</sub> | d <sub>3</sub> | d <sub>4</sub> | h  |                                                                   |                             |                                         | E                                   | F      | T <sub>0</sub> |              | T <sub>x</sub> | T <sub>y</sub> |
| MESC 30      | ☆               | 0.46             | 5.09            | 42                       | 10             | 16   | 60                         | 40             | 10             | 68             | -              | 36             | 78             | M 8 x 12                   | 8              | 28 | 25             | 7              | 11             | 9  | 20                                                                | 80                          | M 6 x 25                                | 20 600                              | 18 800 | 287            | 129 855      | 129 855        | MESC 30        |
| MESC 30...SL | ☆               |                  |                 |                          |                |      |                            |                |                | MESC 30...SL   |                |                |                |                            |                |    |                |                |                |    |                                                                   |                             |                                         |                                     |        |                |              |                |                |
| MES 30       | ☆               | MES 30           |                 |                          |                |      |                            |                |                |                |                |                |                |                            |                |    |                |                |                |    |                                                                   |                             |                                         |                                     |        |                |              |                |                |
| MES 30...SL  | ☆               | MES 30...SL      |                 |                          |                |      |                            |                |                |                |                |                |                |                            |                |    |                |                |                |    |                                                                   |                             |                                         |                                     |        |                |              |                |                |
| MESG 30      | ☆               | MESG 30          |                 |                          |                |      |                            |                |                |                |                |                |                |                            |                |    |                |                |                |    |                                                                   |                             |                                         |                                     |        |                |              |                |                |
| MESG 30...SL | ☆               | 1.13             | 128.5           | 60                       | 96.5           | 139  | 39 200                     | 47 000         | 718            | 704 3 670      | 704 3 670      | MESG 30        |                |                            |                |    |                |                |                |    |                                                                   |                             |                                         |                                     |        |                |              |                |                |
| MESC 35      | ☆               | 0.67             | 6.85            | 48                       | 11             | 18   | 70                         | 50             | 10             | 78             | -              | 41.6           | 90             | M 8 x 12                   | 10             | 34 | 28             | 9              | 14             | 12 | 20                                                                | 80                          | M 8 x 30                                | 29 900                              | 26 800 | 412            | 176 1 190    | 162 1 100      | MESC 35        |
| MES 35       | ☆               | 1.21             |                 |                          |                |      |                            |                |                | 111            | 50             | 74.6           | 123            |                            |                |    |                |                |                |    |                                                                   |                             |                                         | 42 900                              | 44 700 | 686            | 448 2 660    | 412 2 450      | MES 35         |
| MES 45       | ☆               | 2.05             | 11.2            | 60                       | 14             | 20.5 | 86                         | 60             | 13             | 125            | 60             | 81.4           | 136            | M10 x 15                   | 13             | 45 | 34             | 11             | 17.5           | 14 | 22.5                                                              | 105                         | M10 x 35                                | 61 100                              | 60 200 | 1 210          | 672 4 070    | 618 3 750      | MES 45         |

Note (1): Track rail lengths L are shown in Table 30.3.

(2): Track rail mounting bolts are not appended. Hexagon socket bolts of JIS B 1176 strength division 12.9 or equivalent are recommended.

(3): The directions of basic dynamic load rating (C), basic static load rating (C<sub>0</sub>) and static moment rating (T<sub>0</sub>, T<sub>x</sub> and T<sub>y</sub>) are shown in the sketches below. The upper values in the T<sub>x</sub> and T<sub>y</sub> column apply to one slide unit, and the lower values apply to two units in close contact.



### Example of identification number for assembled set

| Model code                                         | Size                                                                                 | Part code                 | Material code                                                                 | Preload symbol                                                       | Class symbol                                                                                                                             | Interchangeable code                                                                                           | Supplemental code                                                             |
|----------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------|-------------------------------------------------------------------------------|----------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------|
| MES G 30 C2 R440                                   |                                                                                      |                           |                                                                               | T <sub>1</sub>                                                       | P                                                                                                                                        | S2                                                                                                             | /U                                                                            |
| <b>Series</b><br>MES Block type, mounting from top | <b>Length of slide unit</b><br>C Short<br>No symbol Standard<br>G High rigidity long | <b>Size</b><br>30, 35, 45 | <b>Number of slide unit (two slide units)</b><br>Length of track rail (440mm) | <b>Material</b><br>No symbol High carbon steel<br>SL Stainless steel | <b>Preload amount</b><br>T <sub>2</sub> Clearance<br>No symbol Standard<br>T <sub>1</sub> Light preload<br>T <sub>2</sub> Medium preload | <b>Interchangeable code</b><br>S2 Interchangeable specification<br>No symbol Non interchangeable specification | <b>Special specification</b><br>A, D, E, F, I, J, L, LF, MA, N, T, U, V, W, Z |
|                                                    |                                                                                      |                           |                                                                               |                                                                      | <b>Accuracy class</b><br>No symbol Ordinary<br>H High<br>P Precision<br>SP Super precision                                               |                                                                                                                |                                                                               |

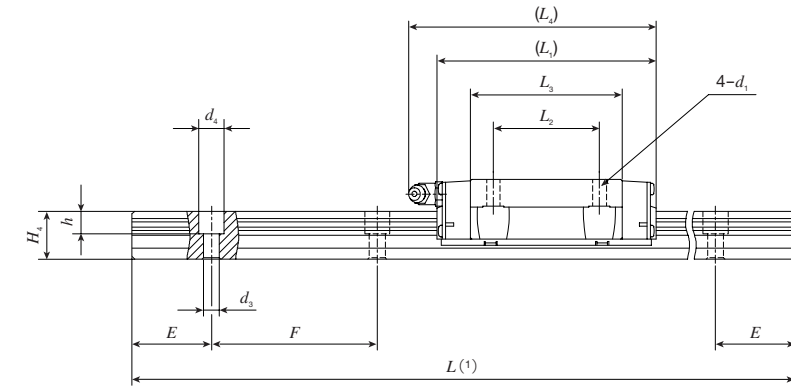
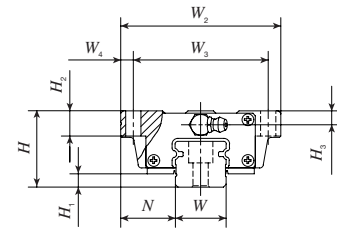
In case ordering track rail only, model code is changed as shown below.  
 Track rail of interchangeable ME → Model code LWE (Ex: LWE30R440PS2)

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

# IKO G-Lube Linear Way MH

Flange type,  
mounting from bottom

Standard : MH  
High rigidity long : MHG

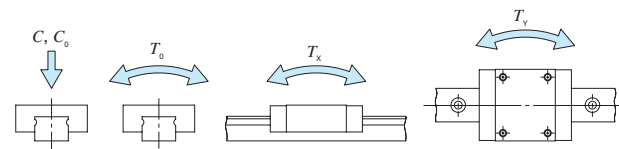


| Model number | Interchangeable | Mass (Reference) |                 | Dimension of assembly mm |                |      | Dimension of slide unit mm |                |                |                |                |                |                |                |                |                | Dimension of track rail mm |                |                |                |     |      |     | Recommended mounting bolt for track rail mm<br>Bolt size × length | Basic <sup>(3)</sup> dynamic load rating C<br>N | Basic <sup>(3)</sup> static load rating C <sub>0</sub><br>N | Static moment rating <sup>(3)</sup> |                       |                       | Model number    |
|--------------|-----------------|------------------|-----------------|--------------------------|----------------|------|----------------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------------------|----------------|----------------|----------------|-----|------|-----|-------------------------------------------------------------------|-------------------------------------------------|-------------------------------------------------------------|-------------------------------------|-----------------------|-----------------------|-----------------|
|              |                 | Slide unit kg    | Track rail kg/m | H                        | H <sub>1</sub> | N    | W <sub>2</sub>             | W <sub>3</sub> | W <sub>4</sub> | L <sub>1</sub> | L <sub>2</sub> | L <sub>3</sub> | L <sub>4</sub> | d <sub>1</sub> | H <sub>2</sub> | H <sub>3</sub> | W                          | H <sub>4</sub> | d <sub>3</sub> | d <sub>4</sub> | h   | E    | F   |                                                                   |                                                 |                                                             | T <sub>0</sub><br>N·m               | T <sub>x</sub><br>N·m | T <sub>y</sub><br>N·m |                 |
| MH 15        | ☆               | 0.22             | 1.47            | 24                       | 4.5            | 16   | 47                         | 38             | 4.5            | 66             | 30             | 44.2           | 69             | 4.5            | 7              | 4.5            | 15                         | 15             | 4.5            | 8              | 6   | 30   | 60  | M 4 × 16                                                          | 11 600                                          | 13 400                                                      | 112                                 | 95.6<br>556           | 95.6<br>556           | MH 15           |
| MH 20        | ☆               | 0.47             | 2.56            | 30                       | 5              | 21.5 | 63                         | 53             | 5              | 83             | 40             | 56             | 94             | 6              | 10             | 5.5            | 20                         | 18             | 6              | 9.5            | 8.5 | 30   | 60  | M 5 × 18                                                          | 18 100                                          | 21 100                                                      | 232                                 | 195<br>1 090          | 195<br>1 090          | MH 20           |
| MHG 20       | ☆               | 0.69             |                 |                          |                |      |                            |                |                | 112            |                | 84.8           |                |                |                |                |                            |                |                |                |     |      |     |                                                                   | 122                                             | 24 100                                                      | 31 700                              | 349                   | 421<br>2 140          | 421<br>2 140    |
| MH 25        | ☆               | 0.69             | 3.50            | 36                       | 6.5            | 23.5 | 70                         | 57             | 6.5            | 95             | 45             | 63.9           | 105            | 7              | 10             | 6.5            | 23                         | 22             | 7              | 11             | 9   | 30   | 60  | M 6 × 22                                                          | 25 200                                          | 28 800                                                      | 362                                 | 309<br>1 690          | 309<br>1 690          | MH 25           |
| MHG 25       | ☆               | 0.91             |                 |                          |                |      |                            |                |                | 118            |                | 86.6           |                |                |                |                |                            |                |                |                |     |      |     |                                                                   | 128                                             | 30 800                                                      | 38 300                              | 483                   | 533<br>2 740          | 533<br>2 740    |
| MH 30        | ☆               | 1.28             | 4.82            | 42                       | 7              | 31   | 90                         | 72             | 9              | 113            | 52             | 80.6           | 123            | 9              | 10             | 8              | 28                         | 25             | 9              | 14             | 12  | 40   | 80  | M 8 × 28                                                          | 35 400                                          | 40 700                                                      | 623                                 | 536<br>2 820          | 536<br>2 820          | MH 30           |
| MHG 30       | ☆               | 1.69             |                 |                          |                |      |                            |                |                | 139            |                | 106.6          |                |                |                |                |                            |                |                |                |     |      |     |                                                                   | 149                                             | 42 700                                                      | 53 200                              | 814                   | 894<br>4 460          | 894<br>4 460    |
| MH 35        | ☆               | 1.79             | 6.85            | 48                       | 8              | 33   | 100                        | 82             | 9              | 123            | 62             | 86.2           | 133            | 9              | 13             | 10             | 34                         | 28             | 9              | 14             | 12  | 40   | 80  | M 8 × 28                                                          | 48 700                                          | 53 700                                                      | 823                                 | 631<br>3 480          | 579<br>3 190          | MH 35           |
| MHG 35       | ☆               | 2.35             |                 |                          |                |      |                            |                |                | 151            |                | 114            |                |                |                |                |                            |                |                |                |     |      |     |                                                                   | 161                                             | 59 500                                                      | 71 600                              | 1 100                 | 1 090<br>5 570        | 1 000<br>5 110  |
| MH 45        | ☆               | 3.17             | 10.7            | 60                       | 10             | 37.5 | 120                        | 100            | 10             | 147            | 80             | 103.4          | 156            | 11             | 15             | 13             | 45                         | 34             | 14             | 20             | 17  | 52.5 | 105 | M12 × 35                                                          | 74 600                                          | 80 200                                                      | 1 610                               | 1 150<br>6 190        | 1 060<br>5 690        | MH 45           |
| MHG 45       | ☆               | 4.34             |                 |                          |                |      |                            |                |                | 190            |                | 146.6          |                |                |                |                |                            |                |                |                |     |      |     |                                                                   | 200                                             | 95 200                                                      | 114 000                             | 2 280                 | 2 240<br>11 100       | 2 050<br>10 200 |

Note (1) : Track rail lengths L are shown in Table 30.4.

(2) : Track rail mounting bolts are not appended. Hexagon socket bolts of JIS B 1176 strength division 12.9 or equivalent are recommended.

(3) : The directions of basic dynamic load rating (C), basic static load rating (C<sub>0</sub>) and static moment rating (T<sub>0</sub>, T<sub>x</sub> and T<sub>y</sub>) are shown in the sketches below.  
The upper values in the T<sub>x</sub> and T<sub>y</sub> column apply to one slide unit, and the lower values apply to two units in close contact.



### Example of identification number for assembled set

|                                                       |                                                                           |                                       |                                               |                                                                                                                                                                          |                                                                      |                                                                                                                |                                                                                    |
|-------------------------------------------------------|---------------------------------------------------------------------------|---------------------------------------|-----------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|
| Model code                                            | Size                                                                      | Part code                             | Material code                                 | Preload symbol                                                                                                                                                           | Class symbol                                                         | Interchangeable code                                                                                           | Supplemental code                                                                  |
| <b>MH G 20 C2 R480</b>                                |                                                                           |                                       |                                               | <b>T<sub>1</sub></b>                                                                                                                                                     | <b>P</b>                                                             | <b>S2</b>                                                                                                      | <b>/D</b>                                                                          |
| <b>Series</b><br>MH Flange type, mounting from bottom | <b>Length of slide unit</b><br>No symbol Standard<br>G High rigidity long | <b>Size</b><br>15, 20, 25, 30, 35, 45 | <b>Number of slide unit (two slide units)</b> | <b>Length of track rail (480mm)</b>                                                                                                                                      | <b>Material</b><br>No symbol High carbon steel<br>SL Stainless steel | <b>Interchangeable code</b><br>S2 Interchangeable specification<br>No symbol Non interchangeable specification | <b>Special specification</b><br>A, D, E, F, I, J, L, LF, MA, MN, N, PS, T, V, W, Z |
|                                                       |                                                                           |                                       |                                               | <b>Preload amount</b><br>T <sub>0</sub> Clearance<br>No symbol Standard<br>T <sub>1</sub> Light preload<br>T <sub>2</sub> Medium preload<br>T <sub>3</sub> Heavy preload | <b>Accuracy class</b><br>H High<br>P Precision<br>SP Super precision |                                                                                                                |                                                                                    |

In case ordering track rail only, model code is changed as shown below.  
Track rail of interchangeable MH → Model code LWH (Ex: LWH25R480BPS2)

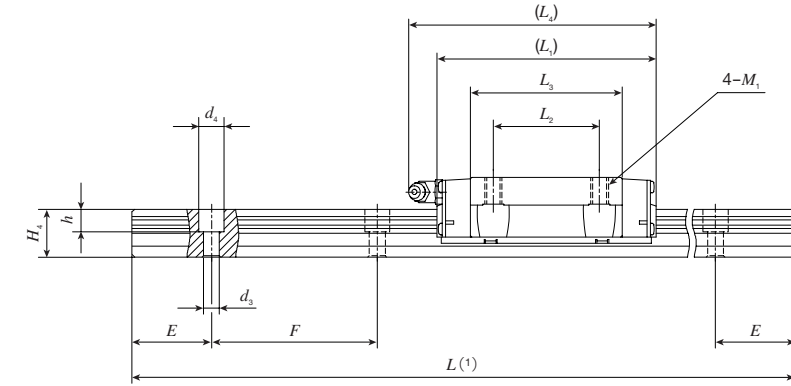
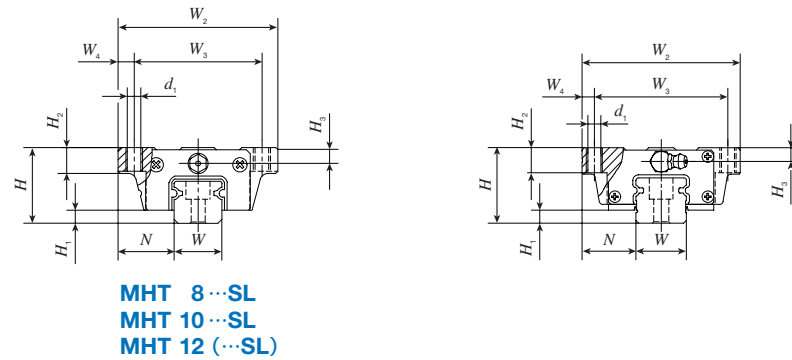
1N=0.102kgf=0.2248lbs.  
1mm=0.03937inch



# IKO G-Lube Linear Way MH

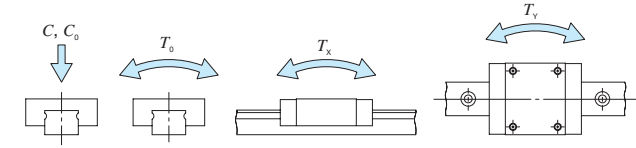
Flange type, mounting from top

Standard : MHT  
 High rigidity long : MHTG  
 Extra High rigidity long : MHTL



| Model number | Interchangeable | Mass (Reference) |                 | Dimension of assembly mm |                |      | Dimension of slide unit mm |                |                |                |                |                |                |                               |                |                |                | Dimension of track rail mm |                |                |                |     |      |     | Recommended mounting bolt for track rail mm<br>Bolt size × length | Basic dynamic load rating C | Basic static load rating C <sub>0</sub> | Static moment rating <sup>(3)</sup> |                |                | Model number |
|--------------|-----------------|------------------|-----------------|--------------------------|----------------|------|----------------------------|----------------|----------------|----------------|----------------|----------------|----------------|-------------------------------|----------------|----------------|----------------|----------------------------|----------------|----------------|----------------|-----|------|-----|-------------------------------------------------------------------|-----------------------------|-----------------------------------------|-------------------------------------|----------------|----------------|--------------|
|              |                 | Slide unit kg    | Track rail kg/m | H                        | H <sub>1</sub> | N    | W <sub>2</sub>             | W <sub>3</sub> | W <sub>4</sub> | L <sub>1</sub> | L <sub>2</sub> | L <sub>3</sub> | L <sub>4</sub> | d <sub>1</sub> <sup>(4)</sup> | M <sub>1</sub> | H <sub>2</sub> | H <sub>3</sub> | W                          | H <sub>4</sub> | d <sub>3</sub> | d <sub>4</sub> | h   | E    | F   |                                                                   |                             |                                         | T <sub>0</sub>                      | T <sub>x</sub> | T <sub>y</sub> |              |
| MHT 8...SL   | ☆               | 0.015            | 0.32            | 10                       | 2.1            | 8    | 24                         | 19             | 2.5            | 24             | 10             | 15.3           | -              | 1.9                           | M 2.3          | 3.5            | 2              | 8                          | 6              | 2.4            | 4.2            | 2.3 | 10   | 20  | M 2×8                                                             | 1 510                       | 2 120                                   | 8.8                                 | 5.5<br>32.0    | 4.7<br>26.9    | MHT 8...SL   |
| MHT 10...SL  | ☆               | 0.031            | 0.47            | 12                       | 2.4            | 10   | 30                         | 24             | 3              | 32             | 12             | 21.4           | -              | 2.6                           | M 3            | 4.5            | 2.5            | 10                         | 7              | 3.5            | 6              | 3.5 | 12.5 | 25  | M 3×8                                                             | 2 640                       | 3 700                                   | 19.2                                | 13.3<br>73.8   | 11.1<br>61.9   | MHT 10...SL  |
| MHT 12       | ☆               | 0.108            | 0.86            | 19                       | 3.2            | 14   | 40                         | 32             | 4              | 46             | 15             | 31.6           | 50             | 3.4                           | M 4            | 6              | 4              | 12                         | 10.5           | 3.5            | 6              | 4.5 | 20   | 40  | M 3×12                                                            | 6 260                       | 8 330                                   | 51.6                                | 44.7           | 37.5           | MHT 12       |
| MHT 12...SL  | ☆               |                  |                 |                          |                |      |                            |                |                |                |                |                |                |                               |                |                |                |                            |                |                |                |     |      |     |                                                                   |                             |                                         |                                     | 237            | 199            | MHT 12...SL  |
| MHT 15       | ☆               | 0.22             | 1.47            | 24                       | 4.5            | 16   | 47                         | 38             | 4.5            | 66             | 30             | 44.2           | 69             | -                             | M 5            | 7              | 4.5            | 15                         | 15             | 4.5            | 8              | 6   | 30   | 60  | M 4×16                                                            | 11 600                      | 13 400                                  | 112                                 | 95.6           | 95.6           | MHT 15       |
| MHT 15...SL  | ☆               |                  |                 |                          |                |      |                            |                |                |                |                |                |                |                               |                |                |                |                            |                |                |                |     |      |     |                                                                   |                             |                                         |                                     | 556            | 556            | MHT 15...SL  |
| MHT 20       | ☆               | 0.47             | 2.56            | 30                       | 5              | 21.5 | 63                         | 53             | 5              | 83             | 40             | 56             | 94             | -                             | M 6            | 10             | 5.5            | 20                         | 18             | 6              | 9.5            | 8.5 | 30   | 60  | M 5×18                                                            | 18 100                      | 21 100                                  | 232                                 | 195            | 195            | MHT 20       |
| MHT 20...SL  | ☆               |                  |                 |                          |                |      |                            |                |                |                |                |                |                |                               |                |                |                |                            |                |                |                |     |      |     |                                                                   |                             |                                         |                                     | 1 090          | 1 090          | MHT 20...SL  |
| MHTG 20      | ☆               | 0.69             | 3.50            | 36                       | 6.5            | 23.5 | 70                         | 57             | 6.5            | 112            | 40             | 84.8           | 122            | -                             | M 6            | 10             | 5.5            | 20                         | 18             | 6              | 9.5            | 8.5 | 30   | 60  | M 5×18                                                            | 24 100                      | 31 700                                  | 349                                 | 421            | 421            | MHTG 20      |
| MHT 25       | ☆               |                  |                 |                          |                |      |                            |                |                |                |                |                |                |                               |                |                |                |                            |                |                |                |     |      |     |                                                                   |                             |                                         |                                     | 309            | 309            | MHT 25       |
| MHT 25...SL  | ☆               | 0.69             | 3.50            | 36                       | 6.5            | 23.5 | 70                         | 57             | 6.5            | 118            | 45             | 86.6           | 128            | -                             | M 8            | 10             | 6.5            | 23                         | 22             | 7              | 11             | 9   | 30   | 60  | M 6×22                                                            | 25 200                      | 28 800                                  | 362                                 | 1 690          | 1 690          | MHT 25...SL  |
| MHTG 25      | ☆               |                  |                 |                          |                |      |                            |                |                |                |                |                |                |                               |                |                |                |                            |                |                |                |     |      |     |                                                                   |                             |                                         |                                     | 533            | 533            | MHTG 25      |
| MHT 30       | ☆               | 1.28             | 6.85            | 48                       | 8              | 33   | 100                        | 82             | 9              | 113            | 52             | 80.6           | 123            | -                             | M 10           | 13             | 10             | 28                         | 25             | 9              | 14             | 12  | 40   | 80  | M 8×28                                                            | 35 400                      | 40 700                                  | 623                                 | 536            | 536            | MHT 30       |
| MHT 30...SL  | ☆               |                  |                 |                          |                |      |                            |                |                |                |                |                |                |                               |                |                |                |                            |                |                |                |     |      |     |                                                                   |                             |                                         |                                     | 2 740          | 2 740          | MHT 30...SL  |
| MHTG 30      | ☆               | 1.69             | 4.82            | 42                       | 7              | 31   | 90                         | 72             | 9              | 139            | 52             | 106.6          | 149            | -                             | M 10           | 10             | 8              | 28                         | 25             | 9              | 14             | 12  | 40   | 80  | M 8×28                                                            | 42 700                      | 53 200                                  | 814                                 | 894            | 894            | MHTG 30      |
| MHTL 30      | ☆               |                  |                 |                          |                |      |                            |                |                |                |                |                |                |                               |                |                |                |                            |                |                |                |     |      |     |                                                                   |                             |                                         |                                     | 4 460          | 4 460          | MHTL 30      |
| MHT 35       | ☆               | 1.79             | 6.85            | 48                       | 8              | 33   | 100                        | 82             | 9              | 123            | 62             | 86.2           | 133            | -                             | M 10           | 13             | 10             | 34                         | 28             | 9              | 14             | 12  | 40   | 80  | M 8×28                                                            | 48 700                      | 53 700                                  | 823                                 | 631            | 579            | MHT 35       |
| MHTG 35      | ☆               |                  |                 |                          |                |      |                            |                |                |                |                |                |                |                               |                |                |                |                            |                |                |                |     |      |     |                                                                   |                             |                                         |                                     | 3 480          | 3 190          | MHTG 35      |
| MHTL 35      | ☆               | 3.24             | 6.85            | 48                       | 8              | 33   | 100                        | 82             | 9              | 199            | 62             | 162.2          | 209            | 8.5                           | M 10           | 13             | 10             | 34                         | 28             | 9              | 14             | 12  | 40   | 80  | M 8×28                                                            | 59 500                      | 71 600                                  | 1 100                               | 1 090          | 1 000          | MHTL 35      |
| MHT 45       | ☆               |                  |                 |                          |                |      |                            |                |                |                |                |                |                |                               |                |                |                |                            |                |                |                |     |      |     |                                                                   |                             |                                         |                                     | 5 570          | 5 110          | MHT 45       |
| MHTG 45      | ☆               | 4.34             | 10.7            | 60                       | 10             | 37.5 | 120                        | 100            | 10             | 147            | 80             | 103.4          | 156            | -                             | M 12           | 15             | 13             | 45                         | 34             | 14             | 20             | 17  | 52.5 | 105 | M 12×35                                                           | 74 600                      | 80 200                                  | 1 610                               | 1 150          | 1 060          | MHT 45       |
| MHT 45...SL  | ☆               |                  |                 |                          |                |      |                            |                |                |                |                |                |                |                               |                |                |                |                            |                |                |                |     |      |     |                                                                   |                             |                                         |                                     | 6 190          | 5 690          | MHT 45...SL  |
| MHTL 45      | ☆               | 5.70             | 10.7            | 60                       | 10             | 37.5 | 120                        | 100            | 10             | 238            | 80             | 146.6          | 200            | -                             | M 12           | 15             | 13             | 45                         | 34             | 14             | 20             | 17  | 52.5 | 105 | M 12×35                                                           | 95 200                      | 114 000                                 | 2 280                               | 2 240          | 2 050          | MHTG 45      |
| MHTL 45      | ☆               |                  |                 |                          |                |      |                            |                |                |                |                |                |                |                               |                |                |                |                            |                |                |                |     |      |     |                                                                   |                             |                                         |                                     | 17 800         | 16 300         | MHTL 45      |

Note (1): Track rail lengths *L* are shown in Table 30.4.  
 (2): Track rail mounting bolts are not appended. Hexagon socket bolts of JIS B 1176 strength division 12.9 or equivalent are recommended.  
 (3): The directions of basic dynamic load rating (*C*), basic static load rating (*C<sub>0</sub>*) and static moment rating (*T<sub>0</sub>*, *T<sub>x</sub>* and *T<sub>y</sub>*) are shown in the sketches below.  
 The upper values in the *T<sub>x</sub>* and *T<sub>y</sub>* column apply to one slide unit, and the lower values apply to two units in close contact.  
 (4): MHT8...SL, MHT10...SL, MHT12 MHT12...SL, MHTL30, MHTL35, and MHTL45 can be mounted also from bottom direction.  
 Remark: Oil hole is provided for size 8 and 10 models.



### Example of identification number for assembled set

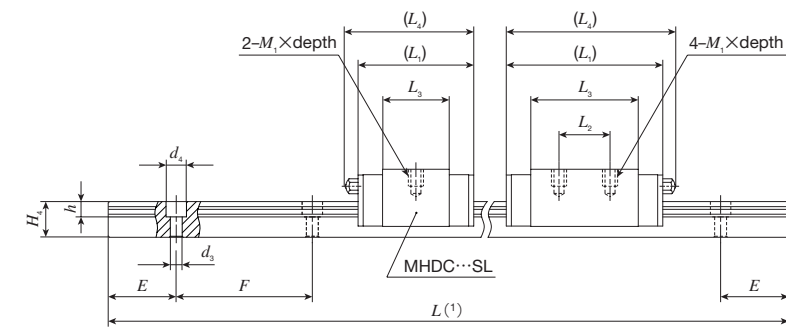
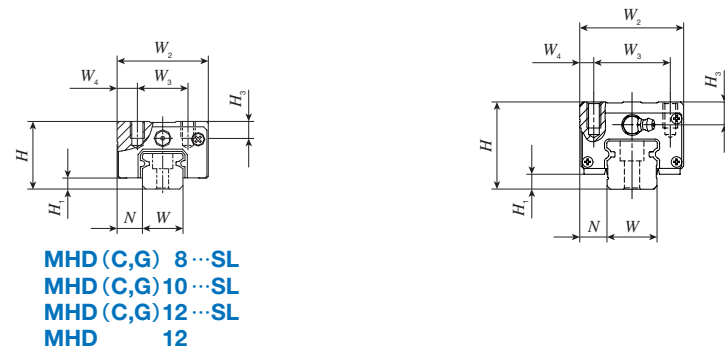
| Model code                                             | Size                                                                                                    | Part code                                        | Material code                                                                 | Preload symbol                                                       | Class symbol                                                                                                                                                             | Interchangeable code                                                                                           | Supplemental code                                                                  |
|--------------------------------------------------------|---------------------------------------------------------------------------------------------------------|--------------------------------------------------|-------------------------------------------------------------------------------|----------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|
| <b>MHT G</b>                                           | <b>20</b>                                                                                               | <b>C2 R480</b>                                   |                                                                               | <b>T<sub>1</sub></b>                                                 | <b>P</b>                                                                                                                                                                 | <b>S2</b>                                                                                                      | <b>/D</b>                                                                          |
| <b>Series</b><br>MHT Flange type, mounting from bottom | <b>Length of slide unit</b><br>No symbol Standard<br>G High rigidity long<br>L Extra High rigidity long | <b>Size</b><br>8, 10, 12, 15, 20, 25, 30, 35, 45 | <b>Number of slide unit (two slide units)</b><br>Length of track rail (480mm) | <b>Material</b><br>No symbol High carbon steel<br>SL Stainless steel | <b>Preload amount</b><br>T <sub>0</sub> Clearance<br>No symbol Standard<br>T <sub>1</sub> Light preload<br>T <sub>2</sub> Medium preload<br>T <sub>3</sub> Heavy preload | <b>Interchangeable code</b><br>S2 Interchangeable specification<br>No symbol Non interchangeable specification | <b>Special specification</b><br>A, D, E, F, I, J, L, LF, MA, MN, N, PS, T, V, W, Z |
|                                                        |                                                                                                         |                                                  |                                                                               |                                                                      |                                                                                                                                                                          | <b>Accuracy class</b><br>H High<br>P Precision<br>SP Super precision                                           |                                                                                    |

In case ordering track rail only, model code is changed as shown below.  
 Track rail of interchangeable MH → Model code LWH (Ex: LWH25R480BPS2)  
 1N=0.102kgf=0.2248lbs.  
 1mm=0.03937inch

# IKO C-Lube Linear Way MH

Block type, mounting from top

- Short : MHDC
- Standard : MHD
- High rigidity long : MHDG
- Extra High rigidity long : MHTL



| Model number | Interchangeable | Mass (Reference) |                 | Dimension of assembly mm |                |      | Dimension of slide unit mm |                |                |                |                |                |                | Dimension of track rail mm |                |    |                |                |                |     | Recommended mounting bolt for track rail mm<br>Bolt size x length | Basic dynamic load rating C<br>N | Basic static load rating C <sub>0</sub><br>N | Static moment rating <sup>(3)</sup> |                 |                       | Model number   |                       |                       |
|--------------|-----------------|------------------|-----------------|--------------------------|----------------|------|----------------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------------------|----------------|----|----------------|----------------|----------------|-----|-------------------------------------------------------------------|----------------------------------|----------------------------------------------|-------------------------------------|-----------------|-----------------------|----------------|-----------------------|-----------------------|
|              |                 | Slide unit kg    | Track rail kg/m | H                        | H <sub>1</sub> | N    | W <sub>2</sub>             | W <sub>3</sub> | W <sub>4</sub> | L <sub>1</sub> | L <sub>2</sub> | L <sub>3</sub> | L <sub>4</sub> | M <sub>1</sub> x depth     | H <sub>3</sub> | W  | H <sub>4</sub> | d <sub>3</sub> | d <sub>4</sub> | h   |                                                                   |                                  |                                              | E                                   | F               | T <sub>0</sub><br>N·m |                | T <sub>x</sub><br>N·m | T <sub>y</sub><br>N·m |
| MHDC 8...SL  | ☆               | 0.008            | 0.32            | 11                       | 2.1            | 4    | 16                         | 10             | 3              | 18             | -              | 9.0            | -              | M 2 x 2.5                  | 3              | 8  | 6              | 2.4            | 4.2            | 2.3 | 10                                                                | 20                               | M 2 x 8                                      | 1 050                               | 1 270           | 5.3                   | 2.2<br>15.5    | 1.8<br>13.0           | MHDC 8...SL           |
| MHD 8...SL   | ☆               | 0.013            |                 |                          |                |      |                            |                |                | 24             | 10             | 15.3           | -              |                            |                |    |                |                |                |     |                                                                   |                                  |                                              | 5.5<br>32.0                         | 4.7<br>26.9     | MHD 8...SL            |                |                       |                       |
| MHDG 8...SL  | ☆               | 0.018            |                 |                          |                |      |                            |                |                | 30.5           | 21.7           | -              | 10.4<br>55.4   |                            |                |    |                |                |                |     |                                                                   |                                  |                                              | 8.8<br>46.4                         | MHDG 8...SL     |                       |                |                       |                       |
| MHDC 10...SL | ☆               | 0.018            | 0.47            | 13                       | 2.4            | 5    | 20                         | 13             | 3.5            | 24             | -              | 13.4           | -              | M 2.6 x 3                  | 3.5            | 10 | 7              | 3.5            | 6              | 3.5 | 12.5                                                              | 25                               | M 3 x 8                                      | 1 920                               | 2 350           | 12.2                  | 5.8<br>37.1    | 4.8<br>31.2           | MHDC 10...SL          |
| MHD 10...SL  | ☆               | 0.026            |                 |                          |                |      |                            |                |                | 32             | 12             | 21.4           | -              |                            |                |    |                |                |                |     |                                                                   |                                  |                                              | 13.3<br>73.8                        | 11.1<br>61.9    | MHD 10...SL           |                |                       |                       |
| MHDG 10...SL | ☆               | 0.035            |                 |                          |                |      |                            |                |                | 40             | 29.4           | -              | 23.8<br>123    |                            |                |    |                |                |                |     |                                                                   |                                  |                                              | 20.0<br>103                         | MHDG 10...SL    |                       |                |                       |                       |
| MHDC 12...SL | ☆               | 0.057            | 0.86            | 20                       | 3.2            | 7.5  | 27                         | 15             | 6              | 34             | -              | 19.6           | 38             | M 4 x 5                    | 5              | 12 | 10.5           | 3.5            | 6              | 4.5 | 20                                                                | 40                               | M 3 x 12                                     | 4 560                               | 5 300           | 32.8                  | 19.4<br>117    | 16.3<br>98.5          | MHDC 12...SL          |
| MHD 12...SL  | ☆               | 0.089            |                 |                          |                |      |                            |                |                | 46             | 15             | 31.6           | 50             |                            |                |    |                |                |                |     |                                                                   |                                  |                                              | 44.7<br>237                         | 37.5<br>199     | MHD 12...SL           |                |                       |                       |
| MHDG 12...SL | ☆               | 0.115            |                 |                          |                |      |                            |                |                | 58             | 43.6           | 62             | -              |                            |                |    |                |                |                |     |                                                                   |                                  |                                              | 80.4<br>399                         | 67.5<br>335     | MHDG 12...SL          |                |                       |                       |
| MHD 15       | ☆               | 0.23             | 1.47            | 28                       | 4.5            | 9.5  | 34                         | 26             | 4              | 66             | 26             | 44.2           | 69             | M 4 x 10                   | 8.5            | 15 | 15             | 4.5            | 8              | 6   | 30                                                                | 60                               | M 4 x 16                                     | 11 600                              | 13 400          | 112                   | 95.6<br>556    | 95.6<br>556           | MHD 15                |
| MHD 25       | ☆               | 0.64             |                 |                          |                |      |                            |                |                | 95             | 35             | 63.9           | 105            |                            |                |    |                |                |                |     |                                                                   |                                  |                                              | 309<br>1 690                        | 309<br>1 690    | MHD 25                |                |                       |                       |
| MHDG 25      | ☆               | 0.78             |                 |                          |                |      |                            |                |                | 118            | 50             | 86.6           | 128            |                            |                |    |                |                |                |     |                                                                   |                                  |                                              | 533<br>2 740                        | 533<br>2 740    | MHDG 25               |                |                       |                       |
| MHD 30       | ☆               | 1.12             | 4.82            | 45                       | 7              | 16   | 60                         | 40             | 10             | 113            | 40             | 80.6           | 123            | M 8 x 16                   | 11             | 28 | 25             | 9              | 14             | 12  | 40                                                                | 80                               | M 8 x 28                                     | 35 400                              | 40 700          | 623                   | 536<br>2 820   | 536<br>2 820          | MHD 30                |
| MHDG 30      | ☆               | 1.44             |                 |                          |                |      |                            |                |                | 139            | 60             | 106.6          | 149            |                            |                |    |                |                |                |     |                                                                   |                                  |                                              | 894<br>4 460                        | 894<br>4 460    | MHDG 30               |                |                       |                       |
| MHDL 30      | ☆               | 1.92             |                 |                          |                |      |                            |                |                | 185            | 152.2          | 194            | -              |                            |                |    |                |                |                |     |                                                                   |                                  |                                              | 1 740<br>8 240                      | 1 740<br>8 240  | MHDL 30               |                |                       |                       |
| MHD 35       | ☆               | 1.74             | 6.85            | 55                       | 8              | 18   | 70                         | 50             | 10             | 123            | 50             | 86.2           | 133            | M 8 x 16                   | 17             | 34 | 28             | 9              | 14             | 12  | 40                                                                | 80                               | M 8 x 28                                     | 48 700                              | 53 700          | 823                   | 631<br>3 480   | 579<br>3 190          | MHD 35                |
| MHDG 35      | ☆               | 2.26             |                 |                          |                |      |                            |                |                | 151            | 72             | 114            | 161            |                            |                |    |                |                |                |     |                                                                   |                                  |                                              | 1 090<br>5 570                      | 1 000<br>5 110  | MHDG 35               |                |                       |                       |
| MHDL 35      | ☆               | 3.08             |                 |                          |                |      |                            |                |                | 199            | 162.2          | 209            | -              |                            |                |    |                |                |                |     |                                                                   |                                  |                                              | 2 200<br>10 400                     | 2 010<br>9 490  | MHDL 35               |                |                       |                       |
| MHD 45       | ☆               | 3.30             | 10.7            | 70                       | 10             | 20.5 | 86                         | 60             | 13             | 147            | 60             | 103.4          | 156            | M10 x 20                   | 23             | 45 | 34             | 14             | 20             | 17  | 52.5                                                              | 105                              | M12 x 35                                     | 74 600                              | 80 200          | 1 610                 | 1 150<br>6 190 | 1 060<br>5 690        | MHD 45                |
| MHDG 45      | ☆               | 4.57             |                 |                          |                |      |                            |                |                | 190            | 80             | 146.6          | 200            |                            |                |    |                |                |                |     |                                                                   |                                  |                                              | 2 240<br>11 100                     | 2 050<br>10 200 | MHDG 45               |                |                       |                       |
| MHDL 45      | ☆               | 5.85             |                 |                          |                |      |                            |                |                | 238            | 194.8          | 248            | -              |                            |                |    |                |                |                |     |                                                                   |                                  |                                              | 3 680<br>17 800                     | 3 370<br>16 300 | MHDL 45               |                |                       |                       |

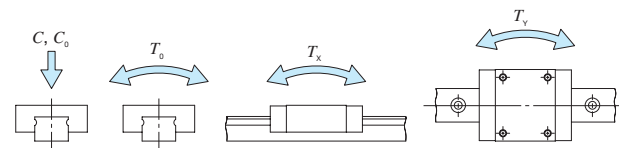
Note (1): Track rail lengths L are shown in Table 30.4.

(2): Track rail mounting bolts are not appended. Hexagon socket bolts of JIS B 1176 strength division 12.9 or equivalent are recommended.

(3): The directions of basic dynamic load rating (C), basic static load rating (C<sub>0</sub>) and static moment rating (T<sub>0</sub>, T<sub>x</sub> and T<sub>y</sub>) are shown in the sketches below.

The upper values in the T<sub>x</sub> and T<sub>y</sub> column apply to one slide unit, and the lower values apply to two units in close contact.

Remark: Oil hole is provided for size 8 to 10 models.



### Example of identification number for assembled set

|                                                    |                                                                                                                    |                                              |                                                     |                                                                                                                                                                          |                                                                      |                                                                                                                |                                                                                       |
|----------------------------------------------------|--------------------------------------------------------------------------------------------------------------------|----------------------------------------------|-----------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| Model code                                         | Size                                                                                                               | Part code                                    | Material code                                       | Preload symbol                                                                                                                                                           | Class symbol                                                         | Interchangeable code                                                                                           | Supplemental code                                                                     |
| <b>MHD G 30 C2 R480</b>                            |                                                                                                                    |                                              |                                                     | <b>T<sub>1</sub></b>                                                                                                                                                     | <b>P</b>                                                             | <b>S2</b>                                                                                                      | <b>/D</b>                                                                             |
| <b>Series</b><br>MHD Block type, mounting from top | <b>Length of slide unit</b><br>C Short<br>No symbol Standard<br>G High rigidity long<br>L Extra High rigidity long | <b>Size</b><br>8, 10, 12, 15, 25, 30, 35, 45 | <b>Number of slide unit (two slide units)</b><br>SL | <b>Length of track rail (480mm)</b>                                                                                                                                      | <b>Material</b><br>No symbol High carbon steel<br>SL Stainless steel | <b>Interchangeable code</b><br>S2 Interchangeable specification<br>No symbol Non interchangeable specification | <b>Special specification</b><br>A, D, E, F, I, J, L, LF, MA, MN, N, PS, T, U, V, W, Z |
|                                                    |                                                                                                                    |                                              |                                                     | <b>Preload amount</b><br>T <sub>0</sub> Clearance<br>No symbol Standard<br>T <sub>1</sub> Light preload<br>T <sub>2</sub> Medium preload<br>T <sub>3</sub> Heavy preload | <b>Accuracy class</b><br>H High<br>P Precision<br>SP Super precision |                                                                                                                |                                                                                       |

In case ordering track rail only, model code is changed as shown below.

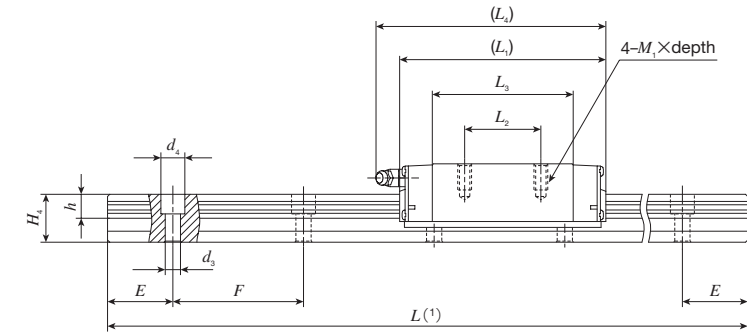
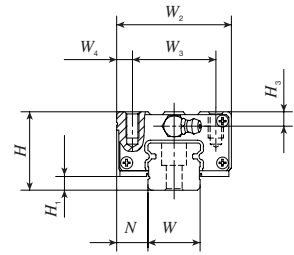
Track rail of interchangeable MH → Model code LWH (Ex: LWH25R480BPS2)

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

# IKO G-Lube Linear Way MH

Compact block type,  
mounting from top

Standard : MHS  
High rigidity long : MHSG

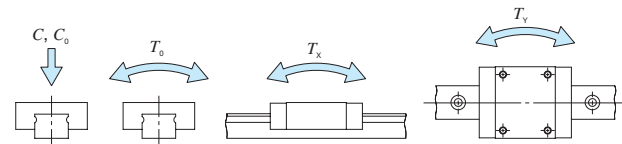


| Model number | Interchangeable | Mass (Reference) |                 | Dimension of assembly mm |                |      | Dimension of slide unit mm |                |                |                |                |                |                | Dimension of track rail mm |                |    |                |                |                |     | Recommended mounting bolt for track rail mm<br>Bolt size × length | Basic <sup>(3)</sup> dynamic load rating C<br>N | Basic <sup>(3)</sup> static load rating C <sub>0</sub><br>N | Static moment rating <sup>(3)</sup> |        |                       | Model number |                       |                       |
|--------------|-----------------|------------------|-----------------|--------------------------|----------------|------|----------------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------------------|----------------|----|----------------|----------------|----------------|-----|-------------------------------------------------------------------|-------------------------------------------------|-------------------------------------------------------------|-------------------------------------|--------|-----------------------|--------------|-----------------------|-----------------------|
|              |                 | Slide unit kg    | Track rail kg/m | H                        | H <sub>1</sub> | N    | W <sub>2</sub>             | W <sub>3</sub> | W <sub>4</sub> | L <sub>1</sub> | L <sub>2</sub> | L <sub>3</sub> | L <sub>4</sub> | M <sub>1</sub> × depth     | H <sub>3</sub> | W  | H <sub>4</sub> | d <sub>3</sub> | d <sub>4</sub> | h   |                                                                   |                                                 |                                                             | E                                   | F      | T <sub>0</sub><br>N·m |              | T <sub>x</sub><br>N·m | T <sub>y</sub><br>N·m |
| MHS 15       | ☆               | 0.18             | 1.47            | 24                       | 4.5            | 9.5  | 34                         | 26             | 4              | 66             | 26             | 44.2           | 69             | M4 × 8                     | 4.5            | 15 | 15             | 4.5            | 8              | 6   | 30                                                                | 60                                              | M4 × 16                                                     | 11 600                              | 13 400 | 112                   | 95.6         | 95.6                  | MHS 15                |
| MHS 15...SL  | ☆               |                  |                 |                          |                |      |                            |                |                | 83             | 36             | 56             | 95             |                            |                |    |                |                |                |     |                                                                   |                                                 |                                                             |                                     |        |                       | 556          | 556                   |                       |
| MHS 20       | ☆               | 0.35             | 2.56            | 30                       | 5              | 12   | 44                         | 32             | 6              | 83             | 36             | 56             | 95             | M5 × 10                    | 5.5            | 20 | 18             | 6              | 9.5            | 8.5 | 30                                                                | 60                                              | M5 × 18                                                     | 18 100                              | 21 100 | 232                   | 195          | 195                   | MHS 20                |
| MHS 20...SL  | ☆               |                  |                 |                          |                |      |                            |                |                | 112            | 50             | 84.8           | 124            |                            |                |    |                |                |                |     |                                                                   |                                                 |                                                             |                                     |        |                       | 1 090        | 1 090                 |                       |
| MHSG 20      | ☆               | 0.52             |                 |                          |                |      |                            |                |                |                |                |                |                |                            |                |    |                |                |                |     |                                                                   |                                                 |                                                             |                                     |        |                       |              |                       | MHSG 20               |
| MHS 25       | ☆               | 0.54             | 3.50            | 36                       | 6.5            | 12.5 | 48                         | 35             | 6.5            | 95             | 35             | 63.9           | 106            | M6 × 12                    | 6.5            | 23 | 22             | 7              | 11             | 9   | 30                                                                | 60                                              | M6 × 22                                                     | 25 200                              | 28 800 | 362                   | 309          | 309                   | MHS 25                |
| MHS 25...SL  | ☆               |                  |                 |                          |                |      |                            |                |                | 118            | 50             | 86.6           | 129            |                            |                |    |                |                |                |     |                                                                   |                                                 |                                                             |                                     |        |                       | 1 690        | 1 690                 |                       |
| MHSG 25      | ☆               | 0.66             |                 |                          |                |      |                            |                |                |                |                |                |                |                            |                |    |                |                |                |     |                                                                   |                                                 |                                                             |                                     |        |                       |              |                       | MHSG 25               |
| MHS 30       | ☆               | 1.00             | 4.82            | 42                       | 7              | 16   | 60                         | 40             | 10             | 113            | 40             | 80.6           | 124            | M8 × 16                    | 8              | 28 | 25             | 9              | 14             | 12  | 40                                                                | 80                                              | M8 × 28                                                     | 35 400                              | 40 700 | 623                   | 536          | 536                   | MHS 30                |
| MHS 30...SL  | ☆               |                  |                 |                          |                |      |                            |                |                | 139            | 60             | 106.6          | 150            |                            |                |    |                |                |                |     |                                                                   |                                                 |                                                             |                                     |        |                       | 2 820        | 2 820                 |                       |
| MHSG 30      | ☆               | 1.29             |                 |                          |                |      |                            |                |                |                |                |                |                |                            |                |    |                |                |                |     |                                                                   |                                                 |                                                             |                                     |        |                       |              |                       | MHSG 30               |

Note (1) : Track rail lengths L are shown in Table 30.4.

(2) : Track rail mounting bolts are not appended. Hexagon socket bolts of JIS B 1176 strength division 12.9 or equivalent are recommended.

(3) : The directions of basic dynamic load rating (C), basic static load rating (C<sub>0</sub>) and static moment rating (T<sub>0</sub>, T<sub>x</sub> and T<sub>y</sub>) are shown in the sketches below.  
The upper values in the T<sub>x</sub> and T<sub>y</sub> column apply to one slide unit, and the lower values apply to two units in close contact.



### Example of identification number for assembled set

|                                                            |                                                                           |                               |                                               |                                     |                                                                      |                                                                                                                                              |                                                                                                                |                                                                                       |
|------------------------------------------------------------|---------------------------------------------------------------------------|-------------------------------|-----------------------------------------------|-------------------------------------|----------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| Model code                                                 | Size                                                                      | Part code                     | Material code                                 | Preload symbol                      | Class symbol                                                         | Interchangeable code                                                                                                                         | Supplemental code                                                                                              |                                                                                       |
| <b>MHS G</b>                                               | <b>30</b>                                                                 | <b>C2 R480</b>                |                                               | <b>T<sub>1</sub></b>                | <b>P</b>                                                             | <b>S2</b>                                                                                                                                    | <b>/D</b>                                                                                                      |                                                                                       |
| <b>Series</b><br>MHS Compact block type, mounting from top | <b>Length of slide unit</b><br>No symbol Standard<br>G High rigidity long | <b>Size</b><br>15, 20, 25, 30 | <b>Number of slide unit (two slide units)</b> | <b>Length of track rail (480mm)</b> | <b>Material</b><br>No symbol High carbon steel<br>SL Stainless steel | <b>Preload amount</b><br>No symbol Standard<br>T <sub>1</sub> Light preload<br>T <sub>2</sub> Medium preload<br>T <sub>3</sub> Heavy preload | <b>Interchangeable code</b><br>S2 Interchangeable specification<br>No symbol Non interchangeable specification | <b>Special specification</b><br>A, D, E, F, I, J, L, LF, MA, MN, N, PS, T, U, V, W, Z |
|                                                            |                                                                           |                               |                                               |                                     |                                                                      |                                                                                                                                              | <b>Accuracy class</b><br>H High<br>P Precision<br>SP Super precision                                           |                                                                                       |

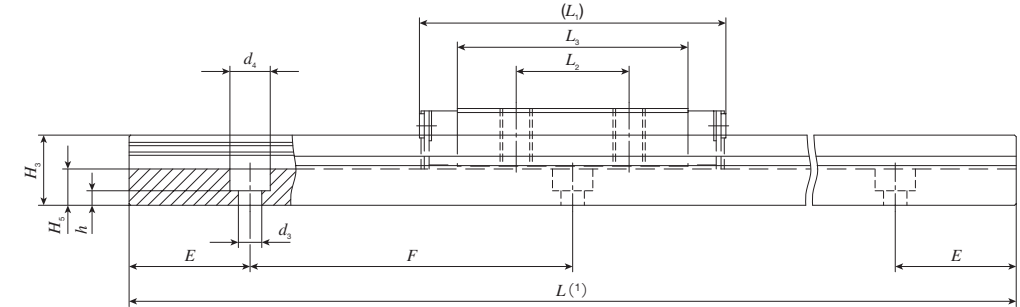
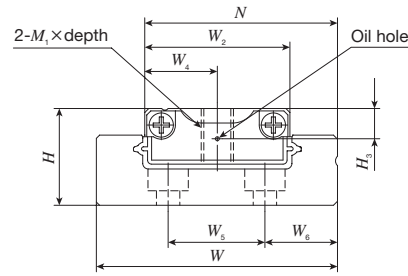
In case ordering track rail only, model code is changed as shown below.  
Track rail of interchangeable MH → Model code LWH (Ex: LWH25R480BPS2)

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



**IKO C-Lube Linear Way MUL Miniature type**

**MUL**

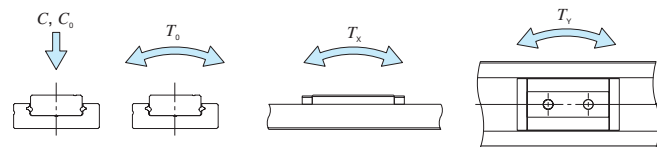


| Model number | Mass (Reference) g |                        | Dimension of assembly mm |      | Dimension of slide unit mm |                |                |                |                |                        |                | Dimension of track rail mm |                |                |                |                |                | Recommended mounting bolt for track rail mm<br>Bolt size x length | Basic dynamic load rating C<br>N | Basic static load rating C <sub>0</sub><br>N | Static moment rating <sup>(3)</sup> |                                                            |       | Model number |      |                       |                       |                       |
|--------------|--------------------|------------------------|--------------------------|------|----------------------------|----------------|----------------|----------------|----------------|------------------------|----------------|----------------------------|----------------|----------------|----------------|----------------|----------------|-------------------------------------------------------------------|----------------------------------|----------------------------------------------|-------------------------------------|------------------------------------------------------------|-------|--------------|------|-----------------------|-----------------------|-----------------------|
|              | Slide unit         | Track rail (per 100mm) | H                        | N    | W <sub>2</sub>             | W <sub>4</sub> | L <sub>1</sub> | L <sub>2</sub> | L <sub>3</sub> | M <sub>1</sub> x depth | H <sub>3</sub> | W                          | H <sub>4</sub> | H <sub>5</sub> | W <sub>5</sub> | W <sub>6</sub> | d <sub>3</sub> |                                                                   |                                  |                                              | d <sub>4</sub>                      | h                                                          | E     |              | F    | T <sub>0</sub><br>N·m | T <sub>x</sub><br>N·m | T <sub>y</sub><br>N·m |
| MUL 25       | 13                 | 87                     | 9                        | 19.4 | 14                         | 7              | 31             | 12             | 22             | M3 x 5                 | 2.9            | 24.9                       | 6.7            | 3.2            | 9              | 8              | 2.9            | 4.8                                                               | 1.6                              | 17.5                                         | 35                                  | Cross-recessed head screw for precision equipment M2.5 x 6 | 1 770 | 2 840        | 20.3 | 10.1<br>53.7          | 8.4<br>45.0           | MUL 25                |
| MUL 30       | 28                 | 139                    | 12                       | 23.9 | 18                         | 9              | 38             | 14             | 28.6           | M4 x 7                 | 3.75           | 29.9                       | 8.7            | 4.5            | 12             | 9              | 2.9            | 5                                                                 | 2.7                              | 20                                           | 40                                  | Hexagon socket head bolt M2.5 x 6                          | 2 280 | 3 810        | 34.9 | 16.9<br>87.5          | 14.2<br>73.4          | MUL 30                |

Note (1) : Track rail lengths L are shown in Table 30.5.

(2) : Track rail mounting bolts are not appended. In case recommended bolts are required, please indicate "/MA" onto the identification number.

(3) : The directions of basic dynamic load rating (C), basic static load rating (C<sub>0</sub>) and static moment rating (T<sub>0</sub>, T<sub>x</sub> and T<sub>y</sub>) are shown in the sketches below.  
The upper values in the T<sub>x</sub> and T<sub>y</sub> column apply to one slide unit, and the lower values apply to two units in close contact.



**Example of identification number for assembled set**

| Model code | Size | Part code | Preload symbol | Class symbol | Supplemental code |
|------------|------|-----------|----------------|--------------|-------------------|
| MUL        | 25   | C2 R280   | T <sub>1</sub> | H            | /U                |

**Series**  
MUL

**Size**  
25, 30

**Number of slide unit (two slide units)**

**Length of track rail (280mm)**

**Special specification**  
E, LR, MA, U, W

**Accuracy class**  
No symbol: Ordinary  
H: High

**Preload amount**  
No symbol: Standard  
T<sub>1</sub>: Light preload

# Environment-friendly **IKO** C-Lube Bearings Minimizing Lubricant Requirement



## What is your trouble?

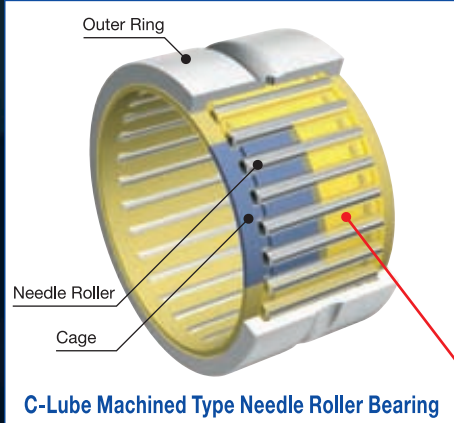
- 1 *Hard access to lubricating?*
- 2 *Machines and work places are dirty with lubricant?*
- 3 *Lubricating tools and instruments occupy the working places?*
- 4 *Having problems keeping up with lubrication maintenance schedule?*

## Find solutions with **IKO**

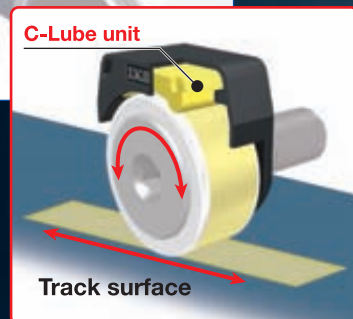
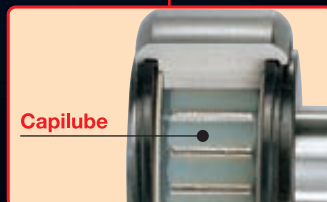
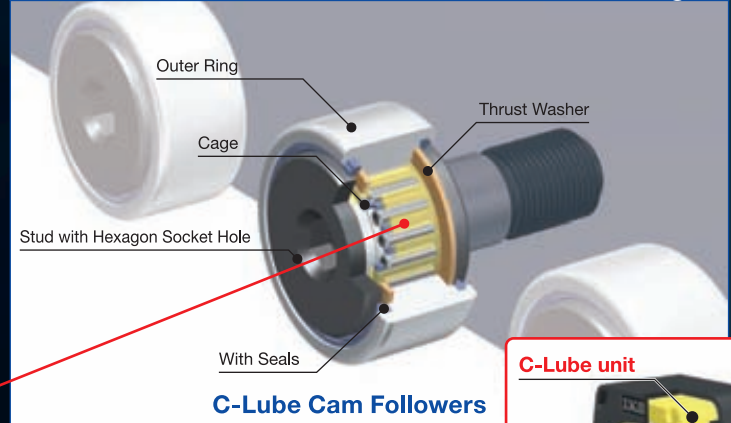
"C-Lube bearings" are IKO's unique maintenance free bearing products with thermosetting solid lubricant (Capilube) pre-packed in the bearing space. As the bearing rotates, the lubricating oil oozes out onto needle rollers and raceways in proper quantity keeping the lubrication performance for a long period of time.



### For shaft support



### For cam mechanisms and follower bearings



## **IKO** Maintenance Free C-Lube Bearing CAT-57165

**Maintenance work can be reduced greatly**

*Requires no periodical lubrication and increases the productivity.*

**Minimizes the amount of lubricant and contributes to the earth environment**

*Contributes to the earth environment and reduces the running cost.*

**Suppresses machine designing and device costs**

*Working spaces can be utilized.*



# World Network of **IKO**



## **NIPPON THOMPSON CO., LTD.**

Head office : 19-19 Takanawa 2-chome Minato-ku  
Tokyo 108-8586, Japan  
Phone : +81 (0)3-3448-5850  
Fax : +81 (0)3-3447-7637  
E-mail : ntt@ikonet.co.jp  
URL : <http://www.ikonet.co.jp/eg/>  
Plant : Gifu, Kamakura

## **NIPPON THOMPSON CO., LTD.**

**ASEAN REPRESENTATIVE OFFICE**  
Level 8, #1 Silom Road, Silom  
Bangrak, Bangkok  
Thailand 10500  
Phone: +66 (0)-2-231-8278  
Fax: +66 (0)-2-231-8121  
E-mail: ntar@ikonet.co.jp

## **IKO-THOMPSON (SHANGHAI) LTD.**

1402-1404 Sunyoung Center  
28 Xuanhua Road, Shanghai  
People's Republic of China 200050  
Phone: +86 (0)21-3250-5525  
Fax: +86 (0)21-3250-5526  
E-mail: ntc@ikonet.co.jp

## **IKO INTERNATIONAL, INC.**

<http://www.ikonet.com/>

### **East coast**

91 Walsh Drive  
Parsippany, NJ 07054  
U.S.A.  
Phone: +1 973-402-0254  
Toll Free: 1-800-922-0337  
Fax: +1 973-402-0441  
E-mail: eco@ikonet.co.jp

### **Midwest**

500 East Thorndale Avenue  
Wood Dale, IL 60191  
U.S.A.  
Phone: +1 630-766-6464  
Toll Free: 1-800-323-6694  
Fax: +1 630-766-6869  
E-mail: mwo@ikonet.co.jp

### **West coast**

20170 South Western Avenue  
Torrance, CA 90501  
U.S.A.  
Phone: +1 310-609-3988  
Toll Free: 1-800-252-3665  
Fax: +1 310-609-3916  
E-mail: wco@ikonet.co.jp

### **Southeast**

2150 Boggs Road, Suite 100  
Duluth, GA 30096  
U.S.A.  
Phone: +1 770-418-1904  
Toll Free: 1-800-874-6445  
Fax: +1 770-418-9403  
E-mail: seo@ikonet.co.jp

### **Southwest**

8105 N. Beltline Road  
Suite 130, Irving, TX 75063  
U.S.A.  
Phone: +1 972-929-1515  
Toll Free: 1-800-295-7886  
Fax: +1 972-915-0060  
E-mail: swo@ikonet.co.jp

## **NIPPON THOMPSON EUROPE B.V.**

<http://www.ikonet.eu/>

### **The Netherlands**

Sheffieldstraat 35-39  
3047 AN Rotterdam  
The Netherlands  
Phone: +31 (0)10-4626868  
Fax: +31 (0)10-4626099  
E-mail: nte@ikonet.co.jp

### **Germany**

Mündelheimer Weg 56  
40472 Düsseldorf  
Germany  
Phone: +49 (0)211-414061  
Fax: +49 (0)211-427693  
E-mail: ntd@ikonet.co.jp

Im Gewerbepark D 30  
93059 Regensburg  
Germany  
Phone: +49 (0)941-206070  
Fax: +49 (0)941-2060719  
E-mail: ntdr@iko-nt.de

Gruben Str.95c  
66540 Neunkirchen  
Germany  
Phone: +49 (0)6821-999-860  
Fax: +49 (0)6821-999-8626  
E-mail: ntdn@iko-nt.de

### **UK**

2 Vincent Avenue, Crownhill  
Milton Keynes Bucks MK8 0AB  
United Kingdom  
Phone: +44 (0)1908-566144  
Fax: +44 (0)1908-565458  
E-mail: sales@iko.co.uk

### **Spain**

Autovia Madrid-Barcelona, Km. 43,700  
Polig. Ind. AIDA, A-8, Ofic. 2, 1ª  
19200-Azuqueca de Henares  
Guadalajara, Spain  
Phone: +34 949-263390  
Fax: +34 949-263113  
E-mail: nts@ikonet.co.jp

### **France**

Roissypole Le Dôme  
2 rue de La Haye  
BP 15950 Tremblay en France  
95733 Roissy C. D. G. Cedex  
France  
Phone: +33 (0)1-48165739  
Fax: +33 (0)1-48165746  
E-mail: ntf@ikonet.co.jp

Recognizing that conservation of the global environment is the top-priority challenge for the world's population, **IKO** will conduct its activities with consideration of the environment as a corporate social responsibility, reduce its negative impact on the environment, and help foster a rich global environment.

**ISO 9001 & 14001 Quality system  
registration certificate**

