

U.S. PATENTED

IKO

C-Lube Linear Roller Way Super

MX

IKO Clean Lubrication



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

CAT-57167

IKO

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MX

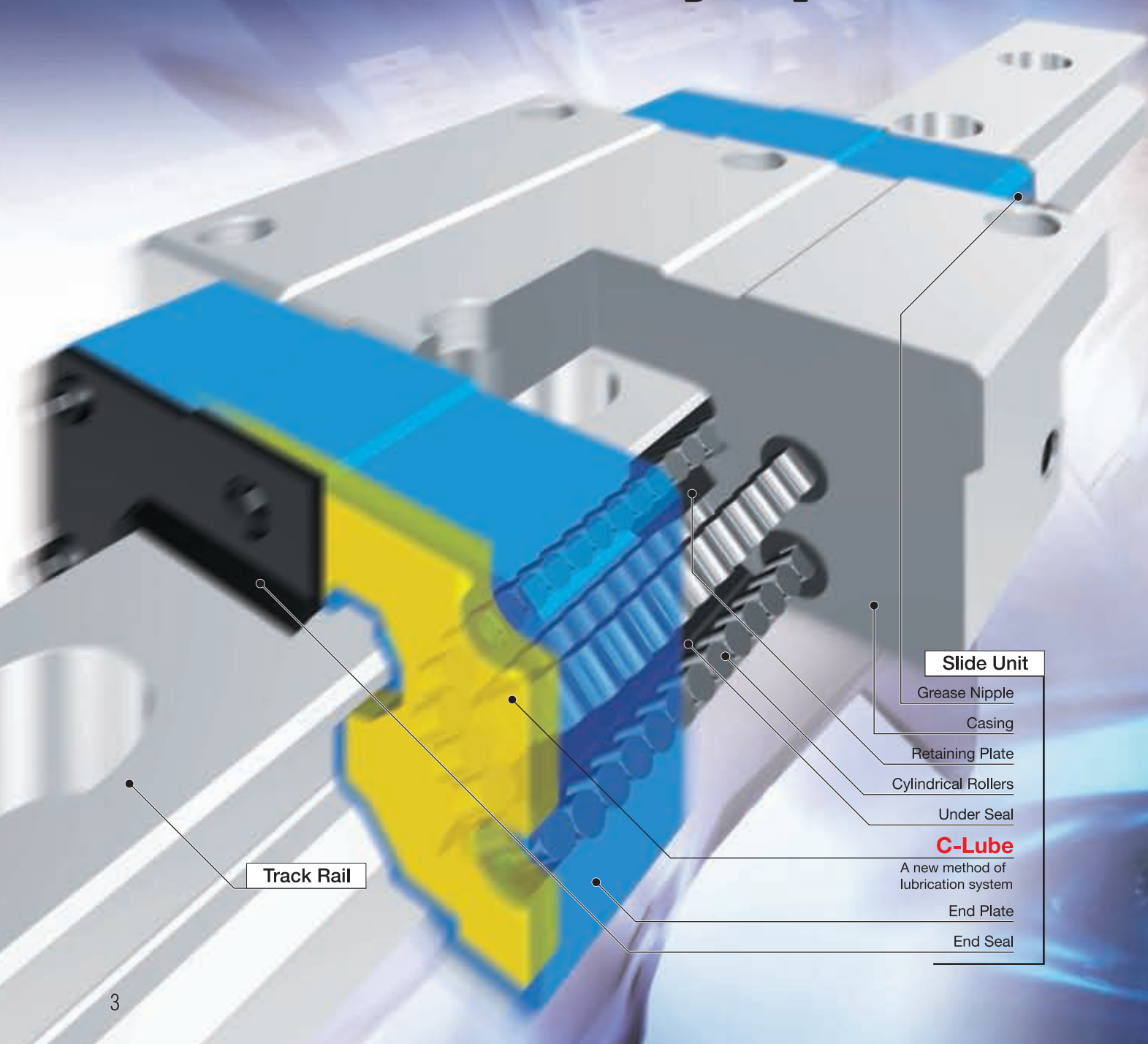
IKO strives to be a leader in Technology. Our primary source for development is listening to the customer wants and needs. Our performance and work separate us from others by utilizing our creative thinking and original technologies. **IKO** is constantly developing and implementing new and advanced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



POWER & CARE

IKO

C-Lube Linear Roller Way Super MX



Track Rail

Slide Unit

Grease Nipple

Casing

Retaining Plate

Cylindrical Rollers

Under Seal

C-Lube

A new method of lubrication system

End Plate

End Seal

IKO C-Lube Linear Roller Way Super MX is a high performance roller type linear motion rolling guide, featuring high reliability, high rigidity, high accuracy and smooth motion which are required from machine tools, semiconductor manufacturing and liquid crystal manufacturing equipments. Cylindrical rollers are incorporated as rolling elements in four rows, arranged in parallel to each other. Owing to its small elastic deformation, stable operation is ensured even under heavy or fluctuating loads. This series is also suitable for applications with vibration and shocks.

With **IKO** original C-Lube technology, its performance makes us different from others, providing superior cost performance for you machines. Maintenance free for 20,000 km or 5 years minimizes the amount of lubricant required and contributes to the global environment protection.

| U.S. PATENT | |
|-------------|-----------|
| No. | 5,800,064 |
| No. | 5,193,914 |
| No. | 5,564,188 |
| No. | 5,374,126 |
| No. | 5,622,433 |
| No. | 6,176,617 |
| No. | 5,967,667 |
| No. | 5,464,288 |

POWER

Roller Effect

Well-balanced structure with cylindrical rollers as rolling element brings you great load capacity, very high rigidity, superior running accuracy and excellent damping characteristics. C-Lube Linear Way Super MX is the best mechanical element for machine tool applications requiring high machining accuracy under high-speed cutting, heavy cutting with vibration and shocks, and precision grinding.

CARE

Maintenance free

Capillary system continuously supplies proper amount of lubrication oil to the cylindrical rollers keeping lubrication condition of the raceways well for long period of time allowing lubrication maintenance can be avoidable up to 20,000 km or 5 years.

Interchangeable

Interchangeable specification is available. Slide units and track rails can be supplied separately allowing them to be matched, replaced and added freely. This feature offers more freedom in designing machines, facilitating standardization and sudden changes of specifications.

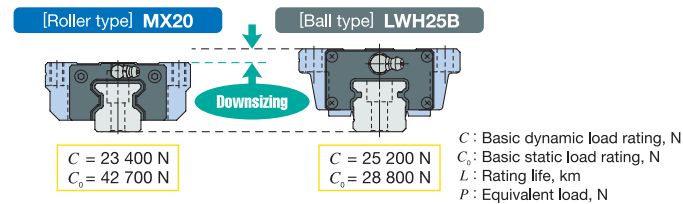
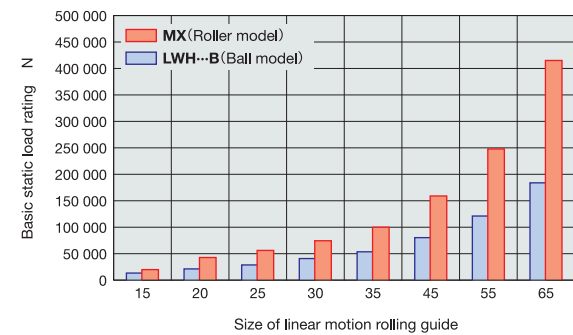
POWER

High rigidity and high load capacity

Super high load capacity

Cylindrical rollers give a larger contact area compared to steel balls, and higher load capacity is attainable. Incorporating a large number of cylindrical rollers, C-Lube Linear Roller Way Super MX has very high load ratings.

Comparison of basic static load ratings



Roller type has longer life due to higher exponent even basic dynamic load rating is smaller.

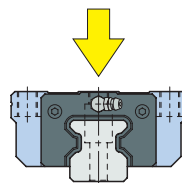
[Life calculation formula]

| Roller type | Ball type |
|--|---------------------------------------|
| $L = 50 \left(\frac{C}{P} \right)^{10/3}$ | $L = 50 \left(\frac{C}{P} \right)^3$ |
| In case of the load 5000N $L \approx 8\,500$ km | $L \approx 5\,100$ km |

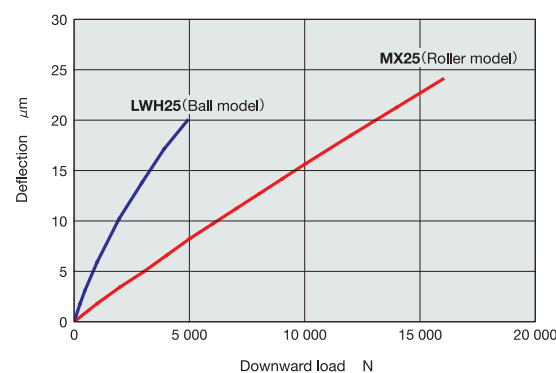
Super high rigidity

Rigidity of linear motion rolling guide has a large influence to the performance of machines or equipment in which they are assembled.

Very high rigidity of C-Lube Linear Roller Way Super MX is achieved owing to the excellent elastic deformation characteristics of cylindrical rollers which give smaller elastic deformation under load as compared with steel balls. In addition, a large number of cylindrical rollers are incorporated in the slide unit.

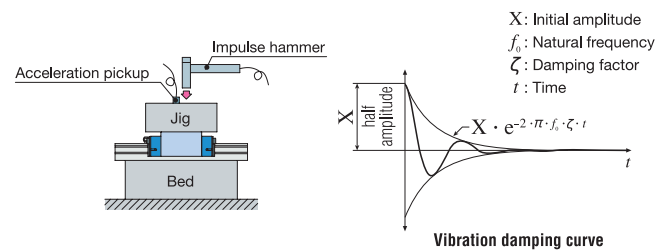


Elastic deformation characteristics of C-Lube Linear Roller Way Super MX

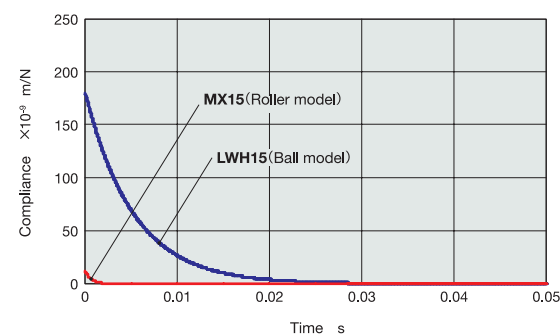


Excellent vibration damping characteristics

As compared with ball types in the same size, C-Lube Linear Roller Way Super MX has higher rigidity and gives much smaller deformation value under repeated fluctuating load. The natural frequency is high, and the vibration damping time can be very short.



Vibration damping curve under downward excitation (half amplitude)



In IKO C-Lube Linear Roller Way Super MX, four rows of cylindrical rollers are incorporated in a highly rigid casing with good balance, and the cylindrical rollers in each row are arranged in parallel to each other. Owing to its small elastic deformation, stable operation is ensured even under heavy or fluctuating loads. Smooth and quiet motion, high reliability, high rigidity and high running accuracy are realized.

Accurate positioning with excellent friction characteristics

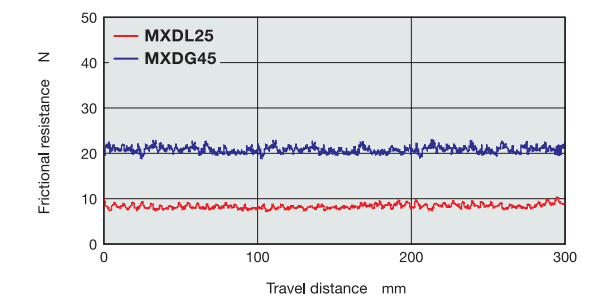
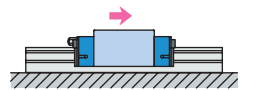
A unique roller retaining method is adopted, in which the end faces of cylindrical rollers are guided accurately by the retaining plate, so the skewing of cylindrical rollers is prevented and smooth motion is achieved.

As compared with the slide guides and ball type linear motion rolling guides, roller type has superior frictional characteristics and gives lower frictional resistance under preload. Good response to micro feeding and high positioning accuracy can be provided.

Saving driving power

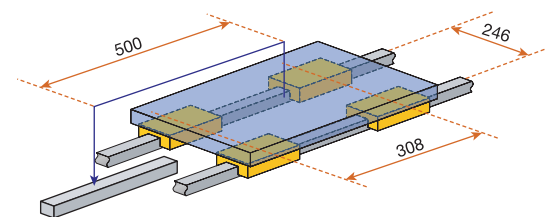
Frictional resistance of MXDL25 and MXDG45 with T₃ preload

| | |
|-------------|--|
| Product | Extra high rigidity long MXDL25 High rigidity long MXDG45 |
| Preload | T ₃ (Heavy preload) |
| Speed | 0.6 m/min |
| Lubrication | C-Lube and grease |



Low noise and high running performance

Smooth and quiet motion is achieved by adopting the optimum design based on the analysis of roller re-circulation behavior. Furthermore, as the number of load carrying cylindrical rollers is large, the minute fluctuating deflection during travel is minimized.



High tact

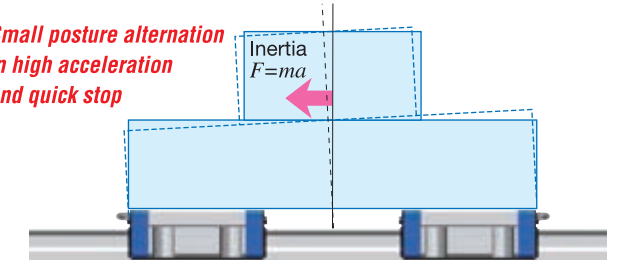
Quick positioning is possible by high rigidity and excellent vibration damping characteristics of roller type even with large inertia caused by the latest high tact positioning devices.

Superior accuracy in the operation

Runout in the operation

| | unit: μm |
|---|----------|
| MXDG35 T ₃ Preload | 0.12 |
| Other company's ultra high accuracy long type | 0.12 |

Small posture alternation in high acceleration and quick stop



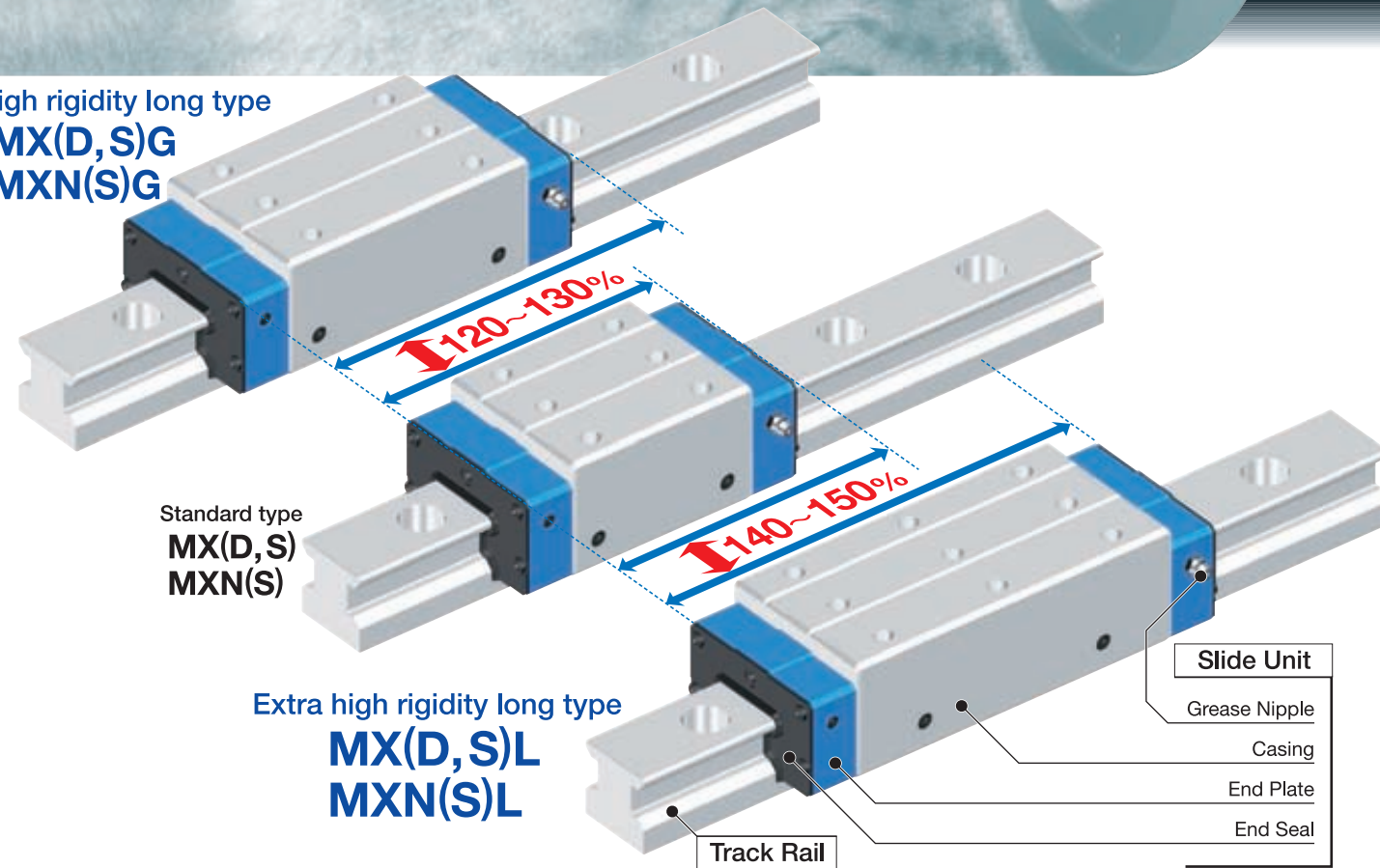
1N=0.102kgf=0.2248lbs.
1mm=0.03937inch

POWER

Extra high rigidity long type slide unit

New longer slide unit having the length 1.5 times of standard type is available.
Large quantity of cylindrical rollers contributes superior running accuracy and higher rigidity.

High rigidity long type
MX(D,S)G
MXN(S)G



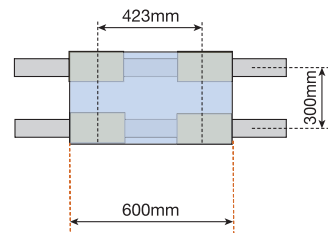
Standard type
MX(D,S)
MXN(S)

Extra high rigidity long type
MX(D,S)L
MXN(S)L

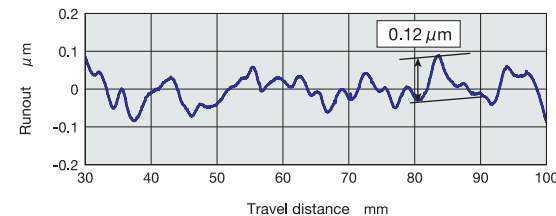
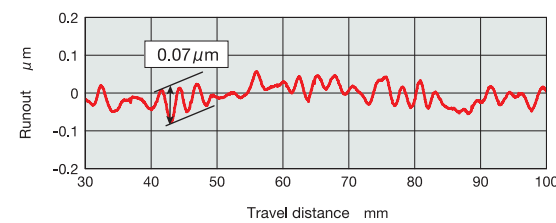
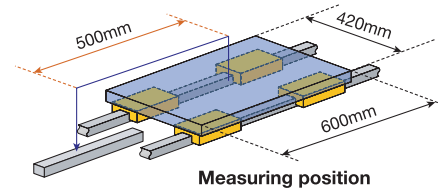
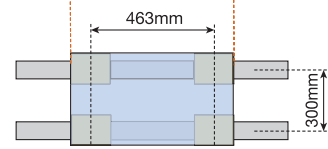
For higher running accuracy

Runout in the operation could be a half of high rigidity long type. Accurately and super fine positioning can be realized in your machine.

| | |
|----------------|---|
| Test condition | |
| Product | Extra high rigidity long type MXDL45 |
| Preload | T ₃ |



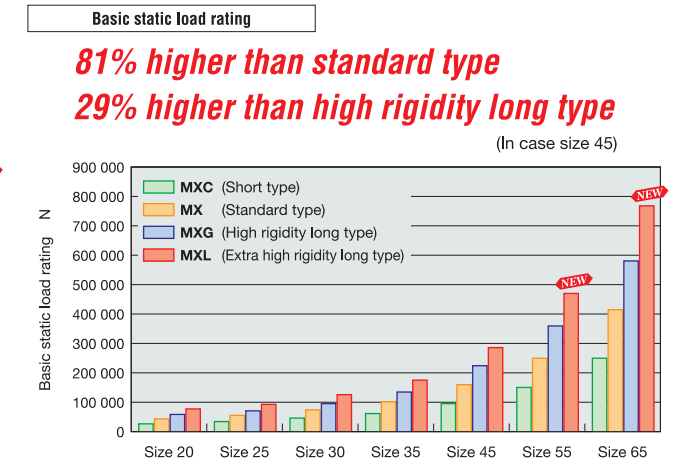
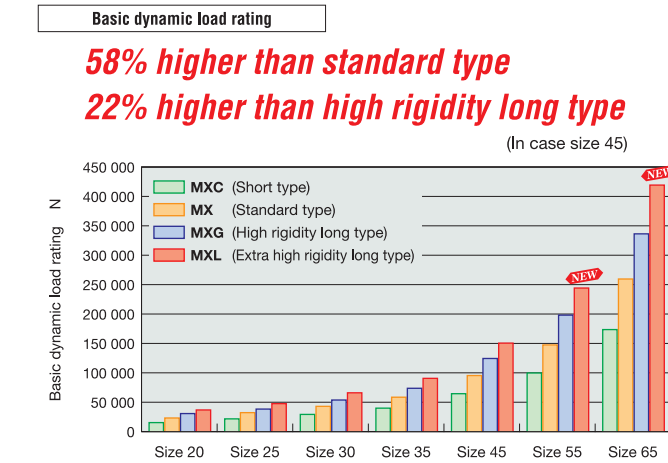
| | |
|----------------|---------------------------------------|
| Test condition | |
| Product | High rigidity long type MXDG45 |
| Preload | T ₃ |



Twice as better in accuracy

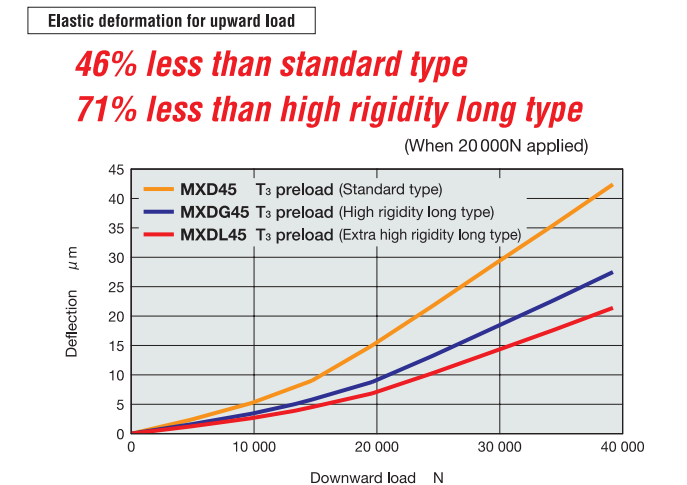
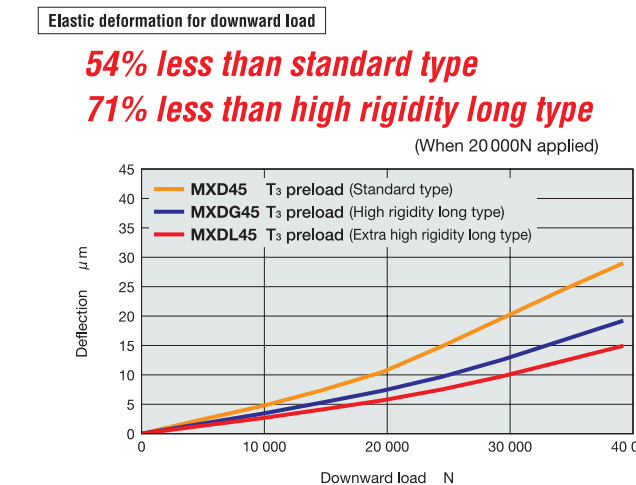
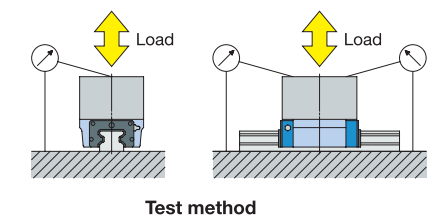
Upgrading of your machine ---- Load capacity

Basic dynamic load rating could be 22% higher and basic static load rating could be 30% higher. Longer machine life and increasing reliability of the machine are possible.



Upgrading of your machine ---- Rigidity

Displacement against load could be 71% smaller than high rigidity long type. It makes machine's rigidity higher and improvement in accuracy, also allows avoiding resonance.



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

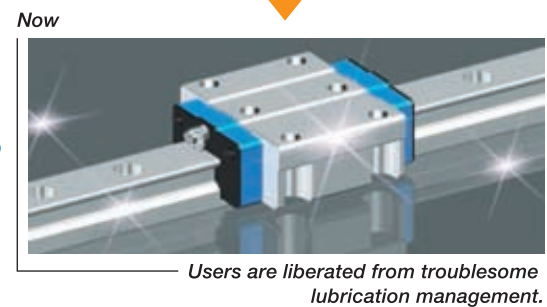
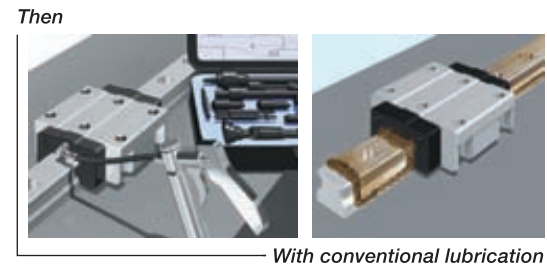
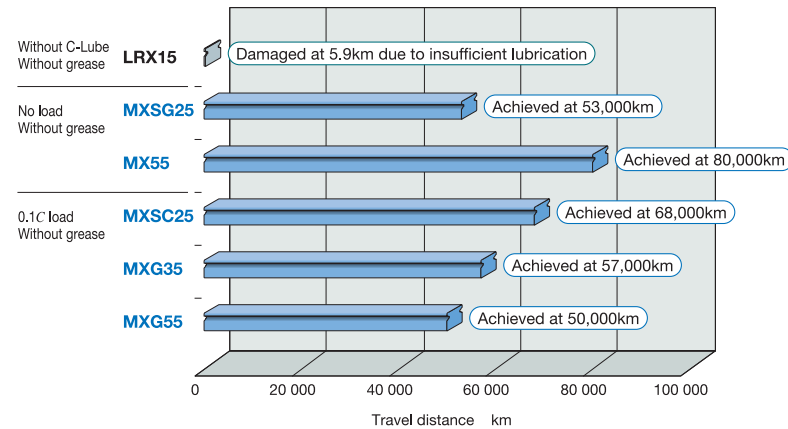
CARE

5 years or 20,000km of maintenance free

Maintenance free for saving-resources

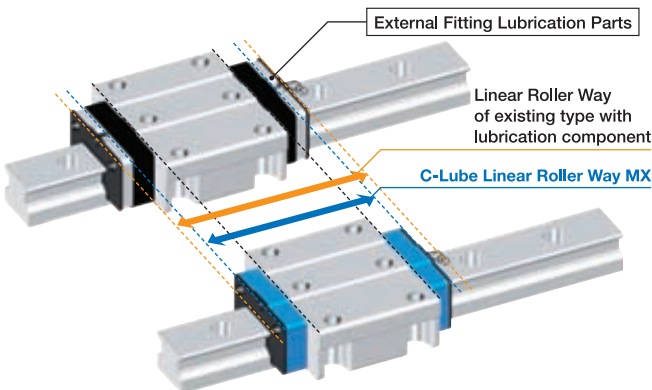
Maintenance free has the ability to maintain lubrication for a long time, reducing the amount of labor required for troublesome lubrication maintenance. The capillary lubrication body continuously supplies lubricant for long period of time even after original grease inside is completely exhausted.

Test results of Durability



Compact design for miniaturization

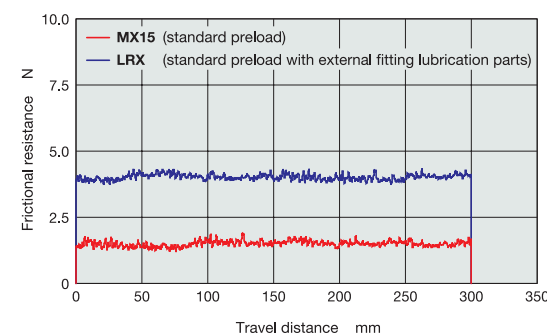
Incorporating C-Lube, linear motion rolling guide provides light-weights and compact sizes. C-Lube Linear Roller Way MX, having no external parts, can replace standard linear way without changing the external dimensions and it does not sacrifice the allowable stroke length.



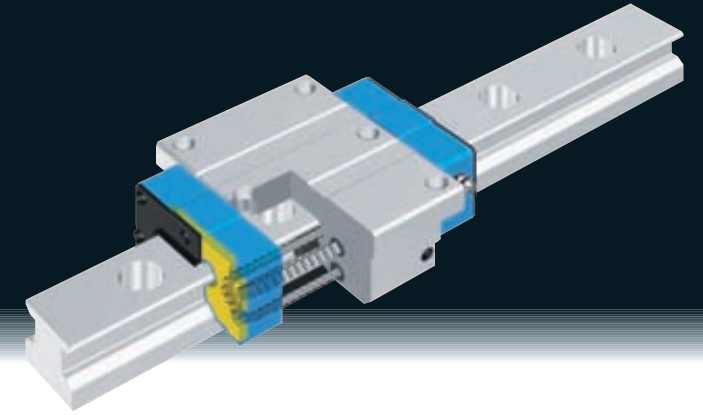
Smooth and light operation

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

Frictional resistance test result



The Capillary system that **IKO** has developed is a new method of lubrication. The Lube-body is formed by sintering a fine resin powder to act as a reservoir and the open pores are impregnated with a large amount of lubrication oil. The capillary action gives the correct amount of lubrication on the rolling elements to protect the raceways for long periods.



Ecology contributes to the global environment by conserving oil

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

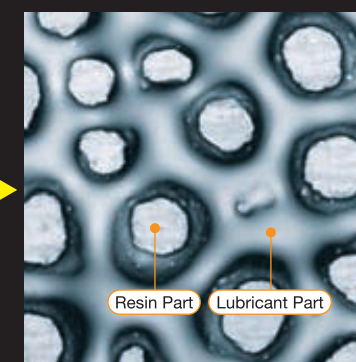
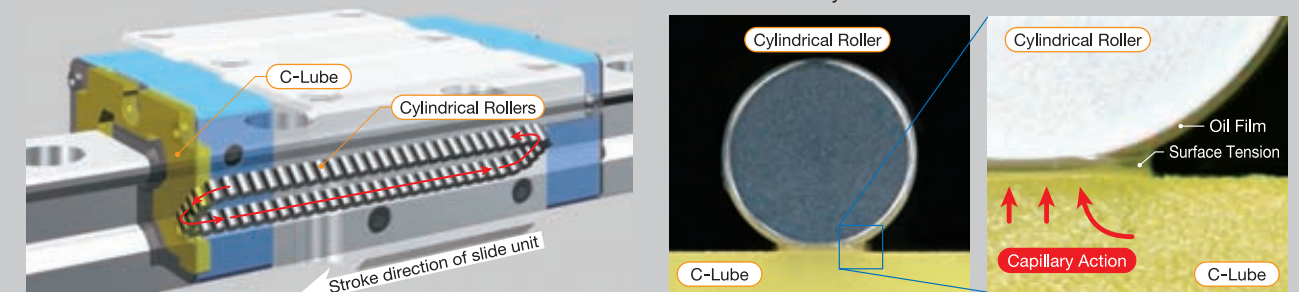
Lubricant supply mechanism of C-Lube system

The circulation of the cylindrical rollers distributes lubricant.

Lubricant is supplied directly to the cylindrical rollers from C-Lube. As the cylindrical rollers circulate, the lubricant is distributed to the loading area through the rollers 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 cylindrical rollers.

The surface of C-Lube is always covered with the lubricant. Lubricant is continuously supplied to the surface of cylindrical rollers by surface tension in the contact of C-Lube surface and cylindrical rollers. New oil permeates automatically from the core of C-Lube to the raceway surfaces that come in contact with cylindrical rollers.

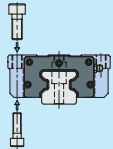
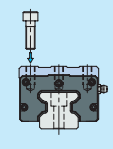
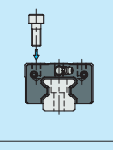
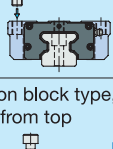



Capillary system **IKO** has developed is a new type lubrication. It is a porous resin Lube-body or plate with steel backing formed by sintering fine resin powder and impregnating a large amount of lubrication oil in its open pores. Capillary system always supplies proper amount of lubrication oil to the cylindrical rollers and lubrication condition of the raceway can be kept well for long period of time.

CARE

Wide variation

Wide variation

| Shape of slide unit | Length of slide unit | Size | | | | | | | | |
|--|--------------------------|------------------|------------------|------------------|------------------|----|----|----|----|---|
| | | 15 | 20 | 25 | 30 | 35 | 45 | 55 | 65 | |
| Flange type, mounting from the top and bottom  MX ⁽¹⁾ | Short | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| | Standard | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| | High rigidity long | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| | Extra high rigidity long | — | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Block type, mounting from top  MXD | Short | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| | Standard | ● ⁽²⁾ | ● ⁽²⁾ | ● ⁽²⁾ | ● ⁽²⁾ | ○ | ○ | ○ | ○ | ○ |
| | High rigidity long | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| | Extra high rigidity long | — | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Compact block type, mounting from top  MXS | Short | ○ | ○ | ○ | ○ | — | — | — | — | — |
| | Standard | ○ | ○ | ○ | ○ | — | — | — | — | — |
| | High rigidity long | ○ | ○ | ○ | ○ | — | — | — | — | — |
| | Extra high rigidity long | — | ○ | ○ | ○ | — | — | — | — | — |
| Low section flange type, mounting from top  MXN | Standard | — | — | — | — | ○ | ○ | ○ | — | — |
| | High rigidity long | — | — | — | — | ○ | ○ | ○ | — | — |
| | Extra high rigidity long | — | — | — | — | ○ | ○ | ○ | ○ | — |
| Low section block type, mounting from top  MXNS | Standard | — | — | — | — | ○ | ○ | ○ | — | — |
| | High rigidity long | — | — | — | — | ○ | ○ | ○ | — | — |
| | Extra high rigidity long | — | — | — | — | ○ | ○ | ○ | ○ | — |

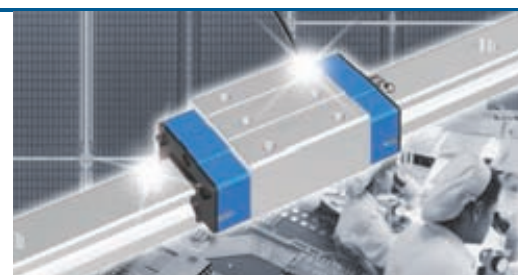
Note (1): Size 20 (MX20, MXD20 and MXS20) can be mounted from top only. For mounting from bottom, MXH can be used, which have the same dimensions as those of above models.

(2) The mark ● indicates that stainless steel product is also available.

NEW

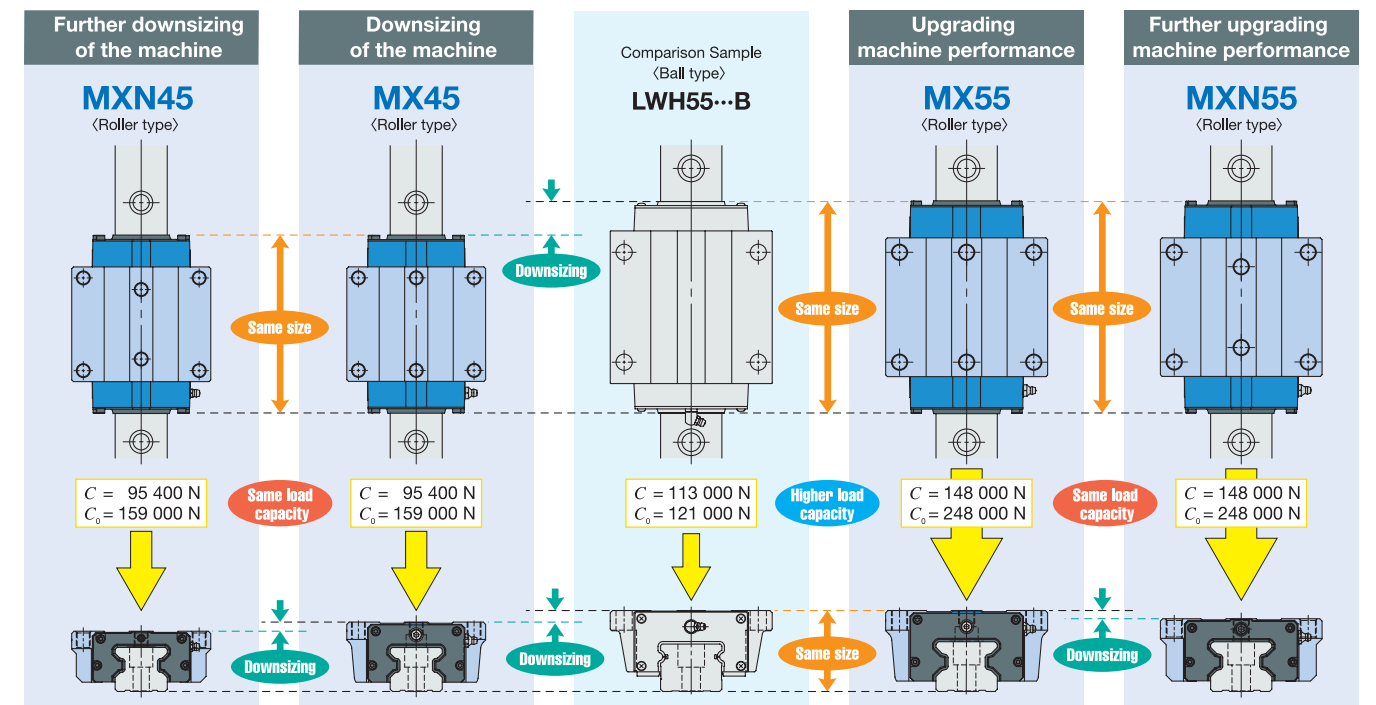
Stainless steel

Stainless steel products are more resistant to corrosion than high carbon steel, so these products are most suitable for applications where the use of oil or grease (including rust preventive oil) should not be avoided or kept to a minimum.



Downsizing

Due to the great load capacity of the roller type compared with the ball type, C-Lube Linear Roller Way Super MX series enables downsizing of the linear motion rolling guide with its abundant variations. It also enables downsizing of the machines and devices.

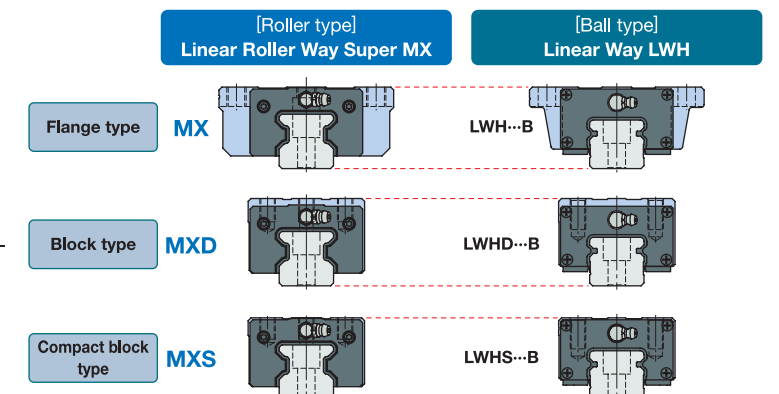


Dimensional interchangeability to the ball type

The mounting dimensions are the same as those of ball type Linear Way H. So this guide can replace the ball type without any change in mounting dimensions in the existing machines or equipment.

Due to the great load capacity of the roller type compared with the ball type, C-Lube Linear Roller Way Super MX enables downsizing of the linear motion rolling guide with its abundant variations. It also enables downsizing of the machines and devices.

Since the dimensional interchangeability to the ball type linear way, accuracy, rigidity and damping characteristic of the machine can be improved greatly by just replacing to C-Lube Linear Roller Way Super MX without any design change.



CARE

Interchangeable specification

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.

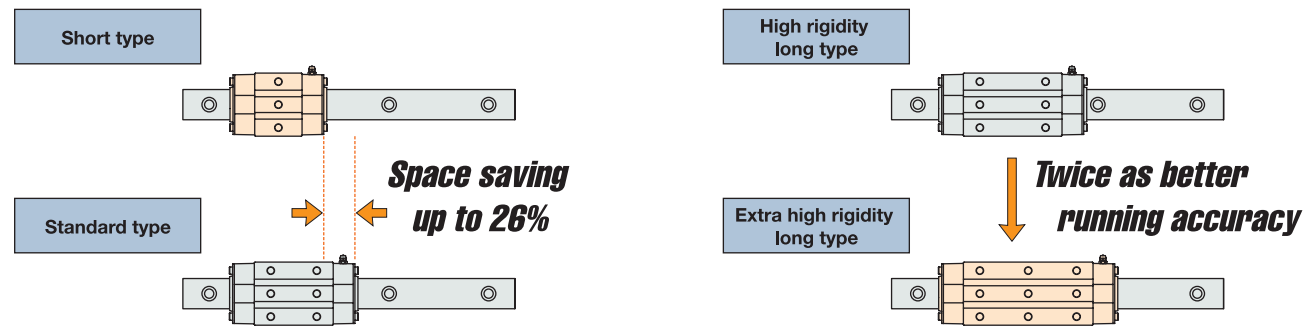
Requirements of ;

- Extending machine life and increase rigidity
- Improving machining accuracy
- Replace only the slide unit
- Increase the number of slide unit
- Replace the track rail
- Extend the length of track rail
- Stock only slide unit for back up

Interchangeable specification realizes ;

- Quick design change.
- Giving higher accuracy and changing preload.
- Slide unit and track rail can be supplied and handled individually.
- Slide unit in any shape with any accuracy or preload can be matched to a track rail.
- Slide unit and track rail can be stocked separately, which contributes to minimize inventory.

Slide units are available in four different lengths.



Interchangeability among types of slide unit

Various types of slide units with different sectional shapes and lengths are prepared. All of these slide units can be mounted on the same track rail freely as required.

Interchangeability of slide unit

Shapes of slide units

| | | | | |
|---|---|---|--|--|
| Flanged type, mounting from top and bottom MX | Blocked type, mounting from top MXD | Compact blocked type, mounting from top MXS | Low section flange type, mounting from top MXN | Low section block type, mounting from top MXNS |
|---|---|---|--|--|

Length of slide units

- Short slide unit
- Standard slide unit
- High rigidity long slide unit

Interchangeability of track rail

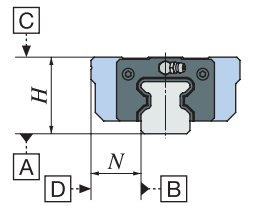
| Track rail | | |
|-------------------|-----------------|-------------------------------|
| High carbon steel | Stainless steel | Butt joint long specification |

Interchangeability in accuracy

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

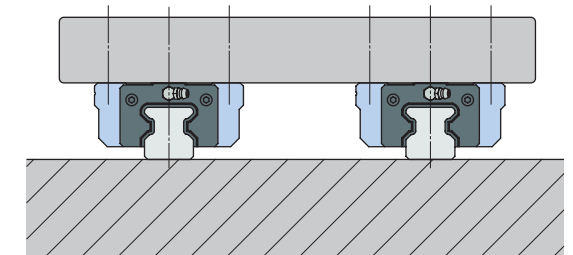
Two accuracy grades are available.

- 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 parallel.

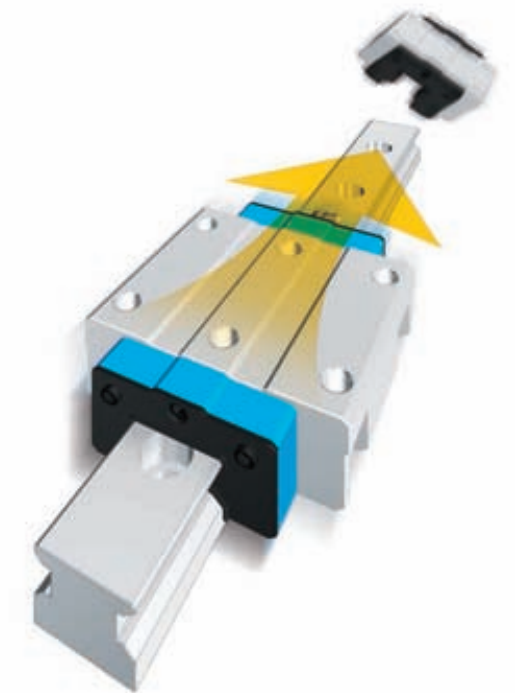
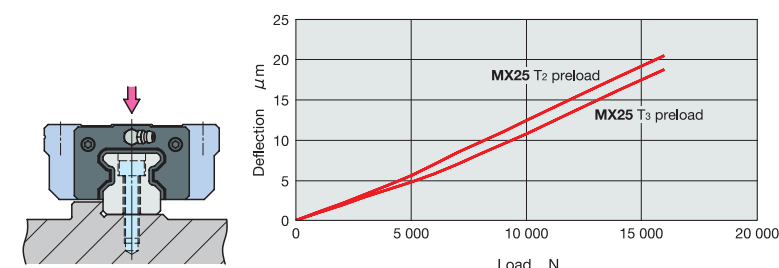
- Dimensional variation of H dimension for multiple assembled sets



Interchangeability in preload

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 different amounts of preload types are prepared so that these products can be selected for the application requirement.

Slide unit with higher preload symbol offers greater rigidity.

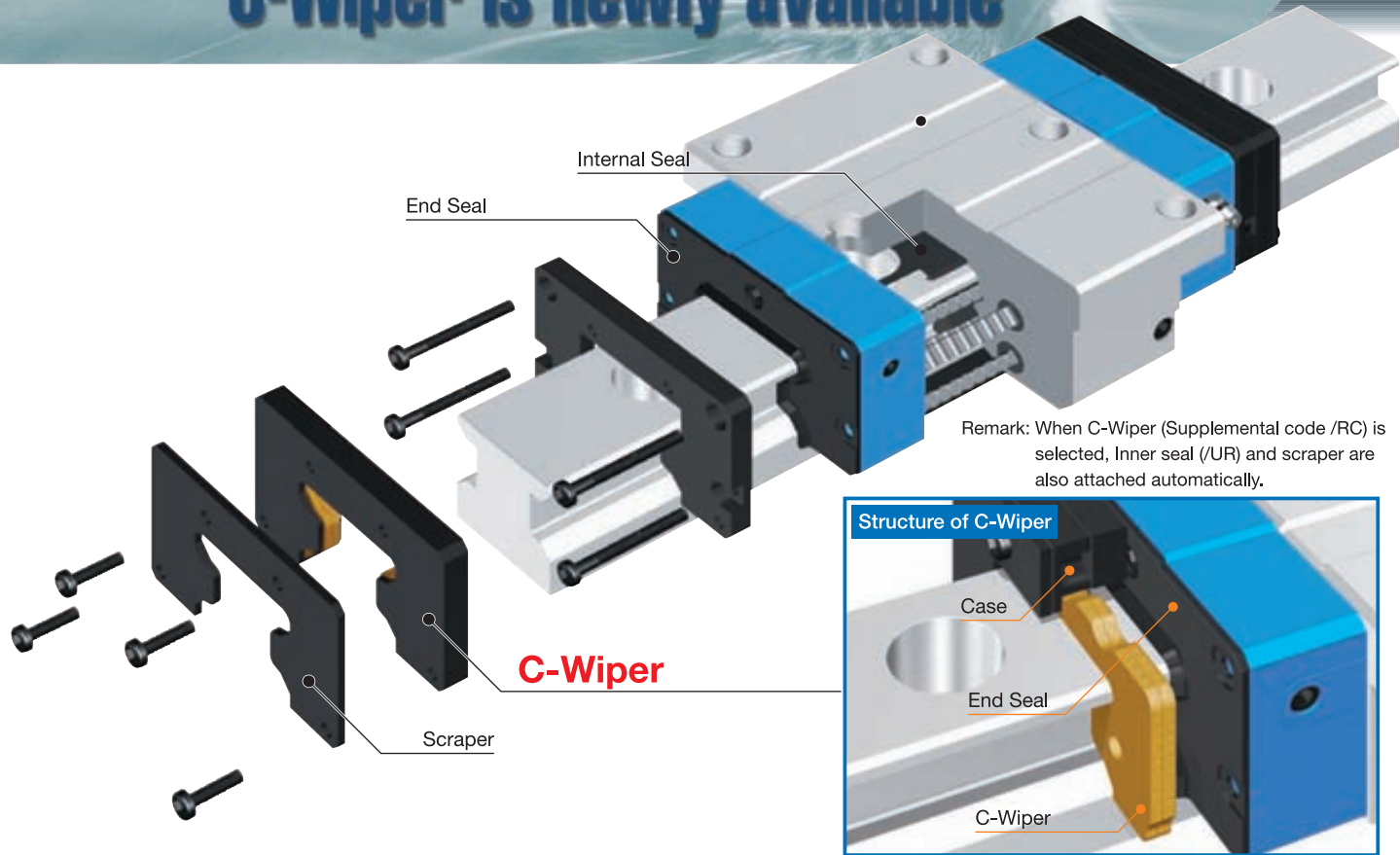


1N=0.102kgf=0.2248lbs.
1mm=0.03937inch

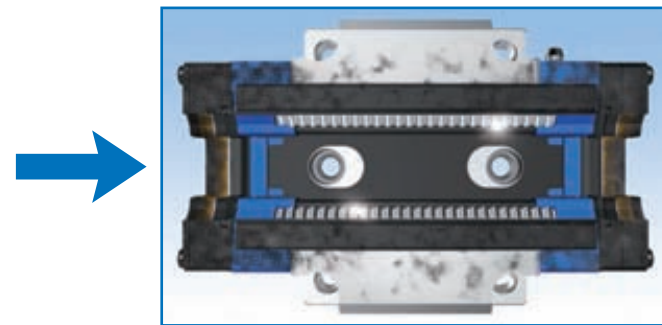
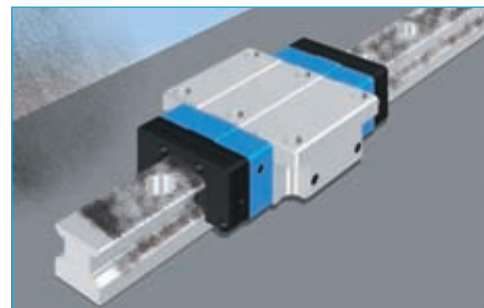
CARE

High performance new dust protective C-Wiper is newly available

C-Wiper is the superior dust protective component against cutting chips and/or coolant of machine tool, lathe and grinding machine. C-Wiper is always contacting to the top surface of track rail by its all wiping surface. Continuous dust protection performance provides better machine reliability under severe working condition.



Even in metal particles fly apart condition



C-Wiper provides superior dust protection

Available product sizes for C-Wiper

| Length of slide unit | Size | | | | | | | |
|-------------------------------------|------|----|-----|----|----|----|-----|----|
| | 15 | 20 | 25 | 30 | 35 | 45 | 55 | 65 |
| Short slide unit | — | — | NEW | ○ | ○ | ○ | ○ | ○ |
| Standard slide unit | — | — | ○ | ○ | ○ | ○ | ○ | ○ |
| High rigidity long slide unit | — | — | ○ | ○ | ○ | ○ | ○ | ○ |
| Extra high rigidity long slide unit | — | — | ○ | ○ | ○ | — | NEW | ○ |

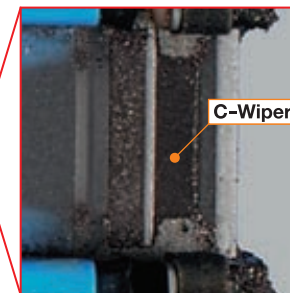
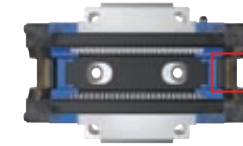
Remark : Applicable to all shape of slide unit in same size.

Durability test result under fine particles

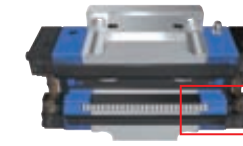
Test condition

| | |
|-----------------|---|
| Product | MX 35 T ₃ preload/FRC : C-Wiper specification |
| Operating speed | 18 m/min |
| Travel length | 500 mm |
| Dust condition | Fine metal particles Diameter of particle : 125 μm or less Hardness of particle : HRC40 to 50 Application amount : 1 g/hr (Total volume: 1 kg) |

After 1000km operation



After 1000km operation



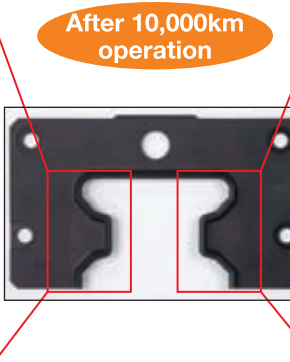
Steel particles inside of slide unit could be minimized.

Durability test result under coolant mist

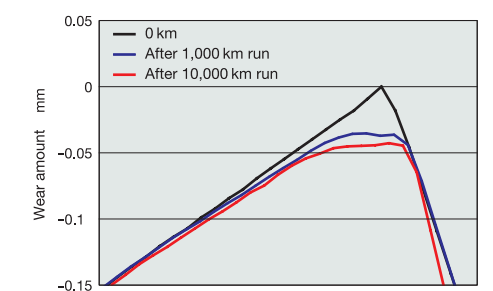
Test condition

| | |
|-----------------|--|
| Product | MX 35 T ₃ preload/FRC : C-Wiper specification |
| Operating speed | 115.2 m/min |
| Travel length | 300 mm |
| Coolant | Soluble type Diluting rate : ×20 Spraying amount : 5 cc/hr |

After 10,000km operation



Wear amount of seal lip



No damage of End seal was found.

Identification number

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

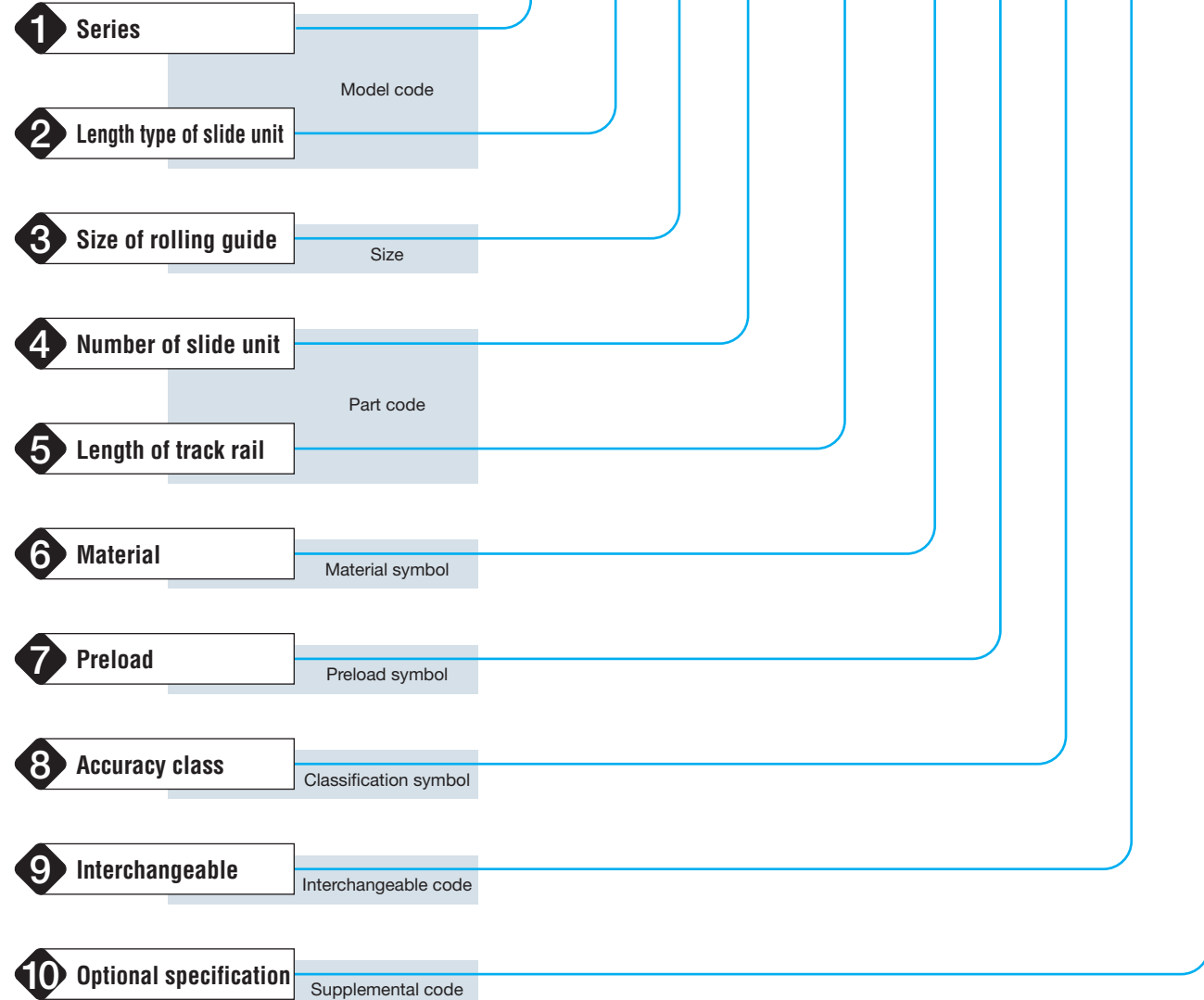
Examples of identification number

• Interchangeable specification

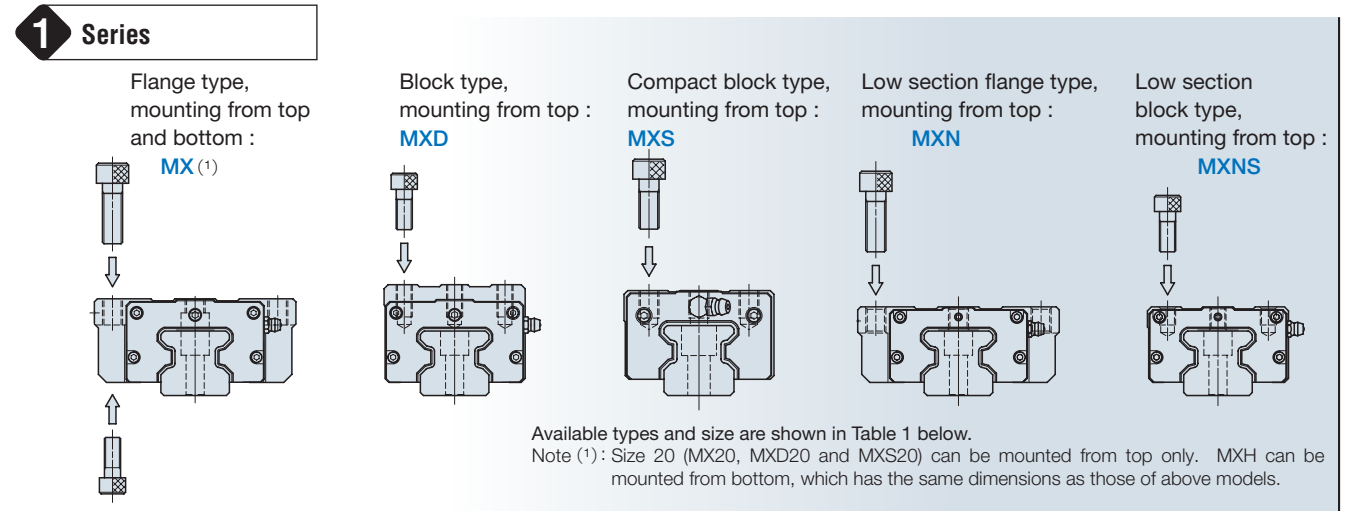
| | | | | | | | | | | |
|--------------------------------|------------|----------|-----------|-----------|-------------|----------------------|----------------------|-----------|-----------|------------|
| Slide unit only | MX | G | 15 | C1 | | T₁ | P | S2 | /Z | |
| Track rail only ⁽¹⁾ | LRX | | 15 | | R240 | | P | S2 | /F | |
| Assembled set | MX | G | 15 | C2 | R240 | | T₁ | P | S2 | /FZ |

• Non-interchangeable specification

| | | | | | | | | | |
|---------------------|-----------|----------|-----------|-----------|-------------|--|----------------------|----------|------------|
| Matched set product | MX | G | 15 | C2 | R240 | | T₁ | P | /FZ |
|---------------------|-----------|----------|-----------|-----------|-------------|--|----------------------|----------|------------|



Note (1) : When ordering track rail only, model code should be changed as shown below.
 MX / MXD / MXS → LRX (Ex: LRX15R240HS2)



2 Length type of slide unit

| | | |
|--------------------------|-------------|--|
| Short | : C | Available types and size are shown in Table 1 below. |
| Standard | : No symbol | |
| High rigidity long | : G | |
| Extra high rigidity long | : L | |

3 Size of rolling guide

| | |
|--------------------------------|--|
| 15, 20, 25, 30, 35, 45, 55, 65 | Available types and size are shown in Table 1 below. |
|--------------------------------|--|

Table 1 Types and sizes of C-Lube Linear Roller Way Super MX

| Material | Type | Mode code | Size | | | | | | | | |
|--|---|--------------------------------------|------|------------------|----|----|----|----|----|----|---|
| | | | 15 | 20 | 25 | 30 | 35 | 45 | 55 | 65 | |
| High Carbon Steel | Flange type, mounting from top and bottom | Short MXC | ☆ | ☆ ⁽¹⁾ | ☆ | ☆ | ☆ | ☆ | ☆ | ☆ | ☆ |
| | | Standard MX | ☆ | ☆ ⁽¹⁾ | ☆ | ☆ | ☆ | ☆ | ☆ | ☆ | ☆ |
| | | High rigidity long MXG | ☆ | ☆ ⁽¹⁾ | ☆ | ☆ | ☆ | ☆ | ☆ | ☆ | ☆ |
| | | Extra high rigidity long MXL | — | ○ ⁽¹⁾ | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| | Block type, mounting from top | Short MXDC | ☆ | ☆ | ☆ | ☆ | ☆ | ☆ | ☆ | ☆ | ☆ |
| | | Standard MXD | ☆ | ☆ | ☆ | ☆ | ☆ | ☆ | ☆ | ☆ | ☆ |
| | | High rigidity long MXDG | ☆ | ☆ | ☆ | ☆ | ☆ | ☆ | ☆ | ☆ | ☆ |
| | | Extra high rigidity long MXDL | — | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| | Compact Block type, mounting from top | Short MXSC | ☆ | ☆ | ☆ | ☆ | — | — | — | — | — |
| | | Standard MXS | ☆ | ☆ | ☆ | ☆ | — | — | — | — | — |
| | | High rigidity long MXSG | ☆ | ☆ | ☆ | ☆ | — | — | — | — | — |
| | | Extra high rigidity long MXSL | — | ○ | ○ | ○ | — | — | — | — | — |
| Low section flange type, mounting from top | Standard MXN | — | — | — | — | ☆ | ☆ | ☆ | — | — | |
| | High rigidity long MXNG | — | — | — | — | ☆ | ☆ | ☆ | — | — | |
| | Extra high rigidity long MXNL | — | — | — | — | ○ | ○ | ○ | — | — | |
| Low section block type, mounting from top | Standard MXNS | — | — | — | — | ☆ | ☆ | ☆ | — | — | |
| | High rigidity long MXNSG | — | — | — | — | ☆ | ☆ | ☆ | — | — | |
| | Extra high rigidity long MXNSL | — | — | — | — | ○ | ○ | ○ | — | — | |
| Stainless Steel | Block type, mounting from top | Standard MXD···SL | ☆ | ☆ | ☆ | ☆ | — | — | — | — | |

Note (1) : MXC20, MX20, MXG20 and MXL20 can be mounted from top side only.
 For mounting from bottom, MXHC20, MXH20, MXHG20 and MXHL20 can be used.
 Remark : ☆ marks are also applicable for interchangeable specification.

Identification number

| | | |
|--|---|---|
| 4 Number of slide unit | Matched set product (with track rail) : C○ Slide unit only (Interchangeable series) : C1 (Ex : MX15C1HS2) | Ex : MX15C2R220H For a matched set, indicates the number of slide units assembled on one track rail. For an interchangeable slide unit only, "C1" can be indicated. |
| 5 Length of track rail | Matched set product (with slide unit) : R○ Track rail only (Interchangeable series) : R○ (Ex:LRX15R220H2) | Ex:MX15C2R220H Indicate the length of track rail in mm. For standard and maximum lengths, see "Track rail length" in Table 22.1, 22.2, 22.3 and 22.4 on page 36. |
| 6 Material | High carbon steel : No symbol Stainless steel : SL | For applicable model and size, see Table 1 on page 18. |
| 7 Preload | Standard : No symbol Light preload : T ₁ Medium preload : T ₂ Heavy preload : T ₃ | Specify preload for a matched set or an interchangeable single slide unit. Details of preload amount and applicable sizes are shown in Table 3 on page 20. |
| 8 Accuracy code | High class : H Precision class : P Super precision class : SP Ultra precision class : UP | Super precision class (SP) and Ultra precision class (UP) are applicable to Non-interchangeable products only. In the interchangeable specification, please combine the same accuracy codes on both slide unit and track rail. For details of accuracy, see Table 2 on page 20. |
| 9 Interchangeable specification | Interchangeable : S2 | In C-Lube Linear Roller Way, slide unit and track rail can be supplied separately by indicating interchangeable code S2. |
| 10 Optional specifications | /A, /D, /E, /F, /GE, /HP, /I, /JO, /LO, /LFO, /MA, /MN, /N, /RCO, /T, /UR, /VO, /WO, /ZO | Applicable special specifications are shown in Table 5 on page 21. When a combination of several special specifications is required, arrange supplemental codes in alphabetical order. For detail of special specifications, see page 21 to 29. |

Accuracy

Accuracy for the matched set of C-Lube Linear Roller Way Super MX are shown in Table 2.

Table 2 Accuracy of C-Lube Linear Roller Way Super MX

| Classification (Symbol) | High (H) | Precision (P) | Super precision ⁽¹⁾ (SP) | Ultra precision ⁽¹⁾ (UP) |
|---|-----------------|---------------|-------------------------------------|-------------------------------------|
| Item | | | | |
| Dim. <i>H</i> Tolerance | ±0.040 | ±0.020 | ±0.010 | ±0.008 |
| Dim. <i>N</i> Tolerance | ±0.050 | ±0.025 | ±0.015 | ±0.010 |
| Dim. variation of <i>H</i> ⁽²⁾ | 0.015 | 0.007 | 0.005 | 0.003 |
| Dim. variation of <i>N</i> ⁽²⁾ | 0.020 | 0.010 | 0.007 | 0.003 |
| Dim. variation of <i>H</i> ⁽³⁾ for multiple sets | 0.035 | 0.025 | — | — |
| Parallelism in operation of <i>C</i> to <i>A</i> | Refer to Fig. 1 | | | |
| Parallelism in operation of <i>D</i> to <i>B</i> | Refer to Fig. 1 | | | |

unit : mm

Note (1) : Applicable to Non-interchangeable specification.
 (2) : Dimensional variation of dimension means the size variation among the slide units mounted on the same track rail when the dimension *H* is measured at the same measuring position of track rail.
 (3) : Applicable to interchangeable specification
 Remark 1 : These values also apply to C-Lube Linear Roller Way Super MX Interchangeable series that has opposite reference surface arrangements.
 2 : Dimensional variation of dimension *H* for multiple sets means the variation of dimension *H* among multiple sets of arbitrarily chosen slide unit and track rail of C-Lube Linear Roller Way Super MX Interchangeable series.
 3 : All of above figures are applicable when the dimensions are measured at the center of each slide unit assembled with a track rail fixed onto a flat base.

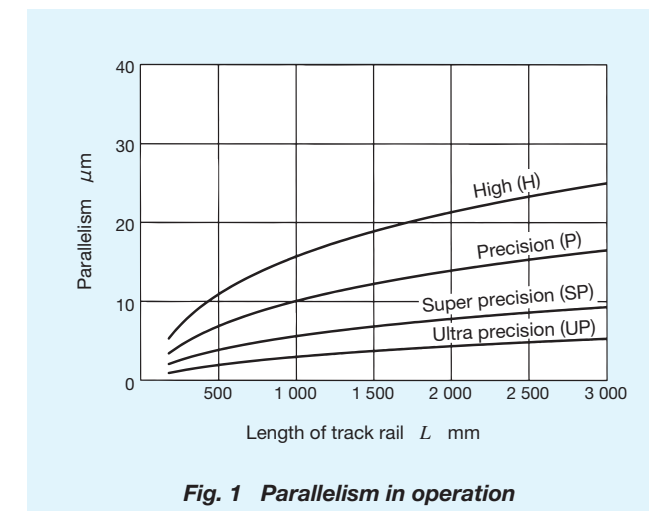


Fig. 1 Parallelism in operation

Preload

Average amounts of preload for C-Lube Linear Roller Way Super MX series are shown in Table 3. Note that, for the slide unit of interchangeable specification, the preload amounts that can be specified are different depending on the size. Applicable preload class and size are shown in Table 4. In case high rigidity and/or damping characteristic might be required, the preload amount is recommended to be 1/2 of the external force.

Table 3 Preload amount

| Preload class | Item Symbol | Preload amount N | Typical application |
|------------------|----------------|---------------------|--|
| Standard preload | (No symbol) | 0 ⁽¹⁾ | • Smooth and precise motion |
| Light preload | T ₁ | 0.02 C ₀ | • Minimum vibration • Loads equally balanced • Smooth and precise motion |
| Medium preload | T ₂ | 0.05 C ₀ | • Medium vibration • Medium overhung load |
| Heavy preload | T ₃ | 0.08 C ₀ | • Vibration and/or shocks • Large overhung load • Heavy cutting |

Note (1) : Zero or minimal amount of preload.
 Remark : C₀ means the basic static load rating.

Table 4 Applicable preload class

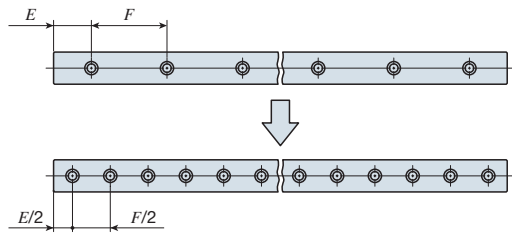
| Model code | Preload class and code | | | |
|------------|------------------------|---------------------------------|----------------------------------|---------------------------------|
| | Standard (No symbol) | Light preload (T ₁) | Medium preload (T ₂) | Heavy preload (T ₃) |
| MX 15 | ☆ | ☆ | ☆ | ○ |
| MX 20 | ☆ | ☆ | ☆ | ○ |
| MX 25 | ○ | ☆ | ☆ | ○ |
| MX 30 | ○ | ☆ | ☆ | ○ |
| MX 35 | ○ | ○ | ☆ | ☆ |
| MX 45 | ○ | ○ | ☆ | ☆ |
| MX 55 | ○ | ○ | ☆ | ☆ |
| MX 65 | ○ | ○ | ☆ | ☆ |

Remark 1 : ☆ marks are also applicable for interchangeable specification.
 2 : The table shows representative model numbers and is also applicable to all models in the same size.

Optional special specifications for the use under special environment

Half pitch of track rail mounting holes

/HP



The pitch of the track rail mounting holes can be 1/2 of the dimension F of standard rail. Track rail mounting bolts are appended in the same number as that of mounting holes.

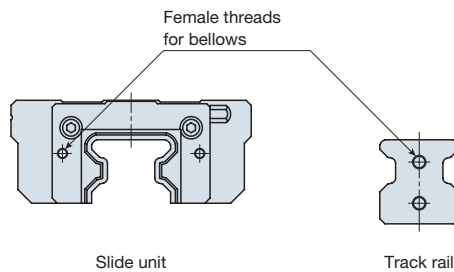
With inspection sheet

/I

This designates to attach an inspection sheet with the product that is recording dimensions H and N (See Accuracy), dimensional variations of H and N and parallelism in operation of the slide unit.

With female threads for bellow mounting

/J /JR /JL



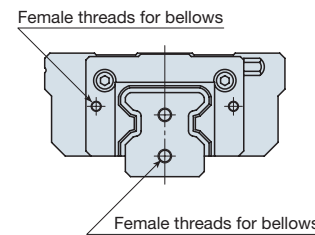
Female threads for mounting bellows are provided on the interchangeable slide unit or the interchangeable track rail. For details of related dimensions, see Table 8.1, 8.2 and 8.3 on page 24 to 26.

- 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 mark.
- ③ /JL Female threads are provided at the left end of the slide unit in sight of mark.

With female threads for bellow mounting

(for an assembled set)

/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 details of related dimensions, see Table 8.1, 8.2 and 8.3 on page 24 to 26.

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

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.

Fluorine black chrome surface treatment

/LFC /LFR /LFCR

After forming 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 casing.
- ② /LFR Treatment is applied to the track rail.
- ③ /LFCR Treatment is applied to the casing and the track rail.

Table 8.1 Female threads for bellow mounting (Supplemental code /J, /JJ)

Size 15 to 30

| Model number | Slide unit | | | | | Track rail | | | |
|--------------|------------|-------|-------|---------------------------|-------------|------------|-------|-------|---------------------------|
| | a_1 | b_1 | b_2 | $M_1 \times \text{depth}$ | $L_1^{(2)}$ | H_3 | a_3 | a_4 | $M_2 \times \text{depth}$ |
| MXC 15 | 10.5 | 10.5 | 26 | M3×6 | 67 | 1 | 4 | 8 | M3×6 |
| MX 15 | | | | | 83 | | | | |
| MXG 15 | | | | | 99 | | | | |
| MXDC 15 | 14.5 | 4 | 26 | M3×6 | 67 | 5 | 4 | 8 | M3×6 |
| MXD 15 | | | | | 83 | | | | |
| MXDG 15 | | | | | 99 | | | | |
| MXSC 15 | 10.5 | 4 | 26 | M3×6 | 67 | 1 | 4 | 8 | M3×6 |
| MXS 15 | | | | | 83 | | | | |
| MXSG 15 | | | | | 99 | | | | |
| MXC 20 | 12 | 13.5 | 36 | M3×6 | 81 | 2 | 5 | 10 | M4×8 |
| MX 20 | | | | | 101 | | | | |
| MXG 20 | | | | | 121 | | | | |
| MXDC 20 | 16 | 4 | 36 | M3×6 | 121 | 6 | 5 | 10 | M4×8 |
| MXD 20 | | | | | 101 | | | | |
| MXDG 20 | | | | | 143 | | | | |
| MXSC 20 | 12 | 4 | 36 | M3×6 | 81 | 2 | 5 | 10 | M4×8 |
| MXS 20 | | | | | 101 | | | | |
| MXSG 20 | | | | | 121 | | | | |
| MXC 25 | 15.5 | 15 | 40 | M3×6 | 89 | 4 | 6 | 12 | M4×8 |
| MX 25 | | | | | 113 | | | | |
| MXG 25 | | | | | 128 | | | | |
| MXDC 25 | 19.5 | 4 | 40 | M3×6 | 152 | 8 | 6 | 12 | M4×8 |
| MXD 25 | | | | | 113 | | | | |
| MXDG 25 | | | | | 128 | | | | |
| MXSC 25 | 15.5 | 4 | 40 | M3×6 | 89 | 4 | 6 | 12 | M4×8 |
| MXS 25 | | | | | 113 | | | | |
| MXSG 25 | | | | | 128 | | | | |
| MXC 30 | 18.5 | 20 | 50 | M3×6 | 100 | 4.8 | 7 | 14 | M4×8 |
| MX 30 | | | | | 128 | | | | |
| MXG 30 | | | | | 149 | | | | |
| MXDC 30 | 21.5 | 5 | 50 | M3×6 | 177 | 7.8 | 7 | 14 | M4×8 |
| MXD 30 | | | | | 100 | | | | |
| MXDG 30 | | | | | 128 | | | | |
| MXSC 30 | 18.5 | 5 | 50 | M3×6 | 149 | 4.8 | 7 | 14 | M4×8 |
| MXS 30 | | | | | 128 | | | | |
| MXSG 30 | | | | | 149 | | | | |
| MXSL 30 | | | | | 177 | | | | |

Note (1): The specification and mounting position of grease nipple are different from those of standard products. Grease nipple A-M4 is attached to size 30.

For grease nipple specification, see Table 17 on page 33.

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

Remark 1: Also applicable to same size of stainless steel products.

2: For the size 15 and 20 of flange type and compact block type, the dimension a_3 is higher than H dimension. For details, consult for future information.

Optional special specifications for the use under special environment

Table 8.2 Female threads for bellow mounting (Supplemental code /J, /JJ)

Size 35 to 65

| 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 (1) | a_3 | a_4 | $M_2 \times \text{depth}$ |
| MXC 35 | 6 | 16 | 30 | 40 | 20 | 60 | M3 x 6 | 99 | 8 | 16 | M4 x 8 |
| MX 35 | | | | | | | | 131 | | | |
| MXG 35 | | | | | | | | 159 | | | |
| MXL 35 | | | | | | | | 191 | | | |
| MXDC 35 | 13 | 15 | 15 | 5 | 60 | M3 x 6 | 99 | 8 | 16 | M4 x 8 | |
| MXD 35 | | | | | | | 131 | | | | |
| MXDG 35 | | | | | | | 159 | | | | |
| MXDL 35 | | | | | | | 191 | | | | |
| MXC 45 | 7 | 21 | 35 | 50 | 23 | 74 | M4 x 8 | 123 | 10 | 19 | M5 x 10 |
| MX 45 | | | | | | | | 163 | | | |
| MXG 45 | | | | | | | | 203 | | | |
| MXL 45 | | | | | | | | 243 | | | |
| MXDC 45 | 17 | 18 | 18 | 6 | 74 | M4 x 8 | 123 | 10 | 19 | M5 x 10 | |
| MXD 45 | | | | | | | 163 | | | | |
| MXDG 45 | | | | | | | 203 | | | | |
| MXDL 45 | | | | | | | 243 | | | | |
| MXC 55 | 7 | 27 | 40 | 60 | 26 | 88 | M4 x 8 | 145 | 10 | 24 | M5 x 10 |
| MX 55 | | | | | | | | 193 | | | |
| MXG 55 | | | | | | | | 247 | | | |
| MXL 55 | | | | | | | | 301 | | | |
| MXDC 55 | 17 | 20 | 20 | 6 | 88 | M4 x 8 | 145 | 10 | 24 | M5 x 10 | |
| MXD 55 | | | | | | | 193 | | | | |
| MXDG 55 | | | | | | | 247 | | | | |
| MXDL 55 | | | | | | | 301 | | | | |
| MXC 65 | 8.7 | 37 | 47.5 | 75 | 31 | 108 | M5 x 10 | 191 | 14 | 28 | M6 x 12 |
| MX 65 | | | | | | | | 255 | | | |
| MXG 65 | | | | | | | | 319 | | | |
| MXL 65 | | | | | | | | 391 | | | |
| MXDC 65 | 8.7 | 37 | 25.5 | 9 | 108 | M5 x 10 | 191 | 14 | 28 | M6 x 12 | |
| MXD 65 | | | | | | | 255 | | | | |
| MXDG 65 | | | | | | | 319 | | | | |
| MXDL 65 | | | | | | | 391 | | | | |

unit : mm

Note (1) : The values are of the slide unit with female threads for bellow mounting at the both ends.

Table 8.3 Female threads for bellow mounting (Supplemental code /J, /JJ)

| Model number | Slide unit | | | | | | | | Track rail | | |
|--------------|------------|-------|-------|-------|-------|--------|---------------------------|-----------|------------|---------|---------------------------|
| | a_1 (1) | a_2 | b_1 | b_2 | b_3 | b_4 | $M_1 \times \text{depth}$ | L_1 (2) | a_3 | a_4 | $M_2 \times \text{depth}$ |
| MXN 35 | 2 | 16 | 30 | 40 | 20 | 60 | M3 x 6 | 131 | 8 | 16 | M4 x 8 |
| MXNG 35 | | | | | | | | 159 | | | |
| MXNL 35 | | | | | | | | 191 | | | |
| MXNS 35 | | | | | | | | 131 | | | |
| MXNSG 35 | 1 | 21 | 15 | 5 | 60 | M3 x 6 | 159 | 8 | 16 | M4 x 8 | |
| MXNSL 35 | | | | | | | 191 | | | | |
| MXN 45 | | | | | | | 163 | | | | |
| MXNG 45 | | | | | | | 203 | | | | |
| MXNL 45 | 1 | 21 | 35 | 50 | 23 | 74 | M4 x 8 | 243 | 10 | 19 | M5 x 10 |
| MXNS 45 | | | | | | | | 163 | | | |
| MXNSG 45 | | | | | | | | 203 | | | |
| MXNSL 45 | | | | | | | | 243 | | | |
| MXN 55 | 0 | 27 | 40 | 60 | 26 | 88 | M4 x 8 | 193 | 10 | 24 | M5 x 10 |
| MXNG 55 | | | | | | | | 247 | | | |
| MXNL 55 | | | | | | | | 301 | | | |
| MXNS 55 | | | | | | | | 193 | | | |
| MXNSG 55 | 0 | 27 | 20 | 6 | 88 | M4 x 8 | 247 | 10 | 24 | M5 x 10 | |
| MXNSL 55 | | | | | | | 301 | | | | |

unit : mm

Note (1) : Values a_1 are the dimension between C-surface (upper surface of slide unit) and the center of female thread.

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

Remark : The dimension a_3 is higher than H dimension.

For details, consult for future information.

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

Optional special specifications for the use under special environment

With track rail mounting bolts

/MA

Track rail mounting bolts are not appended for the assembled set products (both interchangeable and non-interchangeable specifications). /MA designates to append the bolts according to the number of mounting holes. For size of bolts, please refer dimension tables.

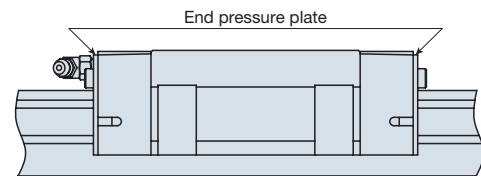
Without track rail mounting bolts

/MN

Track rail mounting bolts are not appended by /MN. This is applicable to interchangeable track rail only.

No end seal

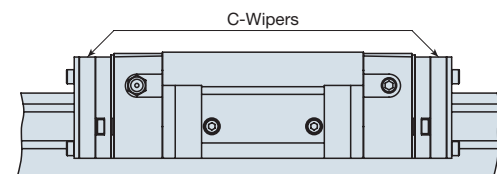
/N



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

C-Wipers

/RC /RCC



C-Wipers are attached on the slide unit for additional dust protection. The slide unit with C-Wipers has also Inner Seal (/UR) and Scraper. Total lengths of slide unit with C-Wipers are shown in Table 9.1 and 9.2.

- ① /RC C-Wipers are provided at the ends of slide units which are closest to the end of the track rail. In case only one slide unit is assembled, C-Wipers are provided at the both ends of slide unit.
- ② /RCC C-Wipers are provided at both ends of all slide units. Applicable when the number of slide units to be two or more. In case one slide unit, indicate "/RC".

Table 9.1 Slide unit with C-Wipers
(Supplemental code /RC /RCC)

Size 25 and 30

| Model number | L_1 (1) | L_4 (1) |
|--------------|-----------|-----------|
| MXC 25 | 89 | 99 |
| MX 25 | 113 | 123 |
| MXG 25 | 128 | 138 |
| MXL 25 | 152 | 162 |
| MXC 30 | 100 | 113 |
| MX 30 | 128 | 141 |
| MXG 30 | 149 | 162 |
| MXL 30 | 177 | 190 |

unit : mm

Note (1): The values for the slide unit with C-Wipers at both ends.
Remark: The table shows representative model numbers only and is also applicable to all models in the same size.

Table 9.2 Slide unit with C-Wipers
(Supplemental code /RC /RCC)

Size 35 to 65

| Model number | L_1 (1) |
|--------------|-----------|
| MXC 35 | 123 |
| MX 35 | 155 |
| MXG 35 | 183 |
| MXL 35 | 215 |
| MXC 45 | 149 |
| MX 45 | 189 |
| MXG 45 | 229 |
| MXL 45 | 269 |
| MXC 55 | 172 |
| MX 55 | 220 |
| MXG 55 | 274 |
| MXL 55 | 328 |
| MXC 65 | 223 |
| MX 65 | 287 |
| MXG 65 | 351 |
| MXL 65 | 423 |

unit : mm

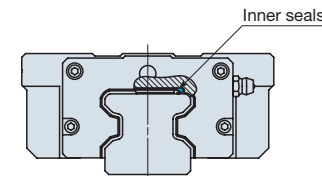
Note (1): The values for the slide unit with C-Wipers at both ends.
Remark: The table shows representative model numbers only and is also applicable to all models in the same size.

Butt-jointing interchangeable track rail

(for interchangeable specification) /T

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

Inner seals



/UR

Inner seals are provided inside of slide unit, where recirculation area is effectively protected from dust collected on upper surface of track rail.

With double end seals

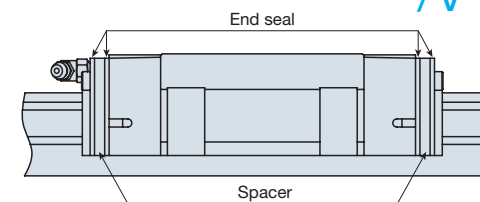
(for interchangeable single slide unit) /V /VR /VL

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 10.1 and 10.2.

- 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 mark.
- ③ /VL Double end seals are provided at the left end of the slide unit in sight of mark.

With double end seals

(for assembled set) /V /VV



Double end seals are provided on the slide unit of assembled set of interchangeable specification or non-interchangeable (set) specification for more effective dust protection. For the total length of the slide unit with double end seals, see the Table 10.1 and 10.2.

- 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 to be two or more. In case only one slide unit is assembled, indicate "/V".)

Table 10.1 Slide unit with double end seals
(Supplemental code /V, /VV)

Size 15 to 30

| Model number | L_1 (1) | L_4 (1) |
|--------------|-----------|-----------|
| MXC 15 | 58 | 60 |
| MX 15 | 74 | 76 |
| MXG 15 | 90 | 92 |
| MXC 20 | 73 | 83 |
| MX 20 | 93 | 103 |
| MXG 20 | 113 | 123 |
| MXL 20 | 135 | 145 |
| MXC 25 | 83 | 92 |
| MX 25 | 107 | 116 |
| MXG 25 | 122 | 131 |
| MXL 25 | 146 | 155 |
| MXC 30 | 93 | 106 |
| MX 30 | 121 | 134 |
| MXG 30 | 142 | 155 |
| MXL 30 | 170 | 183 |

unit : mm

Note (1): The values for the slide unit with double end seals at both ends.
Remark: The table shows representative model numbers only and is also applicable to all models in the same size.

Table 10.2 Slide unit with double end seals
(Supplemental code /V, /VV)

Size 35 to 65

| Model number | L_1 (1) |
|--------------|-----------|
| MXC 35 | 101 |
| MX 35 | 133 |
| MXG 35 | 161 |
| MXL 35 | 193 |
| MXC 45 | 127 |
| MX 45 | 167 |
| MXG 45 | 207 |
| MXL 45 | 247 |
| MXC 55 | 149 |
| MX 55 | 197 |
| MXG 55 | 251 |
| MXL 55 | 305 |
| MXC 65 | 192 |
| MX 65 | 256 |
| MXG 65 | 320 |
| MXL 65 | 392 |

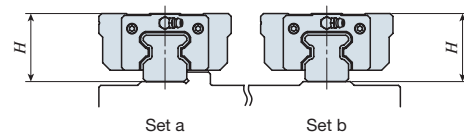
unit : mm

Note (1): The values for the slide unit with double end seals at both ends.
Remark: The table shows representative model numbers only and is also applicable to all models in the same size.

Optional special specifications for the use under special environment

Matched sets to be used as an assembled group

/W





For two or more assembly sets of C-Lube Linear Roller Way Super MX used on the same plane, the dimensional variation of H are 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".

With scrapers

(for interchangeable single slide unit)

/Z /ZR /ZL

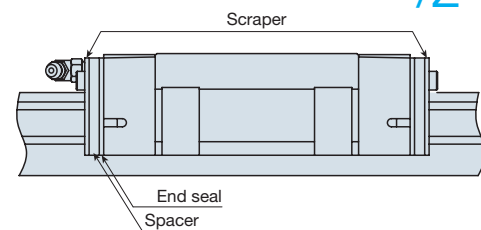
Metal scrapers are provided on the slide unit of interchangeable specification. Scrapers (non-contact type) are attached to effectively remove large particles of dust or foreign matters adhering to the track rail. For the total length of the slide unit with scrapers, see Table 11.1 and 11.2.

- 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  mark.
- ③ /ZL A scraper is provided at the left end of the slide unit in sight of  mark.

With scrapers

(for assembled set)

/Z /ZZ



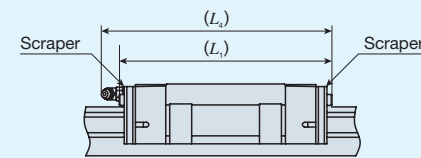
Metal scrapers are provided on the slide units of assembled set of interchangeable specification or non-interchangeable (set) specification.

Scrapers (non-contact type) are attached to effectively remove large particles of dust or foreign matters adhering to the track rail. For the total length of the slide unit with scrapers, see Table 11.1 and 11.2.

- 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 to be two or more. In case only one slide unit is assembled, indicate "/Z".)

Table 11.1 Slide unit with scrapers
(Supplemental code /Z, /ZZ)

Size 15 to 30



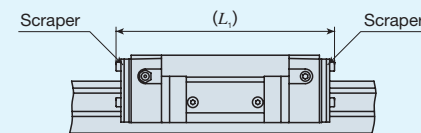
unit : mm

| Model number | L_1 (1) | L_2 (1) |
|--------------|-----------|-----------|
| MXC 15 | 60 | 61 |
| MX 15 | 76 | 77 |
| MXG 15 | 92 | 93 |
| MXC 20 | 74 | 83 |
| MX 20 | 94 | 103 |
| MXG 20 | 114 | 123 |
| MXL 20 | 137 | 146 |
| MXC 25 | 85 | 93 |
| MX 25 | 109 | 117 |
| MXG 25 | 124 | 132 |
| MXL 25 | 148 | 156 |
| MXC 30 | 96 | 107 |
| MX 30 | 124 | 135 |
| MXG 30 | 145 | 156 |
| MXL 30 | 173 | 184 |

Note (1): The values are the slide unit lengths with scrapers at both ends.
Remark: The table shows representative model numbers and is also applicable to all models in the same size of MX series.

Table 11.2 Slide unit with scrapers
(Supplemental code /Z, /ZZ)

Size 35 to 65



unit : mm

| Model number | L_1 (1) |
|--------------|-----------|
| MXC 35 | 103 |
| MX 35 | 135 |
| MXG 35 | 163 |
| MXL 35 | 195 |
| MXC 45 | 129 |
| MX 45 | 169 |
| MXG 45 | 209 |
| MXL 45 | 249 |
| MXC 55 | 151 |
| MX 55 | 199 |
| MXG 55 | 253 |
| MXL 55 | 305 |
| MXC 65 | 194 |
| MX 65 | 258 |
| MXG 65 | 322 |
| MXL 65 | 392 |

Note (1): The values are the slide unit lengths with scrapers at both ends.
Remark: The table shows representative model numbers and is also applicable to all models in the same size of MX series.

Load ratings and Life

Basic dynamic load rating C

Conforming to ISO 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 Roller Way Super MX is individually operated and 90% of those in the group can travel 50×10^3 m free from material damage due to rolling contact fatigue.

Basic static load rating C_0

Conforming to ISO 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. Generally, the basic static load rating is used in combination with the static safety factor.

The static load ratings of C-Lube Linear Roller Way Super MX are designated for equal load capacity in downward load, upward load and lateral load.

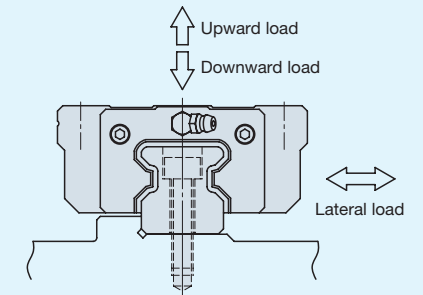


Fig. 2 Load directions

Static moment rating T_0, T_x, T_y

The static moment rating is defined as a static moment load (See Fig. 3) 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. Generally, the basic static moment rating is used in combination with the static safety factor.

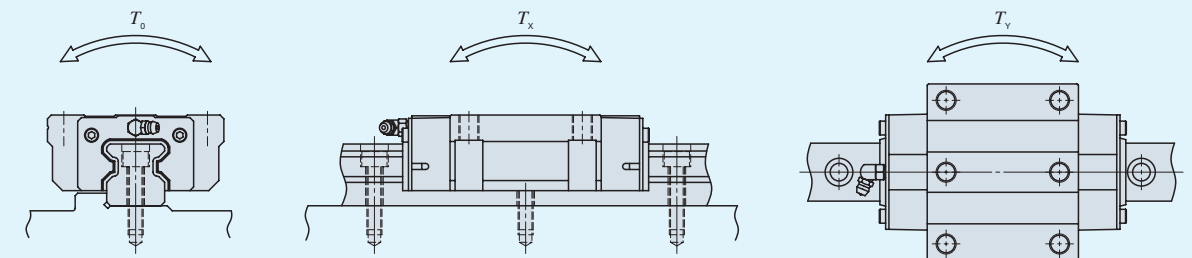


Fig. 3 Directions of static moment rating

Load ratings and Life

Life

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

$$L = 50 \left(\frac{C}{P} \right)^{10/3} \dots\dots\dots (1)$$

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

If the stroke length and the number of 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 Roller Way Super MX series is given in the following formula, and general values of this factor are shown in Table 12.

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

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

Table 12 Static safety factor

| Operating conditions | f_s |
|--|---------|
| Operation with vibration and/or shocks | 4 ~ 6 |
| High operating performance | 3 ~ 5 |
| Normal operation | 2.5 ~ 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 considering the load factor.

Table 13 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 a load is applied in a direction other than that of the basic dynamic load rating of C-Lube Linear Roller Way Super MX complex load is applied, the dynamic equivalent load must be calculated to obtain the basic rating life.

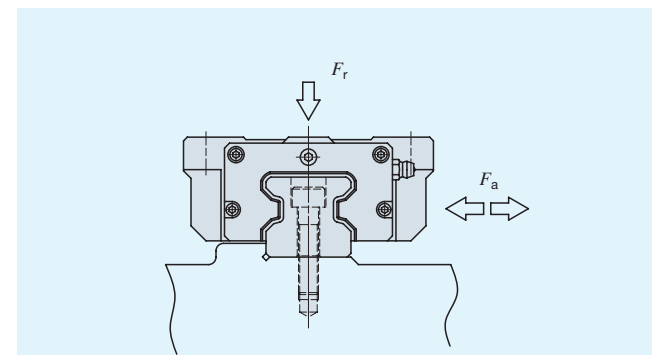
Obtain the downward and lateral conversion loads from the loads and moments in various directions.

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

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

where, F_{ro} : Downward conversion load, N
 F_{ao} : Lateral conversion load, N
 F_r : Downward load, N
 F_a : Lateral load, N
 M_0 : Moment in the T_0 direction, N·m
 M_x : Moment in the T_x direction, N·m
 M_y : Moment in the T_y direction, N·m
 k_r, k_a : Conversion factors for load direction (See Table 14.)
 C_0 : Basic static load rating, N
 T_0 : Static moment rating in the T_0 direction, N·m
 T_x : Static moment rating in the T_x direction, N·m
 T_y : Static moment rating in the T_y direction, N·m

Table 14 Conversion factor for load direction



| Condition | Conversion factor | |
|--------------|-------------------|-------|
| | k_r | k_a |
| $F_r \geq 0$ | 1 | 1 |
| $F_r < 0$ | 1 | |

Obtain the dynamic equivalent load from the downward and lateral conversion loads.

$$P = XF_{ro} + YF_{ao} \dots\dots\dots (6)$$

where, P : Dynamic equivalent load, N
 X, Y : Dynamic equivalent load factor (See Table 15.)
 F_{ro} : Downward conversion load, N
 F_{ao} : Lateral conversion load, N

Table 15 Dynamic equivalent load factor

| Conditions | X | Y |
|--------------------------|-----|-----|
| $ F_{ro} \geq F_{ao} $ | 1 | 0.6 |
| $ F_{ro} < F_{ao} $ | 0.6 | 1 |

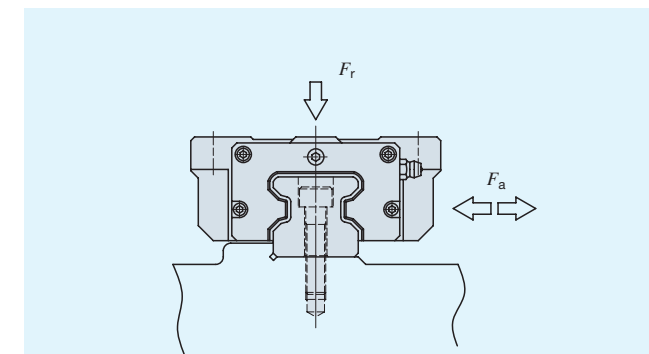
Static equivalent load

When a load is applied in a direction other than that of the basic static load rating of C-Lube Linear Roller Way Super MX complex load is applied, the static equivalent load must be calculated to obtain the static safety factor.

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

where, P_0 : Static equivalent load, N
 F_r : Downward load, N
 F_a : Lateral load, N
 M_0 : Moment in the T_0 direction, N·m
 M_x : Moment in the T_x direction, N·m
 M_y : Moment in the T_y direction, N·m
 k_{or}, k_{oa} : Conversion factors for load direction (See Table 16.)
 C_0 : Basic static load rating, N
 T_0 : Static moment rating in the T_0 direction, N·m
 T_x : Static moment rating in the T_x direction, N·m
 T_y : Static moment rating in the T_y direction, N·m

Table 16 Conversion factor for load direction



| Condition | Conversion factor | |
|--------------|-------------------|----------|
| | k_{or} | k_{oa} |
| $F_r \geq 0$ | 1 | 1 |
| $F_r < 0$ | 1 | |

Lubrication and dust protection

High quality lithium-soap base grease containing extreme pressure additive (ALVANIA EP grease 2 -Shell-) is pre-packed in C-Lube Linear Roller Way Super MX. Additionally, C-Lube a component part is placed in the cylindrical roller recirculation path, thereby extending the re-lubrication (greasing) interval time and maintenance work for a long period.

C-Lube Linear Roller Way Super MX is protected from dust by special rubber seals. But, if large amount of fine contaminants are present, or if large particles of foreign matters 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 Super MX are optionally available. They are easy to mount and highly effective for dust protection. If required, consult IKO.

Grease nipples

Grease nipples shown in Table 17 are assembled to each slide unit of C-Lube Linear Roller Way Super MX.

Table 17 Grease nipple unit : mm

| Model number | | Grease nipple | |
|-------------------------|---------------------------------|---------------------|--|
| Low section flange type | Code | Shape and dimension | |
| — (1) | A-M3 | | |
| MX 15 | A-M4 | | |
| MX 20 MX 25 | B-M4 | | |
| MX 30 | B-M6 | | |
| MX 35 ⁽²⁾ | MXN 35 ⁽²⁾ MXN 45 | JIS 1 | |
| MX 45 MX 55 MX 65 | MXN 55 | JIS 2 | |

Note (1): A-M3 is applicable to sizes 15, 20 and 25 with bellows.
 (2): In low section flange type and low section block type, thread size for grease nipple of front face is smaller than other threads thus, please consult IJKO if grease nipple for front face is required.
 Remark: The table shows representative model numbers and is also applicable to all models in the same size.

Precautions for use

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

To mount C-Lube Linear Roller Way Super MX, correctly fit the reference mounting surfaces B and D of the slide unit and the track rail to the reference mounting surfaces of the table and the bed, then fix them tightly. (See Fig. 4)

The reference mounting surfaces B and D, also the mounting surfaces A and C of C-Lube Linear Way are accurately finished by grinding. Stable and high accuracy linear 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 in opposite to the IJKO mark. The track rail reference mounting surface can be identified by locating the IJKO mark on the top surface of the track rail. The track rail reference mounting surface is the side surface above the IJKO mark (in the direction of the arrow). (See Fig. 5)

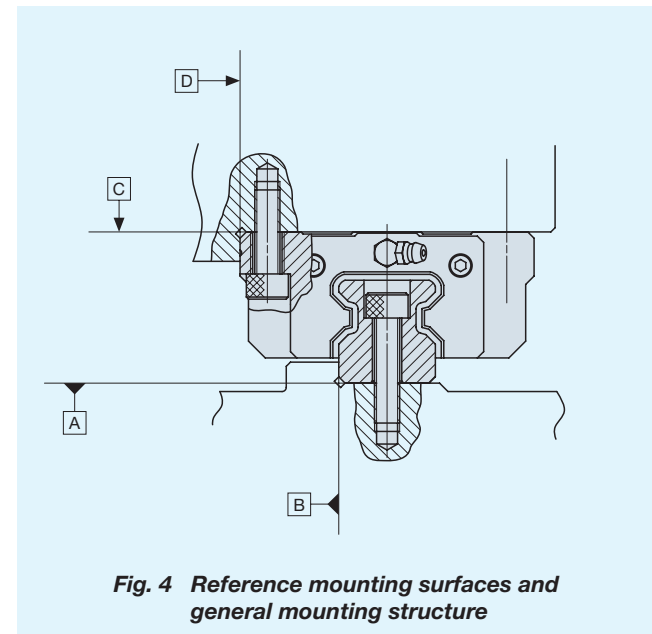


Fig. 4 Reference mounting surfaces and general mounting structure

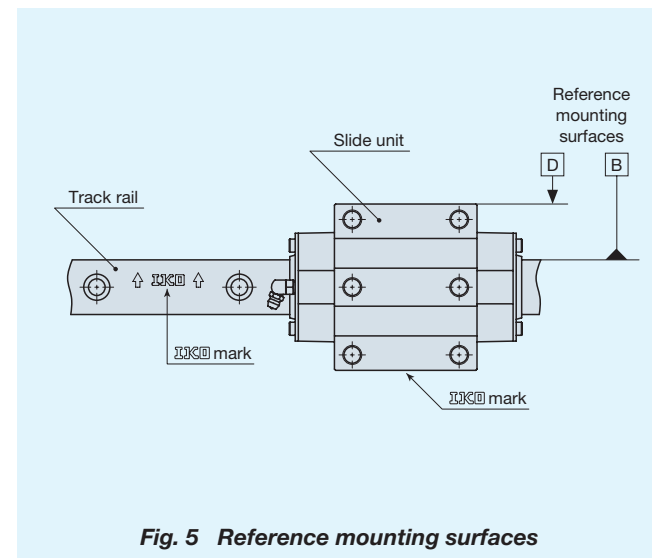


Fig. 5 Reference mounting surfaces

2 Fixing of slide unit

The slide unit is provided with one or two mounting thread holes in the middle of width (See Fig. 6) so that an applied load can be received with good load balance. When designing machines or equipment, ensure that these middle-mounting holes of the slide unit can be securely tightened to obtain maximum performance of the guide. It is recommended to secure the screwing depths shown in Table 18.1 and 18.2 for the slide unit of compact block type.

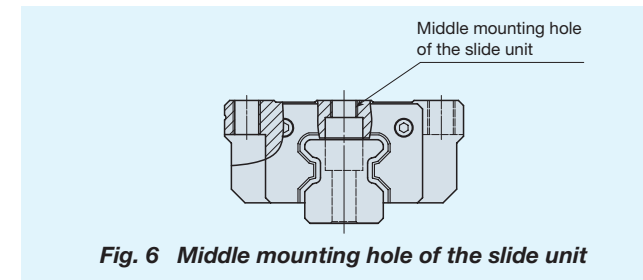


Fig. 6 Middle mounting hole of the slide unit

Table 18.1 Screwing depth of slide unit mounting holes for compact block type unit : mm

| Model number | Recommended minimum depth |
|--------------|---------------------------|
| MXS 15 | 4.5 |
| MXS 20 | 5.5 |
| MXS 25 | 7 |
| MXS 30 | 9 |

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

Table 18.2 Screwing depth of slide unit mounting holes for low section block type unit : mm

| Model number | Recommended minimum depth |
|--------------|---------------------------|
| MXNS 35 | 8.5 |
| MXNS 45 | 10.5 |
| MXNS 55 | 14 |

Remark: The table shows representative model numbers and is also applicable to all models in the same size of low section block type.

3 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. 7. Otherwise, corner radius R is recommended shown in Table 19. Table 19 shows recommended shoulder heights and radius of the reference mounting surfaces.

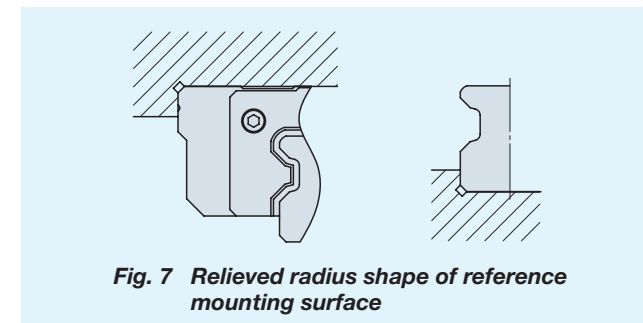


Fig. 7 Relieved radius shape of reference mounting surface

Table 19 Shoulder height and radius of the reference mounting surfaces

| Model number | Slide unit Shoulder height h_1 | Track rail Shoulder height h_2 | Relieved radius R (max.) |
|--------------|----------------------------------|----------------------------------|----------------------------|
| MX 15 | 4 | 3 | 0.5 |
| MX 20 | 5 | 4 | 0.5 |
| MX 25 | 6 | 5 | 1 |
| MX 30 | 8 | 5.5 | 1 |
| MX 35 | 8 | 5.5 | 1 |
| MX 45 | 8 | 7 | 1.5 |
| MX 55 | 10 | 8 | 1.5 |
| MX 65 | 10 | 10 | 1.5 |

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

4 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.

5 Operating temperature

The C-Lube Linear Roller Way Super MX must be operated below 80°C (maximum).

6 Cleaning

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

1 When assembling two or more sets of C-Lube Linear Roller Way Super MX

• Interchangeable specification

In case of an interchangeable specification product, assemble slide units and track rails with the same interchangeable code "S2".

• Non-interchangeable specification

Use the assembly of slide unit(s) 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 those of another group.

2 Assembling a slide unit and a track rail

When assembling C-Lube Linear Roller Way Super MX, correctly fit the groove of 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 dummy rail to the track rail in parallel direction.

Cylindrical rollers are retained, 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 provided dummy rail.

Dummy rail is appended as an accessory to the interchangeable slide unit. Dummy rail is also appended to non-interchangeable specification product. Please use it when disassembling/assembling the slid unit.

3 Accuracy of mating mounting surfaces

Depending on the accuracy of mating mounting surfaces and assembling accuracy, a load greater than the calculated load may act on C-Lube Linear Roller Way Super MX. This will eventually give an adverse effect on the service life of C-Lube Linear Roller Way Super MX. Therefore, the accuracy must be carefully examined.

The accuracy of mating mounting surfaces for track rail and slide unit and the assembling accuracy must be determined considering the operating conditions, required running accuracy and rigidity, etc. Also, the mounting structure must be examined to ensure accuracy and performance for the reliable use of a linear motion rolling guide. When multiple sets are mounted, the parallelism between the two mounting surfaces of machines must be prepared. General guide line is shown in Table 20. These values are also applicable to right angled mounting and back to back mounting .

Table 20 Parallelism between two mounting surfaces

| Class | unit : μm | | | |
|-------------|----------------------|---------------|----------------------|----------------------|
| | High (H) | Precision (P) | Super precision (SP) | Ultra precision (UP) |
| Parallelism | 30 | 20 | 10 | 6 |

Track rail length

Standard and maximum lengths of track rails are shown in Table 22.1 to 22.4. Track rails in different lengths are available upon request. Simply indicate the necessary length of track rail in millimeter (mm) in the identification number.

In non-interchangeable specification, for track rails longer than the maximum length are shown in Table 22.1 to 22.4, butt-jointing

4 Cleaning the mounting surfaces

When mounting C-Lube Linear Roller Way Super MX, firstly clean all the mounting and reference mounting surfaces. (See Fig. 8) 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.

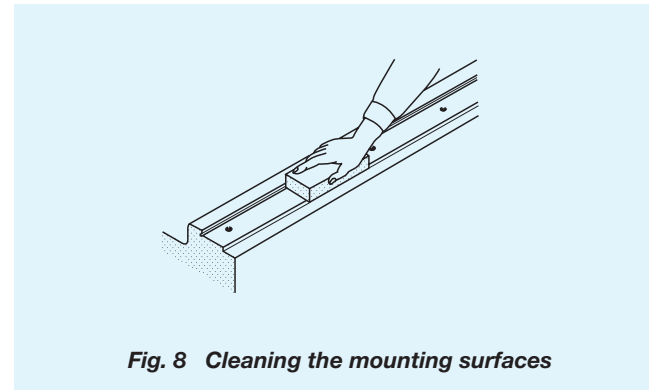


Fig. 8 Cleaning the mounting surfaces

5 Tightening torque values of mounting bolts

The standard torque values for C-Lube Linear Roller Way Super MX mounting bolts are shown in Table 21. 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 21 Tightening torque of mounting bolts

| Bolt size | Tightening torque N·m | |
|------------|--|--|
| | Carbon steel bolt (Strength division 12.9) | Stainless steel bolt (Property division A2-70) |
| M 4 × 0.7 | 4.0 | 2.5 |
| M 5 × 0.8 | 7.9 | 5.0 |
| M 6 × 1 | 13.3 | 8.5 |
| M 8 × 1.25 | 32.0 | 20.4 |
| M10 × 1.5 | 62.7 | — |
| M12 × 1.75 | 108 | — |
| M14 × 2 | 172 | — |
| M16 × 2 | 263 | — |

Remark : For tightening torque values for slide unit center mounting holes on size 15 to 35 of flange type (MXC, MX, MXG, MXL), 70% to 80% of the values in Table 21 are recommended.

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 optional special specification.

Track rail length

Table 22.1 Standard and maximum lengths of track rails (For high carbon steel)

| Item | Model number | MX 15 | MX 20 | MX 25 | MX 30 | MX 35 | MX 45 | MX 55 | MX 65 |
|-------------------------------|--------------|------------------------|--|--|--|--|--|--|--|
| | | Standard length $L(n)$ | 180 (3) 240 (4) 360 (6) 480 (8) 660 (11) | 240 (4) 480 (8) 660 (11) 840 (14) 1 020 (17) 1 200 (20) 1 500 (25) | 240 (4) 480 (8) 660 (11) 840 (14) 1 020 (17) 1 200 (20) 1 500 (25) | 480 (6) 640 (8) 800 (10) 1 040 (13) 1 200 (15) 1 520 (19) | 480 (6) 640 (8) 800 (10) 1 040 (13) 1 200 (15) 1 520 (19) | 840 (8) 1 050 (10) 1 260 (12) 1 470 (14) 1 995 (19) | 840 (7) 1 200 (10) 1 560 (13) 1 920 (16) 3 000 (25) |
| Mounting hole pitch F | | 60 | 60 | 60 | 80 | 80 | 105 | 120 | 150 |
| E | | 30 | 30 | 30 | 40 | 40 | 52.5 | 60 | 75 |
| Reference dimension $E^{(1)}$ | Over (Incl.) | 7 | 8 | 9 | 10 | 10 | 12.5 | 15 | 17 |
| | Under | 37 | 38 | 39 | 50 | 50 | 65 | 75 | 92 |
| Maximum length $(?)$ | | 1 500 (1 980) | 1 980 (3 000) | 3 000 (3 960) | 2 960 (4 000) | 2 960 (4 000) | 2 940 (3 990) | 3 000 (3 960) | 3 000 (3 900) |

Note (1) : Not applicable to the track rail with female threads for bellow mounting. (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 1: The table shows representative model numbers and is also applicable to all models in the same size.

2: In case of half pitch specification (/HP), see Table 22.2.

Table 22.2 Standard and maximum length of track rails (For high carbon steel and half pitch specification /HP) unit : mm

| Item | Model number | MX15.../HP | MX20.../HP | MX25.../HP | MX30.../HP | MX35.../HP | MX45.../HP | MX55.../HP | MX65.../HP |
|-------------------------------|--------------|------------------------|--|--|--|--|--|--|--|
| | | Standard length $L(n)$ | 180 (6) 240 (8) 360 (12) 480 (16) 660 (22) | 240 (8) 480 (16) 660 (22) 840 (28) 1 020 (34) 1 200 (40) 1 500 (50) | 480 (16) 660 (22) 840 (28) 1 020 (34) 1 200 (40) 1 500 (50) | 480 (12) 640 (16) 800 (20) 1 040 (26) 1 200 (30) 1 520 (38) | 480 (12) 640 (16) 800 (20) 1 040 (26) 1 200 (30) 1 520 (38) | 840 (16) 1 050 (20) 1 260 (24) 1 470 (28) 1 995 (38) | 840 (14) 1 200 (20) 1 560 (26) 1 920 (32) 3 000 (50) |
| Mounting hole pitch F | | 30 | 30 | 30 | 40 | 40 | 52.5 | 60 | 75 |
| E | | 15 | 15 | 15 | 20 | 20 | 26.25 | 30 | 37.5 |
| Reference dimension $E^{(1)}$ | Over (Incl.) | 7 | 8 | 9 | 10 | 10 | 12.5 | 15 | 17 |
| | Under | 22 | 23 | 24 | 30 | 30 | 38.75 | 45 | 54.5 |
| Maximum length $(?)$ | | 1 500 (1 980) | 1 980 (3 000) | 3 000 (3 960) | 2 960 (4 000) | 2 960 (4 000) | 2 940 (3 990) | 3 000 (3 960) | 3 000 (3 975) |

Note (1) : Not applicable to the track rail with female threads for bellow mounting. (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 and is also applicable to all models in the same size.

Table 22.3 Standard and maximum length of track rails (For stainless steel) unit : mm

| Item | Model number | MXD15...SL | MXD20...SL | MXD25...SL | MXD30...SL |
|-------------------------------|--------------|------------------------|--|--|--|
| | | Standard length $L(n)$ | 180 (3) 240 (4) 360 (6) 480 (8) 660 (11) | 240 (4) 480 (8) 660 (11) 840 (14) | 240 (4) 480 (8) 660 (11) 840 (14) |
| Mounting hole pitch F | | 60 | 60 | 80 | |
| E | | 30 | 30 | 40 | |
| Reference dimension $E^{(1)}$ | Over (Incl.) | 7 | 8 | 9 | |
| | Under | 37 | 38 | 50 | |
| Maximum length $(?)$ | | 1 200 (1 980) | 1 200 (1 980) | 1 200 (1 980) | 1 200 (2 000) |

Note (1) : Not applicable to the track rail with female threads for bellow mounting. (Supplemental code /J)

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

Remark 1: The table shows representative model numbers and is also applicable to all models in the same size.

2: In case of half pitch specification (/HP), see Table 22.4.

Table 22.4 Standard and maximum length of track rails (For stainless steel and half pitch specification /HP) unit : mm

| Item | Model number | MXD15...SL/HP | MXD20...SL/HP | MXD25...SL/HP | MXD30...SL/HP |
|-------------------------------|--------------|------------------------|--|--|----------------------------------|
| | | Standard length $L(n)$ | 180 (6) 240 (8) 360 (12) 480 (16) 660 (22) | 240 (8) 480 (16) 660 (22) 840 (28) | 480 (16) 660 (22) 840 (28) |
| Mounting hole pitch F | | 30 | 30 | 40 | |
| E | | 15 | 15 | 20 | |
| Reference dimension $E^{(1)}$ | Over (Incl.) | 7 | 8 | 9 | |
| | Under | 22 | 23 | 30 | |
| Maximum length $(?)$ | | 1 200 (1 980) | 1 200 (1 980) | 1 200 (1 980) | 1 200 (2 000) |

Note (1) : Not applicable to the track rail with female threads for bellow mounting. (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.

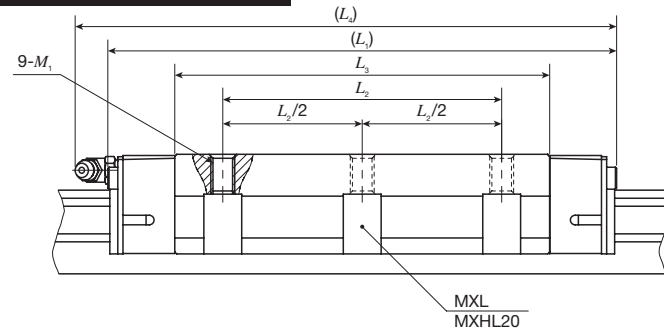
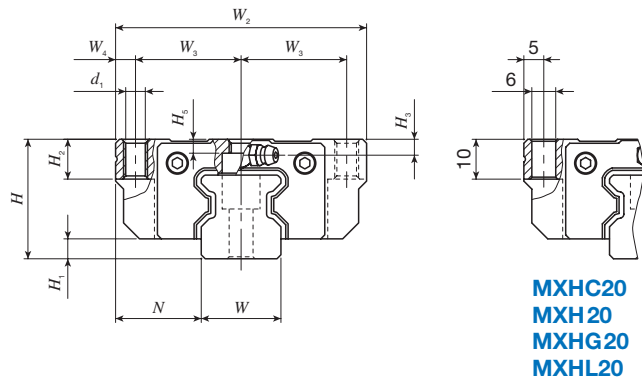
Remark : The table shows representative model numbers and is also applicable to all models in the same size.

IKO C-Lube Linear Roller Way Super MX

Flange type, mounting from top and bottom

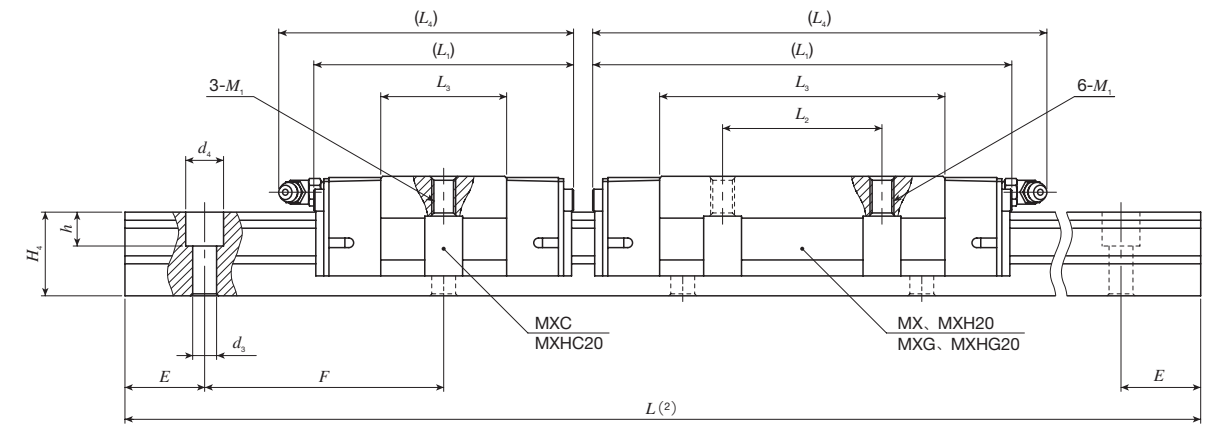
Short : MXC
Standard : MX

High rigidity long : MXG
Extra high rigidity long : MXL



MXHC20
MXH20
MXHG20
MXHL20

Model mounted from bottom only (1)

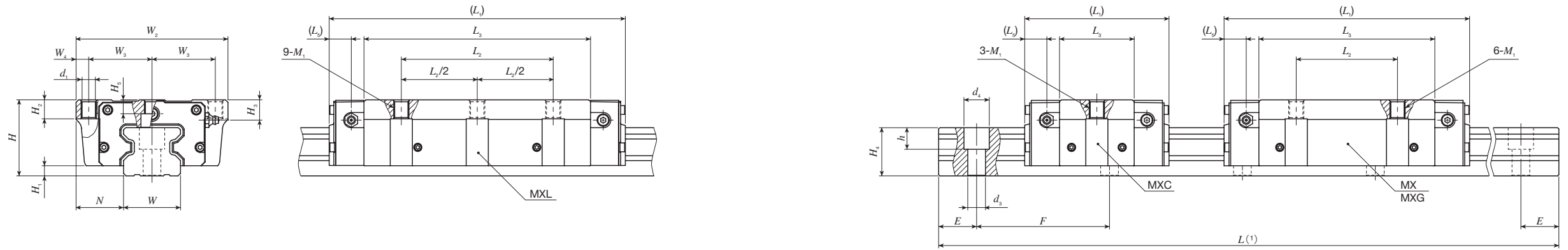


| Model number | Interchangeable | Mass (Reference) | | Dimension of assembly mm | | | Dimension of slide unit mm | | | | | | | | | | Dimension of track rail mm | | | | | | Recommended ⁽³⁾ mounting bolt for track rail mm Bolt size × length | Basic ⁽⁴⁾ dynamic load rating C N | Basic ⁽⁴⁾ static load rating C ₀ N | Static moment rating ⁽⁴⁾ | | | Model number | | | |
|-----------------------|-----------------|------------------|--------------------------------|--------------------------|----------------|------|----------------------------|----------------|----------------|----------------|----------------|----------------|----------------|------------------|--------------------|----------------|----------------------------|----------------|----|----------------|----------------|----------------|--|---|---|-------------------------------------|----------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| | | Slide unit kg | Track rail ⁽²⁾ kg/m | H | H ₁ | N | W ₂ | W ₃ | W ₄ | L ₁ | L ₂ | L ₃ | L ₄ | d ₁ | M ₁ | H ₂ | H ₃ | H ₅ | W | H ₄ | d ₃ | d ₄ | | | | h | E | F | | T ₀ N·m | T _x N·m | T _y N·m |
| MXC 15 | ☆ | 0.13 | 1.65 | 24 | 4 | 16 | 47 | 19 | 4.5 | 52 | - | 24 | 55 | 4.4 | M 5 | 7 | 3.5 | 3 | 15 | 16.5 | 4.5 | 8 | 6 | 30 | 60 | M4 × 16 | 7 730 | 12 000 | 113 | 50.6 457 | 50.6 457 | MXC 15 |
| MX 15 | ☆ | 0.20 | | | | | | | | 68 | 30 | 40 | 71 | | | | | | | | | | | | | | 136 942 | 136 942 | MX 15 | | | |
| MXG 15 | ☆ | 0.28 | | | | | | | | 84 | 56 | 87 | 262 1 590 | | | | | | | | | | | | | | 262 1 590 | MXG 15 | | | | |
| MXC 20 ⁽¹⁾ | ☆ | 0.29 | 2.73 | 30 | 5 | 21.5 | 63 | 26.5 | 5 | 66 | - | 31.6 | 74 | - ⁽¹⁾ | M 6 ⁽¹⁾ | 10 | 4 | 3.5 | 20 | 21 | 6 | 9.5 | 8.5 | 30 | 60 | M5 × 20 | 16 100 | 26 400 | 341 | 150 1 260 | 150 1 260 | MXC 20 ⁽¹⁾ |
| MX 20 ⁽¹⁾ | ☆ | 0.44 | | | | | | | | 86 | 40 | 51.6 | 94 | | | | | | | | | | | | | | 379 2 520 | 379 2 520 | MX 20 ⁽¹⁾ | | | |
| MXG 20 ⁽¹⁾ | ☆ | 0.61 | | | | | | | | 106 | 71.6 | 114 | 713 4 200 | | | | | | | | | | | | | | 713 4 200 | MXG 20 ⁽¹⁾ | | | | |
| MXL 20 ⁽¹⁾ | | 0.80 | | | | | | | | 128 | 70 | 94.1 | 137 | | | | | | | | | | | | | | 1 210 6 560 | 1 210 6 560 | MXL 20 ⁽¹⁾ | | | |
| MXC 25 | ☆ | 0.44 | 3.59 | 36 | 6 | 23.5 | 70 | 28.5 | 6.5 | 74 | - | 36 | 83 | 7 | M 8 | | | | | | | | | | | | | | | | | |

IKO C-Lube Linear Roller Way Super MX

Flange type, mounting from top and bottom

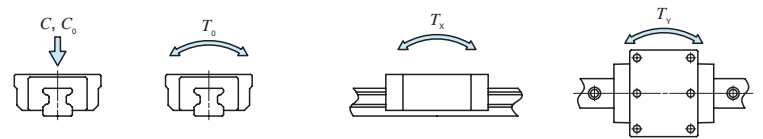
- Short : MXC
- Standard : MX
- High rigidity long : MXG
- Extra high rigidity long : MXL



| Model number | Interchangeable | Mass (Reference) | | Dimension of assembly mm | | | Dimension of slide unit mm | | | | | | | | | | Dimension of track rail mm | | | | | | Recommended ⁽²⁾ mounting bolt for track rail mm Bolt size × length | Basic ⁽³⁾ dynamic load rating C N | Basic ⁽³⁾ static load rating C ₀ N | Static moment rating ⁽³⁾ | | | Model number | | | |
|--------------|-----------------|------------------|--------------------------------|--------------------------|----------------|------|----------------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------------------|----------------|----|----------------|----------------|----------------|--|---|---|-------------------------------------|-------------------|-------------------|--------------|-----------------------|-----------------------|-----------------------|
| | | Slide unit kg | Track rail ⁽¹⁾ kg/m | H | H ₁ | N | W ₂ | W ₃ | W ₄ | L ₁ | L ₂ | L ₃ | L ₅ | d ₁ | M ₁ | H ₂ | H ₃ | H ₅ | W | H ₄ | d ₃ | d ₄ | | | | h | E | F | | T ₀ N·m | T _x N·m | T _y N·m |
| MXC 35 | ☆ | 1.13 | 6.88 | 48 | 6.5 | 33 | 100 | 41 | 9 | 92 | - | 46.6 | 12.7 | 8.5 | M10 | 13 | 13 | 7 | 34 | 32 | 9 | 14 | 12 | 40 | 80 | M 8×35 | 39 500 | 60 000 | 1 300 | 506 3 950 | 506 3 950 | MXC 35 |
| MX 35 | ☆ | 1.76 | | | | | | | | 124 | 62 | 78.6 | | | | | | | | | | | | | | | 1 360 8 470 | 1 360 8 470 | MX 35 | | | |
| MXG 35 | ☆ | 2.41 | | | | | | | | 152 | - | 106.6 | | | | | | | | | | | | | | | 2 440 13 800 | 2 440 13 800 | MXG 35 | | | |
| MXL 35 | | 3.00 | | | | | | | | 184 | 100 | 138.6 | | | | | | | | | | | | | | | 4 060 21 300 | 4 060 21 300 | MXL 35 | | | |
| MXC 45 | ☆ | 2.11 | 10.8 | 60 | 8 | 37.5 | 120 | 50 | 10 | 114 | - | 59 | 17.5 | 10.5 | M12 | 15 | 16 | 11 | 45 | 38 | 14 | 20 | 17 | 52.5 | 105 | M12×40 | 64 100 | 95 600 | 2 660 | 1 010 7 800 | 1 010 7 800 | MXC 45 |
| MX 45 | ☆ | 3.26 | | | | | | | | 154 | 80 | 99 | | | | | | | | | | | | | | | 2 700 16 800 | 2 700 16 800 | MX 45 | | | |
| MXG 45 | ☆ | 4.60 | | | | | | | | 194 | - | 139 | | | | | | | | | | | | | | | 5 220 29 000 | 5 220 29 000 | MXG 45 | | | |
| MXL 45 | | 5.66 | | | | | | | | 234 | 120 | 179 | | | | | | | | | | | | | | | 8 560 44 400 | 8 560 44 400 | MXL 45 | | | |
| MXC 55 | ☆ | 3.49 | 14.1 | 70 | 9 | 43.5 | 140 | 58 | 12 | 136 | - | 72 | 20 | 12.5 | M14 | 17 | 16 | 14 | 53 | 43 | 16 | 23 | 20 | 60 | 120 | M14×45 | 99 700 | 149 000 | 4 830 | 1 880 14 400 | 1 880 14 400 | MXC 55 |
| MX 55 | ☆ | 5.42 | | | | | | | | 184 | 95 | 120 | | | | | | | | | | | | | | | 5 040 31 100 | 5 040 31 100 | MX 55 | | | |
| MXG 55 | ☆ | 7.93 | | | | | | | | 238 | - | 174 | | | | | | | | | | | | | | | 10 400 57 000 | 10 400 57 000 | MXG 55 | | | |
| MXL 55 | | 10.1 | | | | | | | | 292 | 150 | 228 | | | | | | | | | | | | | | | 17 700 90 700 | 17 700 90 700 | MXL 55 | | | |
| MXC 65 | ☆ | 7.18 | 22.6 | 90 | 12 | 53.5 | 170 | 71 | 14 | 180 | - | 95 | 26.3 | 14.5 | M16 | 23 | 18 | 18.5 | 63 | 56 | 18 | 26 | 22 | 75 | 150 | M16×60 | 174 000 | 249 000 | 9 790 | 4 200 32 200 | 4 200 32 200 | MXC 65 |
| MX 65 | ☆ | 11.5 | | | | | | | | 244 | 110 | 159 | | | | | | | | | | | | | | | 11 300 69 300 | 11 300 69 300 | MX 65 | | | |
| MXG 65 | ☆ | 16.0 | | | | | | | | 308 | - | 223 | | | | | | | | | | | | | | | 21 800 120 000 | 21 800 120 000 | MXG 65 | | | |
| MXL 65 | | 20.8 | | | | | | | | 380 | 200 | 295 | | | | | | | | | | | | | | | 37 600 193 000 | 37 600 193 000 | MXL 65 | | | |

Note (1): Track rail length L are shown in Table 22.1 and 22.2 on page 36.
 (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 (C₀) and static moment rating (T₀, T_x and T_y) are shown in the sketches below. The upper values in the T_x and T_y column apply to one slide unit, and the lower values apply to two units in close contact.

Remark 1: The mark ☆ indicates that interchangeable specification products are available.
 2: For grease nipple specification, see Table 17 on page 33.
 3: Three female threaded holes for grease nipple are prepared on each end plate.



Example of identification number for assembled set

Model code: MX G 55 C2 R3000 T1 P S2 /F

Size: 55

Part code: C2

Preload symbol: T1

Class symbol: P

Interchangeable code: S2

Supplemental code: /F

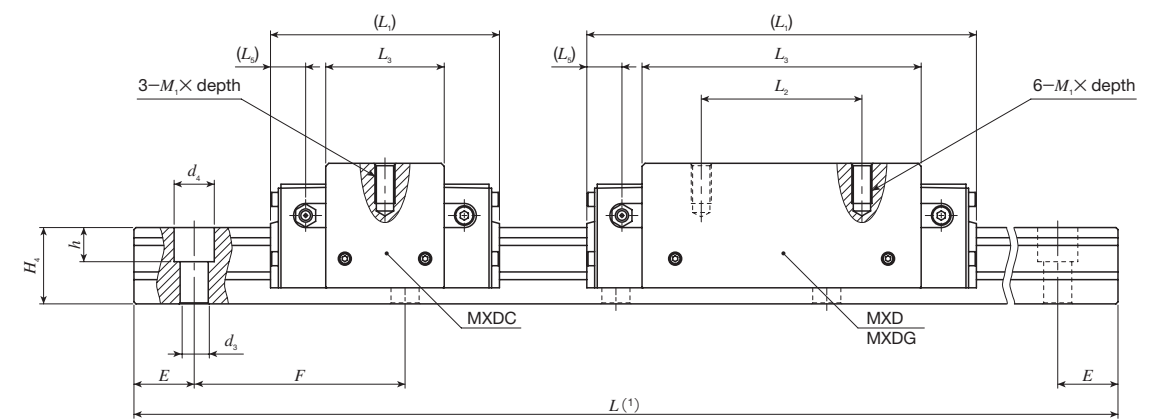
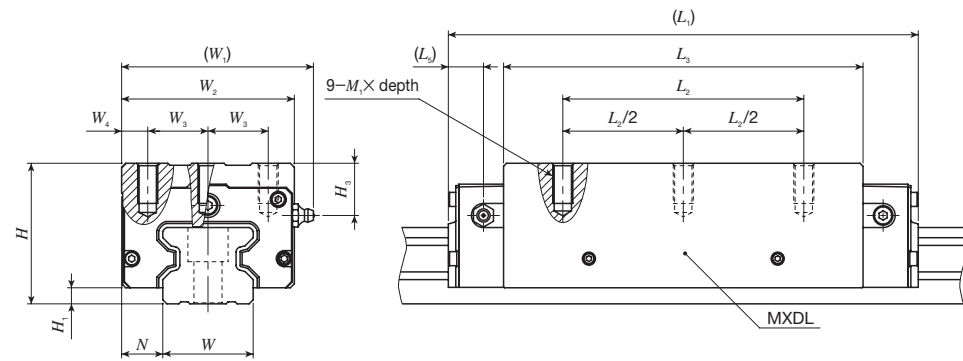
| | | |
|----------------------------------|----------------|--|
| Series | MX | Flange type, mounting from top and bottom |
| Length of slide unit | C | Short |
| | No symbol | Standard |
| | G | High rigidity long |
| | L | Extra high rigidity long |
| Size | 35, 45, 55, 65 | |
| Number of slide unit (two units) | | |
| Preload amount | T1 | Light preload |
| | T2 | Medium preload |
| | T3 | Heavy preload |
| Accuracy class | P | Precision |
| | SP | Super precision |
| | UP | Ultra precision |
| Interchangeable code | S2 | Interchangeable specification |
| | No symbol | Non interchangeable specification |
| Special specification | /F | A, D, E, F, GE, HP, I, J, L, LF, MA, MN, N, RC, T, UR, V, W, Z |

Length of track rail (3000mm)

IKO G-Lube Linear Roller Way Super MX

Block type, mounting from top

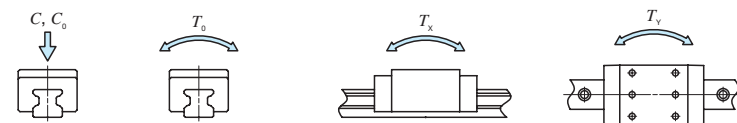
- Short : MXDC
- Standard : MXD
- High rigidity long : MXDG
- Extra high rigidity long : MXDL



| Model number | Interchangeable | Mass (Reference) | | Dimension of assembly mm | | | Dimension of slide unit mm | | | | | | | | | | Dimension of track rail mm | | | | | | | Recommended ⁽²⁾ mounting bolt for track rail mm Bolt size x length | Basic ⁽³⁾ dynamic load rating C N | Basic ⁽³⁾ static load rating C ₀ N | Static moment rating ⁽³⁾ | | | Model number |
|--------------|-----------------|------------------|--------------------------------|--------------------------|----------------|------|----------------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|------------------------|----------------|----------------------------|----------------|----------------|----------------|----|------|-----|--|---|---|-------------------------------------|-----------------------|-----------------------|--------------|
| | | Slide unit kg | Track rail ⁽¹⁾ kg/m | H | H ₁ | N | W ₁ | W ₂ | W ₃ | W ₄ | L ₁ | L ₂ | L ₃ | L ₄ | M ₁ x depth | H ₃ | W | H ₄ | d ₃ | d ₄ | h | E | F | | | | T ₀ N·m | T _x N·m | T _y N·m | |
| MXDC 35 | ☆ | 0.97 | 6.88 | 55 | 6.5 | 18 | 78 | 70 | 25 | 10 | 92 | - | 46.6 | 12.7 | M 8 x 16 | 20 | 34 | 32 | 9 | 14 | 12 | 40 | 80 | M 8 x 35 | 39 500 | 60 000 | 1 300 | 506 3 950 | 506 3 950 | MXDC 35 |
| MXD 35 | ☆ | 1.52 | | | | | | | | | 124 | 50 | 78.6 | | | | | | | | | | | | 1 360 8 470 | 1 360 8 470 | MXD 35 | | | |
| MXDG 35 | ☆ | 2.02 | | | | | | | | | 152 | 72 | 106.6 | | | | | | | | | | | | 2 440 13 800 | 2 440 13 800 | MXDG 35 | | | |
| MXDL 35 | | 2.55 | | | | | | | | | 184 | 100 | 138.6 | | | | | | | | | | | | 4 060 21 300 | 4 060 21 300 | MXDL 35 | | | |
| MXDC 45 | ☆ | 2.01 | 10.8 | 70 | 8 | 20.5 | 97 | 86 | 30 | 13 | 114 | - | 59 | 17.5 | M10 x 20 | 26 | 45 | 38 | 14 | 20 | 17 | 52.5 | 105 | M12 x 40 | 64 100 | 95 600 | 2 660 | 1 010 7 800 | 1 010 7 800 | MXDC 45 |
| MXD 45 | ☆ | 3.13 | | | | | | | | | 154 | 60 | 99 | | | | | | | | | | | | 2 700 16 800 | 2 700 16 800 | MXD 45 | | | |
| MXDG 45 | ☆ | 4.29 | | | | | | | | | 194 | 80 | 139 | | | | | | | | | | | | 5 220 29 000 | 5 220 29 000 | MXDG 45 | | | |
| MXDL 45 | | 5.36 | | | | | | | | | 234 | 120 | 179 | | | | | | | | | | | | 8 560 44 400 | 8 560 44 400 | MXDL 45 | | | |
| MXDC 55 | ☆ | 3.17 | 14.1 | 80 | 9 | 23.5 | 111 | 100 | 37.5 | 12.5 | 136 | - | 72 | 20 | M12 x 25 | 26 | 53 | 43 | 16 | 23 | 20 | 60 | 120 | M14 x 45 | 99 700 | 149 000 | 4 830 | 1 880 14 400 | 1 880 14 400 | MXDC 55 |
| MXD 55 | ☆ | 4.97 | | | | | | | | | 184 | 75 | 120 | | | | | | | | | | | | 5 040 31 100 | 5 040 31 100 | MXD 55 | | | |
| MXDG 55 | ☆ | 7.06 | | | | | | | | | 238 | 95 | 174 | | | | | | | | | | | | 10 400 57 000 | 10 400 57 000 | MXDG 55 | | | |
| MXDL 55 | | 9.08 | | | | | | | | | 292 | 150 | 228 | | | | | | | | | | | | 17 700 90 700 | 17 700 90 700 | MXDL 55 | | | |
| MXDC 65 | ☆ | 5.52 | 22.6 | 90 | 12 | 31.5 | 136 | 126 | 38 | 25 | 180 | - | 95 | 26.3 | M16 x 25 | 18 | 63 | 56 | 18 | 26 | 22 | 75 | 150 | M16 x 60 | 174 000 | 249 000 | 9 790 | 4 200 32 200 | 4 200 32 200 | MXDC 65 |
| MXD 65 | ☆ | 8.70 | | | | | | | | | 244 | 70 | 159 | | | | | | | | | | | | 11 300 69 300 | 11 300 69 300 | MXD 65 | | | |
| MXDG 65 | ☆ | 12.1 | | | | | | | | | 308 | 120 | 223 | | | | | | | | | | | | 21 800 120 000 | 21 800 120 000 | MXDG 65 | | | |
| MXDL 65 | | 15.5 | | | | | | | | | 380 | 200 | 295 | | | | | | | | | | | | 37 600 193 000 | 37 600 193 000 | MXDL 65 | | | |

Note (1): Track rail length L are shown in Table 22.1 and 22.2 on page 36.
 (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 (C₀) and static moment rating (T₀, T_x and T_y) are shown in the sketches below. The upper values in the T_x and T_y column apply to one slide unit, and the lower values apply to two units in close contact.
 Remark 1: The mark ☆ indicates that interchangeable specification products are available.
 2: For grease nipple specification, see Table 17 on page 33.
 3: Three female threaded holes for grease nipple are prepared on each end plate.

1N=0.102kgf



Example of identification number for assembled set

| | | | | | | |
|--------------|-----------|-----------------|----------------|--------------|----------------------|-------------------|
| Model code | Size | Part code | Preload symbol | Class symbol | Interchangeable code | Supplemental code |
| MXD G | 55 | C2 R3000 | T1 | P | S2 | /F |

Series
MXD Block type, mounting from top

Length of slide unit
C Short
No symbol Standard
G High rigidity long
L Extra high rigidity long

Size
35, 45, 55, 65

Number of slide unit (two units)

Preload amount
No symbol Standard
T1 Light preload
T2 Medium preload
T3 Heavy preload

Accuracy class
H High
P Precision
SP Super precision
UP Ultra precision

Length of track rail (3000mm)

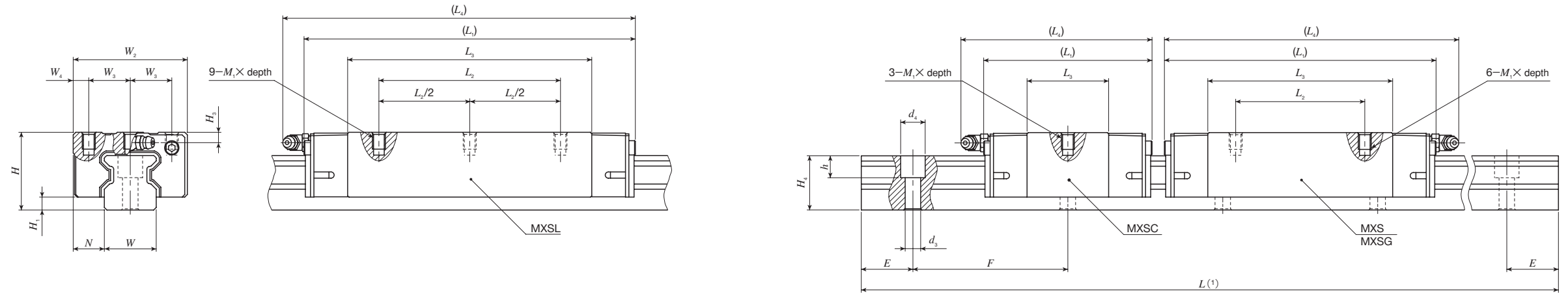
Special specification
A, D, E, F, GE, HP, I, J, L, LF, MA, MN, N, RC, T, UR, V, W, Z

Interchangeable code
S2 Interchangeable specification
No symbol Non interchangeable specification

IKO C-Lube Linear Roller Way Super MX

Compact block type,
mounting from top

- Short : MXSC
- Standard : MXS
- High rigidity long : MXSG
- Extra high rigidity long : MXSL



| Model number | Interchangeable | Mass (Reference) | | Dimension of assembly mm | | | Dimension of slide unit mm | | | | | | | Dimension of track rail mm | | | | | | Recommended ⁽³⁾ mounting bolt for track rail mm Bolt size x length | Basic ⁽⁴⁾ dynamic load rating C N | Basic ⁽⁴⁾ static load rating C ₀ N | Static moment rating ⁽⁴⁾ | | | Model number | | | |
|--------------|-----------------|------------------|--------------------------------|--------------------------|----------------|------|----------------------------|----------------|----------------|----------------|----------------|----------------|----------------|---------------------------------------|----------------|----|----------------|----------------|----------------|--|---|---|-------------------------------------|--------|---------|--------------|-----------------------|-----------------------|-----------------------|
| | | Slide unit kg | Track rail ⁽¹⁾ kg/m | H | H ₁ | N | W ₂ | W ₃ | W ₄ | L ₁ | L ₂ | L ₃ | L ₄ | M ₁ x depth ⁽²⁾ | H ₃ | W | H ₄ | d ₃ | d ₄ | | | | h | E | F | | T ₀ N·m | T _x N·m | T _y N·m |
| MXSC 15 | ☆ | 0.099 | 1.65 | 24 | 4 | 9.5 | 34 | 13 | 4 | 52 | - | 24 | 55 | M4 x 5.5 | 3.5 | 15 | 16.5 | 4.5 | 8 | 6 | 30 | 60 | M4 x 16 | 7 730 | 12 000 | 113 | 50.6 457 | 50.6 457 | MXSC 15 |
| MXS 15 | ☆ | 0.15 | | | | | | | | 68 | 26 | 40 | 71 | | | | | | | | | | | 11 500 | 20 000 | 188 | 136 942 | 136 942 | MXS 15 |
| MXSG 15 | ☆ | 0.21 | | | | | | | | 84 | 56 | 87 | 14 900 | | | | | | | | | | | 28 000 | 263 | 262 1 590 | 262 1 590 | MXSG 15 | |
| MXSC 20 | ☆ | 0.21 | 2.73 | 30 | 5 | 12 | 44 | 16 | 6 | 66 | - | 31.6 | 74 | M5 x 6.5 | 4 | 20 | 21 | 6 | 9.5 | 8.5 | 30 | 60 | M5 x 20 | 16 100 | 26 400 | 341 | 150 1 260 | 150 1 260 | MXSC 20 |
| MXS 20 | ☆ | 0.31 | | | | | | | | 86 | 36 | 51.6 | 94 | | | | | | | | | | | 23 400 | 42 700 | 550 | 379 2 520 | 379 2 520 | MXS 20 |
| MXSG 20 | ☆ | 0.42 | | | | | | | | 106 | 50 | 71.6 | 114 | | | | | | | | | | | 30 100 | 58 900 | 760 | 713 4 200 | 713 4 200 | MXSG 20 |
| MXSL 20 | ☆ | 0.55 | | | | | | | | 128 | 70 | 94.1 | 137 | | | | | | | | | | | 37 200 | 77 200 | 996 | 1 210 6 560 | 1 210 6 560 | MXSL 20 |
| MXSC 25 | ☆ | 0.30 | 3.59 | 36 | 6 | 12.5 | 48 | 17.5 | 6.5 | 74 | - | 36 | 83 | M6 x 9 | 5 | 23 | 24.5 | 7 | 11 | 9 | 30 | 60 | M6 x 25 | 21 600 | 33 800 | 500 | 213 1 810 | 213 1 810 | MXSC 25 |
| MXS 25 | ☆ | 0.47 | | | | | | | | 98 | 35 | 60 | 107 | | | | | | | | | | | 32 100 | 56 300 | 833 | 573 3 800 | 573 3 800 | MXS 25 |
| MXSG 25 | ☆ | 0.57 | | | | | | | | 113 | 50 | 75 | 122 | | | | | | | | | | | 38 200 | 70 300 | 1 040 | 885 5 380 | 885 5 380 | MXSG 25 |
| MXSL 25 | ☆ | 0.74 | | | | | | | | 137 | 70 | 99 | 146 | | | | | | | | | | | 47 400 | 92 800 | 1 370 | 1 530 8 480 | 1 530 8 480 | MXSL 25 |
| MXSC 30 | ☆ | 0.54 | 5.01 | 42 | 6.5 | 16 | 60 | 20 | 10 | 85 | - | 42.4 | 95 | M8 x 11 | 6.5 | 28 | 28 | 9 | 14 | 12 | 40 | 80 | M8 x 28 | 29 200 | 44 600 | 808 | 329 2 740 | 329 2 740 | MXSC 30 |
| MXS 30 | ☆ | 0.83 | | | | | | | | 113 | 40 | 70.4 | 123 | | | | | | | | | | | 43 400 | 74 400 | 1 350 | 883 5 780 | 883 5 780 | MXS 30 |
| MXSG 30 | ☆ | 1.05 | | | | | | | | 134 | 60 | 91.4 | 144 | | | | | | | | | | | 53 200 | 96 700 | 1 750 | 1 470 8 740 | 1 470 8 740 | MXSG 30 |
| MXSL 30 | ☆ | 1.37 | | | | | | | | 162 | 80 | 119.4 | 172 | | | | | | | | | | | 65 600 | 126 000 | 2 290 | 2 500 13 600 | 2 500 13 600 | MXSL 30 |

Note (1): Track rail length L are shown in Table 22.1 and 22.2 on page 34.

(2): Recommended screwing depth are shown in Table 18.1 on page 32.

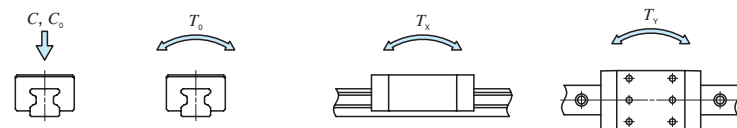
(3): Track rail mounting bolts are not appended. Hexagon socket bolts of JIS B 1176 strength division 12.9 or equivalent are recommended.

(4): The directions of basic dynamic load rating (C), basic static load rating (C₀) and static moment rating (T₀, T_x and T_y) are shown in the sketches below. The upper values in the T_x and T_y column apply to one slide unit, and the lower values apply to two units in close contact.

Remark 1: The mark ☆ indicates that interchangeable specification products are available.

2: For grease nipple specification, see Table 17 on page 33.

3: A grease nipple mounting threaded hole is provided on each end plate respectively.



Example of identification number for assembled set

| Model code | Size | Part code | Preload symbol | Class symbol | Interchangeable code | Supplemental code |
|------------|------|-----------|----------------|--------------|----------------------|-------------------|
| MXS | G | 25 | C2 | R840 | T1 | P S2 /F |

Series

| | |
|-----|---------------------------------------|
| MXS | Compact block type, mounting from top |
|-----|---------------------------------------|

Length of slide unit

| | |
|-----------|--------------------------|
| C | Short |
| No symbol | Standard |
| G | High rigidity long |
| L | Extra high rigidity long |

Size

| |
|----------------|
| 15, 20, 25, 30 |
|----------------|

Number of slide unit (two units)

Preload amount

| | |
|-----------|----------------|
| No symbol | Standard |
| T1 | Light preload |
| T2 | Medium preload |
| T3 | Heavy preload |

Accuracy class

| | |
|----|-----------------|
| H | High |
| P | Precision |
| SP | Super precision |
| UP | Ultra precision |

Interchangeable code

| | |
|-----------|-----------------------------------|
| S2 | Interchangeable specification |
| No symbol | Non interchangeable specification |

Special specification

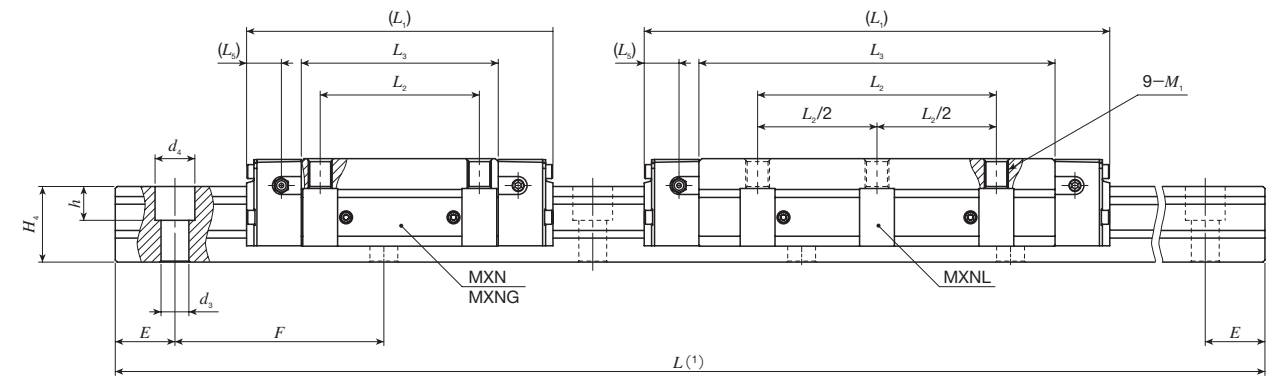
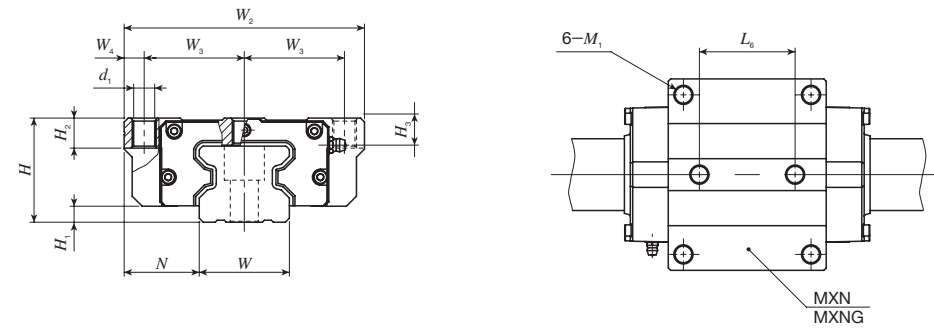
A, D, E, F, GE, HP, I, J, L, LF, MA, MN, N, RC, T, UR, V, W, Z

Length of track rail (840mm)

IKO C-Lube Linear Roller Way Super MX

Low section flange type, mounting from top

- Standard : MXN
- High rigidity long : MXNG
- Extra high rigidity long : MXNL



| Model number | Interchangeable | Mass (Reference) | | Dimension of assembly mm | | | Dimension of slide unit mm | | | | | | | | | | | Dimension of track rail mm | | | | | | Recommended ⁽⁴⁾ mounting bolt for track rail mm Bolt size × length | Basic ⁽⁵⁾ dynamic load rating C N | Basic ⁽⁵⁾ static load rating C ₀ N | Static moment rating ⁽⁵⁾ | | | Model number | | | | | |
|--------------|-----------------|------------------|--------------------------------|--------------------------|----------------|------|----------------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|-------------------------------|----------------|---------------------------------------|----------------------------|----------------|----|----------------|----------------|----------------|--|---|---|-------------------------------------|---------|---------|--------------|-----------------------|-----------------------|-----------------------|------------------|------------------|
| | | Slide unit kg | Track rail kg/m ⁽¹⁾ | H | H ₁ | N | W ₂ | W ₃ | W ₄ | L ₁ | L ₂ | L ₃ | L ₅ | L ₆ | d ₁ ⁽²⁾ | M ₁ | Maximum screwing depth ⁽³⁾ | H ₂ | H ₃ | W | H ₄ | d ₃ | d ₄ | | | | h | E | F | | T ₀ N·m | T _x N·m | T _y N·m | | |
| MXN 35 | ☆ | 1.55 | 6.88 | 44 | 6.5 | 33 | 100 | 41 | 9 | 124 | 62 | 78.6 | 12.7 | 52 | 8.5 | M10 | 11 | 13 | 11 | 34 | 32 | 9 | 14 | 12 | 40 | 80 | M 8 × 35 | 58 700 | 100 000 | 2 170 | 1 360 8 470 | 1 360 8 470 | MXN 35 | | |
| MXNG 35 | ☆ | 2.13 | | | | | | | | 152 | | 106.6 | | | | | | | | | | | | | | | | 8.5 | 13 | 11 | 74 200 | 135 000 | 2 930 | 2 440 13 800 | 2 440 13 800 |
| MXNL 35 | | 2.71 | | | | | | | | 184 | 100 | 138.6 | | | | | | | | | | | | | | | | 10.5 | 15 | 13.5 | 90 800 | 175 000 | 3 800 | 4 060 21 300 | 4 060 21 300 |
| MXN 45 | ☆ | 2.58 | 10.8 | 52 | 8 | 37.5 | 120 | 50 | 10 | 154 | 80 | 99 | 17.5 | 60 | 10.5 | M12 | 13 | 15 | 13.5 | 45 | 38 | 14 | 20 | 17 | 52.5 | 105 | M12 × 40 | 95 400 | 159 000 | 4 430 | 2 700 16 800 | 2 700 16 800 | MXN 45 | | |
| MXNG 45 | ☆ | 3.73 | | | | | | | | 194 | | 139 | | | | | | | | | | | | | | | | 10.5 | 15 | 13.5 | 124 000 | 223 000 | 6 200 | 5 220 29 000 | 5 220 29 000 |
| MXNL 45 | | 4.72 | | | | | | | | 234 | 120 | 179 | | | | | | | | | | | | | | | | 12.5 | 17 | 16 | 151 000 | 287 000 | 7 980 | 8 560 44 400 | 8 560 44 400 |
| MXN 55 | ☆ | 4.61 | 14.1 | 63 | 9 | 43.5 | 140 | 58 | 12 | 184 | 95 | 120 | 20 | 70 | 12.5 | M14 | 19 | 17 | 16 | 53 | 43 | 16 | 23 | 20 | 60 | 120 | M14 × 45 | 148 000 | 248 000 | 8 040 | 5 040 31 100 | 5 040 31 100 | MXN 55 | | |
| MXNG 55 | ☆ | 6.94 | | | | | | | | 238 | | 174 | | | | | | | | | | | | | | | | 12.5 | 17 | 16 | 198 000 | 359 000 | 11 700 | 10 400 57 000 | 10 400 57 000 |
| MXNL 55 | | 8.87 | | | | | | | | 292 | 150 | 228 | | | | | | | | | | | | | | | | 17 | 16 | 244 000 | 470 000 | 15 300 | 17 700 90 700 | 17 700 90 700 | MXNL 55 |

Note (1): Track rail length L are shown in Table 22.1 and 22.2 on page 36.
 (2): It is recommended to secure actual screwing depth should not exceed the maximum screwing depth in the table.
 (3): Track rail mounting bolts are not appended. Hexagon socket bolts of JIS B 1176 strength division 12.9 or equivalent are recommended.
 (4): The directions of basic dynamic load rating (C), basic static load rating (C₀) and static moment rating (T₀, T_x and T_y) are shown in the sketches below. The upper values in the T_x and T_y column apply to one slide unit, and the lower values apply to two units in close contact.
 Remark 1: The mark ☆ indicates that interchangeable specification products are available.
 2: For grease nipple specification, see Table 17 on page 33.
 3: In size 35 female threads for grease nipple are prepared on both side faces and front face of end plate. Thread size of front face is smaller than other threads thus, please consult if grease nipple for front face is required.

Example of identification number for assembled set

Model code: MXN G 55 C2 R3000 T₂ P S2 /F

Size: 55

Part code: C2 R3000

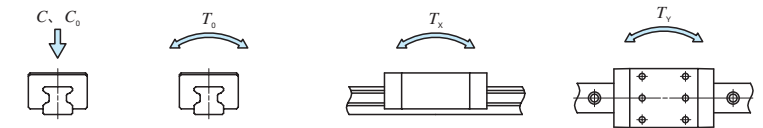
Preload symbol: T₂

Class symbol: P

Interchangeable code: S2

Supplemental code: /F

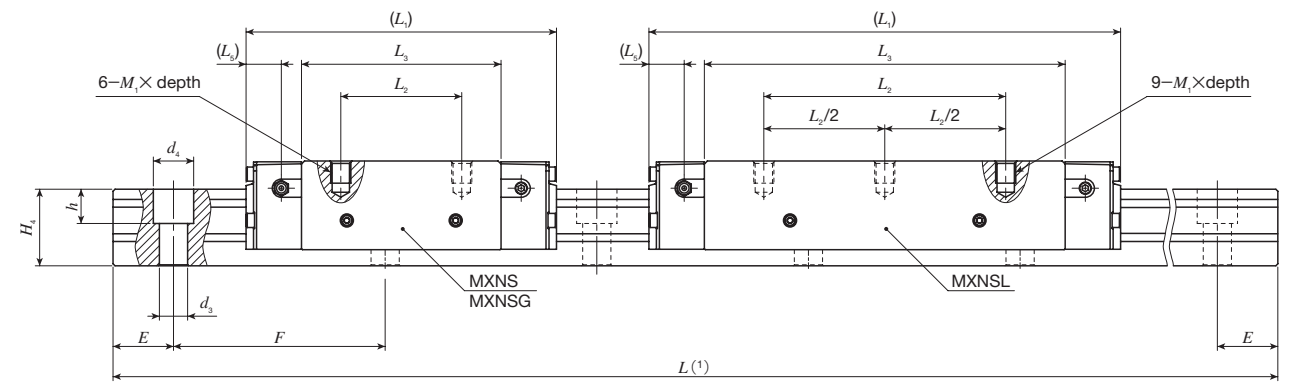
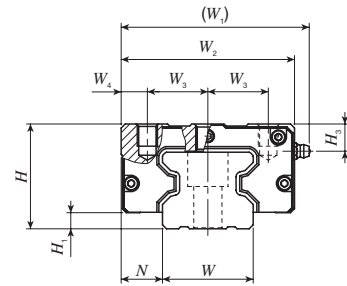
| | |
|---|---|
| Series | MXN Low section flange type, mounting from top |
| Length of slide unit | No symbol Standard G High rigidity long L Extra high rigidity long |
| Size | 35, 45, 55 |
| Number of slide unit (two units) | |
| Preload amount | No symbol Standard T ₁ Light preload T ₂ Medium preload T ₃ Heavy preload |
| Accuracy class | H High P Precision SP Super precision UP Ultra precision |
| Interchangeable code | S2 Interchangeable specification No symbol Non interchangeable specification |
| Special specification | A, D, E, F, HP, I, J, L, LF, MA, RC, T, UR, V, W, Z |



IKO C-Lube Linear Roller Way Super MX

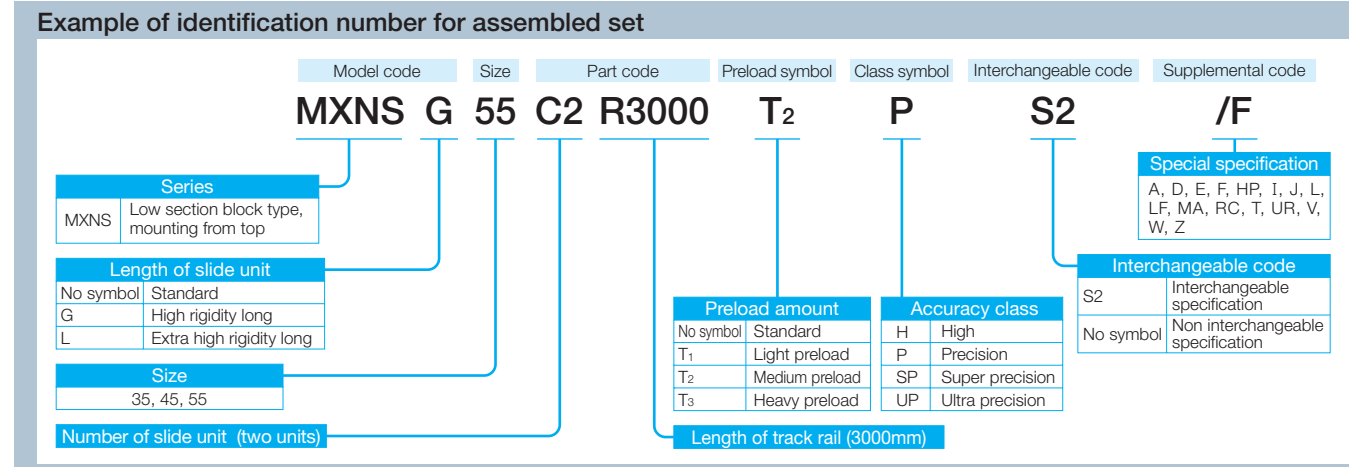
Low section block type,
mounting from top

Standard : MXNS
High rigidity long : MXNSG
Extra high rigidity long : MXNSL



| Model number | Interchangeable | Mass (Reference) | | Dimension of assembly mm | | | Dimension of slide unit mm | | | | | | | | | | Dimension of track rail mm | | | | | | Recommended ⁽³⁾ mounting bolt for track rail mm Bolt size × length | Basic ⁽⁴⁾ dynamic load rating C | Basic ⁽⁴⁾ static load rating C ₀ | Static moment rating ⁽⁴⁾ | | | Model number | | |
|--------------|-----------------|------------------|--------------------------------|--------------------------|----------------|------|----------------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|---------------------------------------|---------------------------------------|----------------------------|----|----------------|----------------|----------------|----|--|--|--|-------------------------------------|---------|----------------|--------------|----------------|----------------|
| | | Slide unit kg | Track rail ⁽¹⁾ kg/m | H | H ₁ | N | W ₁ | W ₂ | W ₃ | W ₄ | L ₁ | L ₂ | L ₃ | L ₄ | M ₁ × depth ⁽²⁾ | Maximum screwing depth ⁽²⁾ | H ₃ | W | H ₄ | d ₃ | d ₄ | h | | | | E | F | T ₀ | | T _x | T _y |
| MXNS 35 | ☆ | 1.08 | 6.88 | 44 | 6.5 | 18 | 78 | 70 | 25 | 10 | 124 | 50 | 78.6 | 12.7 | M 8 × 9 | 11 | 11 | 34 | 32 | 9 | 14 | 12 | 40 | 80 | M 8 × 35 | 58 700 | 100 000 | 2 170 | 1 360 | 1 360 | MXNS 35 |
| MXNSG 35 | ☆ | 1.42 | | | | | | | | | 152 | 72 | 106.6 | | | | | | | | | | | | | 2 440 | 2 440 | MXNSG 35 | | | |
| MXNSL 35 | | 1.81 | | | | | | | | | 184 | 100 | 138.6 | | | | | | | | | | | | | 4 060 | 4 060 | MXNSL 35 | | | |
| MXNS 45 | ☆ | 1.84 | 10.8 | 52 | 8 | 20.5 | 94 | 86 | 30 | 13 | 154 | 60 | 99 | 17.5 | M10 × 11 | 13 | 13.5 | 45 | 38 | 14 | 20 | 17 | 52.5 | 105 | M12 × 40 | 95 400 | 159 000 | 4 430 | 2 700 | 2 700 | MXNS 45 |
| MXNSG 45 | ☆ | 2.58 | | | | | | | | | 194 | 80 | 139 | | | | | | | | | | | | | 5 220 | 5 220 | MXNSG 45 | | | |
| MXNSL 45 | | 3.29 | | | | | | | | | 234 | 120 | 179 | | | | | | | | | | | | | 8 560 | 8 560 | MXNSL 45 | | | |
| MXNS 55 | ☆ | 3.31 | 14.1 | 63 | 9 | 23.5 | 111 | 100 | 37.5 | 12.5 | 184 | 75 | 120 | 20 | M12 × 15 | 19 | 16 | 53 | 43 | 16 | 23 | 20 | 60 | 120 | M14 × 45 | 148 000 | 248 000 | 8 040 | 5 040 | 5 040 | MXNS 55 |
| MXNSG 55 | ☆ | 4.83 | | | | | | | | | 238 | 95 | 174 | | | | | | | | | | | | | 10 400 | 10 400 | MXNSG 55 | | | |
| MXNSL 55 | | 6.28 | | | | | | | | | 292 | 150 | 228 | | | | | | | | | | | | | 17 700 | 17 700 | MXNSL 55 | | | |

Note (1): Track rail length L are shown in Table 22.1 and 22.2 on page 36.
 (2): It is recommended to secure actual screw depth should not be exceed the maximum screwing depth in table 18.2 on page 32. Especially the screwing depth of middle mounting threads in width direction should not be exceed maximum screwing depth in the table.
 (3): Track rail mounting bolts are not appended. Hexagon socket bolts of JIS B 1176 strength division 12.9 or equivalent are recommended.
 (4): The directions of basic dynamic load rating (C), basic static load rating (C₀) and static moment rating (T₀, T_x and T_y) are shown in the sketches below. The upper values in the T_x and T_y column apply to one slide unit, and the lower values apply to two units in close contact.
 Remark 1: The mark ☆ indicates that interchangeable specification products are available.
 2: For grease nipple specification, see Table 17 on page 33.
 3: In size 35 female threads for grease nipple are prepared on both side faces and front face of end plate. Thread size of front face is smaller than other threads thus, please consult if grease nipple for front face is required.



The Roller Effect

Monster

IKO Linear Roller Way Super X

LRX

IKO

Linear Roller Way

SUPER X

SERIES

CAT-57148

In **IKO** Linear Roller Way Super X, four rows of cylindrical rollers are incorporated in a highly rigid casing with good balance, and the cylindrical rollers in each row are arranged in parallel to each other. Owing to its small elastic deformation, stable operation is ensured even under heavy or fluctuating loads. Smooth and quiet motion, high reliability, high rigidity and high running accuracy are realized.

High Rigidity

Superior Damping Characteristic

Well-balanced Structure

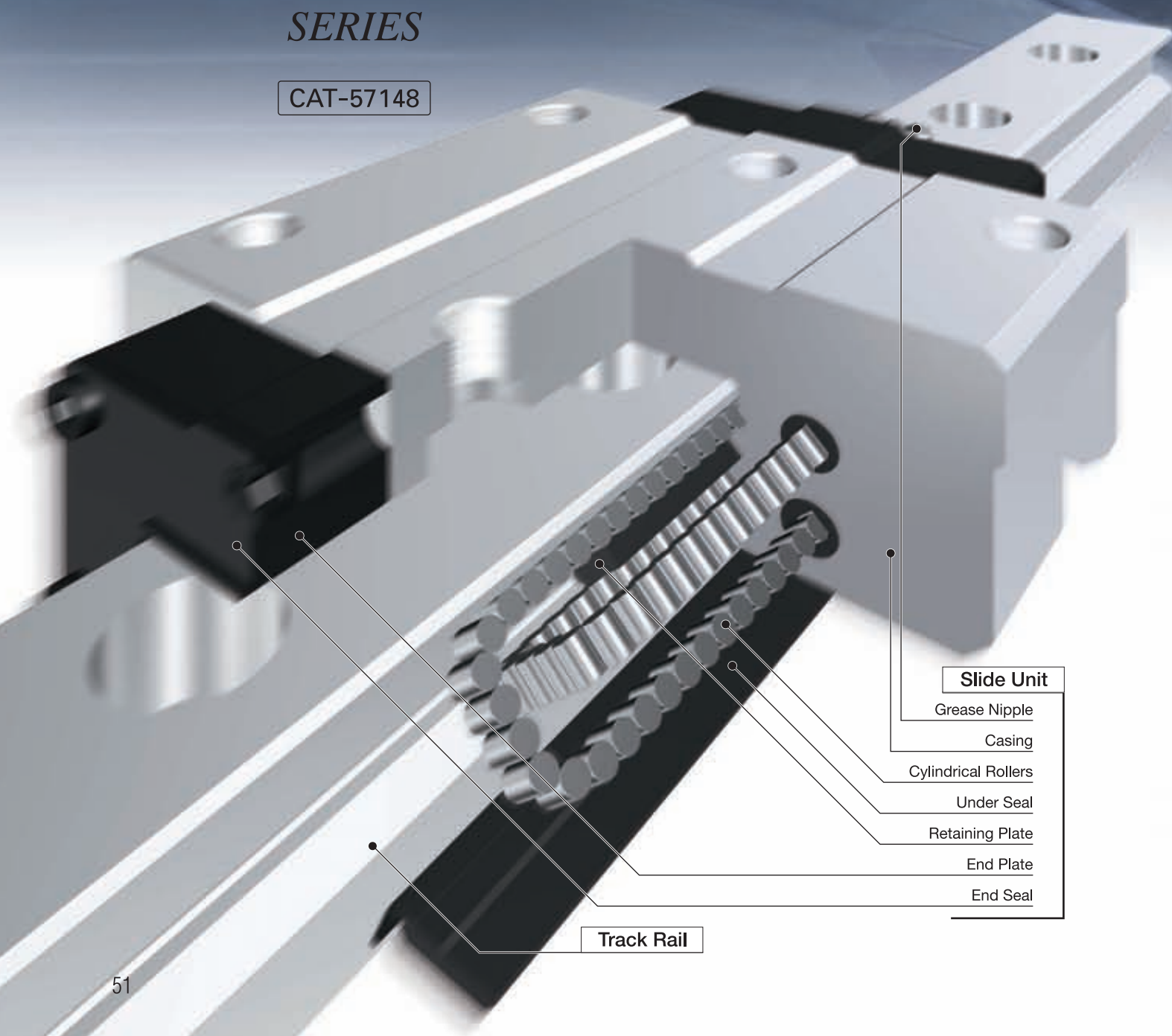
The Super X interchangeable series brings to you the "Six Roller Effects", whenever and wherever they are required to give higher potentials for your application.

High Load Capacity

Long Life and High Accuracy

Smooth and Quiet Motion

In high rigidity and high load capacity **IKO** Linear Roller Way Super X series, the smallest size **LRX 10** is newly introduced covering a full range of variation. Nine types are now available in various sizes with track rail width ranging from 10mm to 100mm. Interchangeable, stainless steel made and nineteen kinds of special options are also available.



Slide Unit

Grease Nipple

Casing

Cylindrical Rollers

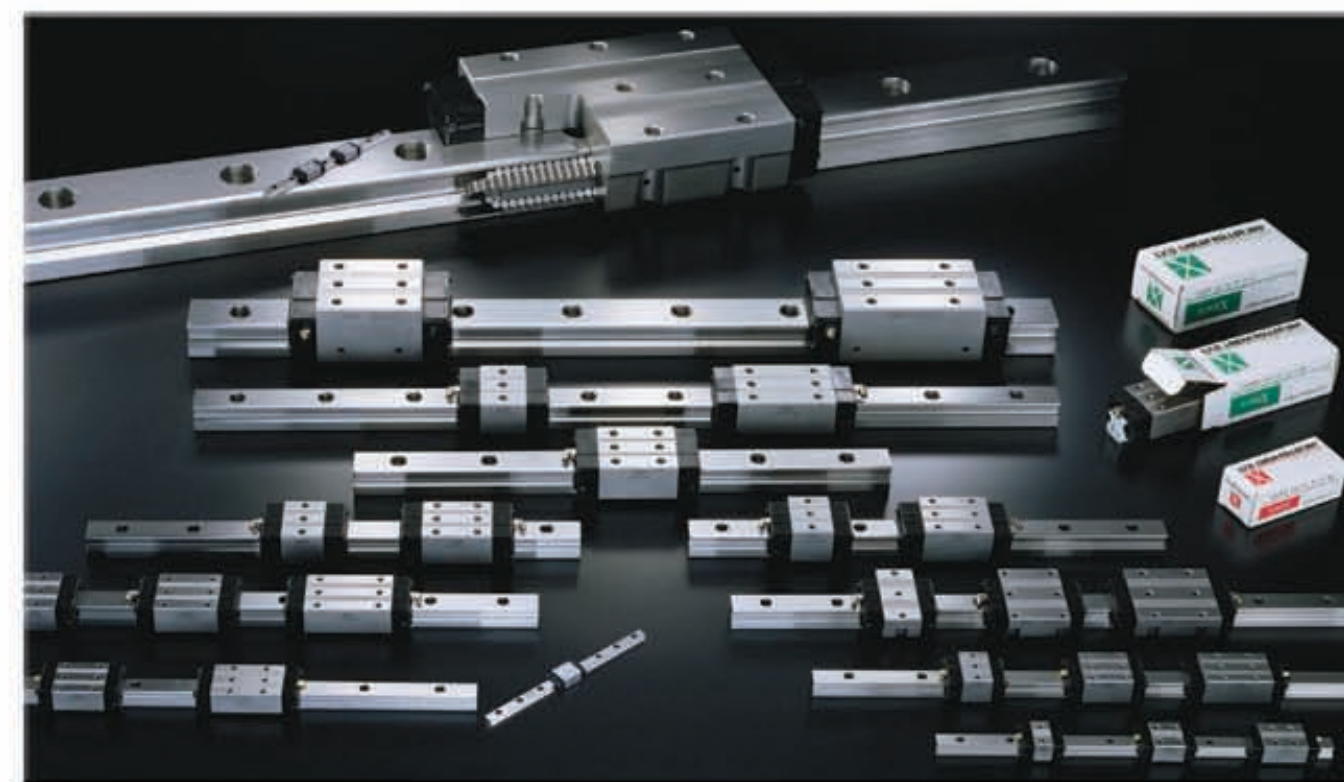
Under Seal

Retaining Plate

End Plate

End Seal

Track Rail



World Network of **IKO**



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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**

