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superior accuracy and rigidity.*

L R X

LINEAR ROLLER WAY SUPER X

U.S. PATENTED



CAT-57119C

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Advanced original design Four-row Roller Type

Compact block type LRXS is newly introduced.

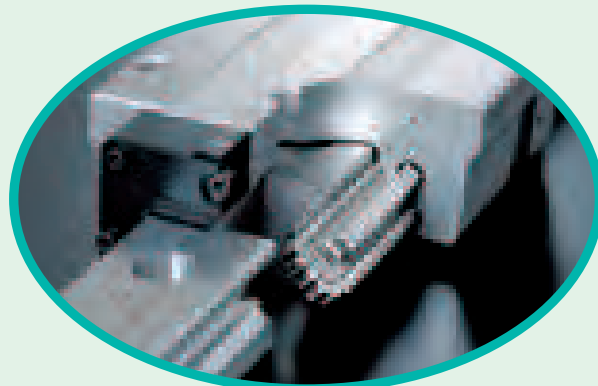
Dimensional interchangeable with a ball type

IKO
Linear Roller Way
SUPER X
SERIES

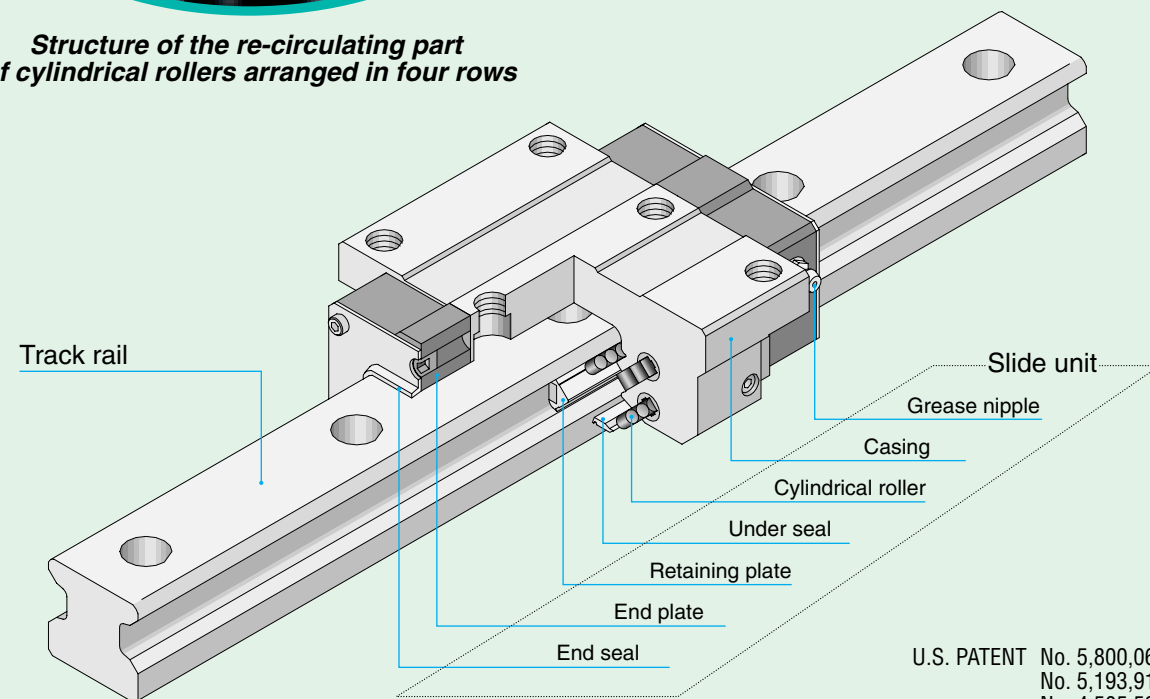


Advanced high-reliability design based on actual operation results

IKO Linear Roller Way Super X is a linear motion rolling guide, featuring high reliability, high rigidity, high accuracy, and smooth motion. Four rows of cylindrical rollers are incorporated in a highly rigid casing, and the cylindrical rollers in each row are arranged in parallel to each other in well-balanced form to take full advantage of the excellent characteristics of cylindrical rollers.

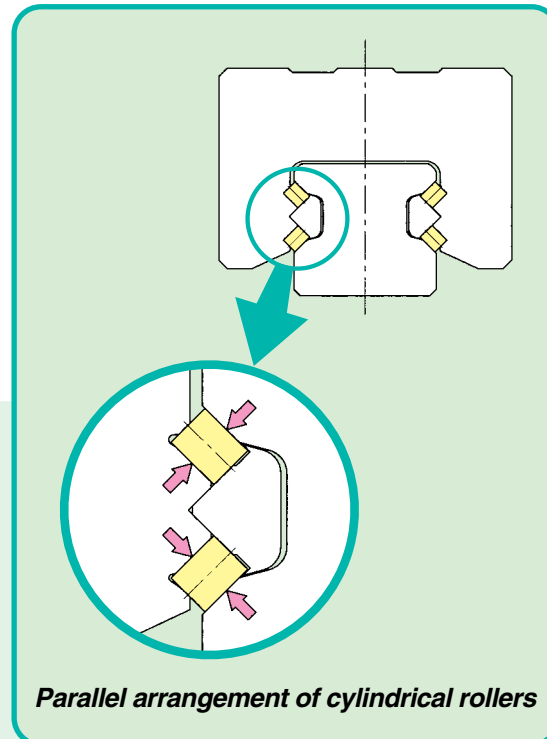


Structure of the re-circulating part of cylindrical rollers arranged in four rows



Structure of Linear Roller Way Super X

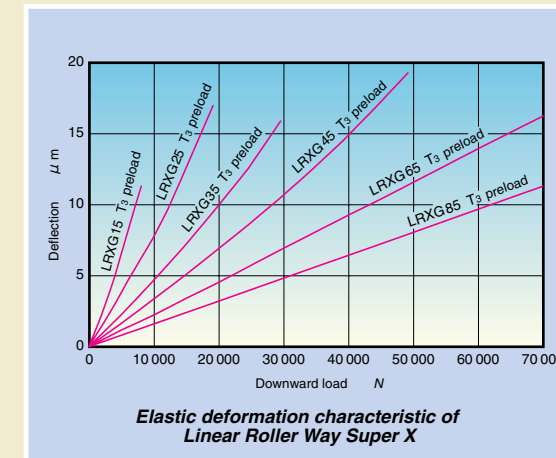
U.S. PATENT No. 5,800,064
No. 5,193,914
No. 4,505,522
No. 5,564,188
No. 5,374,126
No. 5,622,433
No. 6,176,617
No. 5,967,667
No. 5,464,288



Super high rigidity

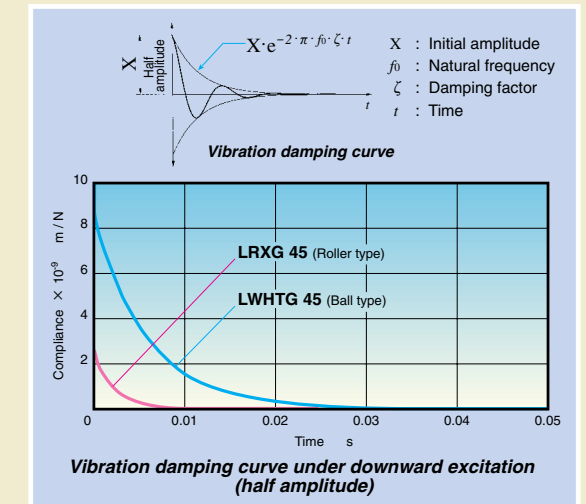
Rigidity of linear motion rolling guide has a large influence on the performance of machines or equipment in which they are assembled.

Very high rigidity of Super X is achieved owing to the excellent elastic deformation characteristics of cylindrical rollers which give smaller elastic deformation under load as compared with steel balls, and, in addition, to a large number of cylindrical rollers incorporated in the slide unit.



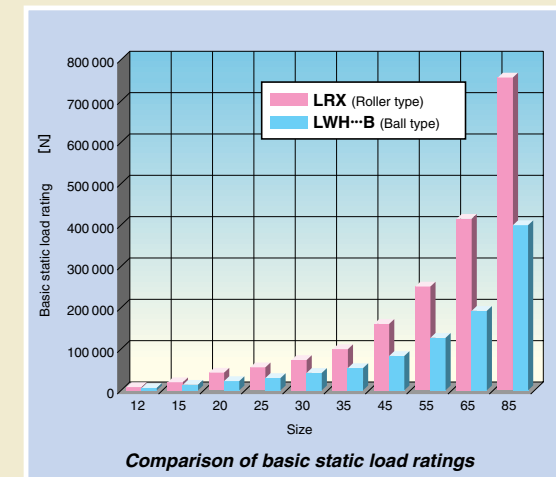
Excellent vibration characteristics

As compared with ball types of the same size, Super X has higher rigidity and gives smaller deformation under repeated fluctuating load. The natural frequency is high, and the vibration damping time is short.



Super high load capacity

Cylindrical rollers give a larger contact area compared to steel balls, so higher load capacity is attainable when cylindrical rollers are used. Incorporating a large number of cylindrical rollers, Super X has very high load ratings.

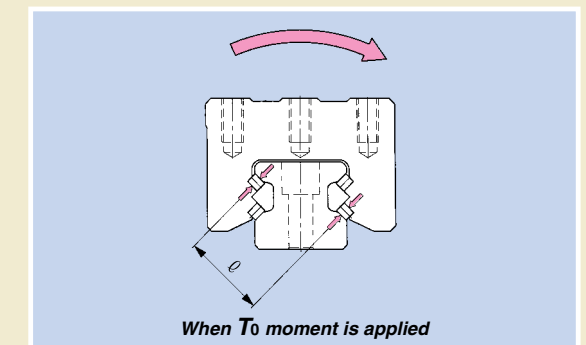


Low noise and high running performance

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 can be minimized.

Excellent load balance and moment load capacity

Cylindrical rollers are arranged in a well-balanced form so that they can uniformly withstand loads in all directions. In addition, rows are arranged in such a way that the moment arm distance ℓ between the loading points is large under T_0 moment. A high moment load capacity can be obtained.

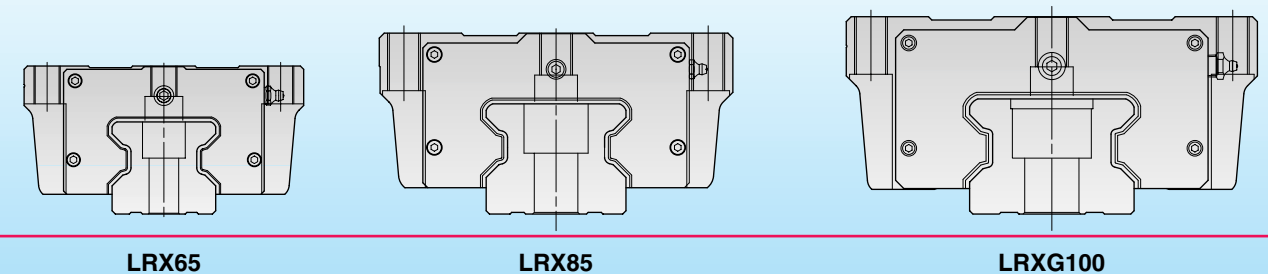
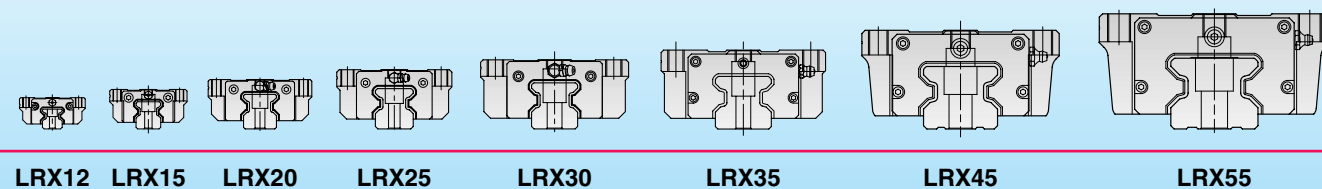


Accurate positioning with excellent friction characteristics

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

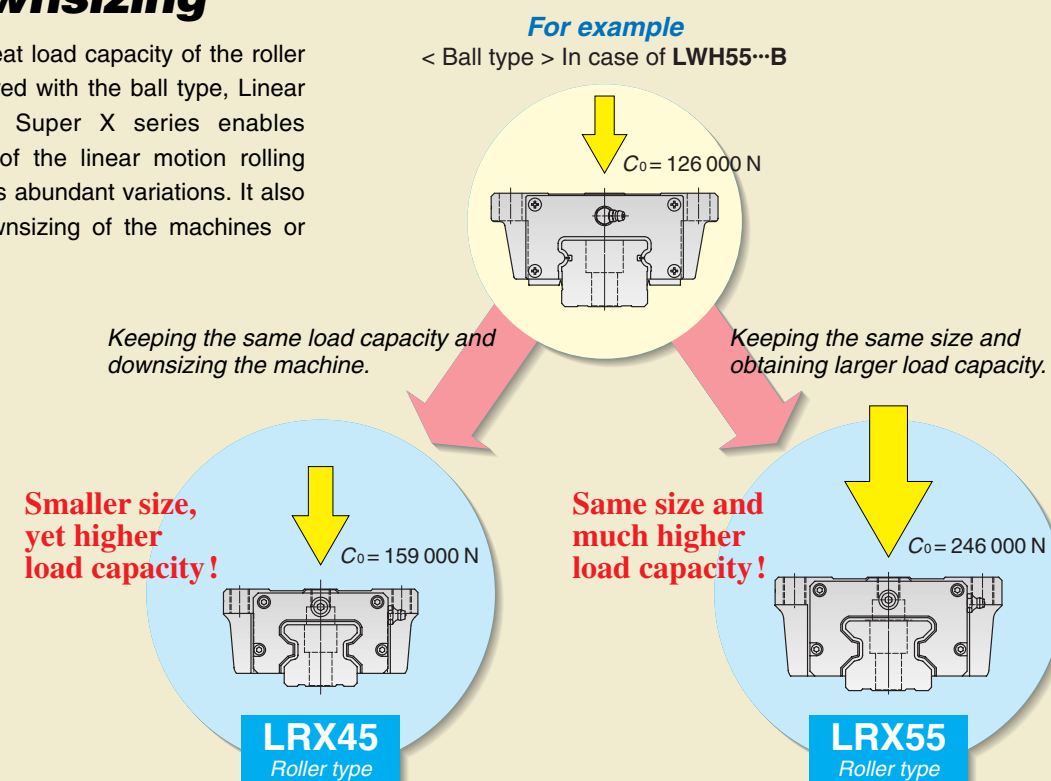
As compared with the slide guides and ball type linear motion rolling guides, Super X has superior frictional characteristics and gives small frictional resistance even under preload. Good response to micro feed and high positioning accuracy can thus be achieved.

Line up with track rail widths from 12mm to 100mm.
They can be applicable to various machines and devices of small machines to large machines.



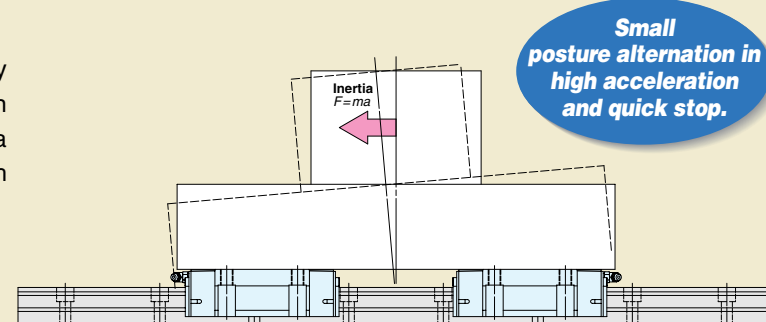
Downsizing

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

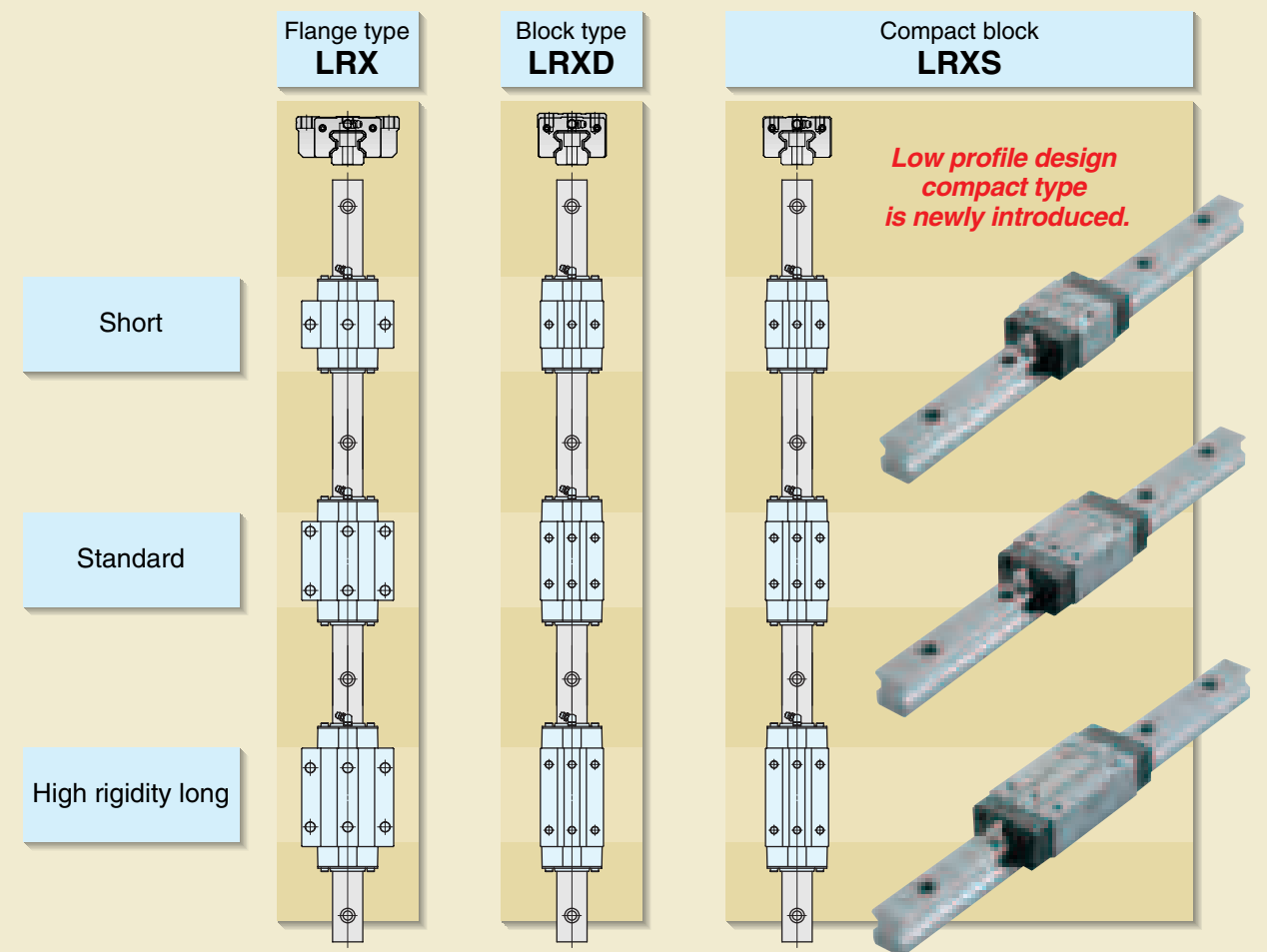


High tact

Quick positioning can be achieved by high rigidity and excellent vibration characteristics of roller type even with a large inertia caused by the latest high tact positioning devices.



Nine Types of Slide Units for Selection to meet Application Needs

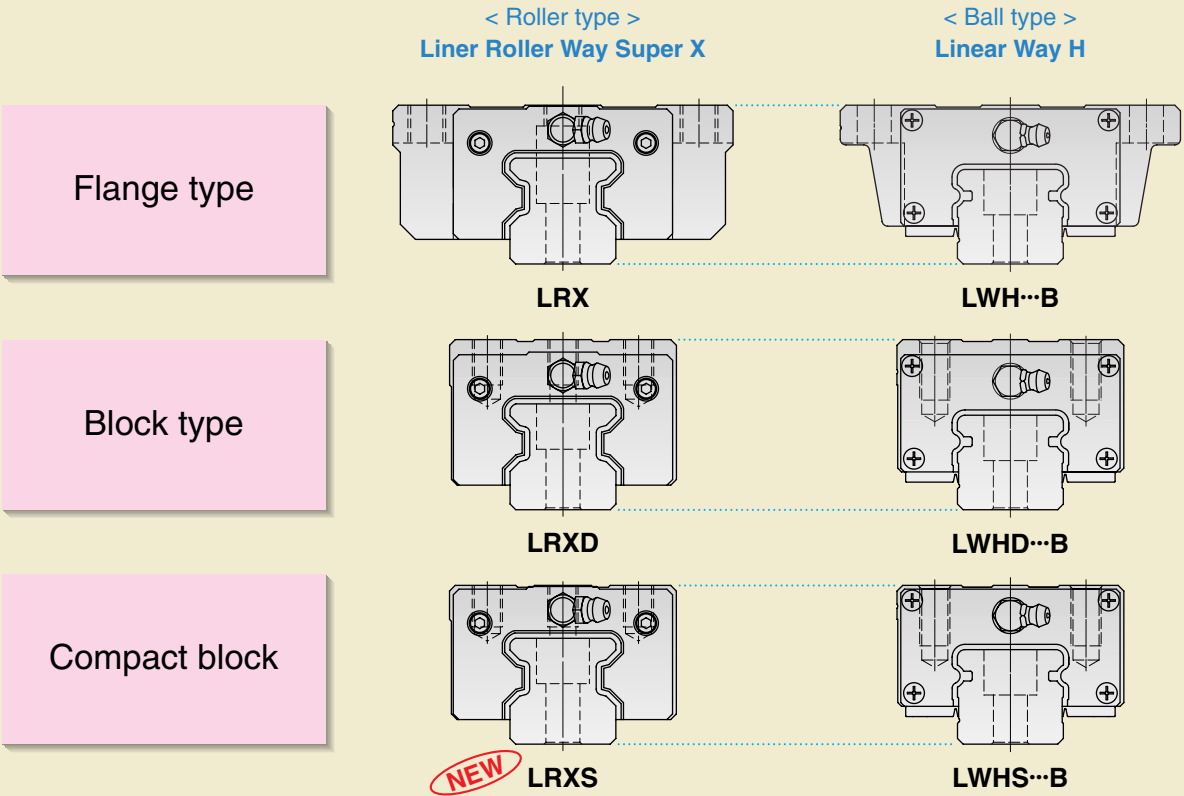


Standardized Stainless Steel Series

Linear Roller Way Super X includes stainless steel series in which stainless steel is used for steel component. Stainless series Linear Roller Way Super X are more resistant to corrosion than high carbon steel series, so these products are most suitable for applications where the use of oil or grease (including rust preventive oil) should be avoided or kept to minimum and for use in clean rooms.

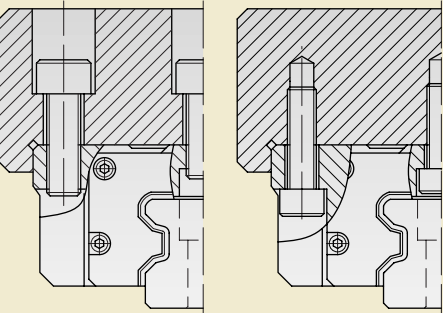
Dimensional interchangeable with a ball type

Liner Roller Way Super X is dimensional interchangeable with a ball type. Replacing by a roller type is possible without a design modification of the machine.



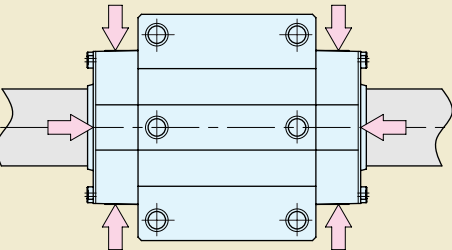
Mounting can be made from top or bottom ! (Flange type)

Flange type slide unit can be mounted from top or bottom.



Six oil supply holes provided as standard specification.

From size 35 to 100 models, oil/grease can be supplied from six positions. As the lubricating position can be selected according to the specification of the machine or equipment, design flexibility is enhanced.



Applicable size 35, 45, 55, 65, 85 and 100 models.

19 special specifications are prepared for Linear Roller Way Super X. They can be specified by the supplemental codes in the identification number. So the right item can be specified easily according to the applications when the customer orders.

< Identification number >

LRXC 35 C1 R640 T2 P S1 /F

Easy specify

	Supplemental code		Supplemental code
Butt-jointing track rails	/A	Rail cover plate	/PS
		Capillary plates	/Q
Opposite reference surfaces arrangement	/D		
Specified rail mounting hole positions	/E	Butt-jointing interchangeable track rail (for interchangeable specification)	/T
With caps for rail mounting holes	/F	With double end seals	/V
Changed pitch of slide unit middle mounting holes	/GE		
Half pitch of track rail mounting holes	/HP	Matched sets to be used as an assembled group	/W
Inspection sheet	/I		
With female threads for bellows (for single slide unit or track rail)	/J	Specified grease	/Y
		With scrapers (for assembled set)	/Z
Black chrome surface treatment	/L		
Fluorine black chrome surface treatment	/LF		
Without track rail mounting bolts	/MN		
No end seal	/N		

If the other specifications are required, please consult **IK□**.

Easy to use 4 Interchangeable Specification, Three Features of Interchangeability

The track rails and the slide units of interchangeable specification Linear Roller Way Super X can be handled separately and can be assembled to make a set as required. Interchangeability of incomparable high level has been achieved through rigorous dimensional control of the slide units and the track rails on the basis of the original advanced manufacturing technology.

At a time like this!

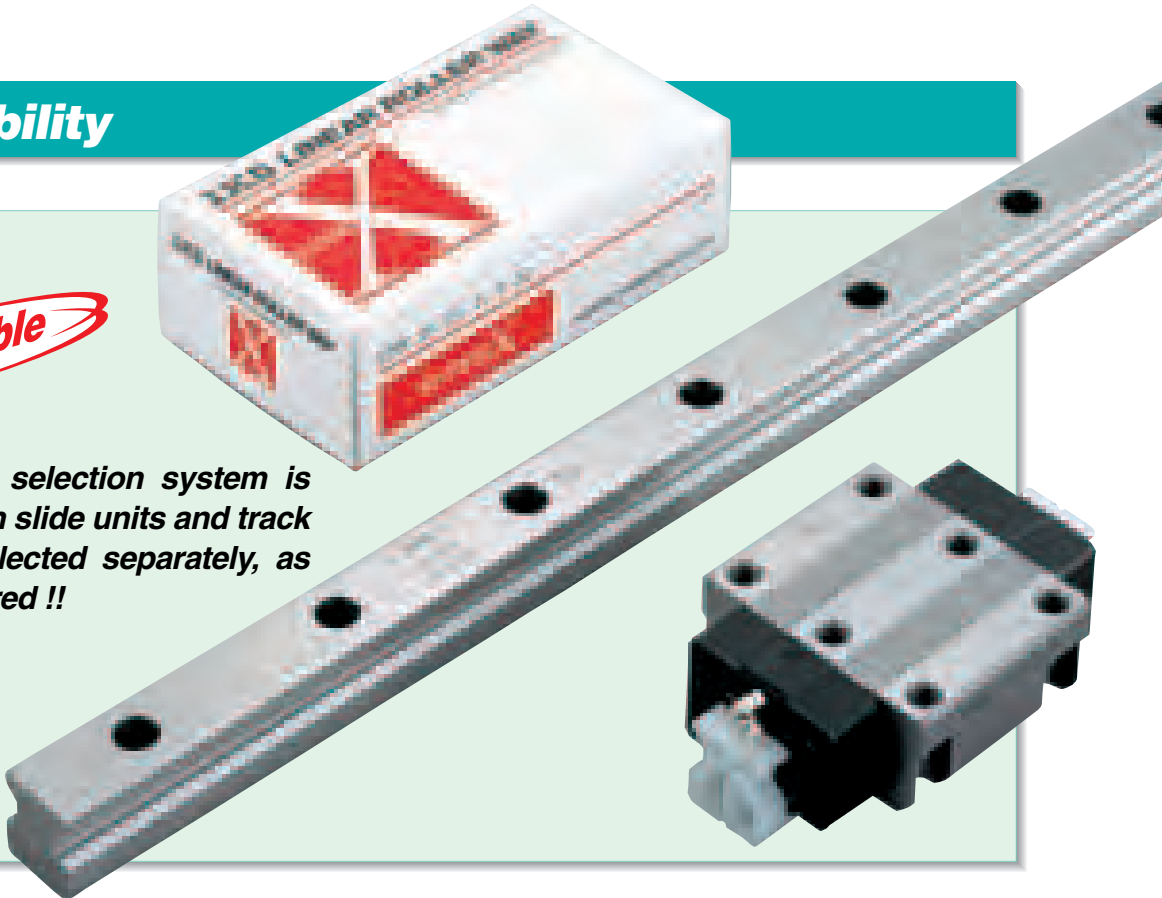
- Want to improve the rigidity and life of the machine
- Want to improve the accuracy of the machine
- Want to replace slide units right away
- Number of slide units insufficient
- Want to replace track rails right away
- Length of track rails not long enough
- Want to stock spare slide units for emergency

Interchangeable specification can be useful.

- Urgent design change can be made.
- High-accuracy and preload can be selected freely.
- Slide units and track rails can be handled separately and combined freely.
- Slide units and track rails can be stocked individually requiring only small stock area.

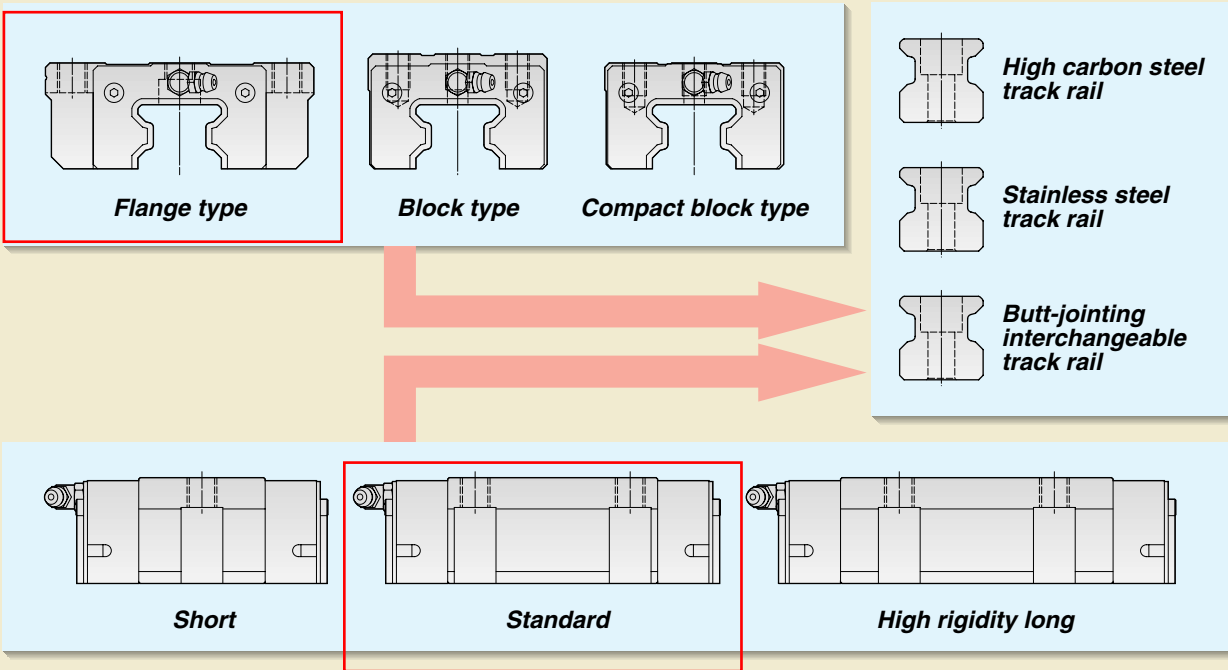
Interchangeable

A new product selection system is offered, in which slide units and track rails can be selected separately, as and when required !!



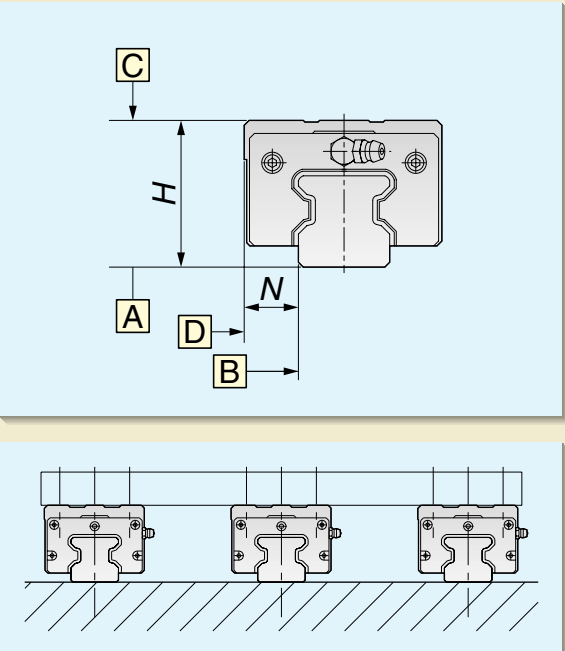
Interchangeable slide unit

Various types of slide units with different sectional shapes and lengths are prepared. All of these slide units can be freely mounted on the same track rail. It is also possible to combine a slide unit and a track rail of different materials, for example, a high carbon steel slide unit and a stainless steel track rail can be combined. In addition, butt-jointing interchangeable track rails (supplemental code /T) can be butt-jointed for use.



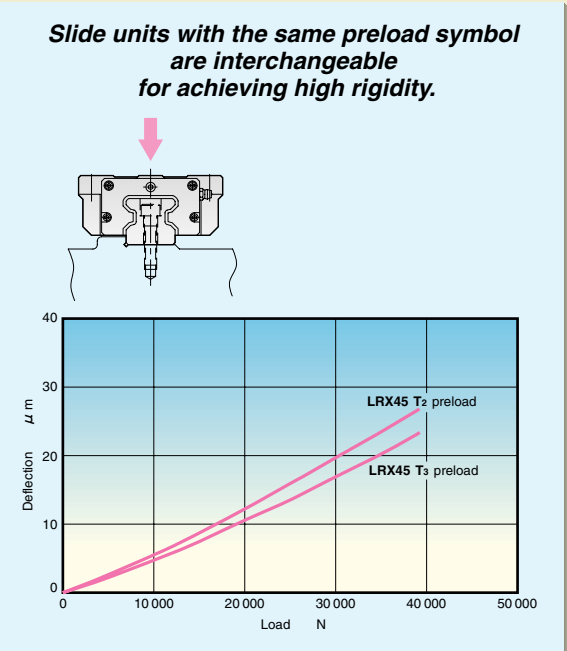
Interchangeable with high accuracy

Two accuracy classes, High and Precision are prepared for the interchangeable specification products so that these products can be used for applications requiring high running accuracy. Height variation among multiple sets is also controlled at a high accuracy level, ensuring that these products can be used for parallel track rail arrangement.



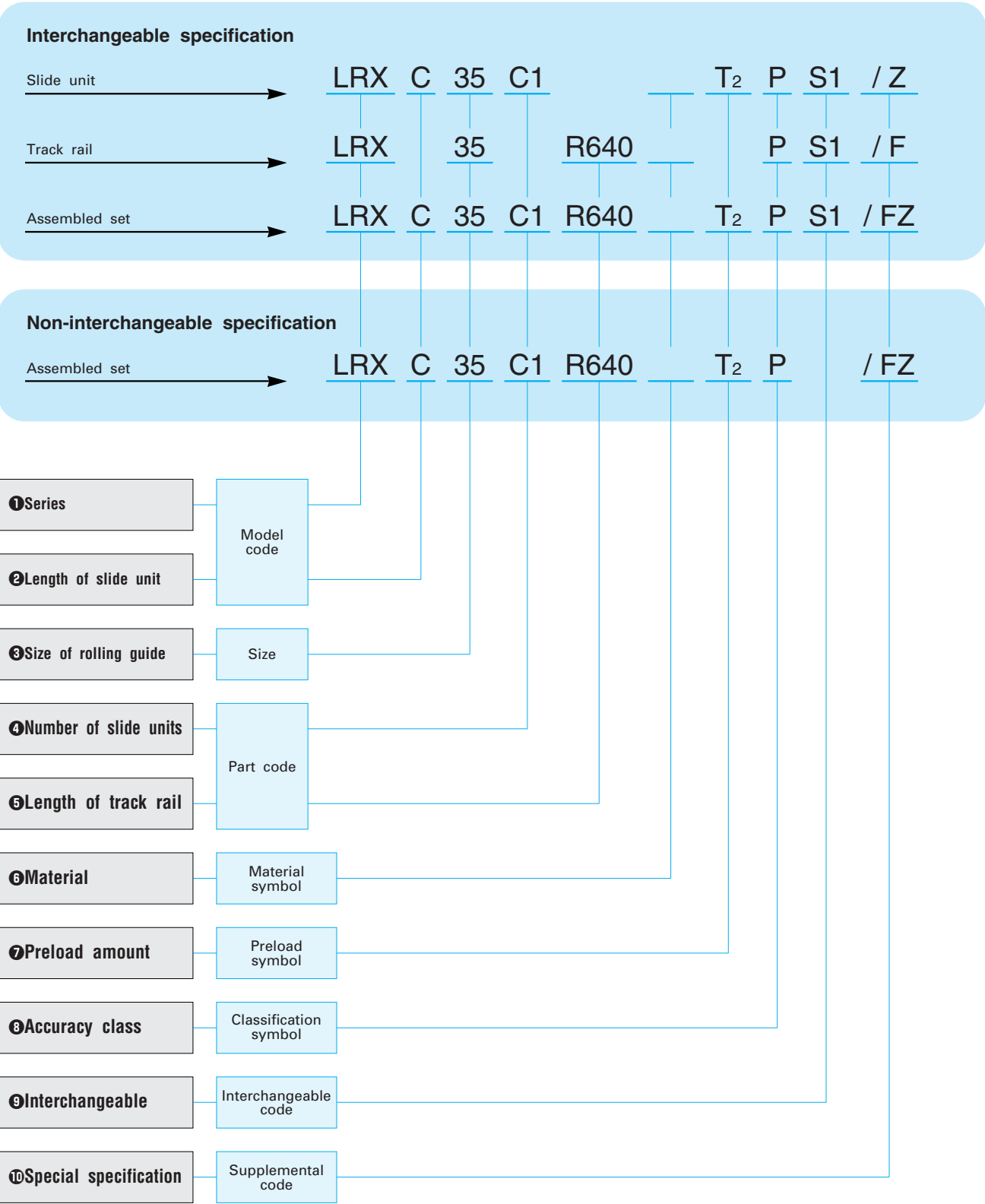
Interchangeable with preload

High accuracy dimensional control owing to a simple structure has made it possible to realize the interchangeability among preloaded slide units. These products can be used for applications requiring one step higher rigidity.



Identification number

The specification of Linear Roller Way Super X is indicated by the identification number, consisting of a model code, a size, a part code, a material symbol, a preload symbol, a classification symbol, an interchangeable code, and any supplemental codes.



①Series	Flange type mounted from the upper/lower side : LRX ⁽¹⁾ Block type mounted from the upper side : LRXD Compact block type mounted from the upper side : LRXS Note ⁽¹⁾ : The size 20 models can be mounted from the upper side only. For mounting from the lower side, LRXH can be used.	For available models and sizes, see Table 1. For the model code of a single track rail of interchangeable specification, indicate LRX.
②Length of slide unit	Short : C Standard : No symbol High rigidity long : G	For available models and sizes, see Table 1.
③Size of rolling guide	12, 15, 20, 25, 30, 35, 45, 55, 65, 85, 100	For available models and sizes, see Table 1.

Table 1 Models and sizes of Linear Roller Way Super X

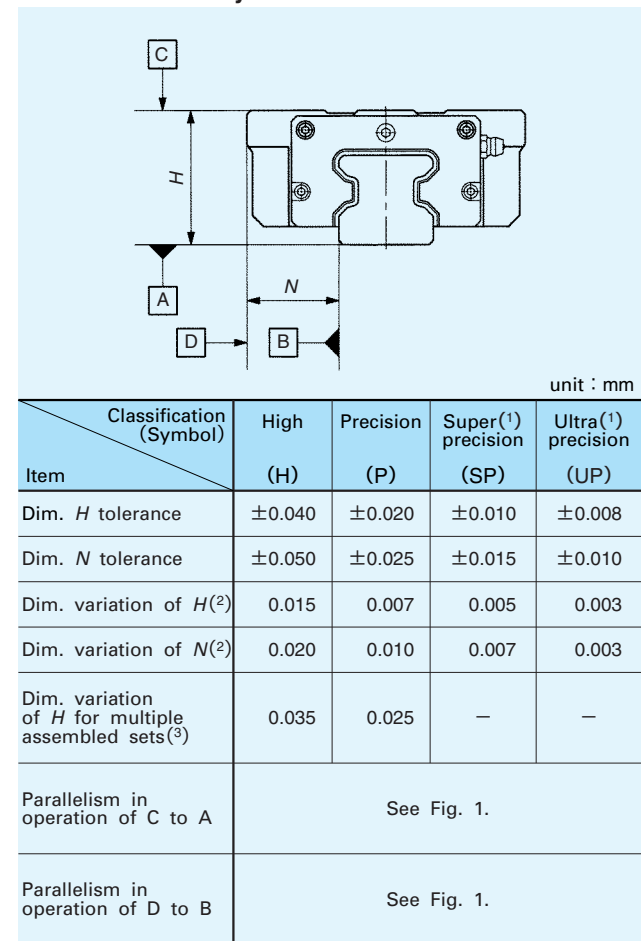
Material	Shape	Model	Size										
			12	15	20	25	30	35	45	55	65	85	100
High carbon steel made	Flange type	LRXC	○	○	○	○	○	○	○	○	○	—	—
		LRX	○	○	○	○	○	○	○	○	○	○ ⁽¹⁾	—
	Block type	LRXG	○	○	○	○	○	○	○	○	○	○ ⁽¹⁾	○ ⁽¹⁾
		LRXDC	○	○	○	○	○	○	○	○	○	—	—
		LRXD	○	○	○	○	○	○	○	○	○	—	—
		LRXDG	○	○	○	○	○	○	○	○	○	—	—
	Compact block	LRXSC	—	○	○	○	○	—	—	—	—	—	—
		LRXS	—	○	○	○	○	—	—	—	—	—	—
Stainless steel made	Block type	LRXSG	—	○	○	○	○	—	—	—	—	—	—
		LRXDC…SL	○	○	○	○	○	—	—	—	—	—	—
		LRXD …SL	○	○	○	○	○	—	—	—	—	—	—
		LRXDG…SL	○	○	○	○	○	—	—	—	—	—	—

Note⁽¹⁾ : The interchangeable specification is not available.

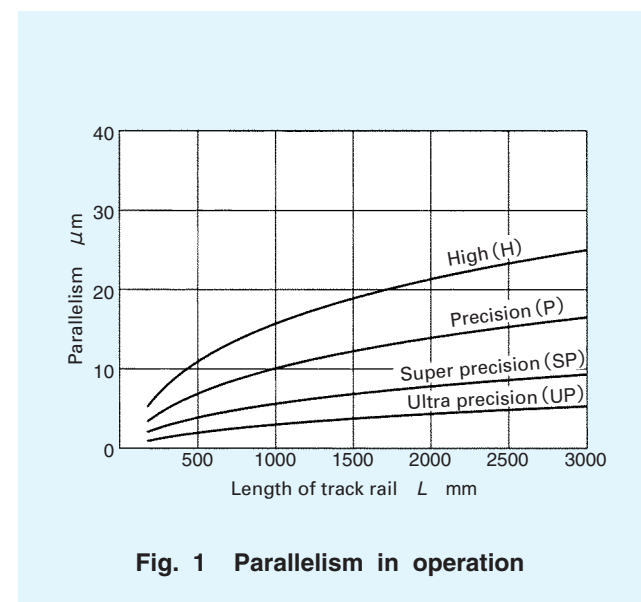
④Number of slide units	Assembled set : C○ Slide unit : C1	For an assembled set, indicate the number of slide units assembled on one track rail. For a slide unit, only “C1” can be indicated.
⑤Length of track rail	Assembled set : R○ Track rail : R○	Indicate the length of track rail in mm. For standard and maximum lengths, see Table 17 on page 27.
⑥Material	High carbon steel made : No symbol Stainless steel made : SL	For available models and sizes, see Table 1.
⑦Preload amount	Standard : No symbol Light preload : T ₁ Medium preload : T ₂ Heavy preload : T ₃	Specify this item for an assembled set or a slide unit. Note that, for the slide unit of interchangeable specification, the preload amount that can be specified differs depending on the size. For details of preload amount, see Table 3 on page 13.
⑧Accuracy class	High : H Precision : P Super precision : SP Ultra precision : UP	The super precision class (SP) and the ultra precision class (UP) apply to the non-interchangeable specification products. In case of interchangeable specification products, assemble track rails and slide units of the same accuracy class. For details of accuracy, see Table 2 on page 13.
⑨Interchangeable code	Select group S1 : S1 Select group S2 : S2	Specify this item for interchangeable specification products. Assemble track rails and slide units with the same interchangeable code. Performance and accuracy of “S1” group and “S2” group are the same.
⑩Special specification	/A, /D, /E, /F, /GE, /HP, /I, /JO, /LO, /LFO, /MN, /N, /PS, /Q, /T, /VO, /WO, /YO, /ZO	For applicable special specifications, see Table 5 on page 14.

Accuracy of Linear Roller Way Super X is shown in Table 2.

Table 2 Accuracy



Note⁽¹⁾ : Applicable to the non-interchangeable specification products.
 (2) : Variation between slide units mounted on the same track rail
 (3) : Applicable to the interchangeable specification products.



Preload

The average amount of preload for Linear Roller Way Super X is shown in Table 3. For slide units of interchangeable specification, the type of preload that can be specified differs depending on the size. The applicable preload types for each size are shown in Table 4. When both rigidity and vibration characteristics are important, the standard preload amount is 1/2 of the applied load.

Table 3 Preload amount

Item Preload type	Symbol	Preload amount (N)	Application
Standard	(No symbol)	0(1)	• Smooth and precise motion
Light preload	T ₁	0.02C ₀	• Minimum vibration • Load is evenly balanced. • Smooth and precise motion
Medium preload	T ₂	0.05C ₀	• Medium vibration • Medium overhung load
Heavy preload	T ₃	0.08C ₀	• Vibration and/or shocks • Large overhung load • Heavy cutting

Note⁽¹⁾ : Zero or minimal amount of preload
Remark : C_0 means the basic static load rating.

Table 4 Preload type

Preload type		Standard (No symbol)	Light preload (T ₁)	Medium preload (T ₂)	Heavy preload (T ₃)
Model number					
Interchangeable specification	LRX 12	○	○	—	—
	LRX 15	○	○	○	—
	LRX 20	○	○	○	—
	LRX 25	—	○	○	—
	LRX 30	—	○	○	—
	LRX 35	—	—	○	○
	LRX 45	—	—	○	○
	LRX 55	—	—	○	○
	LRX 65	—	—	○	○
Non-interchangeable specification		○	○	○	○

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

Special Specifications

Linear Roller Way Super X of the special specifications shown in Table 5 are available.

When a special specification is required, add the applicable supplemental code to the end of the identification number.

When a combination of several special specifications is required (See Table 6.1 & 6.2), arrange their supplemental codes in alphabetical order.

Table 5 Special specifications

Special specification	Supplemental code	Interchangeable specification			Non-interchangeable specification
		Slide unit	Track rail	Assembled set	
Butt-jointing track rails	/A	—	—	—	○
Opposite reference surfaces arrangement	/D	—	—	○	○
Specified rail mounting hole positions	/E	—	○	○	○
Caps for rail mounting holes	/F	—	○	○	○
Changed pitch of slide unit middle mounting holes	/GE	○ ⁽¹⁾ ⁽²⁾	—	○ ⁽¹⁾ ⁽²⁾	○ ⁽¹⁾ ⁽²⁾ ⁽³⁾
Half pitch of track rail mounting holes	/HP	—	○	○	○ ⁽⁴⁾
Inspection sheet	/I	—	—	—	○
Female threads for bellows	/JO	○ ⁽²⁾ ⁽⁵⁾	○ ⁽²⁾ ⁽⁵⁾	○ ⁽²⁾ ⁽⁵⁾	○ ⁽²⁾ ⁽⁴⁾
Black chrome surface treatment	/LO	—	—	○	○ ⁽³⁾ ⁽⁴⁾
Fluorine black chrome surface treatment	/LFO	—	—	○	○ ⁽³⁾ ⁽⁴⁾
Without track rail mounting bolts	/MN	—	○	○	○
No end seal	/N	○ ⁽⁶⁾	—	○ ⁽⁶⁾	○ ⁽⁶⁾
Rail cover plate for track rail	/PS	—	—	—	○ ⁽⁷⁾
Capillary plates	/Q	○	—	○	○ ⁽⁴⁾
Butt-jointing interchangeable track rail	/T	—	○	○	—
Double end seals	/VO	○	—	○	○
Matched sets to be used as an assembled group	/WO	—	—	—	○ ⁽³⁾ ⁽⁴⁾
Specified grease	/YO	—	—	○	○
Scrapers	/ZO	○	—	○	○

Note⁽¹⁾ : Applicable to LRX, LRXG, LRXH20 and LRXHG20.
⁽²⁾ : Not applicable to size 12 models.
⁽³⁾ : Not applicable to size 85 models.
⁽⁴⁾ : Not applicable to size 100 models.

(5) : Not applicable to stainless steel series.
(6) : Not applicable to size 55, 65, 85 and 100 models.
(7) : Applicable to size 35, 45 and 55 models.

Table 6.1 Combination of supplemental codes
(Interchangeable specification)

E	-																			
F	○	○																		
GE	○	○	○																	
HP	○	-	○	○																
J	○	○	○	○	-															
L	○	○	○	○	○	○														
LF	○	○	○	○	○	○	-													
MN	○	○	○	○	○	○	○	○												
N	○	○	-	○	○	-	○	○	○											
Q				○	○	○	-	○	○	○	○									
T	○	○	○	○	○	○	-	○	○	○	○	○								
V	○	○	○	○	○	○	●	○	○	○	-	-	○							
Y	○	○	○				○	○	○	○	○	-	○	○						
Z	○	○	○	○	○	○	●	○	○	○	-	-	○	○	○					
	D	E	F	GE	HP	J	L	LF	MN	N	Q	T	V	Y	Z					

Remark 1: In the table, the mark ○ indicates that this combination can be made.

2: For combinations marked ●, consult [IKO](#) for further information.

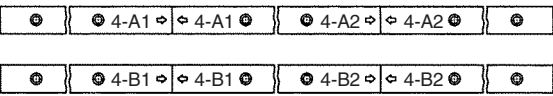
Table 6.2 Combination of supplemental codes
(Non-interchangeable specification)

[illegible]

Remark : In the table, the mark \bigcirc indicates that this combination can be made.

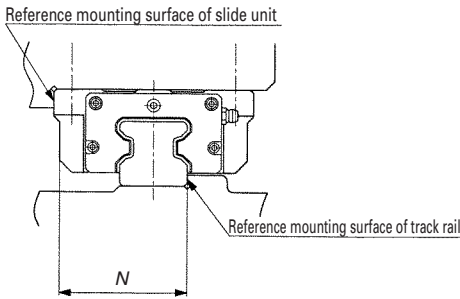
1N=0.102kgf=0.2248lbs.
1mm=0.03937inch

Butt-jointing track rails /A



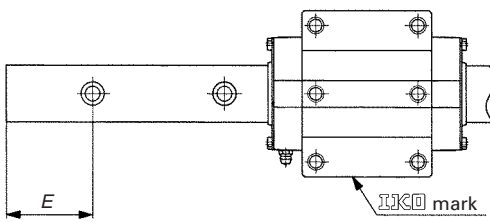
When the required length of non-interchangeable specification track rail exceeds the maximum length indicated in Table 16, two or more track rails can be used by butt-jointing them in the direction of linear motion. For the length and the number of butt-jointing track rails, consult for further information.

Opposite reference surfaces arrangement /D



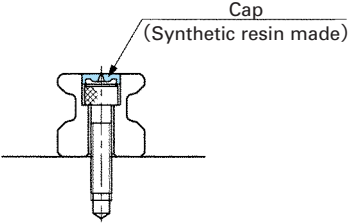
The reference mounting surface of track rail is made opposite to the standard side. The accuracy of dimension N including parallelism in operation is the same as that of standard specification.

Specified rail mounting hole positions /E



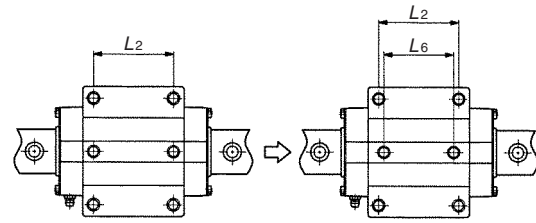
The mounting hole positions of track rail can be specified by specifying dimension E at the left end, which is the distance from the mounting hole nearest to the left end of the track rail to the left end face of the track rail in sight of mark on the slide unit. When ordering, add the dimension (in mm) after “/E”. Dimension E can be specified in a limited range. Consult for further information.

With caps for rail mounting holes /F



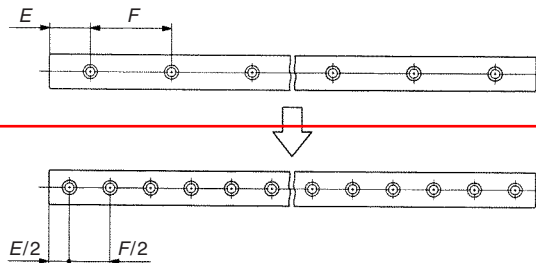
Specially prepared caps for track rail mounting holes are appended. These caps cover the track rail mounting holes to improve the sealing performance in the linear motion direction. Aluminum caps are also available. Consult for further information.

Changed pitch of slide unit middle mounting holes /GE



The pitch length between the two middle mounting holes of slide unit is changed. For this dimension, see Table 7.

Half pitch of track rail mounting holes /HP

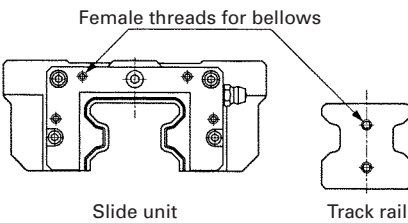


The pitch of the track rail mounting holes is changed to 1/2 of the dimension F of standard type. Track rail mounting bolts are appended in the same number as that of mounting holes.

Inspection sheet /I

The inspection sheet recording dimensions H and N , dimensional variations of H and N , and parallelism in operation of the slide unit is attached for each set.

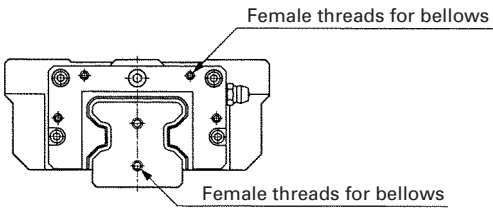
With female threads for bellows (for single slide unit or track rail) /J /JR /JL



Female threads for mounting bellows are provided on the interchangeable slide unit or the interchangeable track rail. For details of related dimensions, see Table 9.

- 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 bellows (for 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 9.

- 1/J Female threads are provided at both ends of the track rail, and at the slide unit ends which are the closest to the track rail ends. (In case only one slide unit is assembled, female threads are provided at both ends.)

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

Black chrome surface treatment /LC /LR /LCR

A black permeable chrome film is formed to improve corrosion resistance. The surface is then coated with acrylic resin.

- 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

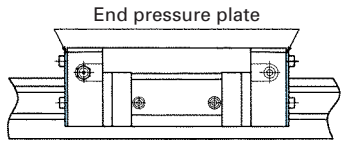
After forming a black permeable chrome film, the surface is coated with fluorine resin for further improvement in corrosion resistance. This treatment is also effective in preventing the adhesion of foreign substances on the surface.

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

Without track rail mounting bolts /MN

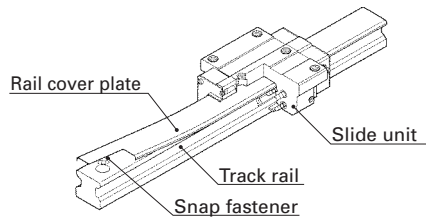
Bolts for track rail mounting are not appended.

No end seal /N



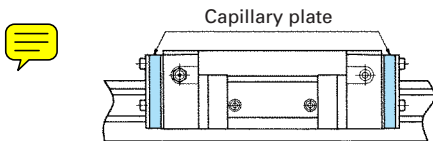
End seals at both ends of slide unit are replaced by end pressure plates (not in contact with the track rail) to reduce frictional resistance. The under seals are not assembled.
This specification is not effective for dust protection.

Rail cover plate /PS



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

Capillary plates /Q



The capillary plate is assembled inside the end seal of the slide unit. It is impregnated with lubricant so that re-lubrication interval can be made longer. For the total length of the slide unit with capillary plates, see Table 8.

Butt-jointing interchangeable track rail (for interchangeable specification) /T

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

With double end seals (for single slide unit)


/V /VR /VL

Double end seals are provided on the interchangeable slide unit for more effective dust protection. For the total length of the side unit with double end seals, see Table 8.


①/V

Double end seals are provided at both ends of the slide unit.

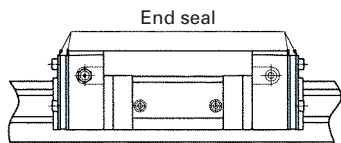
②/VR

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 specification for more effective dust protection. For the total length of the slide unit with double end seals, see Table 8.

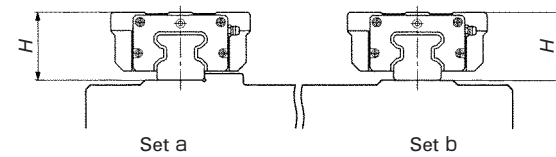
①/V

Double end seals are provided at the slide unit ends which are the closest to the ends of the track rail. (In case only one slide unit is assembled, double end seals are provided at both ends.)

②/VV

Double end seals are provided at all ends of all slide units. (Applicable, when the number of slide units is two or more. In case only one slide unit is assembled, indicate "V".)

Matched sets to be used as an assembled group /W



For two or more sets of Linear Roller Way Super X used on the same plane, the dimensional variation of *H* of Linear Roller Way Super X is kept within the specified range.


The dimensional variation of dimension *H* in matched sets is the same as that of a single set.

When ordering, indicate the number of sets, which is always represented by the number of track rails, after "W".

Specified grease /YCG /YBR /YNG

The type of pre-packed grease in the slide unit can be changed by a supplemental code.

①/YCG

 Low Dust Generation Grease for Clean Environment CG2 is pre-packed.

②/YBR

MOLYCOTE BR2 Plus Grease (Dow Corning) is pre-packed.

③/YNG

No grease is pre-packed.

With scrapers (for single slide unit) /Z /ZR /ZL


Metal scrapers are provided on the slide unit of interchangeable specification.

The scraper (non-contact type) is used to effectively remove large particles of dust or foreign matter adhering to the track rail. For the total length of the slide unit with scrapers, see Table 8.


①/Z

Scrapers are provided at both ends of the slide unit.

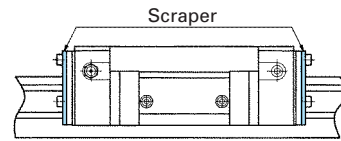
②/ZR

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 specification.

The scraper (non-contact type) is used to effectively remove large particles of dust or foreign matter adhering to the track rail. For the total length of the slide unit with scrapers, see Table 8.

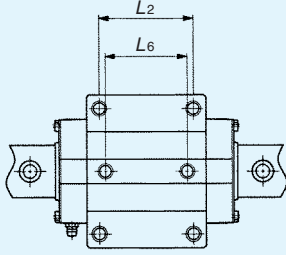
①/Z

Scrapers are provided at the slide unit ends which are the closest to the ends of the track rail. (In case only one slide unit is assembled, scrapers are provided at both ends.)

②/ZZ

Scrapers are provided at all ends of all slide units. (Applicable, when the number of slide units is two or more. In case only one slide unit is assembled, indicate "Z".)

Table 7 Pitch of slide unit middle mounting holes (Supplemental code /GE)

Model number		
	<i>L</i> ₂	<i>L</i> ₆
LRX 15, LRXG 15	30	26
LRX 20, LRXG 20 ⁽¹⁾	40	35
LRX 25, LRXG 25	45	40
LRX 30, LRXG 30	52	44
LRX 35, LRXG 35	62	52
LRX 45, LRXG 45	80	60
LRX 55, LRXG 55	95	70
LRX 65, LRXG 65	110	82
LRXG 100	200	150

Note⁽¹⁾ : Also applicable to LRXH 20 and LRXHG 20.

Table 8 Slide unit with capillary plates (Supplemental code /Q), with double end seals (Supplemental code /V), and with scrapers (Supplemental code /Z)

Size 12, 15, 20, 25, 30

/Q

Capillary plate

(L4)

(L1)

Capillary plate

/V

End seal

(L4)

(L1)

End seal

/Z

Scraper

(L4)

(L1)

Scraper

Size 35, 45, 55, 65, 85, 100

/Q

Capillary plate

(L1)

Capillary plate

/V

End seal

(L1)

End seal

/Z

Scraper

(L1)

Scraper

unit : mm

Model number	With capillary plates (/Q)		With double end seals ⁽¹⁾ (/V)		With scrapers ⁽¹⁾ (/Z)		Model number	With capillary plates (/Q)	With double end seals ⁽¹⁾ (/V)	With scrapers ⁽¹⁾ (/Z)
	L1	L4	L1	L4	L1	L4		L1	L1	L1
LRXC 12	47	50	44	46	45	48	LRXC 35	103	101	103
LRX 12	57	60	54	57	56	58	LRX 35	135	133	135
LRXG 12	68	71	65	67	66	69	LRXG 35	163	161	163
LRXC 15	63	64	58	60	60	61	LRXC 45	127	127	129
LRX 15	79	80	74	76	76	77	LRX 45	167	167	169
LRXG 15	95	96	90	92	92	93	LRXG 45	207	207	209
LRXC 20	76	85	73	83	75	84	LRXC 55	149	149	151
LRX 20	96	105	93	103	95	104	LRX 55	197	197	199
LRXG 20	116	125	113	123	115	124	LRXG 55	251	251	253
LRXC 25	85	94	83	92	85	93	LRXC 65	198	193	194
LRX 25	109	118	107	116	109	117	LRX 65	262	257	258
LRXG 25	124	133	122	131	124	132	LRXG 65	326	321	322
LRXC 30	96	108	93	106	96	107	LRX 85	341	338	339
LRX 30	124	136	121	134	124	135	LRXG 85	413	410	411
LRXG 30	145	157	142	155	145	156	LRXG 100	—	376	378

Note⁽¹⁾ : The values for a slide unit with double end seals or scrapers at both ends are shown.
Remark : The above table shows representative model numbers but is applicable to all models of the same size.

Table 9.1 Female threads for bellows (Supplemental code /J)

Size 15, 20, 25, 30

The image contains three technical drawings. The leftmost drawing is a side view of the slide unit showing dimensions b_1 , b_2 , $2-M_1 \times \text{depth}$, H_3 , a_1 , a_4 , a_3 , D , B , and $2-M_2 \times \text{depth}$. The middle drawing is a top view of the slide unit showing the same dimensions. The rightmost drawing is a side view of the track rail assembly showing dimensions (L_1) , 6 , a_5 , and a grease nipple labeled (1) (A-M3).

Unit : mm

Model number	Slide unit						Track rail							
	a_1	b_1	b_2	$M_1 \times \text{depth}$	$L_1^{(3)}$	H_3	a_3	a_4	$M_2 \times \text{depth}$					
LRXC 15	10.5	10.5	26	M3×6	67	1	4	8	M3×6					
LRX 15					83									
LRXG 15					99									
LRXDC 15	14.5	4			67	5								
LRXD 15					83									
LRXDG 15					99									
LRXSC 15	10.5	4			67	1								
LRXS 15					83									
LRXSG 15					99									
LRXC 20 ⁽²⁾	12	13.5	36	M3×6	81	2	5	10	M4×8					
LRX 20 ⁽²⁾					101									
LRXG 20 ⁽²⁾					121									
LRXDC 20	16	4			81	6								
LRXD 20					101									
LRXDG 20					121									
LRXSC 20	12	4			81	2								
LRXS 20					101									
LRXSG 20					121									
LRXC 25	15.5	15	40	M3×6	89	4	6	12	M4×8					
LRX 25					113									
LRXG 25					128									
LRXDC 25	19.5	4			89	8								
LRXD 25					113									
LRXDG 25					128									
LRXSC 25	15.5	4			89	4								
LRXS 25					113									
LRXSG 25					128									
LRXC 30	18.5	20	50	M3×6	100	4.8	7	14	M4×8					
LRX 30					128									
LRXG 30					149									
LRXDC 30	21.5	5			100	7.8								
LRXD 30					128									
LRXDG 30					149									
LRXSC 30	18.5	5			100	4.8								
LRXS 30					128									
LRXSG 30					149									


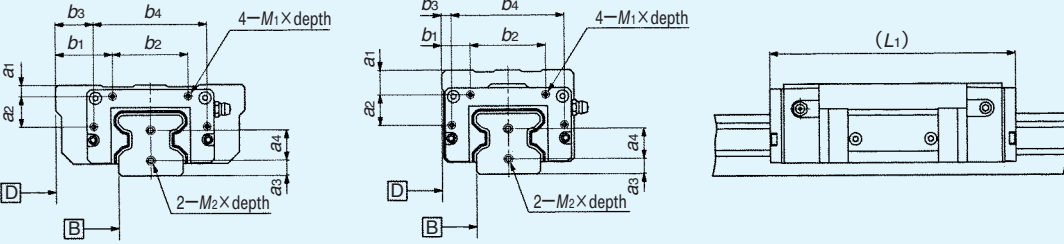
Note⁽¹⁾ : The specification and mounting position of grease nipple are different from those of the standard specification product. The grease nipple of the size 30 models is A-M4. For grease nipple specifications, see Table 12.
(2) : Also applicable to LRXHC20, LRXH20 and LRXHG20.
(3) : The values for a slide unit with female threads for bellows at both ends are shown.
Remark : For the size 15 and 20 models of flange type and compact block type, the dimension "a5" is higher than the dimension H of the assembly. For details, consult  for further information.

Table 9.2 Female threads for bellows (Supplemental code /J)

Size 35, 45, 55, 65, 85



unit : mm

Model number	Slide unit								Track rail		
	a1	a2	b1	b2	b3	b4	M1×depth	L1 (1)	a3	a4	M2×depth
LRXC 35	6	16	30	40	20	60	M3× 6	99	8	16	M4× 8
LRX 35								131			
LRXG 35								159			
LRXDC 35	13	16	15	5	60	M3× 6		99			
LRXD 35								131			
LRXDG 35								159			
LRXC 45	7	21	35	50	23	74	M4× 8	123	10	19	M5×10
LRX 45								163			
LRXG 45								203			
LRXDC 45	17	21	18	6	74	M4× 8		123			
LRXD 45								163			
LRXDG 45								203			
LRXC 55	7	27	40	60	26	88	M4× 8	145	10	24	M5×10
LRX 55								193			
LRXG 55								247			
LRXDC 55	17	27	20	6	88	M4× 8		145			
LRXD 55								193			
LRXDG 55								247			
LRXC 65	8.7	37	47.5	75	31	108	M5×10	192	14	28	M6×12
LRX 65								256			
LRXG 65								320			
LRXDC 65	8.7	37	25.5	9	108	M5×10		192			
LRXD 65								256			
LRXDG 65								320			
LRX 85	15	45	62.5	90	37.5	140	M6×10	334	14.5	38	M6×12
LRXG 85								406			

Note(1) : The values for a slide unit with female threads for bellows at both ends are shown.

Basic dynamic load rating C

The basic dynamic load rating is defined as the constant load both in direction and magnitude under which a group of identical Linear Roller Ways Super X are individually operated and 90% of those in the group can travel 50 x 10³ meters free from material damage due to rolling contact fatigue.

The dynamic load ratings of Linear Roller Way Super X are designed for equal load capacity in downward, upward and lateral directions.

Basic static load rating C₀

The basic static load rating is defined as the static load that gives a prescribed constant contact stress at the center of the contact area between the rolling element and raceway receiving the maximum load. It is the allowable limit load that permits normal rolling motion. Generally, the basic static load rating is used in combination with the static safety factor.

The static load ratings of Linear Roller Way Super X are designed for equal load capacity in download, upward and lateral directions.

Static moment rating T₀, T_x, T_y

The static moment rating is defined as the static moment load that gives a prescribed constant contact stress at the center of the contact area between the rolling element and raceway receiving the maximum load when a moment (See Fig. 3.) is loaded. It is the allowable limit moment that permits normal rolling motion. Generally, the static moment rating is used in combination with the static safety factor.

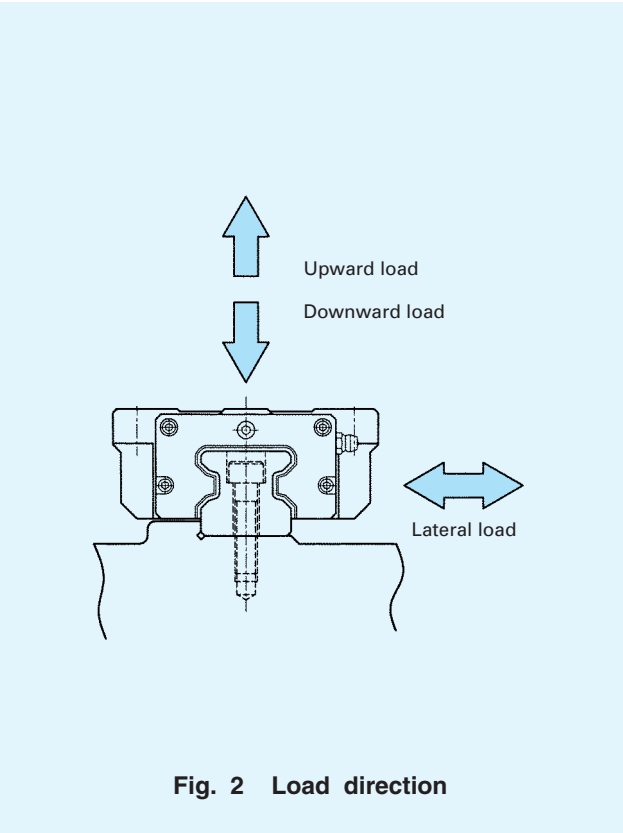


Fig. 2 Load direction

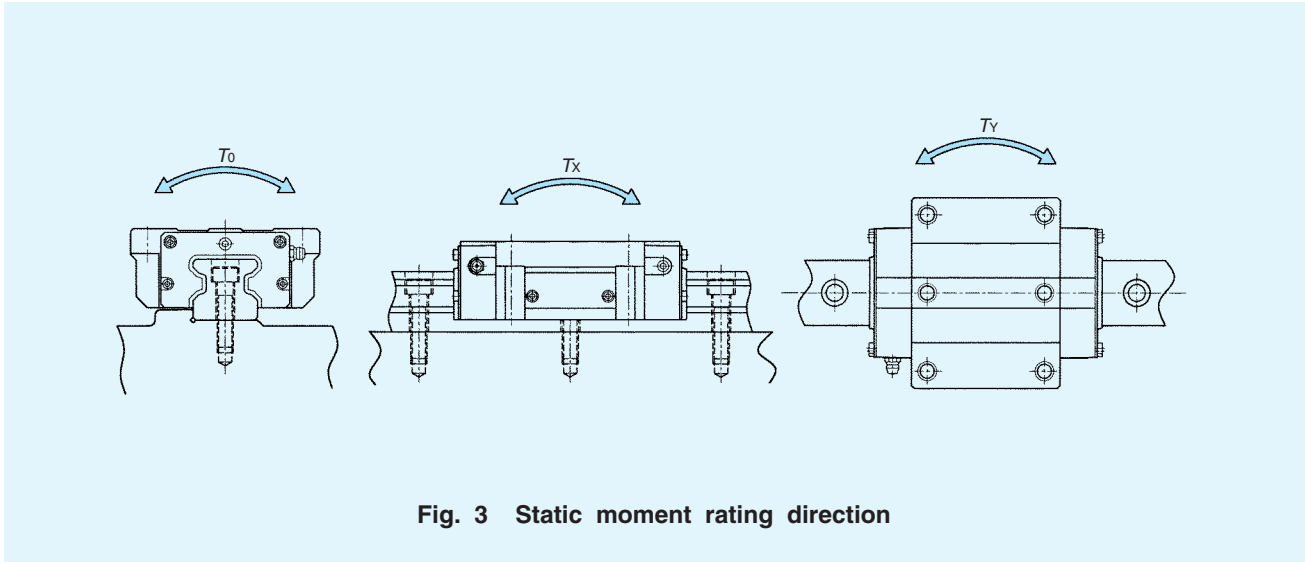


Fig. 3 Static moment rating direction

Lubrication and Dust Protection

Life

The rating life of Linear Roller Way Super X is obtained from the following formula.

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

where, L : Rating life, 10^3m

C : Basic dynamic load rating, N

P : Dynamic equivalent load (or Applied load), N

If the stroke length and the number of strokes per minute are known, the life in hours can be obtained from the following formula.

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

where, L_h : Rating life in hours, h

S : Stroke length, mm

n_1 : Number of strokes per minute, cpm

Static safety factor

The static safety factor of Linear Roller Way Super X is given in the following formula.

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

where, f_s : Static safety factor

C_0 : Basic static load rating, N

P_0 : Static equivalent load (or Applied load), N

Table 10 Static safety factor

Operating conditions	fs
Operation with vibration and/or shocks	4 ~6
High operating performance	3 ~5
Normal operation	2.5~3

Load factor

Due to vibration and/or shocks during machine operation, the actual load on each rolling guide becomes greater in many cases than the theoretically calculated load. The applied load is generally calculated by multiplying the theoretically calculated load by the load factor indicated in Table 11.

Table 11 Load factor

Operating conditions	f_w
Smooth operation free from vibration and/or shocks	1 ~1.2
Normal operation	1.2~1.5
Operation with vibration and/or shocks	1.5~3

A quality lithium-soap base grease containing extreme-pressure additives (ALVANIA EP Grease 2 (SHELL)) is pre-packed in Linear Roller Way Super X. However, the quality of any grease will gradually deteriorate as operating time passes. Therefore, periodic re-lubrication is necessary. The re-lubrication interval varies depending on the operating conditions of the rolling guides. A six month interval is generally recommended and, if the machine operation consists of reciprocating motions with many cycles and long strokes, re-lubrication every three months is recommended. Re-lubrication is performed from a grease nipple provided at the slide unit.

Re-lubrication interval can be extended by using the special specification Capillary Plate (supplemental code "Q"). Also, re-lubrication and other maintenance works can be reduced.

Linear Roller Way Super X is dust-protected with special rubber seals. But, if large amounts of fine contaminants are present, or if large particles of foreign matter such as dust or chips may fall on the track rail, it is recommended to provide protective covers such as bellows or telescopic shields for the entire linear motion mechanism.

Bellows to match the dimensions of Linear Roller Way Super X are optionally available. They are easy to mount and highly effective for dust protection. If required, consult **IKD**.

Grease Nipple

Grease nipples shown in Table 12 are assembled to each slide unit of Linear Roller Way Super X.

Table 12 Grease nipple

Model number	Grease nipple	
	Type	Shape and dimension
LRX 12	A—M3	
LRX 15	A—M4	
LRX 20 LRX 25	B—M4	
LRX 30	B—M6	
LRX 35	JIS A—M6F	
LRX 45 LRX 55 LRX 65 LRX 85	JIS A—PT1/8	
LRXG 100	JIS A—PT1/4	




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

Precautions for Use

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

To mount Linear Roller Way Super X, correctly fit the reference mounting surfaces B and D of Linear Roller Way Super X to the reference mounting surfaces of the table and the bed, and then fix them tightly. (See Fig. 4.)

The reference mounting surfaces B and D and mounting surfaces A and C of Linear Roller Way Super X 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 opposite to the  mark. The track rail reference mounting surface is identified by locating the  mark on the top surface of the track rail. The track rail reference mounting surface is the side surface above the  mark (in the direction of the arrow). (See Fig. 5.)

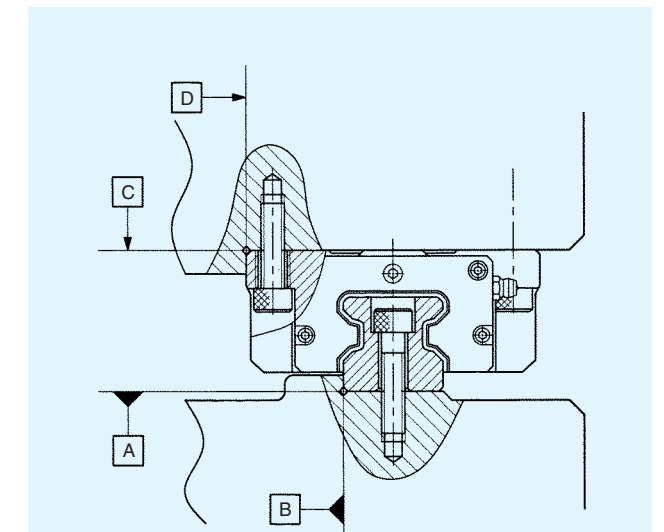


Fig. 4 Reference mounting surfaces and general mounting structure

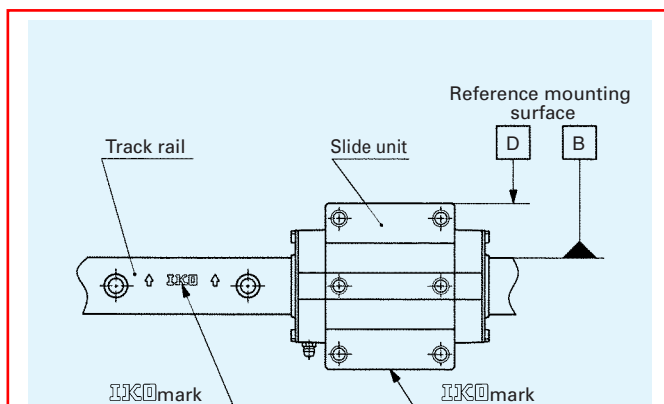


Fig. 5 Reference mounting surfaces

②Mounting of the slide unit

Except the size 12 models, 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 13 for the slide units of compact block type.

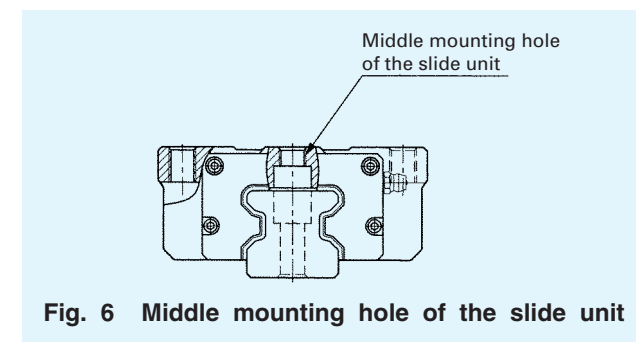


Table 13 Screwing depth of slide unit mounting holes for compact block type

Model number	Recommended minimum depth mm
LRXS 15	4.5
LRXS 20	5.5
LRXS 25	7
LRXS 30	9

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

③Corner 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. However, in some series, corner radius R shown in Table 14 can also be used. Table 14 shows recommended shoulder heights and corner radius of the mating reference mounting surfaces.

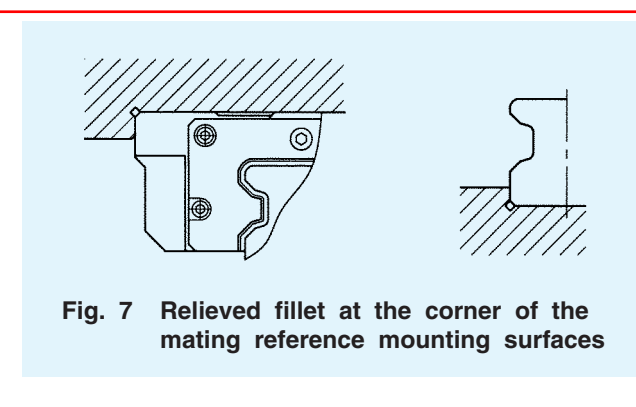


Table 14 Shoulder heights and corner radius of the mating reference mounting surfaces

unit : mm				
Model number	Slide unit Shoulder height h_1	Track rail Shoulder height h_2	Corner radius R (max.)	
LRX 12	4	2	0.5	
LRX 15	4	3	0.5	
LRX 20	5	4	0.5	
LRX 25	6	5	1	
LRX 30	8	5.5	1	
LRX 35	8	5.5	1	
LRX 45	8	7	1.5	
LRX 55	10	8	1.5	
LRX 65	10	10	1.5	
LRX 85	14	14	2.5	
LRXG 100	14	13	2.5	

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

④Multiple 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 accuracy of 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.

⑤Operating temperature

The maximum operating temperature is 120°C and a continuous operation is possible at temperatures up to 100 °C. When the temperature exceeds 100°C, consult IEC. For the "with capillary plates" (supplemental code "/Q") of special specification, operate Linear Roller Way Super X below 80°C.

Mounting

①When mounting multiple sets at the same time

In the case of interchangeable specification Linear Roller Way Super X, assemble a slide unit and a track rail with the same interchangeable code ("S1" or "S2"). In the case of non-interchangeable specification Linear Roller Way Super X, use an assembly of slide unit and track rail as delivered without changing the combination. Special specification products of matched sets (supplemental code "/W") are delivered as a group in which dimensional variations are specially controlled. Mount them without mixing with the sets of another group.

②Assembling a slide unit and a track rail

When assembling the slide unit on the track rail, correctly fit the grooves of the slide unit to the grooves of the track rail and move the slide unit gently in parallel direction. Rough handling will result in seal damage or dropping of cylindrical rollers.

The interchangeable specification slide unit is provided with a dummy rail. The size 12, 15, 20, 25 and 30 models of non-interchangeable specification are appended with a dummy rail. This dummy rail should be used for assembly.

③Accuracy of mating mounting surfaces

A load greater than the calculated load may act on Linear Roller Way Super X, depending on the accuracy of mating mounting surfaces and assembling accuracy. This will eventually give an adverse effect on the service life of Linear Roller Way Super X. 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 reliable use of a linear motion rolling guide.

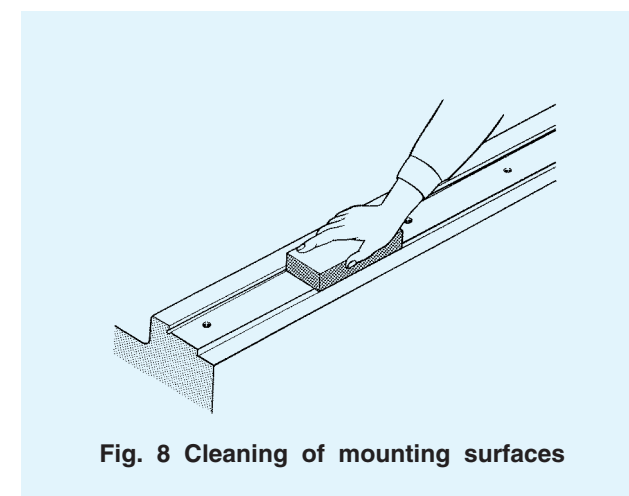
When multiple sets are mounted, the parallelism between the two mounting surfaces of machines must be prepared, in general, as shown in Table 15.

Table 15 Parallelism between two mounting surfaces

unit : μm				
Accuracy class	High (H)	Precision (P)	Super precision (SP)	Ultra precision (UP)
Parallelism	30	20	10	6

④Cleaning of mounting surfaces

Before assembling Linear Roller Way Super X, remove burrs and blemishes from the reference mounting surfaces and mounting surfaces of the machine using an oil-stone, etc., and wipe off rust prevention oil and dirt with clean cloth.



⑤Tightening torque of mounting bolts

The standard torque values for Linear Roller Way Super X mounting bolts are shown in Table 16. When machines or equipment are subjected to severe 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 16 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 3×0.5	1.7	1.1
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	—
M20×2.5	512	—
M24×3	882	—
M30×3.5	1 750	—

Remark : Tightening torque for slide unit center mounting holes on flange type (LRXC, LRX, LRXG) size 15, 20, 25, 30, and 35, are, recommended to be tightened with a torque 70 to 80% values of table 16.

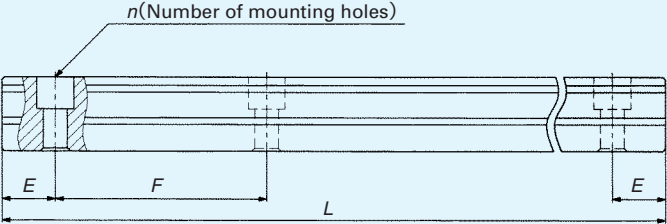
Track Rail Length

Standard and maximum lengths of track rails of Linear Roller Way Super X are shown in Table 17. Track rails in any length are also available. Simply indicate the necessary length of track rail in mm in the identification number.

For non-interchangeable track rails longer than the maximum length shown in Table 17, butt-jointing track rails are available upon request. In this case, indicate “/A” in the identification number.

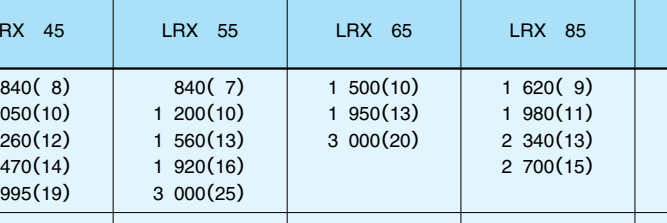
E dimensions at both ends are the same unless otherwise specified. To change these dimensions, specify the specified rail mounting hole positions (supplemental code “/E”) of special specification.

Table 17.1 Standard and maximum lengths of high carbon steel track rails



Unit : mm


Model number	LRX 12	LRX 15	LRX 20	LRX 25	LRX 30	LRX 35
Item						
Standard length L(n)	80(2) 160(4) 240(6) 320(8) 400(10) 480(12) 560(14) 640(16) 720(18)	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)
Pitch of mounting holes F	40	60	60	60	80	80
E	20	30	30	30	40	40
Standard range of E ⁽¹⁾	incl. 5.5 under 25.5	7 37	8 38	9 39	10 50	10 50
Maximum length ⁽²⁾	1 480	1 500 (1 980)	1 980 (3 000)	3 000	2 960 (4 000)	2 960 (4 000)



Unit : mm

Model number	LRX 45	LRX 55	LRX 65	LRX 85	LRXG 100
Item					
Standard length L(n)	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)	1 500(10) 1 950(13) 3 000(20)	1 620(9) 1 980(11) 2 340(13) 2 700(15)	1 500(10) 1 950(13) 3 000(20)
Pitch of mounting holes F	105	120	150	180	150
E	52.5	60	75	90	75
Standard range of E ⁽¹⁾	incl. 12.5 under 65	15 75	17 92	23 113	29 104
Maximum length ⁽²⁾	2 940 (3 990)	3 000 (3 960)	3 000 (3 900)	2 880 ⁽³⁾	3 000

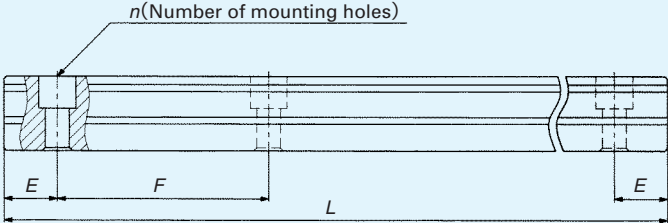
Note⁽¹⁾ : Not applicable to the track rail with female threads for bellows (Supplemental code /J)

⁽²⁾ : Track rails with the maximum lengths shown in parentheses can also be manufactured. Consult  for further information.

⁽³⁾ : LRX85 track rail maximum length of half pitch (supplemental code “/HP”) is 2970mm.

Remark : The above table shows representative model numbers but is applicable to all high carbon steel track rails of the same size.


Table 17.2 Standard and maximum lengths of stainless steel track rails



Unit : mm

Model number	LRX 12…SL	LRX 15…SL	LRX 20…SL	LRX 25…SL	LRX 30…SL
Item					
Standard length L(n)	80(2) 160(4) 240(6) 320(8) 400(10) 480(12) 560(14) 640(16) 720(18)	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)	480(4) 640(8) 800(10) 1 040(13)
Pitch of mounting holes F	40	60	60	60	80
E	20	30	30	30	40
Standard range of E ⁽¹⁾	incl. 5.5 under 25.5	7 37	8 38	9 39	10 50
Maximum length ⁽²⁾	1 000 (1 480)	1 200 (1 980)	1 200 (1 980)	1 200 (1 980)	1 200 (2 000)

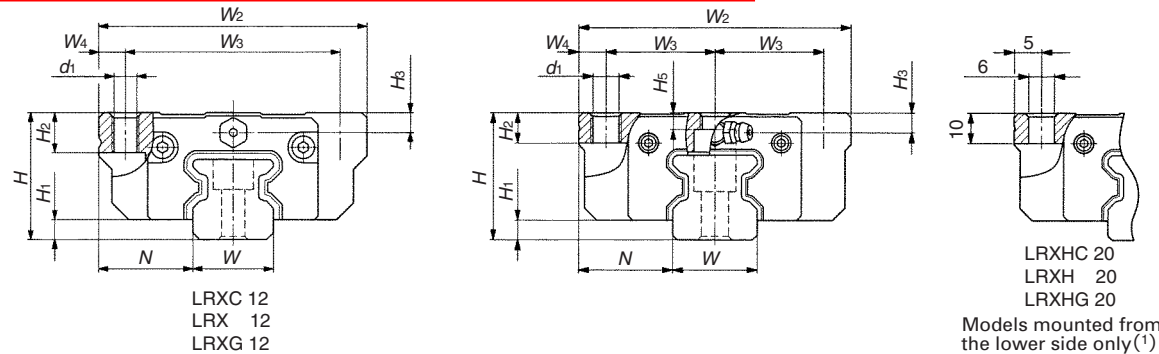
Note⁽¹⁾ : Not applicable to the track rail with female threads for bellows (Supplemental code /J)

⁽²⁾ : Track rails with the maximum lengths shown in parentheses can also be manufactured. Consult  for further information.

Remark : The above table shows representative model numbers but is applicable to all stainless steel track rails of the same size.

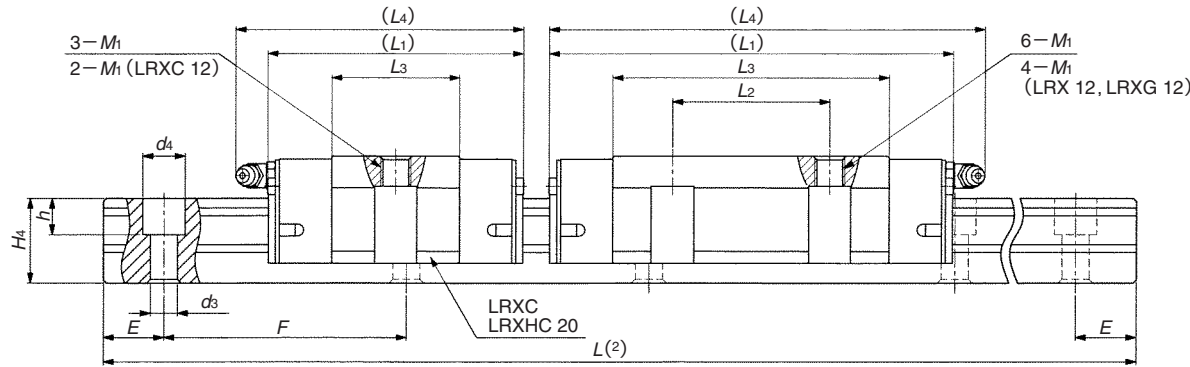
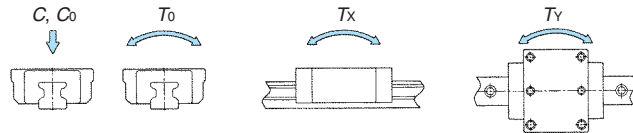
IKO Linear Roller Way Super X

Flange type mounted from the upper/lower side
LRXC, LRX, LRXG



Model number	Interchangeable	Mass (Ref.)		Dimensions of assembly mm			Dimensions of slide unit mm												
		Slide unit kg	Track rail 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	
LRXC 12	☆	0.058	0.92	19	3	14	40	32	4	37	—	14.8	40	3.4	M 4	6	3	—	
LRX 12	☆	0.092								47	15	25.3	50						
LRXG 12	☆	0.13								58		35.8	61						
LRXC 15	☆	0.13	1.65	24	4	16	47	19	4.5	52	—	24	55	4.4	M 5	7	3.5	3	
LRX 15	☆	0.20								68	30	40	71						
LRXG 15	☆	0.28								84		56	87						
LRXC 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
LRX 20 ⁽¹⁾	☆	0.44								86	40	51.6	94						
LRXG 20 ⁽¹⁾	☆	0.61								106		71.6	114						
LRXC 25	☆	0.44	3.59	36	6	23.5	70	28.5	6.5	74	—	36	83	7	M 8	10	5	5	
LRX 25	☆	0.67								98	45	60	107						
LRXG 25	☆	0.84								113		75	122						
LRXC 30	☆	0.78	5.01	42	6.5	31	90	36	9	85	—	42.4	95	8.5	M10	10	6.5	5.5	
LRX 30	☆	1.20								113	52	70.4	123						
LRXG 30	☆	1.58								134		91.4	144						

Note⁽¹⁾ : LRXC20, LRX20, and LRXG20 can be mounted from the upper side only. For mounting from the lower side, LRXHC20, LRXH20, and LRXHG20 which have the same dimensions as those of the above models can be used.
Note⁽²⁾ : Track rail lengths L are shown in Table 17.
Note⁽³⁾ : The directions of basic dynamic load rating (C), basic static load rating (C_0), and static moment rating (T_0 , T_x , T_y) are shown in the sketches below.
The upper values in the T_x and T_y columns apply to one slide unit, and the lower values apply to two slide units in close contact.
Remark 1 : The mark ☆ indicates that interchangeable specification products are available.
2 : The appended track rail mounting bolts are hexagon socket head bolts of JIS B 1176 or equivalent.
3 : For grease nipple specifications, see Table 12.
4 : A grease nipple mounting thread is provided on the left and right end plates respectively.

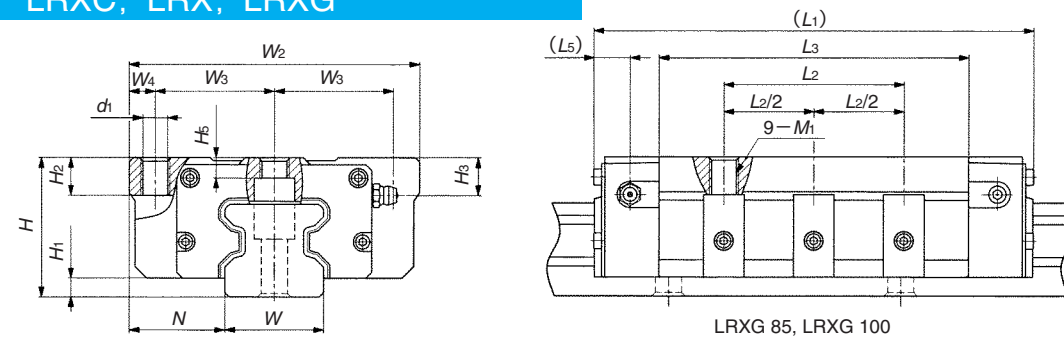


Dimensions of track rail mm							Mounting bolt for track rail mm Bolt size×length	Basic dynamic load rating ⁽³⁾ C N	Basic static load rating ⁽³⁾ C ₀ N	Static moment rating ⁽³⁾			Model number
W	H ₄	d ₃	d ₄	h	E	F				T ₀ N-m	T _x N-m	T _y N-m	
12	12	3.5	6	4.5	20	40	M3×12	3 900	6 090	46.3	16.3 170	16.3 170	LRXC 12
								5 890	10 400	78.7	45.2 343	45.2 343	LRX 12
								7 710	14 600	111	88.6 581	88.6 581	LRXG 12
15	16.5	4.5	8	6	30	60	M4×16	7 730	12 000	113	50.6 457	50.6 457	LRXC 15
								11 500	20 000	188	136 942	136 942	LRX 15
								14 900	28 000	263	262 1 590	262 1 590	LRXG 15
20	21	6	9.5	8.5	30	60	M5×20	16 100	26 400	341	150 1 260	150 1 260	LRXC 20 ⁽¹⁾
								23 400	42 700	550	379 2 520	379 2 520	LRX 20 ⁽¹⁾
								30 100	58 900	760	713 4 200	713 4 200	LRXG 20 ⁽¹⁾
23	24.5	7	11	9	30	60	M6×25	21 600	33 800	500	213 1 810	213 1 810	LRXC 25
								32 100	56 300	833	573 3 800	573 3 800	LRX 25
								38 200	70 300	1 040	885 5 380	885 5 380	LRXG 25
28	28	9	14	12	40	80	M8×28	29 200	44 600	808	329 2 740	329 2 740	LRXC 30
								43 400	74 400	1 350	883 5 780	883 5 780	LRX 30
								53 200	96 700	1 750	1 470 8 740	1 470 8 740	LRXG 30

Example of identification number of assembled set

LRX	20	C2	R840	T ₁	P	S2	/ F		
Model code LRXC LRX LRXG	Size of rolling guide		Length of track rail (840mm)	Preload amount Standard : No symbol Light preload : T ₁ Medium preload : T ₂ Heavy preload : T ₃	Accuracy class High : H Precision : P Super precision : SP Ultra precision : UP	Interchangeable code Select group 1 : S1 Select group 2 : S2	Special specification Caps for rail mounting holes		
	Number of slide units (Two slide units)								

Flange type mounted from the upper/lower side
LRXC, LRX, LRXG



Model number	Interchangeable	Mass (Ref.)		Dimensions of assembly mm			Dimensions of slide unit mm													
		Slide unit kg	Track rail 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	H ₆	
LRXC 35	☆	1.13	6.88	48	6.5	33	100	41	9	92	—	46.6	12.5	8.5	M10	13	13	7	—	
LRX 35	☆	1.76								124	62	78.6								
LRXG 35	☆	2.41								152		106.6								
LRXC 45	☆	2.11	10.8	60	8	37.5	120	50	10	114	—	59	17.5	10.5	M12	15	16	11	—	
LRX 45	☆	3.26								154	80	99								
LRXG 45	☆	4.60								194		139								
LRXC 55	☆	3.49	14.1	70	9	43.5	140	58	12	136	—	72	20	12.5	M14	17	16	14	—	
LRX 55	☆	5.42								184	95	120								
LRXG 55	☆	7.93								238		174								
LRXC 65	☆	7.18	22.6	90	12	53.5	170	71	14	181	—	95	26.6	14.5	M16	23	18	18.5	—	
LRX 65	☆	11.5								245	110	159								
LRXG 65	☆	16.0								309		223								
LRX 85		25.4	36.7	110	16	65	215	92.5	15	323	140	232	27.5	17.8	M20	35	22	25.5	20	
LRXG 85		32.7								395	200	304								
LRXG 100		43.0	43.2	120	15	75	250	110	15	362	200	262	29.7	17.8	M20	35	30	30.5	—	

Note⁽¹⁾ : Track rail lengths L are shown in Table 17.

(2) : The directions of basic dynamic load rating (C), basic static load rating (C_0), and static moment rating (T_0 , T_x , T_y) are shown in the sketches below.

The upper values in the T_x and T_y columns apply to one slide unit, and the lower values apply to two slide units in close contact.

(3) : The track rail longer (and equal) than 1000mm of LRX85, LRXG85 and LRXG100 have few threaded holes for purpose by specified hanging bolt.

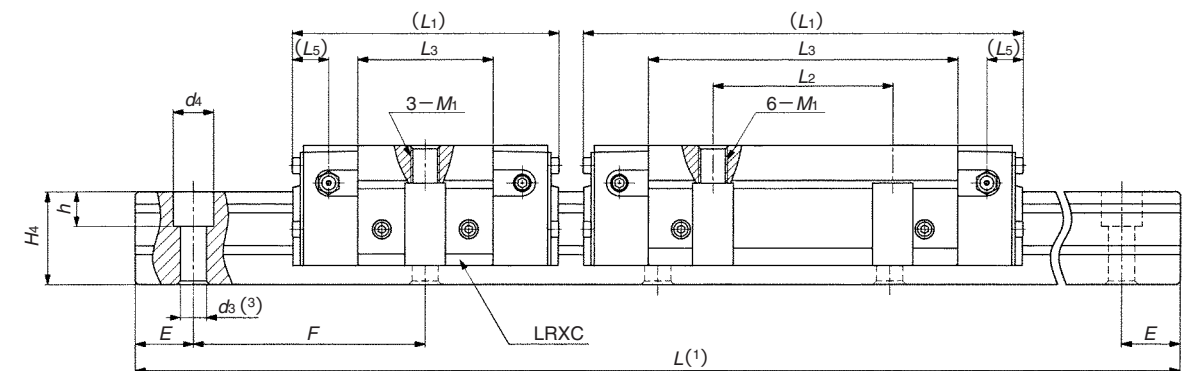
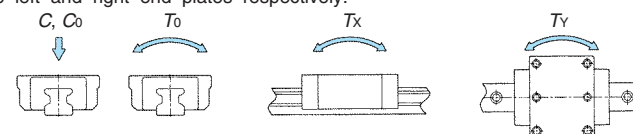
More details, consult **IKO**.

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

2 : The appended track rail mounting bolts are hexagon socket head bolts of JIS B 1176 or equivalent.

3 : For grease nipple specifications, see Table 12.

4 : Three grease nipple mounting threads are provided on the left and right end plates respectively.



Dimensions of track rail mm							Mounting bolt for track rail mm	Basic dynamic load rating ⁽²⁾ C	Basic static load rating ⁽²⁾ C ₀	Static moment rating ⁽²⁾			Model number
W	H ₄	d ₃	d ₄	h	E	F				T ₀	T _x	T _y	
							Bolt size×length	N	N	N·m	N·m	N·m	
34	32	9	14	12	40	80	M 8×35	39 500	60 000	1 300	506 3 950	506 3 950	LRXC 35
								58 700	100 000	2 170	1 360 8 470	1 360 8 470	LRX 35
								74 200	135 000	2 930	2 440 13 800	2 440 13 800	LRXG 35
45	38	14	20	17	52.5	105	M12×40	64 100	95 600	2 660	1 010 7 800	1 010 7 800	LRXC 45
								95 400	159 000	4 430	2 700 16 800	2 700 16 800	LRX 45
								124 000	223 000	6 200	5 220 29 000	5 220 29 000	LRXG 45
53	43	16	23	20	60	120	M14×45	99 700	149 000	4 830	1 880 14 400	1 880 14 400	LRXC 55
								148 000	248 000	8 040	5 040 31 100	5 040 31 100	LRX 55
								198 000	359 000	11 700	10 400 57 000	10 400 57 000	LRXG 55
63	56	18	26	22	75	150	M16×60	174 000	249 000	9 790	4 200 32 200	4 200 32 200	LRXC 65
								260 000	415 000	16 300	11 300 69 300	11 300 69 300	LRX 65
								337 000	581 000	22 800	21 800 120 000	21 800 120 000	LRXG 65
85	67	26.5	39	30	90	180	M24×70	440 000	753 000	38 900	29 500 163 000	29 500 163 000	LRX 85
								542 000	985 000	50 800	50 000 257 000	50 000 257 000	LRXG 85
100	70	33	48	36	75	150	M30×80	498 000	821 000	49 700	35 800 199 000	35 800 199 000	LRXG 100

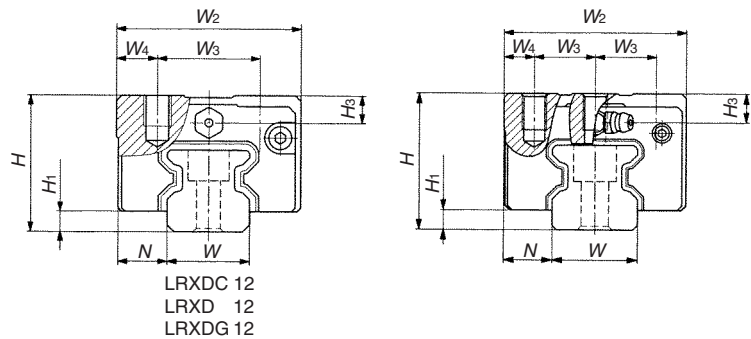
Example of identification number of assembled set

LRX	55	C2	R3000	T ₂	P	S2	/ F
Model code LRXC LRX LRXG	Size of rolling guide	Number of slide units (Two slide units)	Length of track rail (3000mm)	Preload amount Standard : No symbol Light preload : T ₁ Medium preload : T ₂ Heavy preload : T ₃	Accuracy class High : H Precision : P Super precision : SP Ultra precision : UP	Interchangeable code Select group 1 : S1 Select group 2 : S2	Special specification Caps for rail mounting holes

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

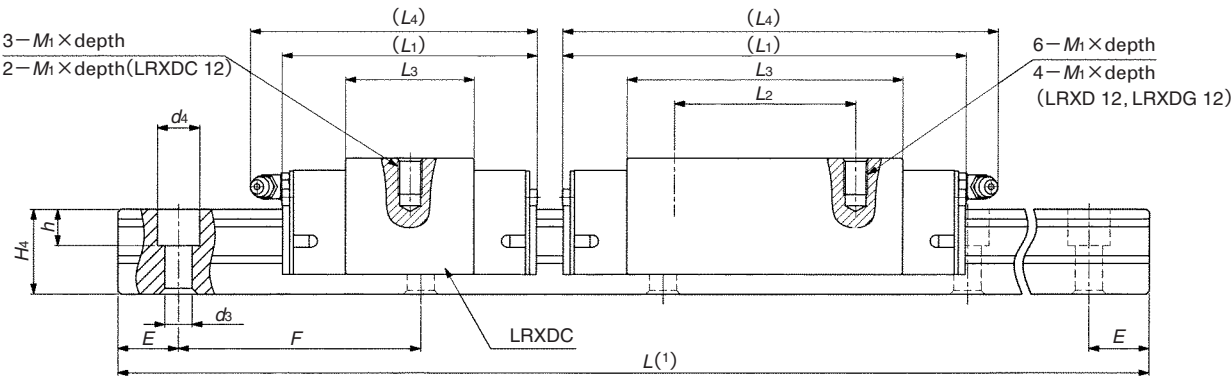
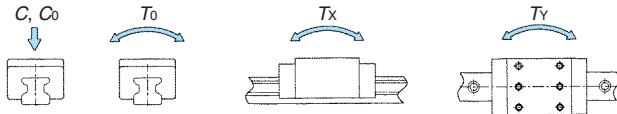
IKO Linear Roller Way Super X

Block type mounted from the upper side
LRXDC, LRXD, LRXDG



Model number	Interchangeable	Mass (Ref.)		Dimensions of assembly mm			Dimensions of slide unit mm											W
		Slide unit kg	Track rail kg/m	H	H ₁	N	W ₂	W ₃	W ₄	L ₁	L ₂	L ₃	L ₄	M ₁ ×depth	H ₃			
LRXDC 12	☆	0.045	0.92	20	3	7.5	27	15	6	37	—	14.8	40	M4×4.5	4	12		
LRXDC 12…SL	☆	0.072								47	15	25.3	50					
LRXD 12	☆									58		35.8	61					
LRXD 12…SL	☆	0.097																
LRXDG 12	☆																	
LRXDG 12…SL	☆																	
LRXDC 15	☆	0.13	1.65	28	4	9.5	34	13	4	52	—	24	55	M4×8	7.5	15		
LRXDC 15…SL	☆	0.19								68	26	40	71					
LRXD 15	☆									84		56	87					
LRXD 15…SL	☆	0.26																
LRXDG 15	☆																	
LRXDG 15…SL	☆																	
LRXDC 20	☆	0.25	2.73	34	5	12	44	16	6	66	—	31.6	74	M5×8	8	20		
LRXDC 20…SL	☆	0.38								86	36	51.6	94					
LRXD 20	☆									106	50	71.6	114					
LRXD 20…SL	☆	0.52																
LRXDG 20	☆																	
LRXDG 20…SL	☆																	
LRXDC 25	☆	0.36	3.59	40	6	12.5	48	17.5	6.5	74	—	36	83	M6×12	9	23		
LRXDC 25…SL	☆	0.55								98	35	60	107					
LRXD 25	☆									113	50	75	122					
LRXD 25…SL	☆	0.68																
LRXDG 25	☆																	
LRXDG 25…SL	☆																	
LRXDC 30	☆	0.60	5.01	45	6.5	16	60	20	10	85	—	42.4	95	M8×12	9.5	28		
LRXDC 30…SL	☆	0.92								113	40	70.4	123					
LRXD 30	☆									134	60	91.4	144					
LRXD 30…SL	☆	1.18																
LRXDG 30	☆																	
LRXDG 30…SL	☆																	

Note⁽¹⁾: Track rail lengths *L* are shown in Table 17.
(2): The directions of basic dynamic load rating (*C*), basic static load rating (*C₀*), and static moment rating (*T₀*, *T_x*, *T_y*) are shown in the sketches below.
The upper values in the *T_x* and *T_y* columns apply to one slide unit, and the lower values apply to two slide units in close contact.
Remark 1: The mark ☆ indicates that interchangeable specification products are available.
2: The appended track rail mounting bolts are hexagon socket head bolts of JIS B 1176 or equivalent.
For stainless steel series Linear Roller Way Super X, stainless steel bolts are appended.
3: For grease nipple specifications, see Table 12.
4: A grease nipple mounting thread is provided on the left and right end plates respectively.



Dimensions of track rail mm						Mounting bolt for track rail mm Bolt size×length	Basic dynamic load rating ⁽²⁾ <i>C</i> N	Basic static load rating ⁽²⁾ <i>C₀</i> N	Static moment rating ⁽²⁾			Model number
<i>H₄</i>	<i>d₃</i>	<i>d₄</i>	<i>h</i>	<i>E</i>	<i>F</i>				<i>T₀</i> N-m	<i>T_x</i> N-m	<i>T_y</i> N-m	
12	3.5	6	4.5	20	40	M3×12	3 900	6 090	46.3	16.3 170	16.3 170	LRXDC 12
							5 890	10 400	78.7	45.2 343	45.2 343	LRXD 12
							7 710	14 600	111	88.6 581	88.6 581	LRXD 12...SL
16.5	4.5	8	6	30	60	M4×16	7 730	12 000	113	50.6 457	50.6 457	LRXDC 12
							11 500	20 000	188	136 942	136 942	LRXD 12
							14 900	28 000	263	262 1 590	262 1 590	LRXD 12...SL
21	6	9.5	8.5	30	60	M5×20	16 100	26 400	341	150 1 260	150 1 260	LRXDC 15
							23 400	42 700	550	379 2 520	379 2 520	LRXD 15
							30 100	58 900	760	713 4 200	713 4 200	LRXD 15...SL
24.5	7	11	9	30	60	M6×25	21 600	33 800	500	213 1 810	213 1 810	LRXDC 20
							32 100	56 300	833	573 3 800	573 3 800	LRXD 20
							38 200	70 300	1 040	885 5 380	885 5 380	LRXD 20...SL
28	9	14	12	40	80	M8×28	29 200	44 600	808	329 2 740	329 2 740	LRXDC 25
							43 400	74 400	1 350	883 5 780	883 5 780	LRXD 25
							53 200	96 700	1 750	1 470 8 740	1 470 8 740	LRXD 25...SL

Example of identification number of assembled set

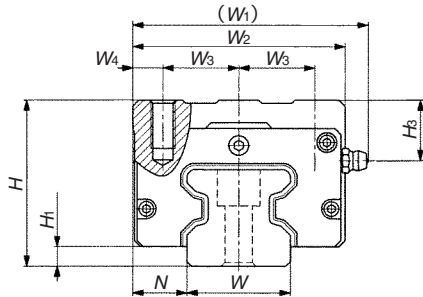
LRXD	20	C2	R840	SL	T ₁	P	S2	/ F
Model code LRXDC LRXD LRXDG	Size of rolling guide		Material High carbon steel made : No symbol Stainless steel made : SL		Preload amount Standard : No symbol Light preload : T ₁ Medium preload : T ₂ Heavy preload : T ₃	Accuracy class High : H Precision : P Super precision : SP Ultra precision : UP	Interchangeable code Select group 1 : S1 Select group 2 : S2	Special specification Caps for rail mounting holes
	Number of slide units (Two slide units)							
	Length of track rail (840mm)							

1N=0.102kaf=0.2248lbs.

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

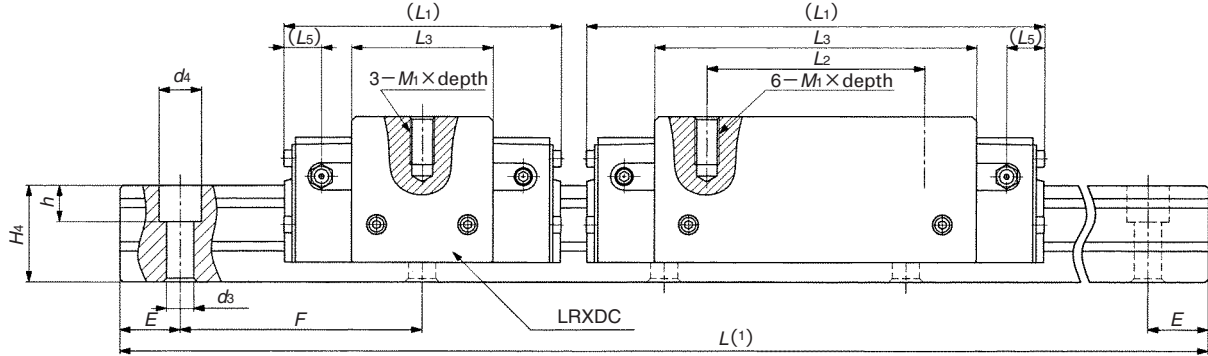
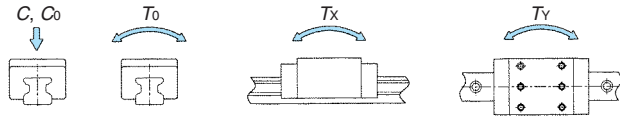
IKO Linear Roller Way Super X

Block type mounted from the upper side
LRXDC, LRXD, LRXDG



Model number	Interchangeable	Mass (Ref.)		Dimensions of assembly mm			Dimensions of slide unit mm									
		Slide unit kg	Track rail kg/m	H	H ₁	N	W ₁	W ₂	W ₃	W ₄	L ₁	L ₂	L ₃	L ₅	M1×depth	H ₃
LRXDC 35	☆	0.97	6.88	55	6.5	18	80	70	25	10	92	—	46.6	12.5	M 8×16	20
LRXD 35	☆	1.52									124	50	78.6			
LRXDG 35	☆	2.02									152	72	106.6			
LRXDC 45	☆	2.01	10.8	70	8	20.5	98	86	30	13	114	—	59	17.5	M10×20	26
LRXD 45	☆	3.13									154	60	99			
LRXDG 45	☆	4.29									194	80	139			
LRXDC 55	☆	3.17	14.1	80	9	23.5	112	100	37.5	12.5	136	—	72	20	M12×25	26
LRXD 55	☆	4.97									184	75	120			
LRXDG 55	☆	7.06									238	95	174			
LRXDC 65	☆	5.52	22.6	90	12	31.5	136	126	38	25	181	—	95	26.6	M16×25	18
LRXD 65	☆	8.70									245	70	159			
LRXDG 65	☆	12.1									309	120	223			

Note⁽¹⁾ : Track rail lengths L are shown in Table 17.
(²) : The directions of basic dynamic load rating (C), basic static load rating (C₀), and static moment rating (T₀, T_x, T_y) are shown in the sketches below.
The upper values in the T_x and T_y columns apply to one slide unit, and the lower values apply to two slide units in close contact.
Remark 1 : The mark ☆ indicates that interchangeable specification products are available.
2 : The appended track rail mounting bolts are hexagon socket head bolts of JIS B 1176 or equivalent.
3 : For grease nipple specifications, see Table 12.
4 : Three grease nipple mounting threads are provided on the left and right end plates respectively.

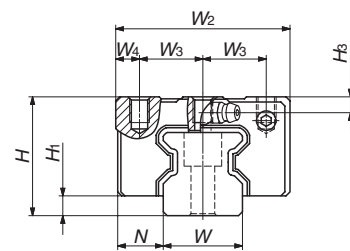


Dimensions of track rail mm							Mounting bolt for track rail mm Bolt size×length	Basic dynamic load rating ⁽²⁾ C N	Basic static load rating ⁽²⁾ C ₀ N	Static moment rating ⁽²⁾			Model number
W	H ₄	d ₃	d ₄	h	E	F				T ₀ N-m	T _x N-m	T _y N-m	
34	32	9	14	12	40	80	M 8×35	39 500	60 000	1 300	506 3 950	506 3 950	LRXDC 35
								58 700	100 000	2 170	1 360 8 470	1 360 8 470	LRXD 35
								74 200	135 000	2 930	2 440 13 800	2 440 13 800	LRXDG 35
45	38	14	20	17	52.5	105	M12×40	64 100	95 600	2 660	1 010 7 800	1 010 7 800	LRXDC 45
								95 400	159 000	4 430	2 700 16 800	2 700 16 800	LRXD 45
								124 000	223 000	6 200	5 220 29 000	5 220 29 000	LRXDG 45
53	43	16	23	20	60	120	M14×45	99 700	149 000	4 830	1 880 14 400	1 880 14 400	LRXDC 55
								148 000	248 000	8 040	5 040 31 100	5 040 31 100	LRXD 55
								198 000	359 000	11 700	10 400 57 000	10 400 57 000	LRXDG 55
63	56	18	26	22	75	150	M16×60	174 000	249 000	9 790	4 200 32 200	4 200 32 200	LRXDC 65
								260 000	415 000	16 300	11 300 69 300	11 300 69 300	LRXD 65
								337 000	581 000	22 800	21 800 120 000	21 800 120 000	LRXDG 65

Example of identification number of assembled set

LRXD	55	C2	R3000	T ₂	P	S2	/ F		
Model code LRXDC LRXD LRXDG	Size of rolling guide		Number of slide units (Two slide units)	Preload amount Standard : No symbol Light preload : T ₁ Medium preload : T ₂ Heavy preload : T ₃		Accuracy class High : H Precision : P Super precision : SP Ultra precision : UP		Interchangeable code Select group 1 : S1 Select group 2 : S2	
	Length of track rail (3000mm)					Special specification Caps for rail mounting holes			

Compact block type mounted from the upper side
LRXSC, LRXS, LRXSG



Model number	Interchangeable	Mass (Ref.)		Dimension of assembly mm			Dimension of slide unit mm										H ₃	W
		Slide unit kg	Track rail kg/m	H	H ₁	N	W ₂	W ₃	W ₄	L ₁	L ₂	L ₃	L ₄	M1×depth ⁽²⁾				
LRXSC 15	☆	0.099	1.65	24	4	9.5	34	13	4	52	—	24	55	M4×5.5	3.5	15		
LRXS 15	☆	0.15								26	40	71						
LRXSG 15	☆	0.21									84	56	87					
LRXSC 20	☆	0.21	2.73	30	5	12	44	16	6	66	—	31.6	74	M5×6.5	4	20		
LRXS 20	☆	0.31								26	86	36	51.6				94	
LRXSG 20	☆	0.42									106	50	71.6				114	
LRXSC 25	☆	0.30	3.59	36	6	12.5	48	17.5	6.5	74	—	36	83	M6×9	5	23		
LRXS 25	☆	0.47								26	98	35	60				107	
LRXSG 25	☆	0.57									113	50	75				122	
LRXSC 30	☆	0.54	5.01	42	6.5	16	60	20	10	85	—	42.4	95	M8×11	6.5	28		
LRXS 30	☆	0.83								26	113	40	70.4				123	
LRXSG 30	☆	1.05									134	60	91.4				144	

Note⁽¹⁾ : Track rail lengths L are shown in Table 17.

(2) : Recommended screwing depths are shown in Table 13.

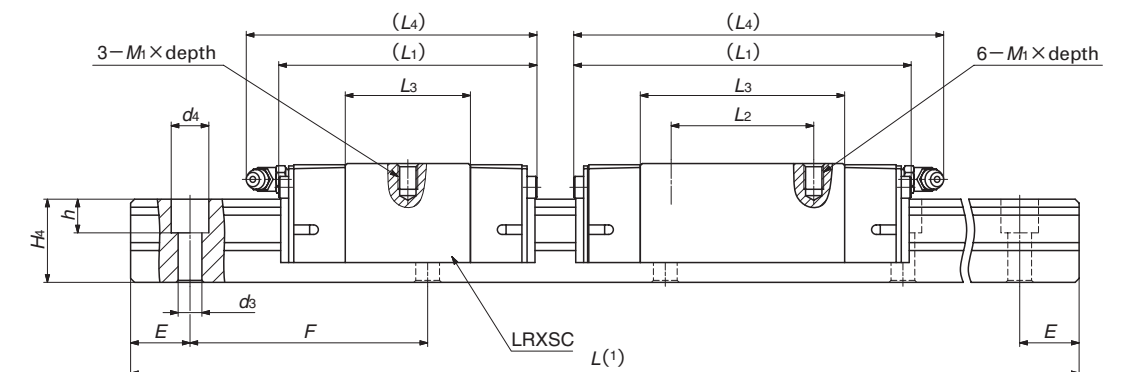
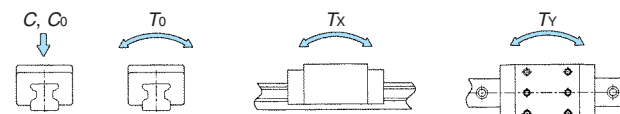
(3) : The directions of basic dynamic load rating (C), basic static load rating (C_0), and static moment rating (T_0 , T_x , T_y) are shown in the sketches below.

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

2 : Appended track rail mounting bolts are hexagon socket head bolts of JIS B 1176 or equivalent.

3: For grease nipple specifications, see Table 12.

4 : Three grease nipple mounting threads are provided on the left and right end plates respectively.



Dimensions of track rail mm						Mounting bolt for track rail mm Bolt size×length	Basic dynamic load rating ⁽³⁾ C N	Basic static load rating ⁽³⁾ C ₀ N	Static moment rating ⁽³⁾			Model number
H ₄	d ₃	d ₄	h	E	F				T ₀	T _x	T _y	
16.5	4.5	8	6	30	60	M4×16	7 730	12 000	113	50.6 457	50.6 457	LRXSC 15
							11 500	20 000	188	136 942	136 942	LRXS 15
							14 900	28 000	263	262 1 590	262 1 590	LRXSG 15
21	6	9.5	8.5	30	60	M5×20	16 100	26 400	341	150 1 260	150 1 260	LRXSC 20
							23 400	42 700	550	379 2 520	379 2 520	LRXS 20
							30 100	58 900	760	713 4 200	713 4 200	LRXSG 20
24.5	7	11	9	30	60	M6×25	21 600	33 800	500	213 1 810	213 1 810	LRXSC 25
							32 100	56 300	833	573 3 800	573 3 800	LRXS 25
							38 200	70 300	1 040	885 5 380	885 5 380	LRXSG 25
28	9	14	12	40	80	M8×28	29 200	44 600	808	329 2 740	329 2 740	LRXSC 30
							43 400	74 400	1 350	883 5 780	883 5 780	LRXS 30
							53 200	96 700	1 750	1 470 8 740	1 470 8 740	LRXSG 30

Example of identification number of assembled set

LRXS	20	C2	R840	T ₁	P	S2	/ F
<div>Model code</div> <div>LRXSC</div> <div>LRXS</div> <div>LRXSG</div>	<div>Side of rolling guide</div>	<div>Number of slide units (Two slide units)</div>	<div>Preload amount</div> <div>Standard : No symbol</div> <div>Light preload : T₁</div> <div>Medium preload : T₂</div> <div>Heavy preload : T₃</div>	<div>Accuracy class</div> <div>High : H</div> <div>Precision : P</div> <div>Super precision : SP</div> <div>Ultra precision : UP</div>	<div>Interchangeable code</div> <div>Select group 1 : S1</div> <div>Select group 2 : S2</div>	<div>Special specification</div> <div>Caps for rail mounting holes</div>	