

# Explore our Diverse Linear Guide Lineup

Designed to meet your precision needs

Wide Variety

Simplified Installation



## Our Linear Guides

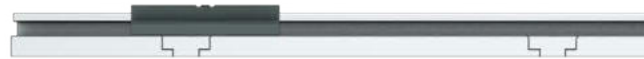
# Optimal solutions to meet your needs

Many industries use high-precision linear guides for a range of applications. However, in applications where high precision is unnecessary, there are often hidden costs associated with component prices and labour. Start optimizing your linear guides to reduce costs and maximise value.



## Wide Variety

Sugatsune offers a wide variety of linear guides of varying lengths, sizes, load capacities and constructions that can be selected according to project needs.

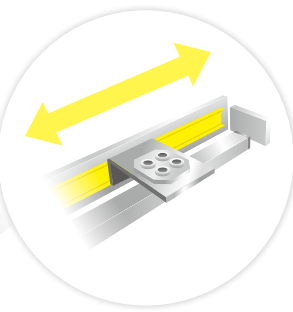
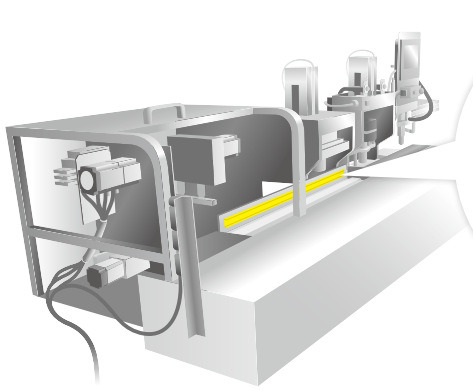


## Simplified Installation

Our guides do not require meticulous mounting precision, unlike high-precision guides. They operate smoothly without specialised jigs or pre-processing.

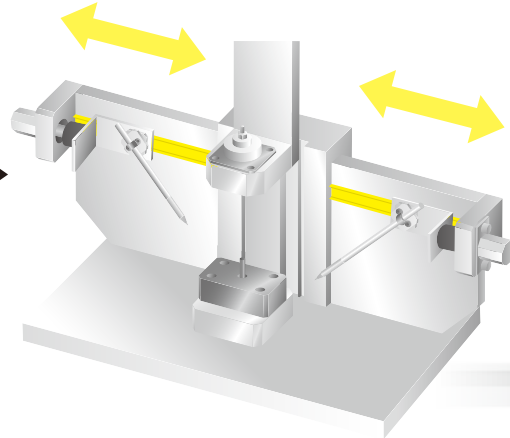


## Application Examples

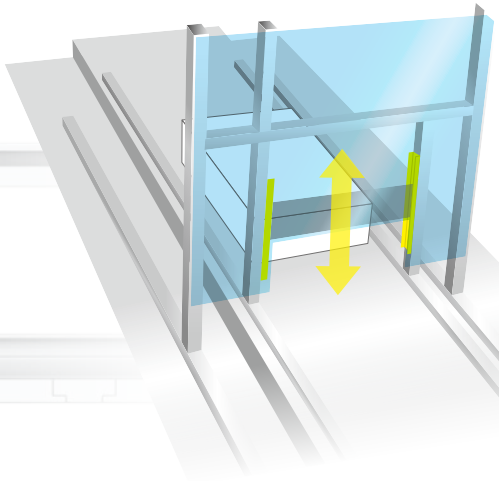


◀ Small workpiece transfer system in assembly equipment.

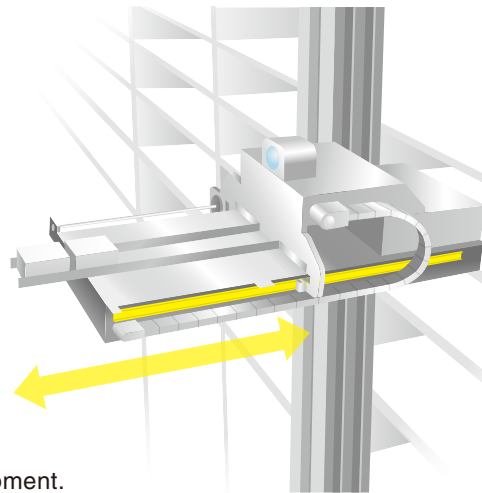
Workpiece marking equipment. ▶



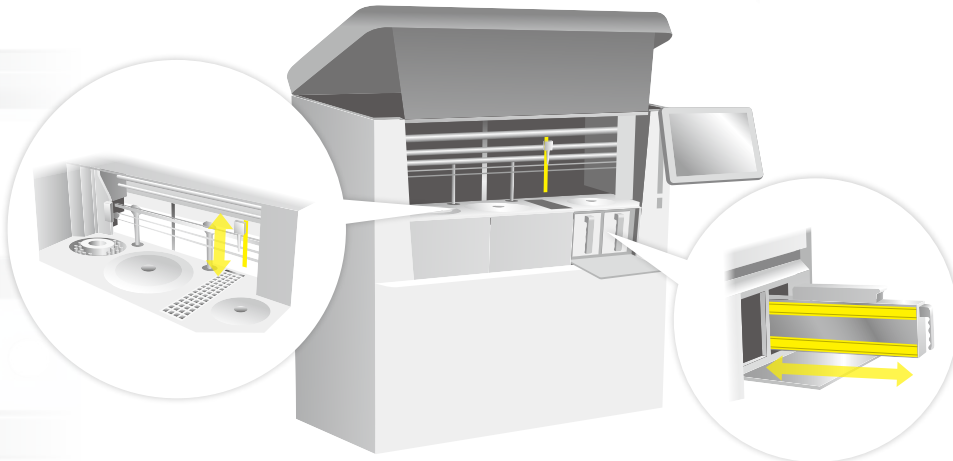
◀ Conveyor line shutter mechanism.



Arm movement in lightweight transfer system. ▶



▼ Vertical pipette movement and cartridge changing units in analysis equipment.

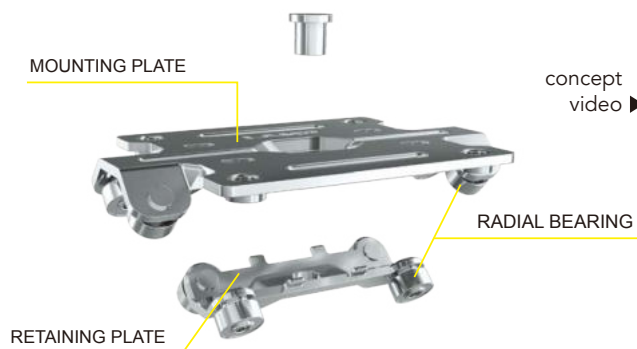
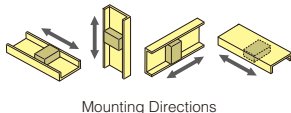


# Diverse Lineup

## MLGX

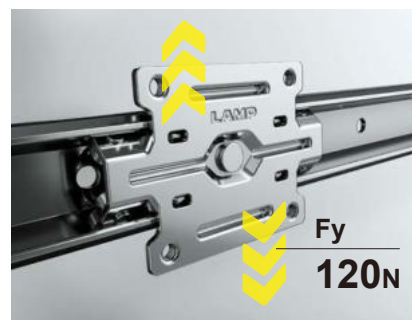
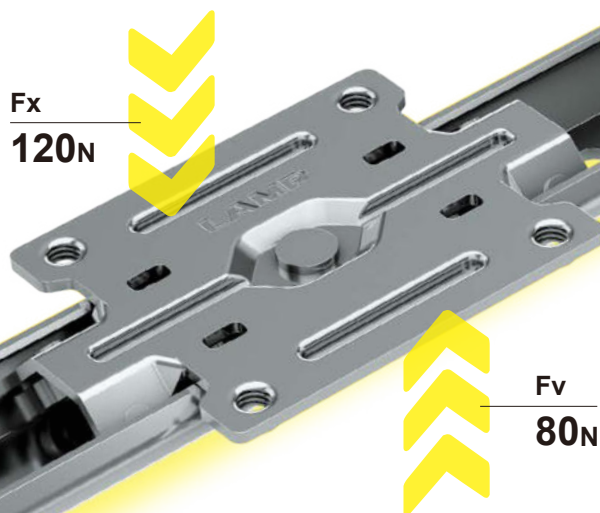
### Multi-Roller Type

- Smooth and stable motion.
- Supports loads in various directions.

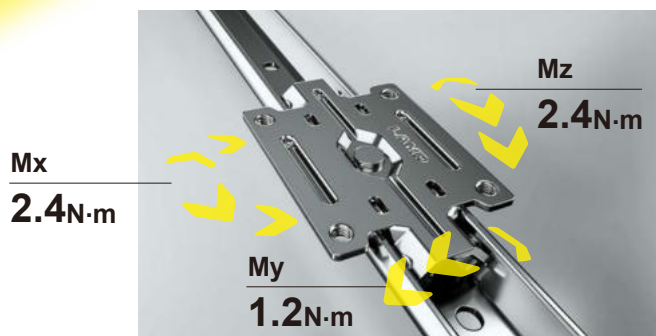


### The DUAL-X structure

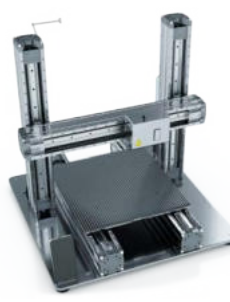
The "Dual X structure" comprises of 2 plates and 8 rollers arranged in an X-shape. This design evenly distributes preload to prevent rattling and ensure smooth movement, regardless of the mounting orientation.



### Supports vertical, horizontal, and diagonal loads



Achieves stable motion even under moment.



Suitable for various applications including automated machines and cutting machines.



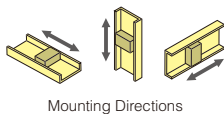


Various models are available, including a silent plastic bearing type and a low-cost greaseless type

## MLG

### Multi-Roller Type

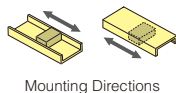
The multi-roller structure supports radial and thrust loads. Slim type and compact type are also available.



## LGB

### Roller Type

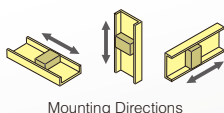
The plastic bearing rollers enable quiet and smooth movement. It is designed with a moderate clearance setting, allowing for easy and hassle-free installation.



## MRS

### Sliding Type (no rollers)

The greaseless rail and plastic guide block allows for simplified installation and labour cost reduction.

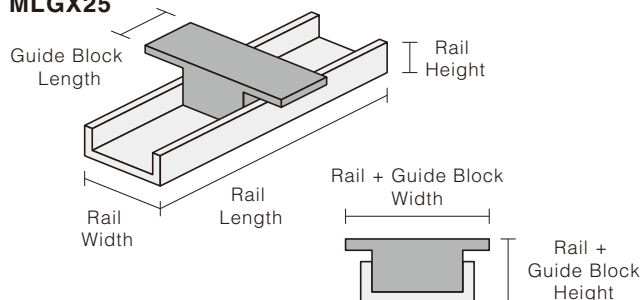


# Product Lineup

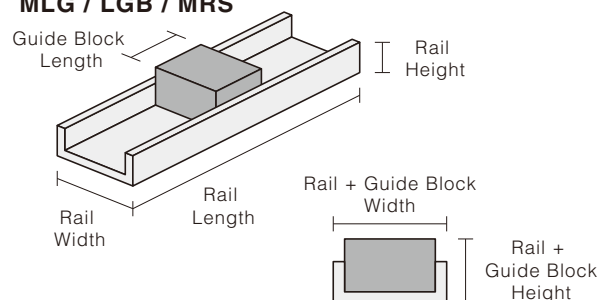
						Rail + Guide Block		Guide Block	
Series	Model	Page	Guide Block No.	Feature	Height mm	Width mm	Length mm	Screw Size	
MLGX Multi-Roller Type	 MLGX25	P.8	MLGX-25C-8	Preloaded	12	42 (Rail:25)	66	M4	
MLG Multi-Roller Type	 MLG20	P.10	MLG-20C	-	10.5	20.2	43	M2.6	
			MLG-20CS	Compact			30	M3	
			MLG-20C-8	8-Wheel Roller			40		
	 MLG13	P.12	MLG-13C	Slim	10.5	13	61	M3	
LGB Roller Type	 LGB30	P.14	LGB-30CM	-	20	30	70	M5	
			LGB-30CB	Bidirectionally Preloaded			72.7		
MRS Sliding Type	 MRS15	P.20	MR-15CS	-	7	15	20	M3	
	 MRS20	P.21	MR-20CS	-	8.2	20	50	M4	
			MR-20CNB	Preloaded					
	 MRS30	P.22	MR-30CS	-	11	30	50	M4	
			MR-30CNB	Preloaded			60		
			MR-30CB	Bidirectionally Preloaded					
	 MRS40	P.25	MR-40CS	-	14	40	70	M5	
			MR-40CNB	Preloaded					

## Dimensions

### MLGX25

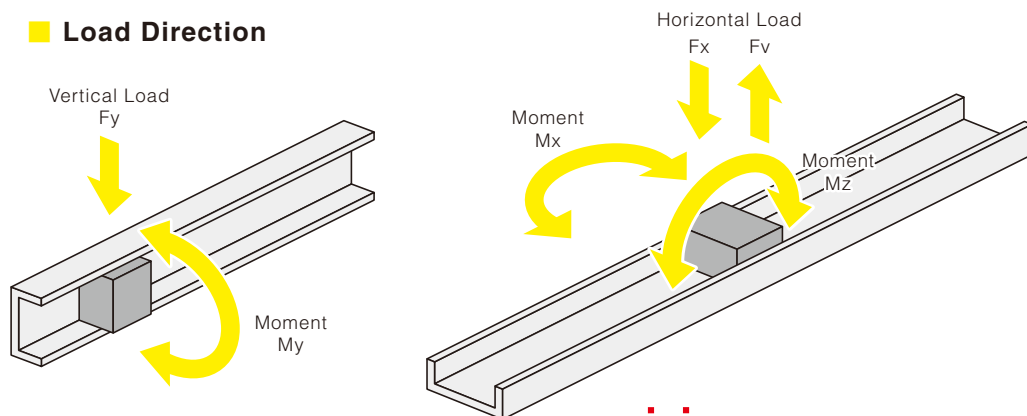


### MLG / LGB / MRS



Rail				Load							Option Part
Length mm	Width mm	Screw Size	Hole Pitch mm	Load Type	Fx	Fy	Fv	Mx	My	Mz	
					(N)			(N・m)			
200~1200	25	M4	50	Operating Load	120	120	80	2.4	1.2	2.4	-
100~2000	20.2	M4	50	Static Rated Load	40	40	-	1.2	0.4	0.8	Mounting Plate
								0.8		0.4	-
					80	80		1.8	0.8	1.2	-
200~1200	13	M4	50		40	40	-	1.0	0.2	1.2	-
400~2000	30	M4	50	Load Capacity	294	-	-	-	-	-	Stopper Mounting Plate
100~1200	15	M3	50	Static Rated Load	100	30	-	-	-	-	Clamp
100~2000	20	M4	50		300	175	-	3	1.5	1.5	Clamp
100~2000	30	M4	40		520	305	-	5	2.5	2.5	Clamp Bracket for Sensor
400~2000	40	M4	50		700	490	-	7	3.5	3.5	-

### ■ Load Direction



MULTI-ROLLER LINEAR GUIDE MLGX25 For Medium Load

Passed a run test of 100 km



Multiple guide blocks can be used in a guide rail.

Video Link



- The unique structure called "Dual X" allows for smooth movement even when the load is applied horizontally or vertically.
- The rail is for medium load, designed to withstand an operating load of up to 120 N in either a horizontal or vertical direction.
- Tested at 200 mm/s for 500,000 round trips of 100 mm (total distance 100 km).
- Since there is no ball creep, it can be used together with a motor drive.
- Moves smoothly even when moment load occurs.
- The guide block is a preloaded type with minimal backlash.

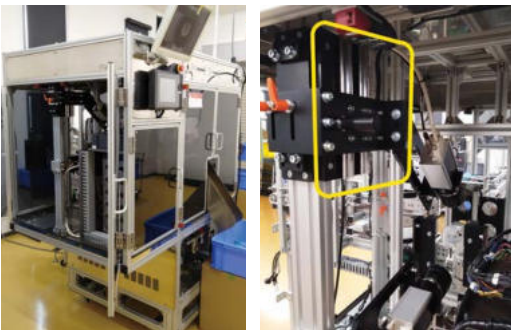
[Application]

- Automatic machine, medical equipment, analytical instrument, machine tool.

[Remarks]

- Please use with stoppers.

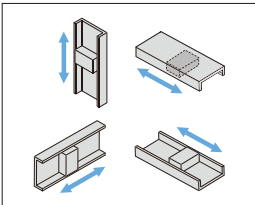
[Application Example]



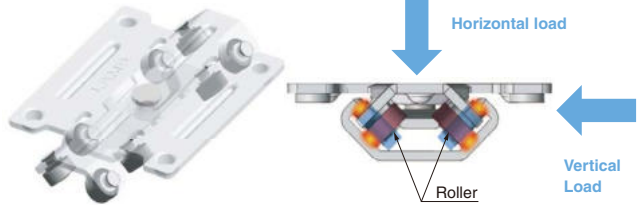
Used for height adjustment of inspection machine's camera.

[Mounting Direction]

Can be mounted in the following directions



[Dual X Structure]



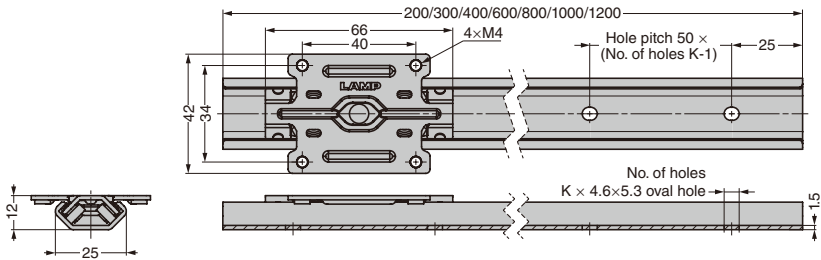
Rollers are located at two different angles to resist both horizontal and vertical loads.

[No Ball Creep]



Ball creep<sup>2</sup> does not occur on roller slides, unlike ball bearing slides.

<sup>2</sup> A phenomenon where travel distances vary between outward and return paths due to a misaligned ball contact point that may occur depending on the smoothness of sliding or applied force when a ball type rail is moved. If extra load is applied in this state, the rail may become unable to move.



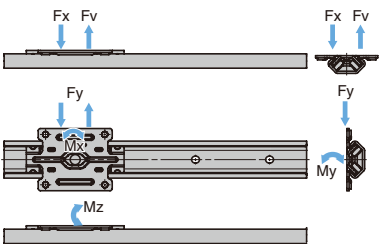
\* The figure shows the dimensions when the guide rail and a guide block are combined.

[Rated Load Reference Values]

Loading Direction	Horizontal Load Fx		Vertical Load Fy		Horizontal Load Fv	
	N	kgf	N	kgf	N	kgf
Max. Load Capacity	200	20.4	200	20.4	130	13.2
Operating Load	120	12.2	120	12.2	80	8.1

Loading Direction	Moment Mx		Moment My		Moment Mz	
	N-m	kgf-cm	N-m	kgf-cm	N-m	kgf-cm
Max. Moment	4.0	40.8	2.0	20.4	4.0	40.8
Operating Moment	2.4	24.4	1.2	12.2	2.4	24.4

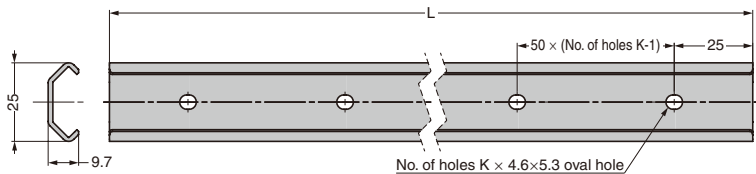




MULTI-ROLLER LINEAR GUIDE RAIL **MLGX25** For Medium Load



- [Other]  
● Grease is applied to the rail. When applying additional grease, use lithium soap grease.
- [Recommended Screw]  
● Hexagon socket bolt M4 (head diameter:  $\phi 7.6$  mm or less, head height: 2.2 mm or less)



RoHS	CAD	Item Code	Item Name	Length (L)	No. of Holes K	Material	Weight (g)	Box (pcs)
●	2C3D	190-047-257	MLGX25-200S	200	4	Stainless Steel (SUS304)	86	1,850
●	2C3D	190-047-258	MLGX25-300S	300	6		130	2,270
●	2C3D	190-047-259	MLGX25-400S	400	8		173	2,680
●	2C3D	190-047-260	MLGX25-600S	600	12		258	3,350
●	2C3D	190-047-261	MLGX25-800S	800	16		344	4,450
●	2C3D	190-047-262	MLGX25-1000S	1000	20		430	5,560
●	2C3D	190-047-263	MLGX25-1200S	1200	24		516	6,700

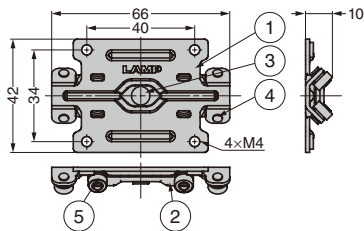
MULTI-ROLLER LINEAR GUIDE BLOCK **MLGX-25C-8** For Medium Load



Front



Back



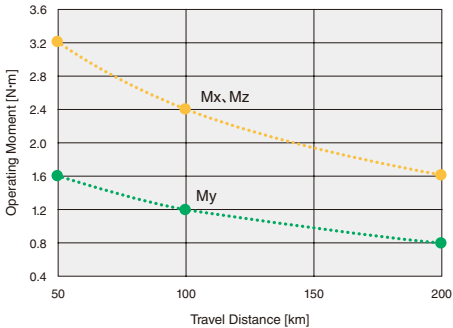
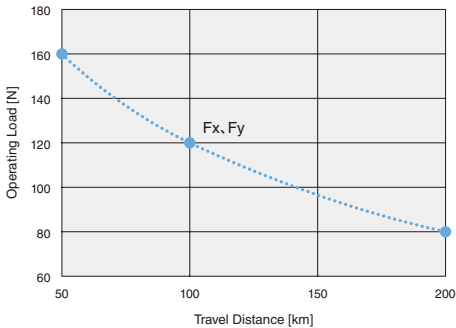
No.	Part Name	Material
①	Mounting Plate	Stainless Steel (SUS430)
②	Holding Plate	
③	Caulking Pin	Stainless Steel (SUS303)
④	Roller Pin	Stainless Steel (SUS XM7)
⑤	Bearing Roller	Steel

- Preloaded type with minimal backlash.

The roller is made of steel. To prevent rusting, it is important not to store this product in an environment with high temperatures and humidity once the package has been opened.

RoHS	CAD	Item Code	Item Name	Weight (g)	Box (pcs)
●	2C3D	190-047-256	MLGX-25C-8	39	3,070

[Operating Load/Moment and Travel Distance (Life) Guidelines] Condition: 200 mm/sec of speed



# MULTI-ROLLER LINEAR GUIDE MLG20 Mini Type

Passed a run test of 60 km



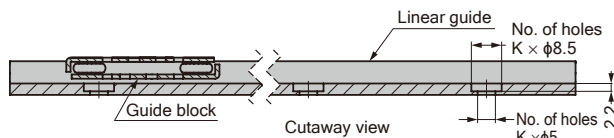
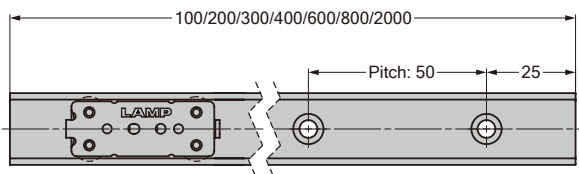
MLG20-200 MLG-20C



MLG20-200 MLG-20CS



MLG20-200 MLG-20C-8



\* The figure shows the dimensions when the linear guide and guide block are combined.

- Allows for smooth movement with the unique mechanism called "multi-roller".
- Tested at 200 mm/s for 300,000 round trips of 100 mm (total distance 60 km).
- Since there is no ball creep, it can be used together with a motor drive.
- A 100 mm type rail is now available.
- A compact guide block is now available. The shortened overall length of the guide block extends the travel distance by an additional 13 mm.
- An 8-wheel guide block is now available. The load rating has been improved while maintaining the same travel distance.

## [Application]

Medical equipment, food machine, amusement machine, analytical instruments.

## [Remarks]

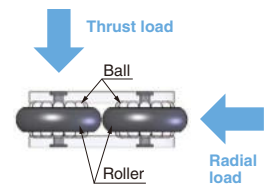
- Please use with stoppers.
- Mounting plates cannot be attached to compact or 8-wheel guide block.

## [The Unique Mechanism]



No ball creep due to roller type mechanism.

Ball creep is a phenomenon where travel distances vary between outward and return paths due to a misaligned ball contact point that may occur on ball type rails because of sliding or applied force. If extra load is applied in this state, the rail may become unable to move.



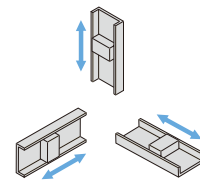
The multi-roller mechanism allows for smooth movement even with loads applied in radial or thrust directions.

Video Link



## [Mounting Directions]

Can be mounted in the following directions



## [Rated Load Reference Values] The rated load refers to the load limit.

### Rated Load Reference Values

- Max. load = Static rated load × Static safety coefficient
- Max. moment = Static rated moment × Static safety coefficient
- Operating load = Max. load × Dynamic safety coefficient
- Operating moment = Max. moment × Static safety coefficient

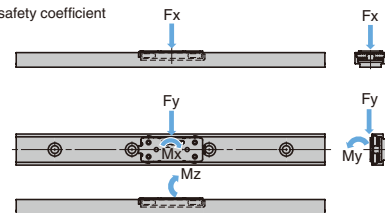
Use Conditions	Static Safety Coefficient		Dynamic Safety Coefficient	
Low movement frequency with gentle movement	0.4 ~ 0.5		0.9 ~ 1.0	
High movement frequency with smooth movement	0.3 ~ 0.4		0.6 ~ 0.8	
High movement frequency with vibration or impact	0.2 ~ 0.3		0.3 ~ 0.5	

Item Name	Horizontal Static Rated Load Fx		Vertical Static Rated Load Fy	
	N	kgf	N	kgf
MLG-20C	40	4.0	40	4.0
MLG-20CS	40	4.0	40	4.0
MLG-20C-8	80	8.1	80	8.1

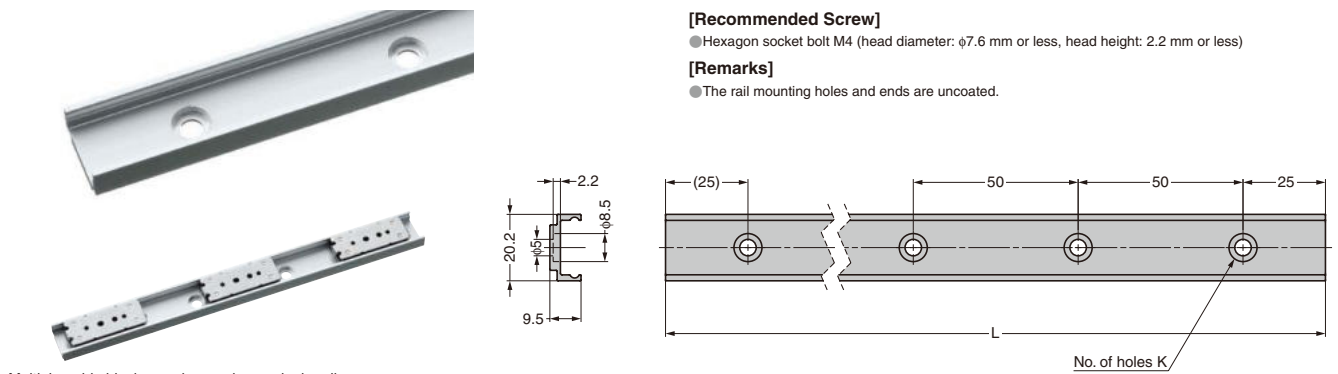
  

Item Name	Vertical Static Rated Moment Mx		Horizontal Static Rated Moment My		Horizontal Static Rated Moment Mz	
	N-m	kgf-cm	N-m	kgf-cm	N-m	kgf-cm
MLG-20C	1.2	12.2	0.4	4.0	0.8	8.1
MLG-20CS	0.8	8.1	0.4	4.0	0.4	4.0
MLG-20C-8	1.8	18.3	0.8	8.1	1.2	12.2



The calculation formula above is for reference purpose only. Please confirm with the actual item before use.

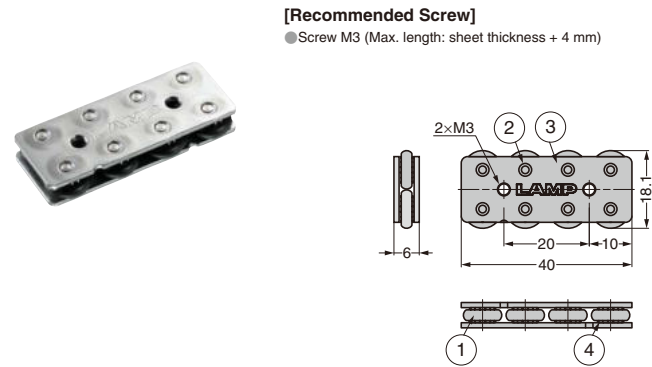
GUIDE RAIL MLG20



Multiple guide blocks can be used on a single rail.

RoHS	CAD	Item Code	Item Name	Length (L)	No. of Holes K	Material	Finish	Weight (g)
●	203D	190-047-272	MLG20-100	100	2	Aluminium Alloy	Silver Anodised	18
●	203D	190-045-763	MLG20-200	200	4			36
●	203D	190-045-764	MLG20-300	300	6			54
●	203D	190-045-765	MLG20-400	400	8			72
●	203D	190-050-438	MLG20-600	600	12			108
●	203D	190-050-439	MLG20-800	800	16			144
●	203D	190-050-440	MLG20-2000	2000	40			359

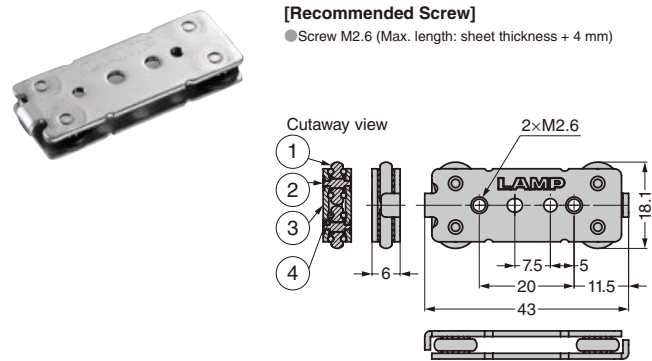
8-WHEEL GUIDE BLOCK MLG-20C-8



No.	Part Name	Material
①	Roller	Polyacetal (POM)
②	Pin	Stainless Steel (SUS303)
③	Plate	Stainless Steel (SUS304)
④	Ball	Steel (SUJ)

RoHS	CAD	Item Code	Item Name	Weight (g)
●	203D	190-054-826	MLG-20C-8	15

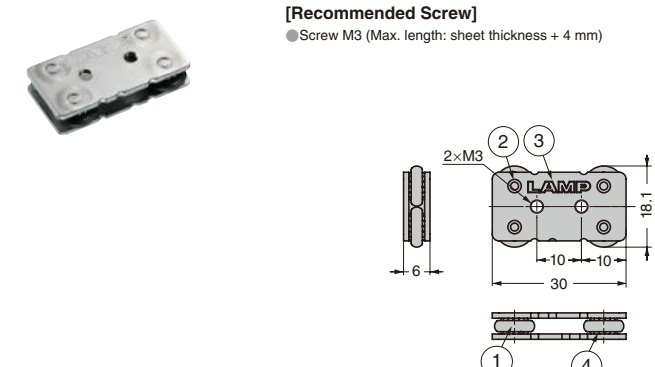
GUIDE BLOCK MLG-20C



No.	Part Name	Material
①	Roller	Polyacetal (POM)
②	Pin	Stainless Steel (SUS303)
③	Plate	Stainless Steel (SUS304)
④	Ball	Steel (SUJ)

RoHS	CAD	Item Code	Item Name	Weight (g)
●	203D	190-045-762	MLG-20C	13

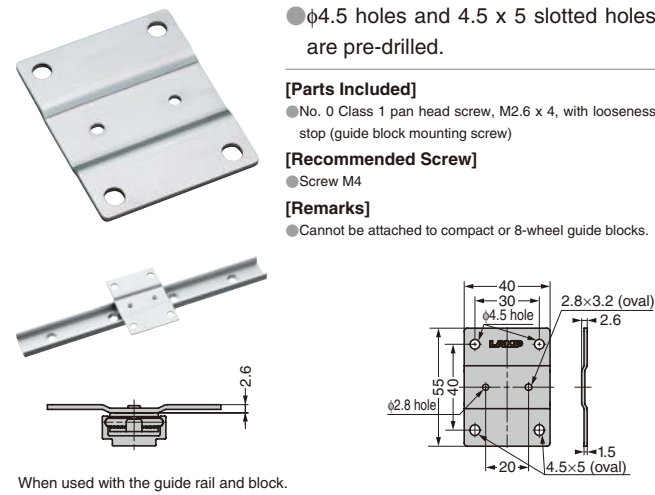
COMPACT GUIDE BLOCK MLG-20CS



No.	Part Name	Material
①	Roller	Polyacetal (POM)
②	Pin	Stainless Steel (SUS303)
③	Plate	Stainless Steel (SUS304)
④	Ball	Steel (SUJ)

RoHS	CAD	Item Code	Item Name	Weight (g)
●	203D	190-047-271	MLG-20CS	11

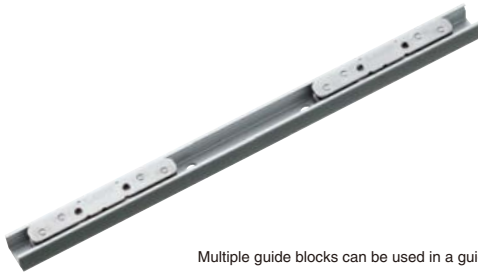
MOUNTING PLATE MLG20-P55-40



RoHS	CAD	Item Code	Item Name	Material	Weight (g)
●	203D	190-045-766	MLG20-P55-40	Stainless Steel (SUS304)	26

MULTI-ROLLER LINEAR GUIDE MLG13 Slim Type

Passed a run test of 60 km



Multiple guide blocks can be used in a guide rail.

- Allows for smooth movement with the unique mechanism called "multi-roller".
- Tested at 200 mm/s for 300,000 round trips of 100 mm (total distance 60 km).
- Since there is no ball creep, it can be used together with a motor drive.
- Slim type with a guide rail width of 13 mm.

[Application]

Medical equipment, food machine, amusement machine, analytical instruments.

[Other]

- Guide rails with a length of up to 2000 mm are available through custom order.

[Remarks]

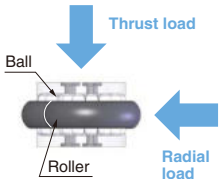
- Please use with stoppers.

[The Unique Mechanism]



No ball creep due to roller type mechanism.

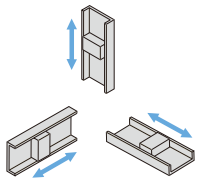
Ball creep is a phenomenon where travel distances vary between outward and return paths due to a misaligned ball contact point that may occur on ball type rails because of sliding or applied force. If extra load is applied in this state, the rail may become unable to move.



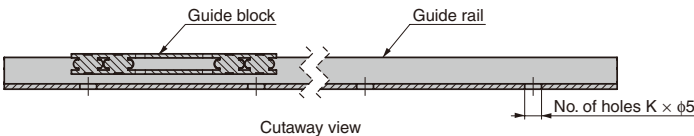
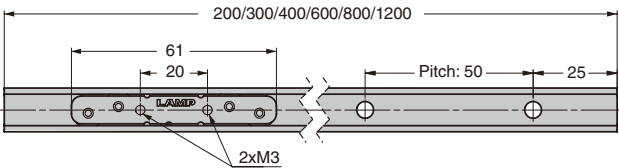
The multi-roller mechanism allows for smooth movement even with loads applied in radial or thrust directions.

[Mounting Directions]

Can be mounted in the following directions



Video Link



[Rated Load Reference Values] The rated load refers to the load limit.

Rated Load Reference Values

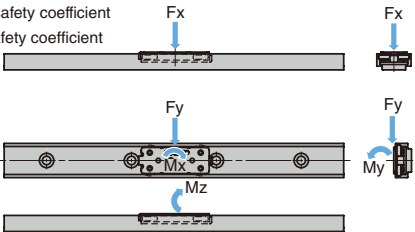
- Max. load = Static rated load × Static safety coefficient
- Max. moment = Static rated moment × Static safety coefficient
- Operating load = Max. load × Dynamic safety coefficient
- Operating moment = Max. moment × Static safety coefficient

Use Conditions	Static Safety Coefficient	Dynamic Safety Coefficient
Low movement frequency with gentle movement	0.4 ~ 0.5	0.9 ~ 1.0
High movement frequency with smooth movement	0.3 ~ 0.4	0.6 ~ 0.8
High movement frequency with vibration or impact	0.2 ~ 0.3	0.3 ~ 0.5

Item Name	Horizontal Static Rated Load Fx		Vertical Static Rated Load Fy	
	N	kgf	N	kgf
MLG-13C	40	4.0	40	4.0

Although the rollers of MLG-13C are installed alternately, the rated load is the same even when it is mounted in reverse.

Item Name	Vertical Static Rated Moment Mx		Horizontal Static Rated Moment My		Horizontal Static Rated Moment Mz	
	N-m	kgf-cm	N-m	kgf-cm	N-m	kgf-cm
MLG-13C	1.0	10.2	0.2	2.0	1.2	12.2

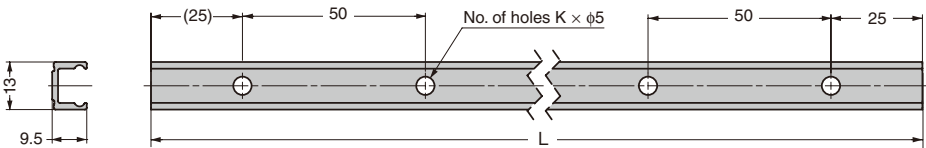


The calculation formula above is for reference purpose only. Please confirm with the actual item before use.

GUIDE RAIL MLG13



- [Recommended Screw]  
●Hexagon socket bolt M4 (head diameter:  $\phi 7.6$  mm or less, head height: 2.2 mm or less)
- [Remarks]  
●The rail mounting holes and ends are uncoated.

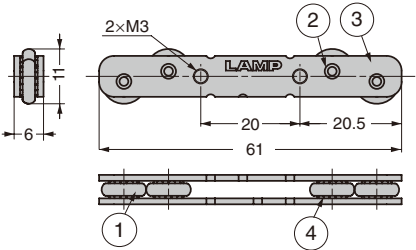


RoHS	CAD	Item Code	Item Name	Length (L)	No. of Holes K	Material	Finish	Weight (g)/Rail	Box (pcs)
●		190-047-265	MLG13-200	200	4	Aluminium Alloy	Silver Anodised	23	760
●		190-047-266	MLG13-300	300	6			34	860
●		190-047-267	MLG13-400	400	8			45	1,000
●		190-047-268	MLG13-600	600	12			68	1,330
●		190-047-269	MLG13-800	800	16			91	1,650
●		190-047-270	MLG13-1200	1200	24			137	2,450

GUIDE BLOCK MLG-13C



- [Recommended Screw]  
●Screw M3 (Max. length: sheet thickness + 4 mm)



No.	Part Name	Material
①	Roller	Polyacetal (POM)
②	Pin	Stainless Steel (SUS303)
③	Plate	Stainless Steel (SUS304)
④	Ball	Steel (SUJ)

RoHS	CAD	Item Code	Item Name	Weight (g)	Box (pcs)
●		190-047-264	MLG-13C	11	1,000



LINEAR ROLLER GUIDE RAIL LGB30



- Bearing roller used in guide block allows for smooth movement.
- The guide block features a noise-reducing bearing roller using a plastic outer ring.
- Clearance between the guide rail and guide block provides versatility.

[Specifications]

- Temperature: 0–40°C

[Applications]

- Vending machine, amusement machine, medical equipment, semiconductor equipment, food processing equipment, and washing machine.

[Remarks]

- The surface of the mounting hole and both ends is not treated.
- Do not use it under the condition that moment load is applied.

[Parts Included]

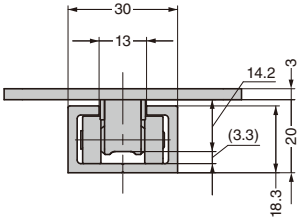
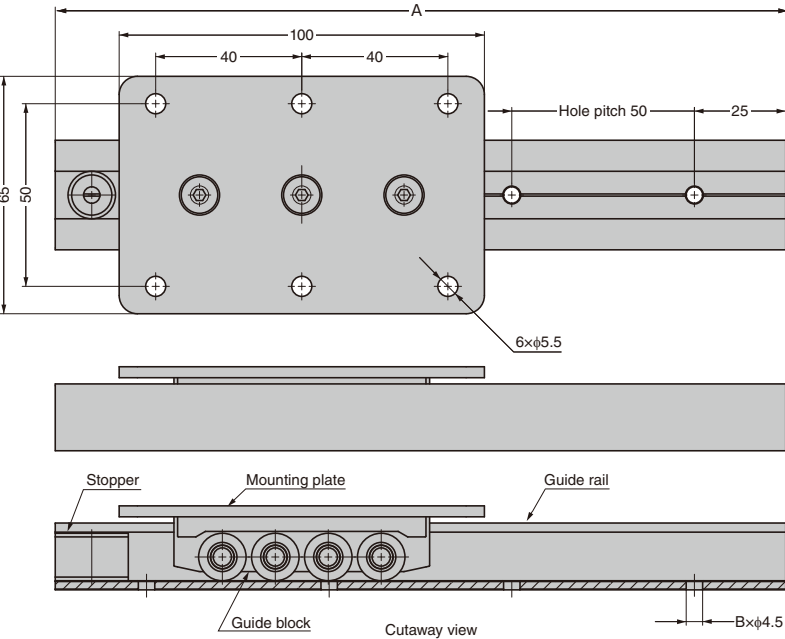
- For plate: Hexagon socket countersunk bolt M5 (stainless steel)

[Recommended Screws]

- For rail: Hexagon socket button head screw M4, cross-recessed binding screw M4, cross-recessed binding tapping screw nominal 4

Combination dimensions of guide rail, guide block, stopper and mounting plate

Combination example: Guide rail LGB30, guide block LGB-30CM 1, stopper LGB30-ST and mounting plate LGB30-P65-100 2

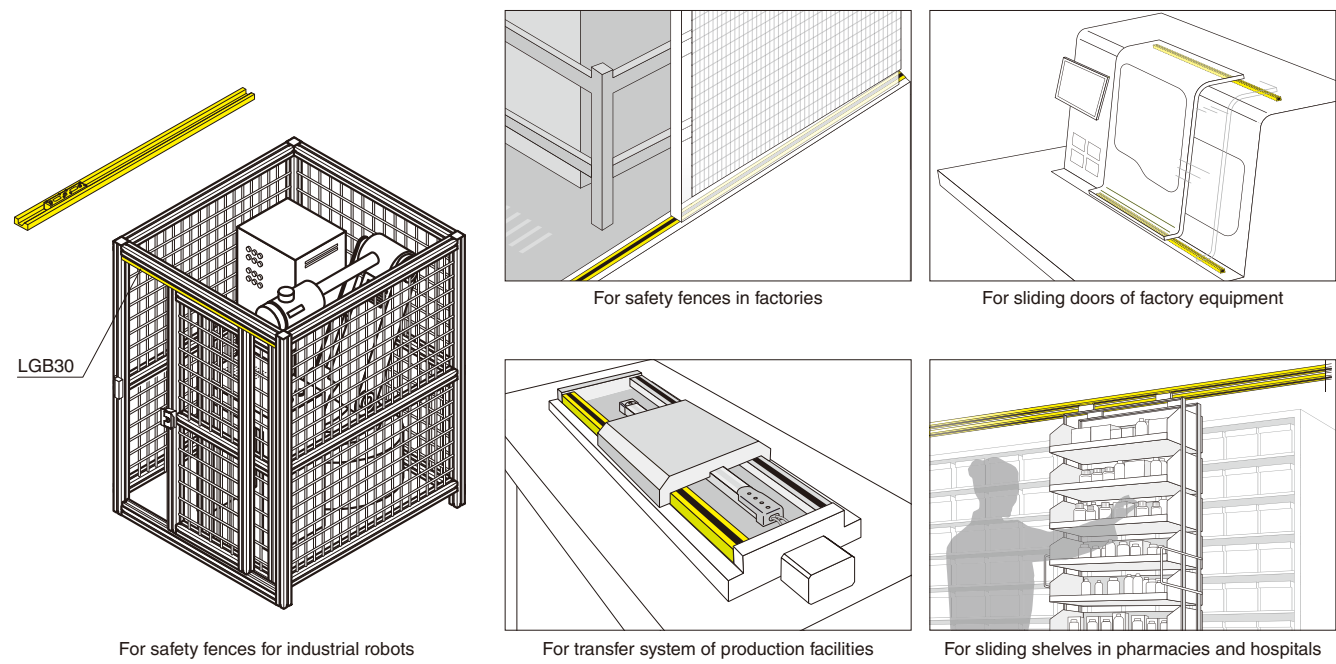


Guide rail

Item Name	Slide Length A	Holes B
LGB30-400	400	8
LGB30-800	800	16
LGB30-2000	2000	40

Refer to 1 : P.16, 2 : P.17

[Application Example]

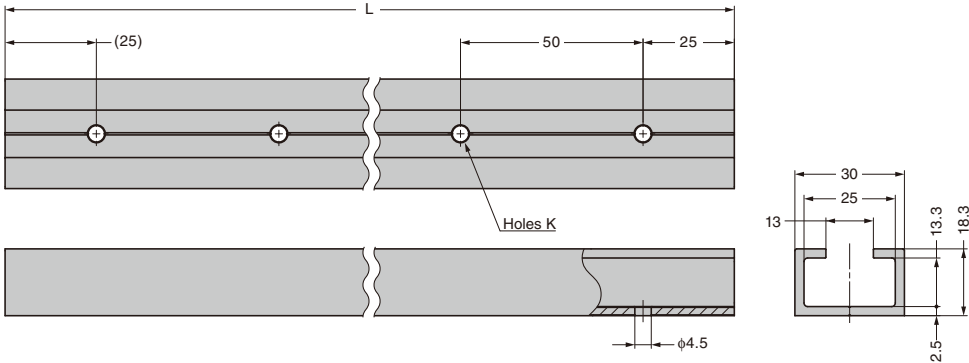


GUIDE RAIL LGB30



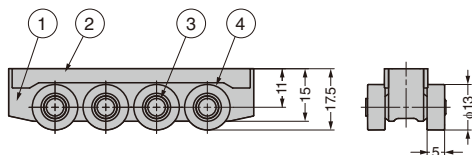
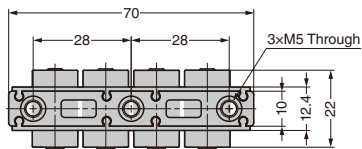
- [Recommended Screws]
- Hexagon socket button head screw M4
  - Binding head screw M4
  - Binding head tapping screw 4

- [Remarks]
- Mounting holes and both ends are not surface treated.
  - Do not use under moment load.



RoHS	CAD	Item Code	Item Name	L	K	Material	Finish	Weight (g/pc)	Box (pcs)	Carton (pcs)
		190-036-273	LGB30-400	400	8	Aluminium Alloy	Anodised Silver	195	50	—
		190-036-274	LGB30-800	800	16			390	25	—
		190-036-275	LGB30-2000	2000	40			875	10	—

GUIDE BLOCK **LGB-30CM** Silent Type

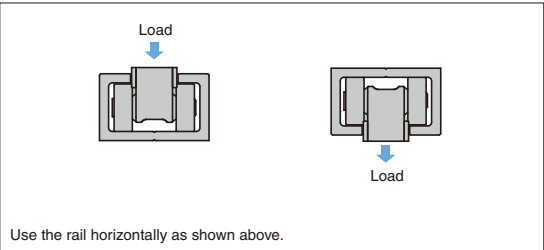


- Bearing roller used in guide block allows for smooth movement.
- Plastic outer ring type bearing roller.
- For guide rail LGB30 only.

[Remarks]

- Do not remove the slide protector.

[Load Direction]

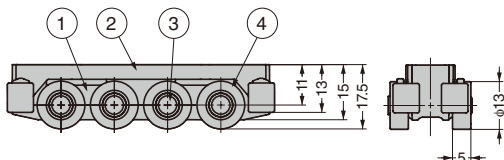
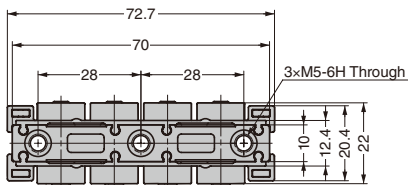


No.	Product Name	Material	Finish / Colour
①	Body	Zinc Alloy (ZDC)	Clear Zinc Chromate (Trivalent)
②	Slide Protector	PE	Black
③	Roller Shaft	Stainless Steel (SUS304)	Plain
④	Roller	Steel/POM	Outer Ring: Black

RoHS	CAD	Item Code	Item Name	Load Capacity N	Load Capacity kgf	Weight (g)	Box (pcs)	Carton (pcs)
		190-036-158	LGB-30CM	Max. 294	Max. 30	76	200	2000

Refer to : P.14

GUIDE BLOCK **LGB-30CB** Silent Type / Bidirectional Preloaded

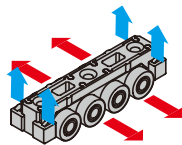
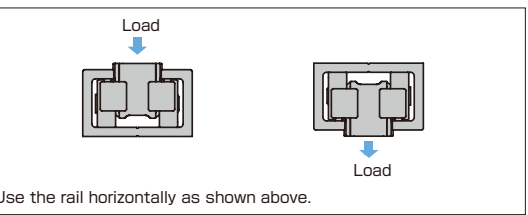


- Preloaded in two directions to significantly reduce the rattling between the guide block and rail.

[Remarks]

- Do not remove the slide protector.
- Not designed to free-stop objects. Do not use it in a vertical or diagonal position.

[Load Direction]

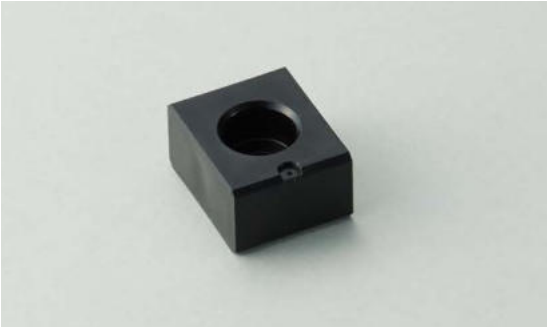


Pre-load direction

No.	Product Name	Material	Finish / Colour
①	Body	Zinc Alloy (ZDC)	Clear Zinc Chromate (Trivalent)
②	Slide Protector	PE	Black
③	Roller Shaft	Stainless Steel (SUS304)	Plain
④	Roller	Steel/POM	Outer Ring: Black

RoHS	CAD	Item Code	Item Name	Load Capacity N	Load Capacity kgf	Weight (g)
		190-054-829	LGB-30CB	294	30	76

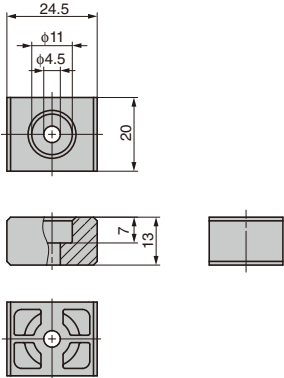
STOPPER LGB30-ST



- Used for preventing guide block LGB-30CM 1 from coming off.
- Install to guide rail LGB30 2 with screws. Mounting screws not included.

[Remarks]

- Do not use for stopping guide block collision.



RefS	CAD	Item Code	Item Name	Material	Colour	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	190-036-127	LGB30-ST	POM	Black	5.6	240	960

Refer to 1 : P.16, 2 : P.14

MOUNTING PLATE LGB30-P65-100

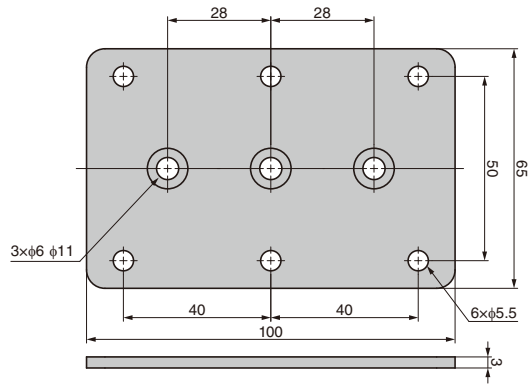


- The mounting plate facilitates attachment when mounting requires additional contact area and mounting holes.
- Install to guide block LGB-30CM 1 with supplied screws.

[Parts Included]

- Hexagon socket countersunk head screw M5x16 3 pcs (SUS)

[Dimensions]



[Installation]

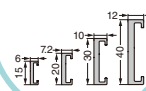


RefS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)	Carton (pcs)
G	3D	190-036-465	LGB30-P65-100	Stainless Steel (SUS304)	Barrel Polished	137	50	—

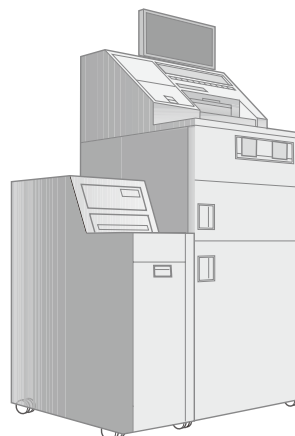
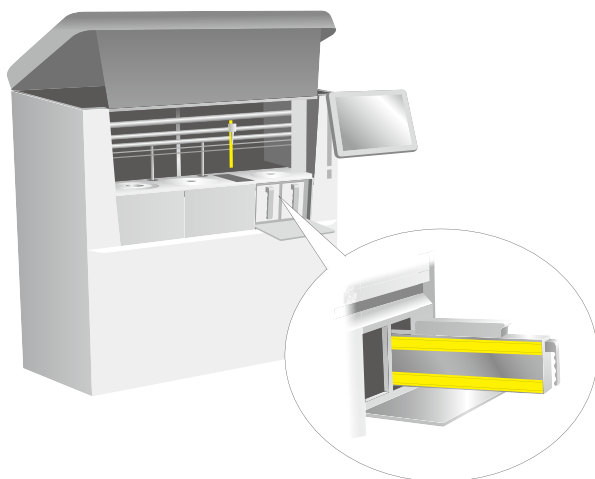
Refer to 1 : P.16

**Simple**

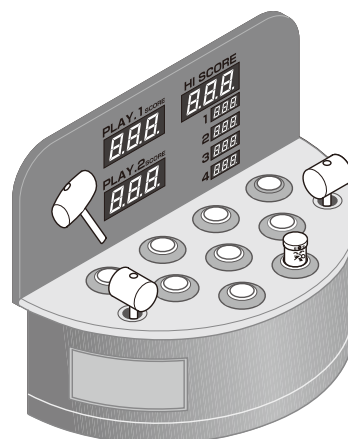
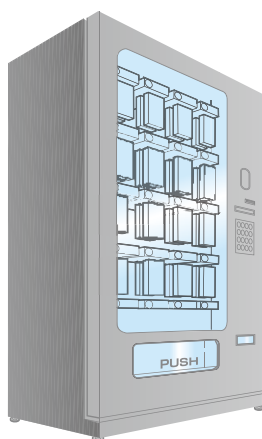
For applications  
not requiring  
high precision.

**Greaseless****Compact**

- Grease or oil not required due to the utilization of a special polyethylene resin with outstanding sliding properties.
- Special polyethylene resin with excellent chemical resistance.
- UL94HB rated flame retardant material.
- Recyclable.
- Preload type carriage with minimal gap is also available (MRS-20, 30, 40 only).

**[Application Example]**

For cartridge drawers on analysis equipment.



For sliding mechanism in vending machines  
and amusement machines



Item Name	Size	Slide Length	Max. Load Capacity Guidelines <sup>※1</sup>	Preload Type	Options		Page
<b>MRS 15</b>		100 ~ 1200	No moment load Approx. 1.2 kg Approx. 0.6 kg with vibration/impact	×	 Clamp (for temporary fixing)	×	P.20
<b>MRS 20</b>		100 ~ 2000	Approx. 5.3 kg Approx. 3.5 kg with vibration/impact	○	 Clamp (for temporary fixing)	×	P.21
<b>MRS 30</b>		100 ~ 2000	Approx. 12.4 kg Approx. 6.2 kg with vibration/impact	○	 Clamp (for temporary fixing)	 Bracket for center <sup>※2</sup>	P.22
<b>MRS 40</b>		400 ~ 2000	Approx. 20 kg Approx. 10k g with vibration/impact	○	×	×	P.25

※1 The max. load capacity guidelines, which apply to the rated load below, are values found by multiplying the vertical static rated load and the static safety coefficient.

※2 The picture shows a horizontal mount type. A vertical mount type is also available.

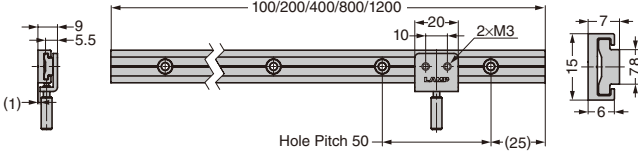
[Rated Load Guidelines] The rated load indicates the limit load.						
● Max. load=static rated load x static safety coefficient			● Max. moment load=static rated moment load x static safety coefficient			
● Operating load=max. load x dynamic safety coefficient			● Operating moment load=max. moment load x dynamic safety coefficient			
Usage Conditions		Static Safety Coefficient		Dynamic Safety Coefficient		
Low movement frequency with gentle movement		0.4 ~ 0.5		0.9 ~ 1.0		
High movement frequency with smooth movement		0.3 ~ 0.4		0.6 ~ 0.8		
High movement frequency with vibration or impact		0.2 ~ 0.3		0.3 ~ 0.5		
Item Name	Horizontal static rated load Fx		Vertical static rated load Fy		Vertical static rated moment load Mx	
	N	kgf	N	kgf	N-m	kgf-cm
MR-15CS	100	10.2	30	3.0	-	-
MR-20CS	300	30.6	175	17.8	3	30.6
MR-30CS	520	53.0	305	31.1	5	51.0
MR-40CS	700	71.4	490	50.0	7	71.4
Item Name	Horizontal static rated moment load My		Horizontal static rated moment load Mz			
	N-m	kgf-cm	N-m	kgf-cm		
MR-15CS	-	-	-	-		
MR-20CS	1.5	15.3	1.5	15.3		
MR-30CS	2.5	25.5	2.5	25.5		
MR-40CS	3.5	35.7	3.5	35.7		

The above formulae are guidelines.  
Confirm with the actual product for use.  
Use MR-15CS so that moment load is not applied.

# MINI GUIDE RAIL MRS15



Combination Dimensions for Guide Rail, Carriage, & Clamp



- Grease or oil not required due to the utilization of a special polyethylene resin with outstanding sliding properties.
- Special polyethylene resin with excellent chemical resistance.
- UL94HB rated flame retardant material.
- Recyclable.

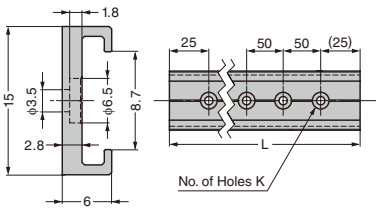
### [Recommended Mounting Screws]

- (Rail) M3 hexagon socket button head screw or M3 pan head machine screw

### [Remarks]

- Refer to the Rated Load Guidelines 1 to prevent moment from being applied.
- The rail mounting holes and ends are plain.

## [MINI GUIDE RAIL MRS15]



RoHS	CAD	Item Code	Item Name	L	No. of Holes K	Material	Finish	Weight (g)
		190-027-331	MRS15-100	100	2	Aluminium Alloy	Silver Anodised	14.5
		190-027-332	MRS15-200	200	4			29
		190-027-333	MRS15-400	400	8			58
		190-027-334	MRS15-800	800	16			117
		190-046-490	MRS15-1200	1200	24			174

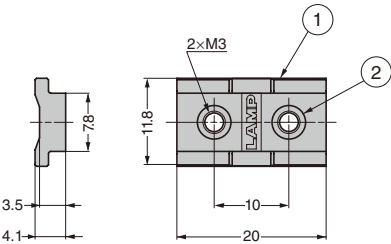
## [MINI GUIDE CARRIAGE MR-15CS]



### [Specifications]

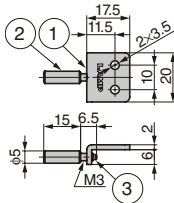
- Operating temperature: 0° C ~ 40° C

RoHS	CAD	Item Code	Item Name	Weight (g)
		190-027-335	MR-15CS	1



No.	Material	Finish/Colour
①	Special Polyethylene	High Sliding Grade/Grey
②	Stainless Steel (SUS304)	Plain

## [MINI GUIDE CLAMP MR-15CLP]



- Tighten the knob to the rail for simple fixing.
- Mount to the carriage with screws.

### [Remarks]

- If external force exceeding the retaining force (reference value) is applied, the retaining position may deviate.
- If the knob tightening torque is exceeded, the knob tip may be damaged.
- Mounting screws are to be supplied by the customer.

No.	Part Name	Material	Finish/Colour
①	Plate	Stainless Steel (SUS304)	Barrel Polished
②	Knob Body	Stainless Steel (SUS303)	Plain
③	Knob Tip	Polyacetal (POM)	Black

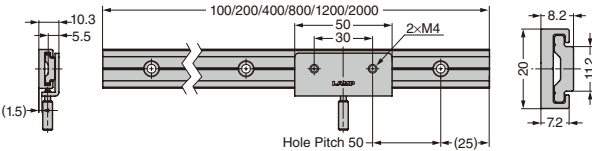
RoHS	CAD	Item Code	Item Name	Retaining Force N (reference value)	Knob Tightening Torque N-m	Weight (g)
		190-035-310	MR-15CLP	7 or below	0.05 or below	8.6

Refer to 1 : P.19

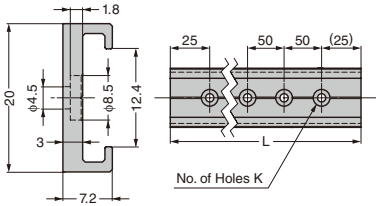
MINI GUIDE RAIL MRS20



Combination Dimensions for Guide Rail, Carriage, & Clamp

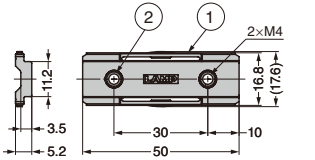


[MINI GUIDE RAIL MRS20]



RoHS	CAD	Item Code	Item Name	L	No. of Holes K	Material	Finish	Weight (g)
	3D	190-111-491	MRS20-100	100	2	Aluminium Alloy	Silver Anodised	20
	3D	190-111-492	MRS20-200	200	4			40
	3D	190-111-493	MRS20-400	400	8			80
	3D	190-111-494	MRS20-800	800	16			160
	3D	190-046-491	MRS20-1200	1200	24			240
	3D	190-111-495	MRS20-2000	2000	40			400

[MINI GUIDE CARRIAGE MR-20CNB Preload Type]

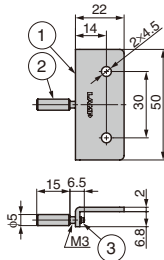


[Specifications]  
● Operating temperature: 0°C ~ 40°C

No.	Material	Finish/Colour
①	Special Polyethylene	High Sliding Grade/Grey
②	Stainless Steel (SUS304)	Plain

RoHS	CAD	Item Code	Item Name	Weight (g)
	3D	190-037-638	MR-20CNB	5

[MINI GUIDE CLAMP MR-20CLP]



RoHS	CAD	Item Code	Item Name	Retaining Force N (reference value)	Knob Tightening Torque N·m	Weight (g)
	3D	190-035-311	MR-20CLP	7 or below	0.05 or below	22.6

- Grease or oil not required due to the utilization of a special polyethylene resin with outstanding sliding properties.
- Special polyethylene resin with excellent chemical resistance.
- UL94HB rated flame retardant material.
- Preload type carriage with minimal gap is also available.
- Recyclable.

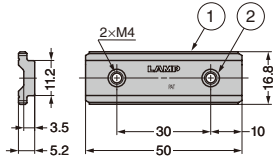
[Recommended Mounting Bolts]

- (Rail) M4 hexagon socket button head screws

[Remarks]

- When combined with a clamp, use under moment load is not possible.
- The rail mounting holes and ends are plain.
- The preload type carriage does not fix the slider. Do not use the MINI GUIDE RAIL in a vertical or diagonal position, as it will lead to danger when the slider falls.

[MINI GUIDE CARRIAGE MR-20CS]



[Specifications]  
● Operating temperature: 0°C ~ 40°C

[Remarks]  
● The carriage unit working force changes depending on the operating temperature.

No.	Material	Finish/Colour
①	Special Polyethylene	High Sliding Grade/Grey
②	Stainless Steel (SUS304)	Plain

RoHS	CAD	Item Code	Item Name	Weight (g)
	3D	190-111-496	MR-20CS	6

- Tighten the knob to the rail for simple fixing.
- Mount to the carriage with screws.

[Remarks]

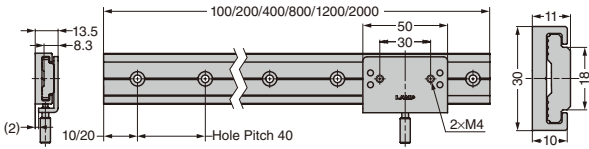
- If external force exceeding the retaining force (reference value) is applied, the retaining position may deviate.
- If the knob tightening torque is exceeded, the knob tip may be damaged.
- Mounting screws are to be supplied by the customer.

No.	Part Name	Material	Finish/Colour
①	Plate	Stainless Steel (SUS304)	Barrel Polished
②	Knob Body	Stainless Steel (SUS303)	Plain
③	Knob Tip	Polyacetal (POM)	Black

MINI GUIDE RAIL MRS30



Combination Dimensions for Guide Rail, Carriage, & Clamp



- Grease or oil not required due to the utilization of a special polyethylene resin with outstanding sliding properties.
- Special polyethylene resin with excellent chemical resistance.
- UL94HB rated flame retardant material.
- Preload type carriage with minimal gap is also available.
- Recyclable.

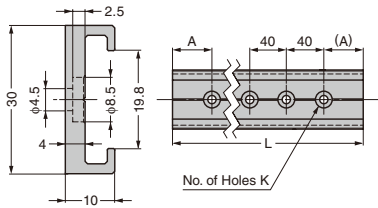
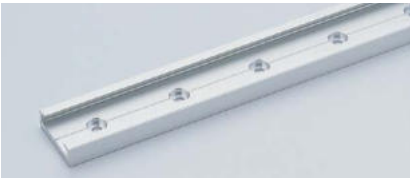
[Recommended Mounting Bolts]

- (Rail) M4 hexagon socket button head screws

[Remarks]

- When combined with a clamp, use under moment load is not possible.
- The rail mounting holes and ends are plain.
- The preload type carriage does not fix the slider. Do not use the MINI GUIDE RAIL in a vertical or diagonal position, as it will lead to danger when the slider falls.

[MINI GUIDE RAIL MRS30]



RoHS	CAD	Item Code	Item Name	L	A	No. of Holes K	Material	Finish	Weight (g)
		190-112-860	MRS30-100	100	10	3	Aluminium Alloy	Silver Anodised	39
		190-112-861	MRS30-200	200	20	5			79
		190-112-862	MRS30-400	400		10			159
		190-112-863	MRS30-800	800		20			312
		190-046-492	MRS30-1200	1200		30			468
		190-112-864	MRS30-2000	2000		50			790

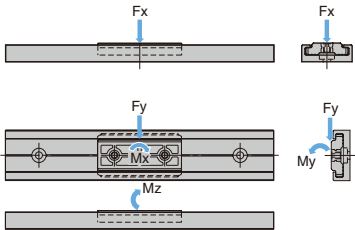
[Rated Load Guidelines] The rated load indicates the limit load.

- Max. load=static rated load x static safety coefficient
- Max. moment load=static rated moment load x static safety coefficient
- Operating load=max. load x dynamic safety coefficient
- Operating moment load=max. moment load x dynamic safety coefficient

Usage Conditions		Static Safety Coefficient		Dynamic Safety Coefficient	
Low movement frequency with gentle movement		0.4 ~ 0.5		0.9 ~ 1.0	
High movement frequency with smooth movement		0.3 ~ 0.4		0.6 ~ 0.8	
High movement frequency with vibration or impact		0.2 ~ 0.3		0.3 ~ 0.5	

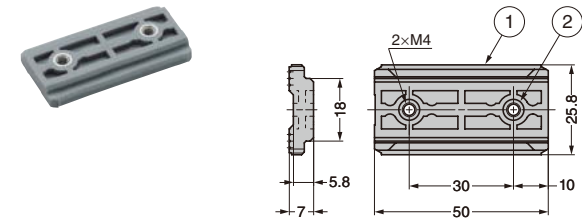
Item Name	Horizontal static rated load Fx		Vertical static rated load Fy		Vertical static rated moment load Mx	
	N	kgf	N	kgf	N-m	kgf-cm
MR-15CS	100	10.2	30	3.0	-	-
MR-20CS	300	30.6	175	17.8	3	30.6
MR-30CS	520	53.0	305	31.1	5	51.0
MR-40CS	700	71.4	490	50.0	7	71.4

Item Name	Horizontal static rated moment load My		Horizontal static rated moment load Mz	
	N-m	kgf-cm	N-m	kgf-cm
MR-15CS	-	-	-	-
MR-20CS	1.5	15.3	1.5	15.3
MR-30CS	2.5	25.5	2.5	25.5
MR-40CS	3.5	35.7	3.5	35.7



The above formulae are guidelines.  
Confirm with the actual product for use.  
Use MR-15CS so that moment load is not applied.

[MINI GUIDE BLOCK MR-30CS]



RoHS	CAD	Item Code	Item Name	Weight (g)
		190-111-489	MR-30CS	7

- A guide block without preload.

[Specifications]

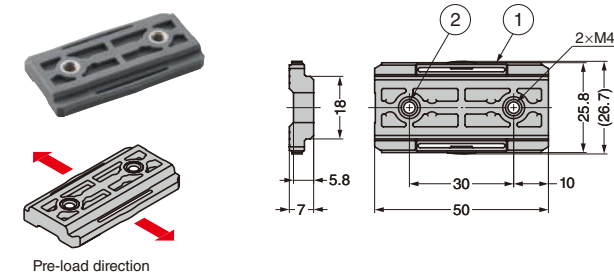
- Operating temperature: 0°C ~ 40°C

[Remarks]

- The carriage unit working force changes depending on the operating temperature.

No.	Material	Finish/Colour
①	Special Polyethylene	High Sliding Grade/Grey
②	Stainless Steel (SUS304)	Plain

[MINI GUIDE BLOCK MR-30CNB Preloaded Type]



RoHS	CAD	Item Code	Item Name	Weight (g)
		190-037-639	MR-30CNB	7

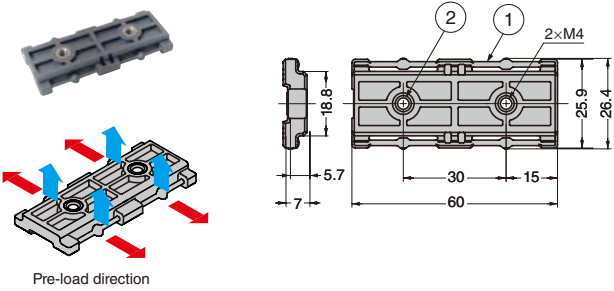
- Preloaded to reduce the rattling between the guide block and rail.

[Specifications]

- Operating temperature: 0°C ~ 40°C

No.	Material	Finish/Colour
①	Special Polyethylene	High Sliding Grade/Grey
②	Stainless Steel (SUS304)	Plain

[MINI GUIDE BLOCK MR-30CB Bidirectional Preloaded Type]



RoHS	CAD	Item Code	Item Name	Weight (g)
		190-048-938	MR-30CB	7

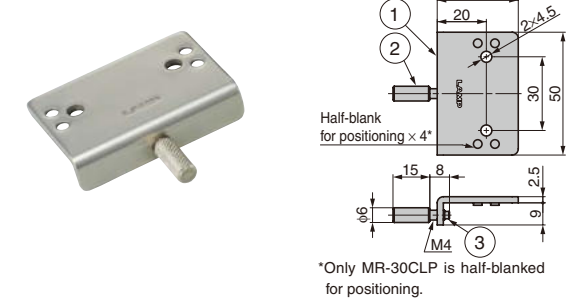
- Preloaded in two directions to significantly reduce the rattling between the guide block and rail.

[Specifications]

- Operating temperature: 0 °C to 40 °C

No.	Material	Finish/Colour
①	Special Polyethylene	High Sliding Grade/Grey
②	Stainless Steel (SUS304)	Plain

[MINI GUIDE CLAMP MR-30CLP]



RoHS	CAD	Item Code	Item Name	Retaining Force N (reference value)	Knob Tightening Torque N·m	Weight (g)
		190-035-312	MR-30CLP	14 or below	0.1 or below	40.8

- Tighten the knob to the rail for simple fixing.
- Mount to the guide block with screws.

[Remarks]

- If external force exceeding the retaining force (reference value) is applied, the retaining position may deviate.
- If the knob tightening torque is exceeded, the knob tip may be damaged.
- Mounting screws are to be supplied by the customer.

No.	Part Name	Material	Finish/Colour
①	Plate	Stainless Steel (SUS304)	Barrel Polished
②	Knob Body	Stainless Steel (SUS303)	Plain
③	Knob Tip	Polyacetal (POM)	Black



BRACKET FOR SENSOR MR-30BKT



Horizontal Mount Type

Vertical Mount Type

- Mounts photoelectric sensors on the guide block (MRS-30).
- Compatible with sensors which have hole interval of 25.4 mm.
- Height and angle of photoelectric sensors are adjustable.

[Application]

- Production line, test equipment

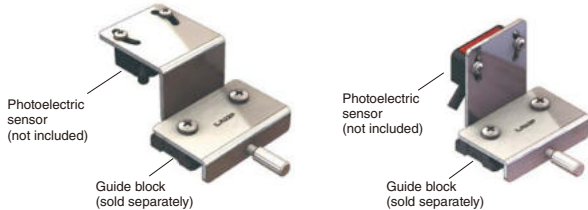
[Remarks]

- Fixing position may shift when an external force more than the retaining force (reference value) is applied.
- Knob tip may be damaged when the knob tightening torque is exceeded.

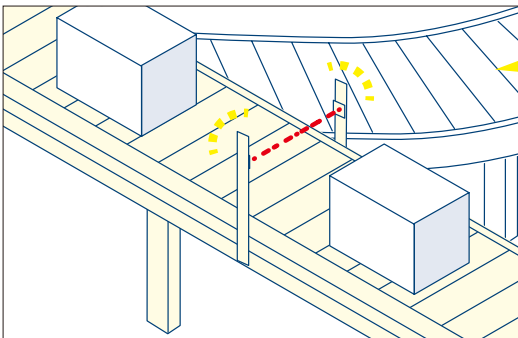
[Included Parts]

- Pre-assembled cross-recessed pan head screw (p=4) stainless steel M3 x 12 (for photoelectric sensor)
- Cross-recessed pan head screw stainless steel M4 x 8 (for guide block)

[With a Photoelectric Sensor]



[Application]



Easy Position Adjustments

[Height]



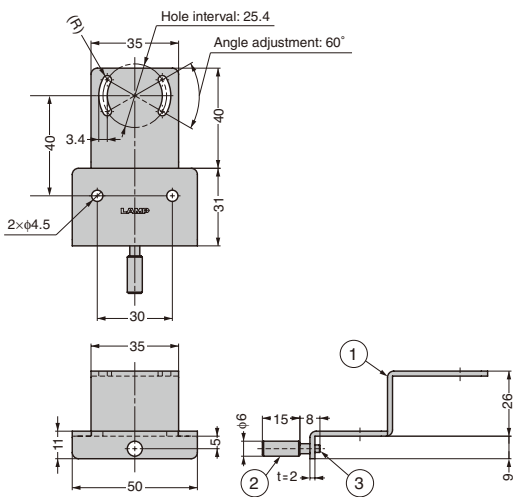
Turn the knob to adjust the height of the photoelectric sensor.

[Angle]

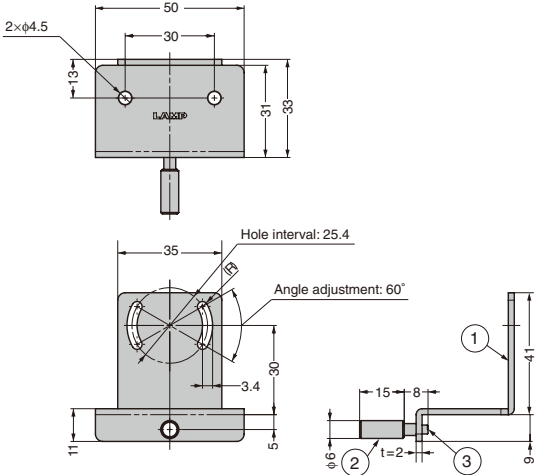


Turn the screws to adjust the angle of the photoelectric sensor.

[Horizontal Mount Type]



[Vertical Mount Type]



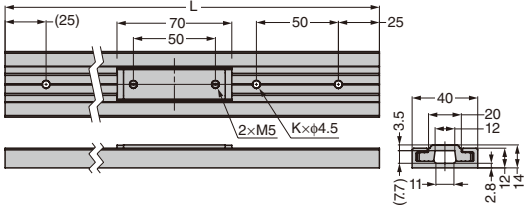
RoHS	CAD	Item Code	Item Name	Mount Type	Retaining Force N (reference)	Knob Tightening Torque N	Weight (g)
		190-048-569	MR-30BKT-PH	Horizontal	14 and under	0.1 and under	60
		190-048-568	MR-30BKT-PV	Vertical			50

No.	Part Name	Material	Finish/Colour
①	Plate	Stainless Steel	Barrel Polished
②	Knob Body	(SUS304)	Plain
③	Knob Tip	POM	Black

MINI GUIDE RAIL MRS40



Combination Dimensions for Guide Rail & Carriage



- Grease or oil not required due to the utilization of a special polyethylene resin with outstanding sliding properties.
- Special polyethylene resin with excellent chemical resistance.
- UL94HB rated flame retardant material.
- Preload type carriage with minimal gap is also available.
- Recyclable.

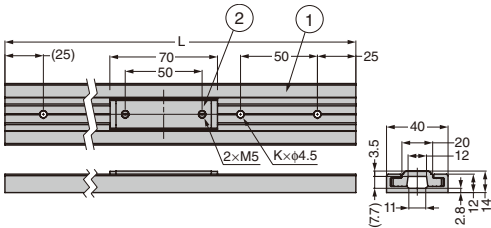
[Recommended Mounting Screws]

- (Rail) M4 hexagon socket button head screw, M4 hexagon socket low head bolt, or M4 binding machine screw

[Remarks]

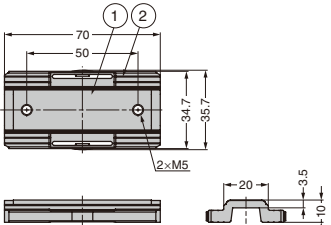
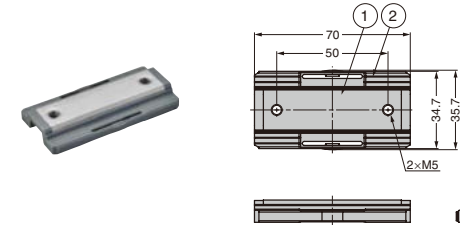
- The rail mounting holes and ends are plain.
- The preload type carriage does not fix the slider. Do not use the MINI GUIDE RAIL in a vertical or diagonal position, as it will lead to danger when the slider falls.
- The carriage unit working force changes depending on the operating temperature.

[MINI GUIDE RAIL MRS40]



RoHS	CAD	Item Code	Item Name	L	No. of Holes K	Material	Finish	Weight (g)
		190-037-686	MRS40-400	400	8	Aluminium Alloy	Silver Anodised	236
		190-037-687	MRS40-800	800	16			472
		190-043-711	MRS40-1200	1200	24			708
		190-037-688	MRS40-2000	2000	40			1180

[MINI GUIDE CARRIAGE MR-40CNB Preload Type]



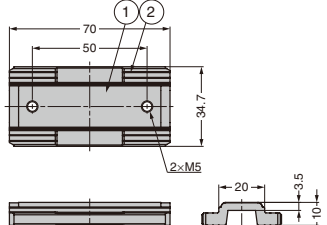
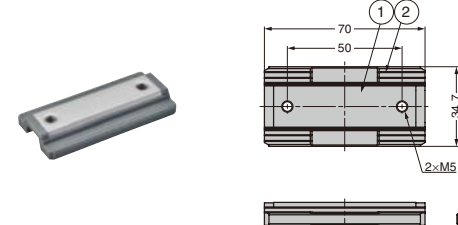
[Specifications]

- Operating temperature: 0°C ~ 40°C

No.	Material	Finish/Colour
①	Stainless Steel (SUS304)	Barrel Polished
②	Special Polyethylene	High Sliding Grade/Grey

RoHS	CAD	Item Code	Item Name	Weight (g)
		190-041-093	MR-40CNB	40

[MINI GUIDE CARRIAGE MR-40CS]



[Specifications]

- Operating temperature: 0°C ~ 40°C

No.	Material	Finish/Colour
①	Stainless Steel (SUS304)	Barrel Polished
②	Special Polyethylene	High Sliding Grade/Grey

RoHS	CAD	Item Code	Item Name	Weight (g)
		190-041-092	MR-40CS	41

# Our Wide Variety of Slides

In addition to the products in this catalog,  
we also offer a wide variety of other slides  
including compact and heavy-duty options.

Please see the general catalogue (No.400)  
for the full range of our slides.



No.400  
Online Catalogue






# Mini Slide Series

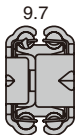

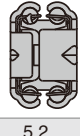


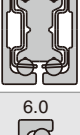


Slides with ultra-compact construction,  
just 15.5mm in height. Perfect for small drawers and  
transfer systems.



## Linear Guides

Size		Load Capacity N										Main Material	Item Name	Page in Catalogue No.400	
		🔧🔧 Vertical Use (pair)					🔧🔧 Horizontal Use (pair)								
		100	150	200	250	300	100	150	200	250	300				
15.5	5.2	177~235											Stainless Steel	SCRL2	P.565
															
15.5	5.2	177~235											Stainless Steel	SCRL2-15S	P.565
															
16.0	6.0	20/49					8/18						Aluminium Alloy	ARL2-16	P.562
															

## Drawer Slide

Size	Length	Load Capacity N/pair					Main Material	Feature	Item Name	Page in Catalogue No.400
		100	150	200	250	300				
15.5 9.7 	80 ~ 150	98~118					Steel		SCR3	P.563
15.5 5.2 	80 ~ 150	137~177					Steel		SCRW2	P.564
15.5 9.7 	80 ~ 150	98~118					Stainless Steel		SCR3-15S	P.563
15.5 5.2 	80 ~ 150	137~177					Stainless Steel		SCRW2-15S	P.564
16.0 11.0 	80 ~ 150	20~39					Aluminium Alloy		AR3-16	P.561
16.0 6.0 	70 ~ 150	11~69					Aluminium Alloy		ARW2-16	P.562



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