

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.



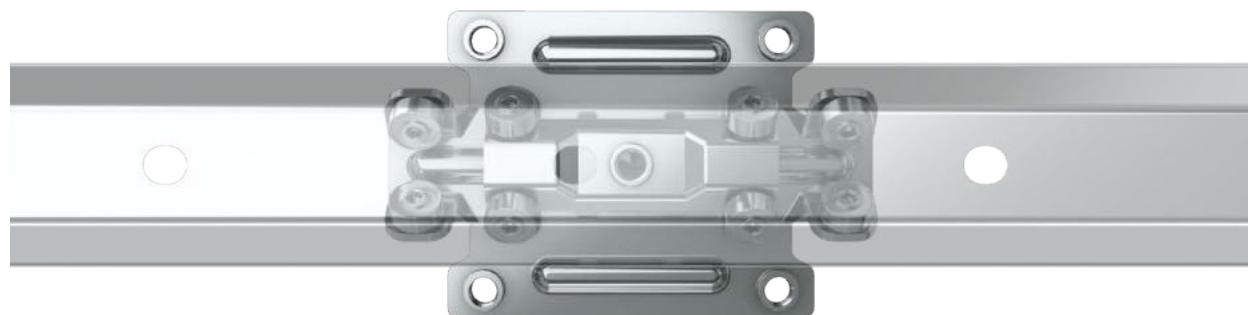
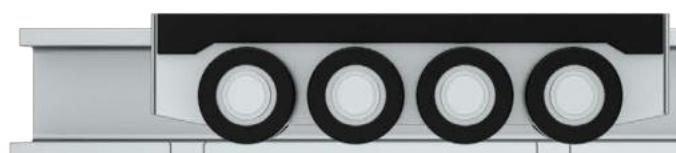
Wide Variety

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

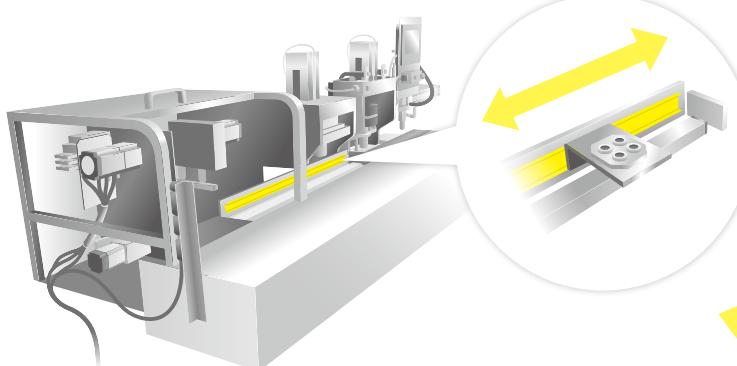


Simplified Installation

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

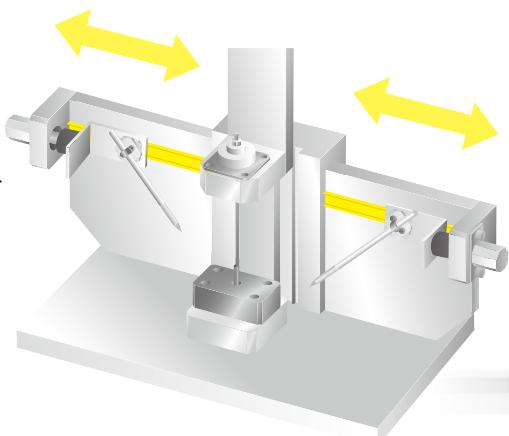


Application Examples

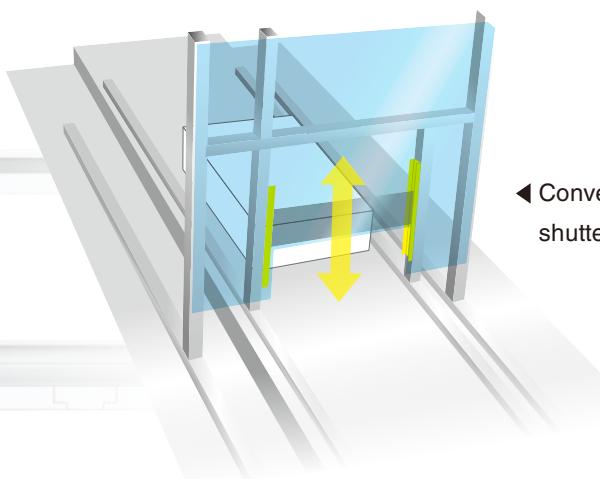


◀ Small workpiece transfer system in assembly equipment.

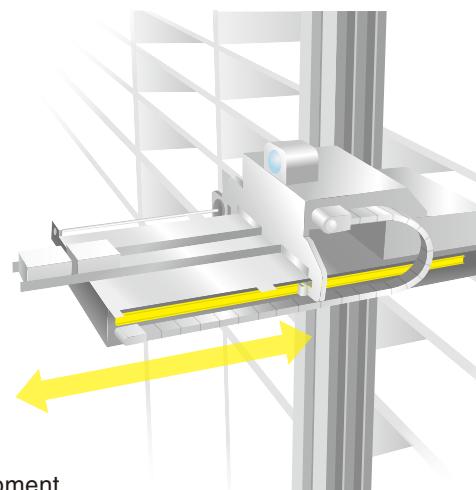
Workpiece marking equipment. ►



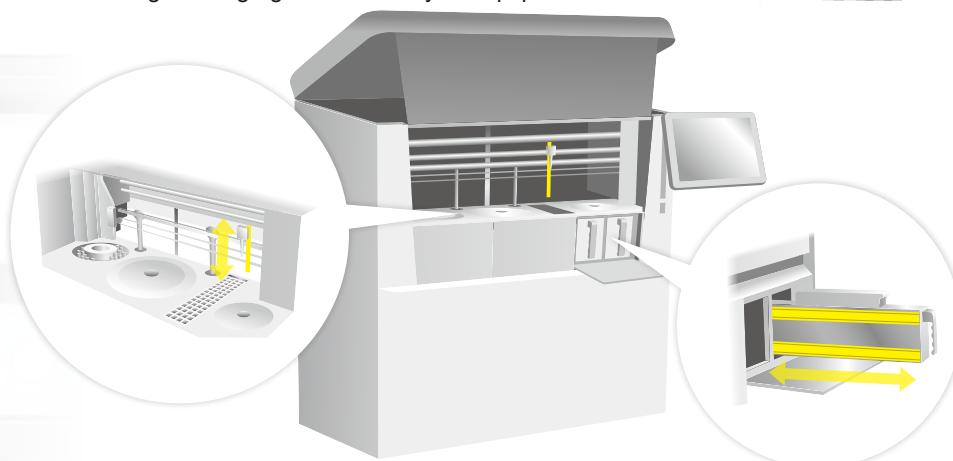
◀ Conveyor line shutter mechanism.



Arm movement in lightweight transfer system. ►



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

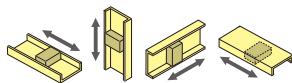


Diverse Lineup

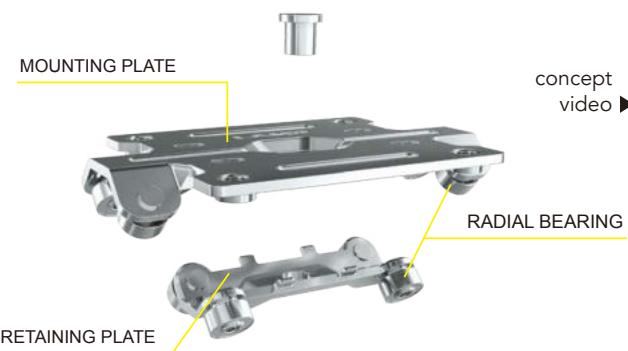
MLGX

Multi-Roller Type

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



Mounting Directions

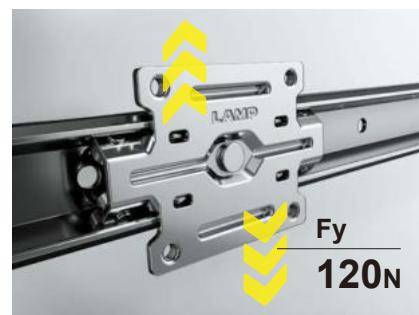
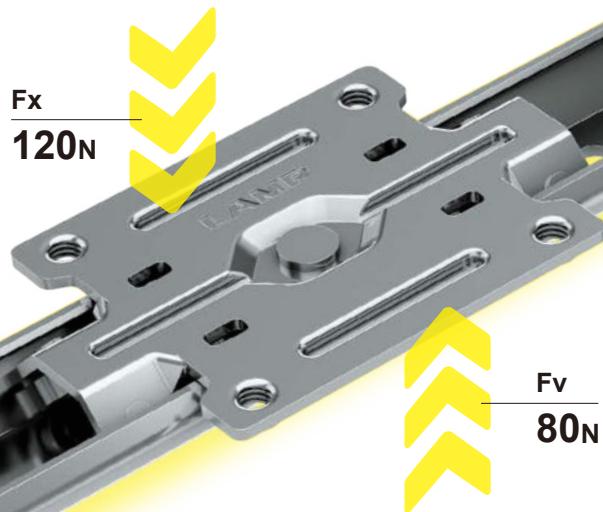


concept video ▶

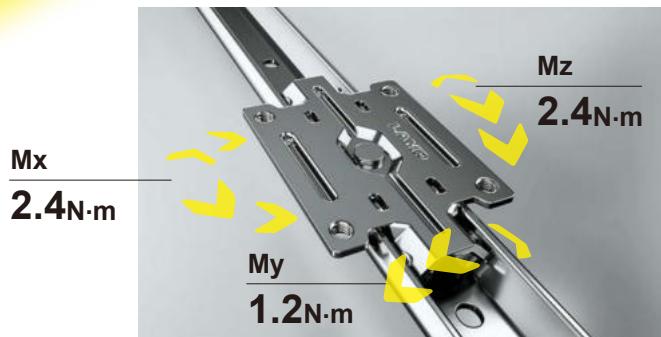


The DUAL-X structure

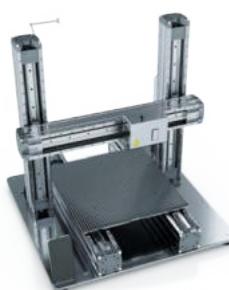
The "Dual X structure" comprises of 2 plates and 8 rollers arranged in an X-shape. This design evenly distributes preload to prevent rattling and ensure smooth movement, regardless of the mounting orientation.



Supports vertical, horizontal, and diagonal loads



Achieves stable motion even under moment.



Suitable for various applications including automated machines and cutting machines.

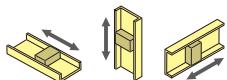


Various models are available, including a silent plastic bearing type and a low-cost greaseless type

MLG

Multi-Roller Type

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



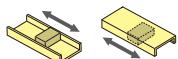
Mounting Directions



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.



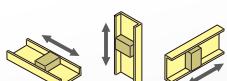
Mounting Directions



MRS

Sliding Type (no rollers)

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



Mounting Directions

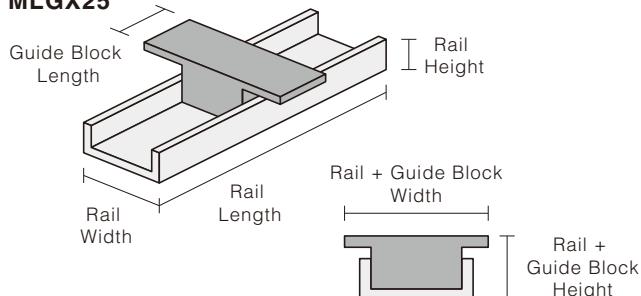


Product Lineup

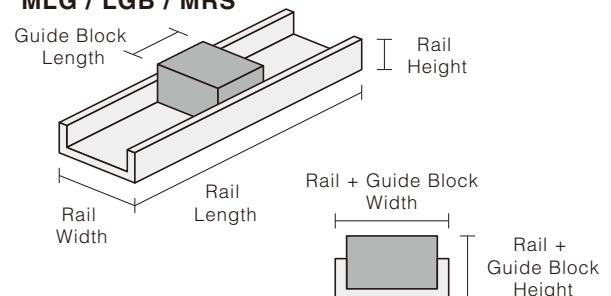
					Rail + Guide Block		Guide Block	
Series	Model	Page	Guide Block No.	Feature	Height mm	Width mm	Length mm	Screw Size
MLGX Multi-Roller Type	MLGX25	P.8	MLGX-25C-8	Preloaded	12	42 (Rail:25)	66	M4
MLG Multi-Roller Type	MLG20	P.10	MLG-20C	-	10.5	20.2	43	M2.6
			MLG-20CS	Compact			30	M3
			MLG-20C-8	8-Wheel 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			50	
	MRS30	P.22	MR-30CS	-	11	30	60	M4
			MR-30CNB	Preloaded			50	
			MR-30CB	Bidirectionally Preloaded			60	
	MRS40	P.25	MR-40CS	-	14	40	70	M5
			MR-40CNB	Preloaded			70	

Dimensions

MLGX25

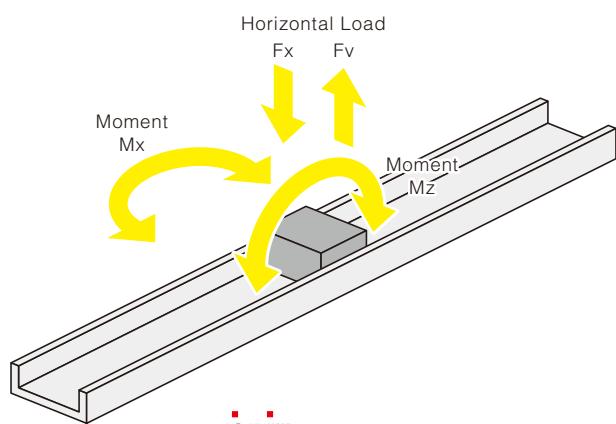
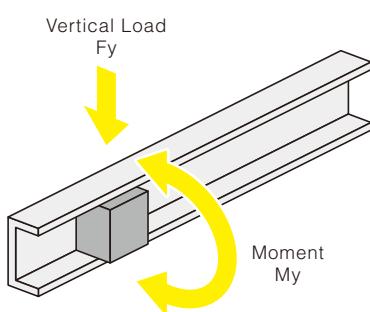


MLG / LGB / MRS



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
					80	80		0.8		0.4	-
					40	40	-	1.8	0.8	1.2	-
					294	-		1.0	0.2	1.2	-
200~1200	13	M4	50	Load Capacity	100	30	-	-	-	-	Stopper Mounting Plate
400~2000	30	M4	50	Static Rated Load	300	175	-	3	1.5	1.5	Clamp
100~1200	15	M3	50		520	305	-	5	2.5	2.5	Clamp
100~2000	20	M4	50		700	490	-	7	3.5	3.5	Bracket for Sensor
400~2000	30	M4	40								-

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.

- 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.

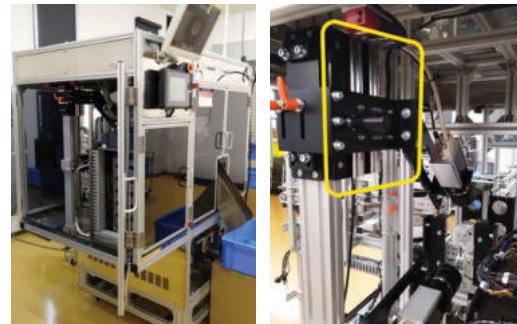
[Application]

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

[Remarks]

● Please use with stoppers.

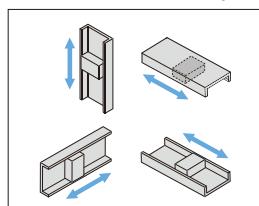
[Application Example]



Used for height adjustment of inspection machine's camera.

[Mounting Direction]

Can be mounted in the following directions



[Dual X Structure]



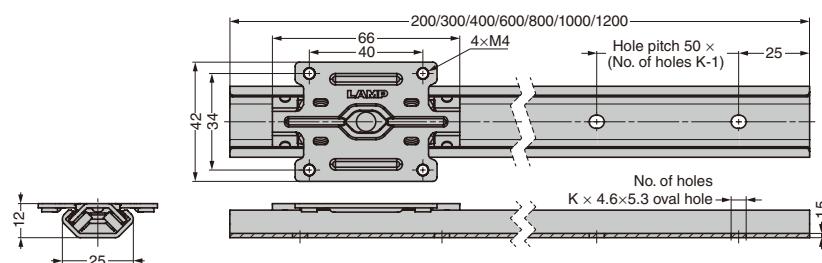
Rollers are located at two different angles to resist both horizontal and vertical loads.

[No Ball Creep]



Ball creep² does not occur on roller slides, unlike ball bearing slides.

²A 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.

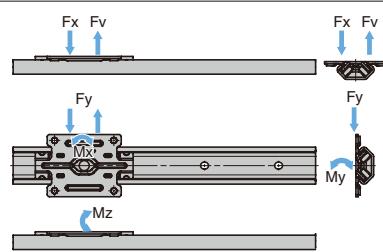


* The figure shows the dimensions when the guide rail and a guide block are combined.

[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

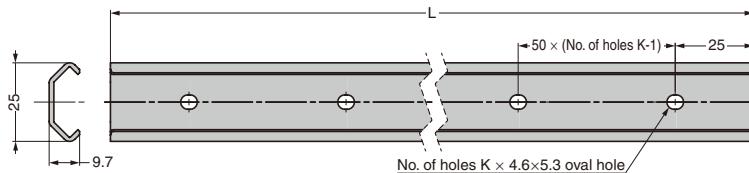


[Other]

●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)
●	●	190-047-257	MLGX25-200S	200	4		86	1,850
●	●	190-047-258	MLGX25-300S	300	6		130	2,270
●	●	190-047-259	MLGX25-400S	400	8		173	2,680
●	●	190-047-260	MLGX25-600S	600	12		258	3,350
●	●	190-047-261	MLGX25-800S	800	16		344	4,450
●	●	190-047-262	MLGX25-1000S	1000	20		430	5,560
●	●	190-047-263	MLGX25-1200S	1200	24		516	6,700

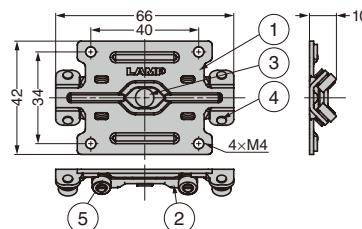
MULTI-ROLLER LINEAR GUIDE BLOCK MLGX-25C-8 For Medium Load



Front



Back



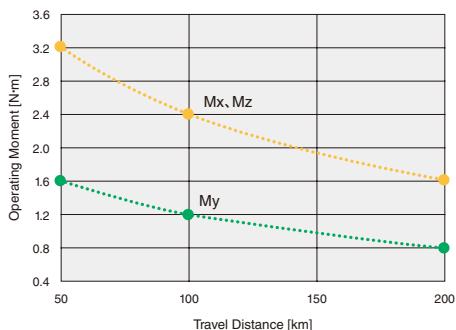
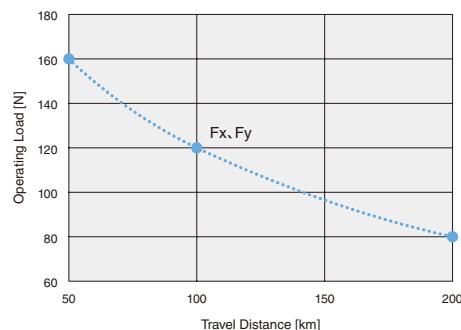
No.	Part Name	Material
①	Mounting Plate	Stainless Steel (SUS430)
②	Holding Plate	
③	Caulking Pin	Stainless Steel (SUS303)
④	Roller Pin	Stainless Steel (SUS XM7)
⑤	Bearing Roller	Steel

●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)
●	●	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



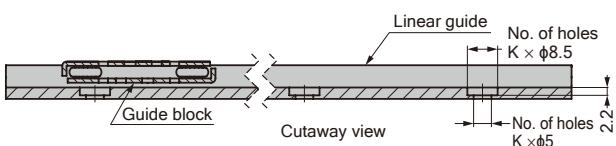
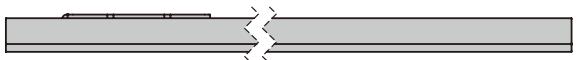
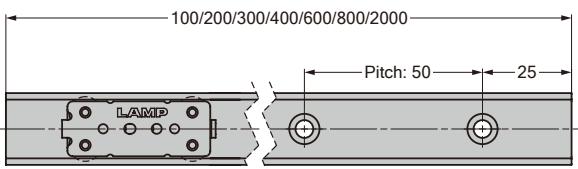
MLG20-200 MLG-20C



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.

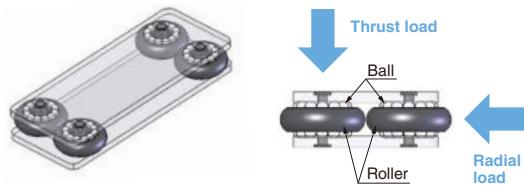
[Application]

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]

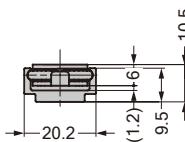


No ball creep due to roller type mechanism.

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.

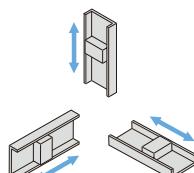
If extra load is applied in this state, the rail may become unable to move.

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



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

Use Conditions

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

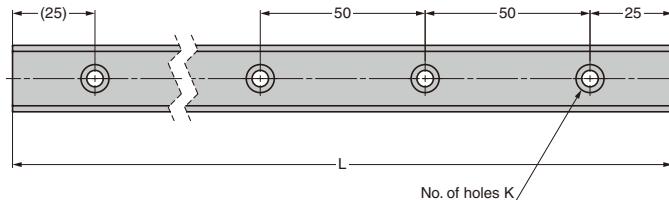
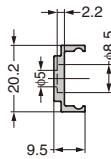


[Recommended Screw]

● 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.



Multiple guide blocks can be used on a single rail.

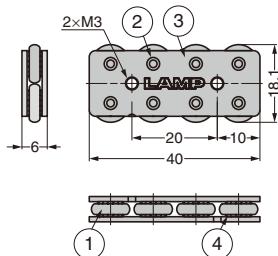
RoHS	CAD	Item Code	Item Name	Length (L)	No. of Holes K	Material	Finish	Weight (g)
●	●	190-047-272	MLG20-100	100	2	Aluminium Alloy	Silver Anodised	18
●	●	190-045-763	MLG20-200	200	4			36
●	●	190-045-764	MLG20-300	300	6			54
●	●	190-045-765	MLG20-400	400	8			72
●	●	190-050-438	MLG20-600	600	12			108
●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

8-WHEEL GUIDE BLOCK MLG-20C-8



[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)

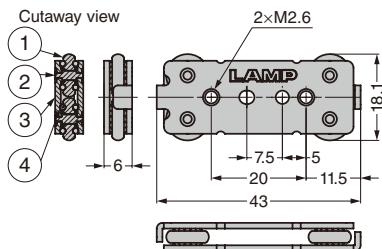
RoHS	CAD	Item Code	Item Name	Weight (g)
●	●	190-054-826	MLG-20C-8	15

GUIDE BLOCK MLG-20C



[Recommended Screw]

● Screw M2.6 (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)

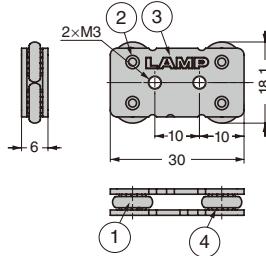
RoHS	CAD	Item Code	Item Name	Weight (g)
●	●	190-045-762	MLG-20C	13

COMPACT GUIDE BLOCK MLG-20CS



[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)
●	●	190-047-271	MLG-20CS	11

MOUNTING PLATE MLG20-P55-40



● $\phi 4.5$ holes and 4.5×5 slotted holes are pre-drilled.

[Parts Included]

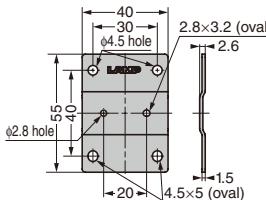
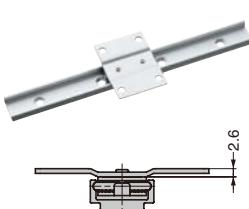
● No. 0 Class 1 pan head screw, M2.6 x 4, with looseness stop (guide block mounting screw)

[Recommended Screw]

● Screw M4

[Remarks]

● Cannot be attached to compact or 8-wheel guide blocks.



When used with the guide rail and block.

RoHS	CAD	Item Code	Item Name	Material	Weight (g)
●	●	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.

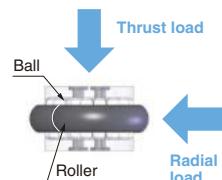
[Other]

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

[Remarks]

Please use with stoppers.

[The Unique Mechanism]



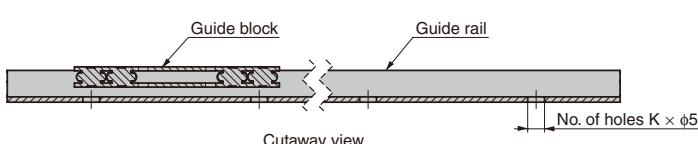
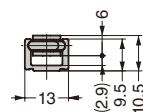
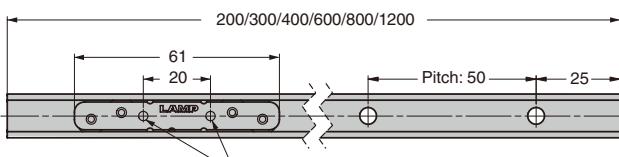
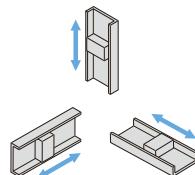
No ball creep due to roller type mechanism.

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

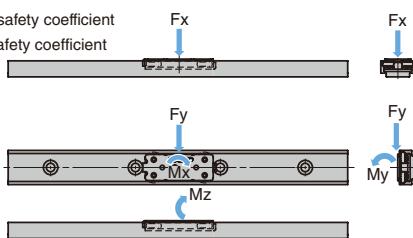
- Max. load = Static rated load × Static safety coefficient
- Operating load = Max. load × Dynamic safety coefficient
- Max. moment = Static rated moment × Static safety coefficient
- Operating moment = Max. moment × Static safety coefficient

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

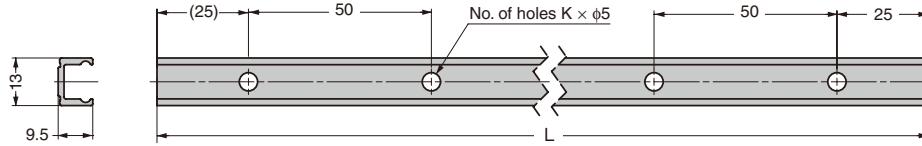


[Recommended Screw]

● 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.



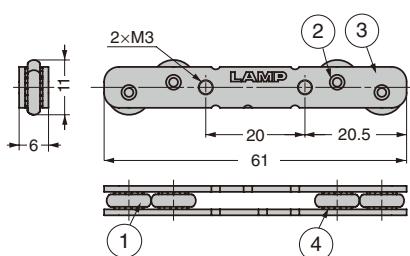
RoHS	CAD	Item Code	Item Name	Length (L)	No. of Holes K	Material	Finish	Weight (g)/Rail	Box (pcs)
●	2D3D	190-047-265	MLG13-200	200	4	Aluminium Alloy	Silver Anodised	23	760
●	2D3D	190-047-266	MLG13-300	300	6			34	860
●	2D3D	190-047-267	MLG13-400	400	8			45	1,000
●	2D3D	190-047-268	MLG13-600	600	12			68	1,330
●	2D3D	190-047-269	MLG13-800	800	16			91	1,650
●	2D3D	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)
●	2D3D	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]

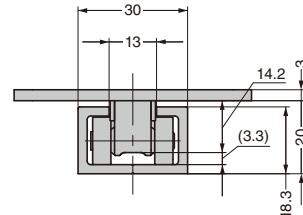
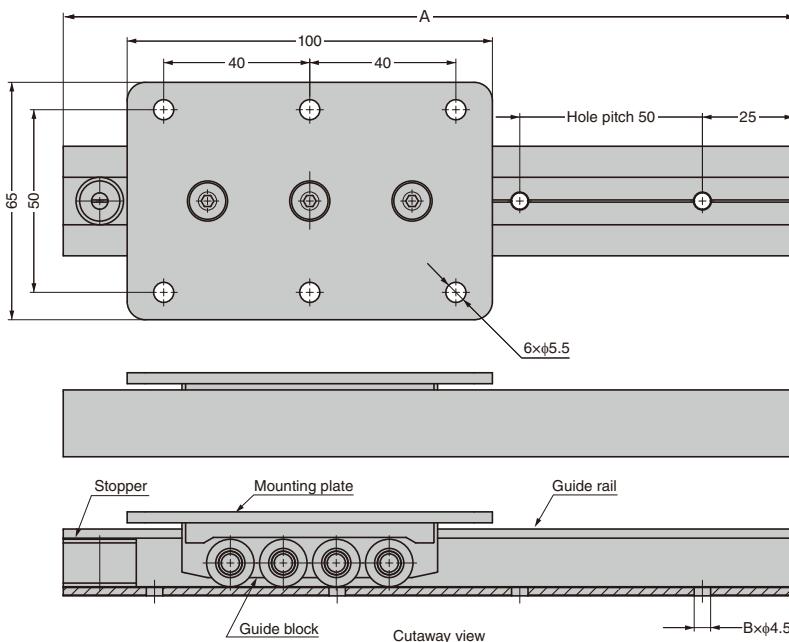
- For plate: Hexagon socket countersunk bolt M5 (stainless steel)

[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 LGB30CM 1, stopper LGB30-ST and mounting plate LGB30-P65-100 2

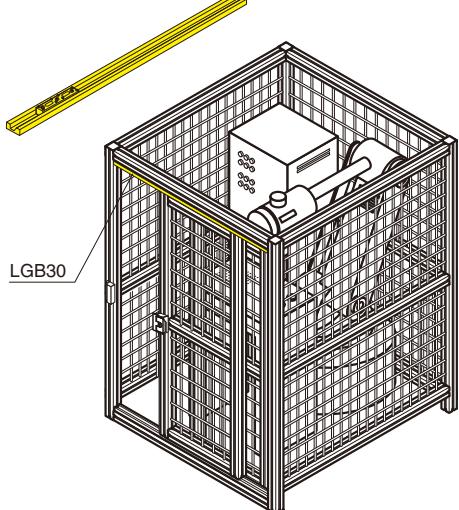


Guide rail

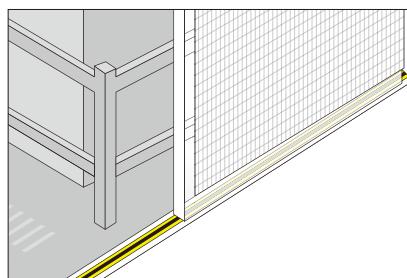
Item Name	Slide Length A	Holes B
LGB30-400	400	8
LGB30-800	800	16
LGB30-2000	2000	40

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

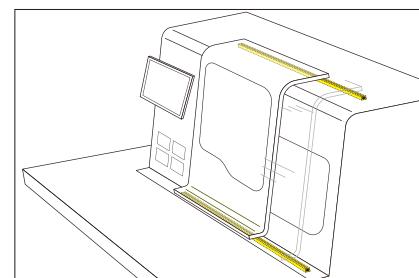
[Application Example]



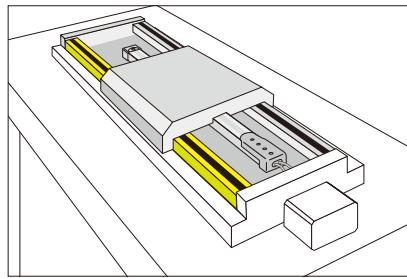
For safety fences for industrial robots



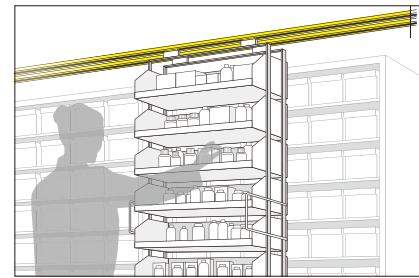
For safety fences in factories



For sliding doors of factory equipment



For transfer system of production facilities



For sliding shelves in pharmacies and hospitals

GUIDE RAIL LGB30

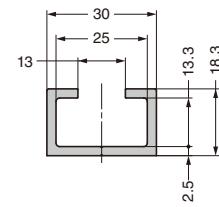
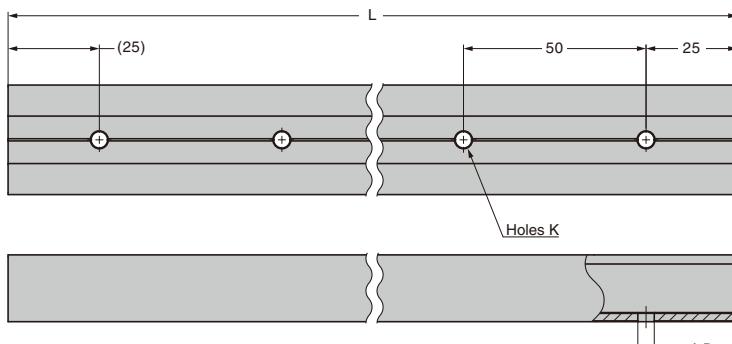


[Recommended Screws]

- 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)
Green	3D	190-036-273	LGB30-400	400	8	Aluminium Alloy	Anodised Silver	195	50	-
Green	3D	190-036-274	LGB30-800	800	16			390	25	-
Green	3D	190-036-275	LGB30-2000	2000	40			875	10	-

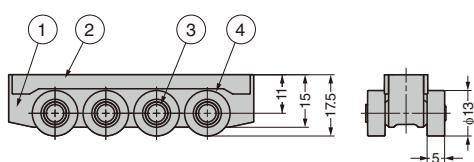
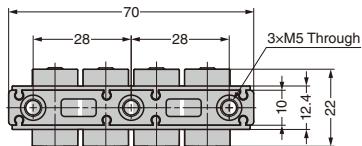
GUIDE BLOCK LGB-30CM Silent Type

MLGX

MLG

LGB

MRS

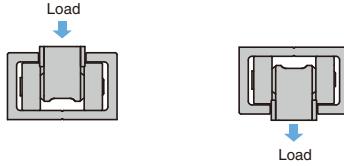


- Bearing roller used in guide block allows for smooth movement.
- Plastic outer ring type bearing roller.
- For guide rail LGB30 1 only.

[Remarks]

- Do not remove the slide protector.

[Load Direction]



Use the rail horizontally as shown above.

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)
Green	3D	190-036-158	LGB-30CM	Max. 294	Max. 30	76	200	2000

Refer to 1 : P.14

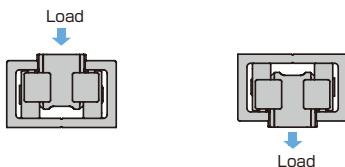
GUIDE BLOCK LGB-30CB Silent Type / Bidirectional Preloaded

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

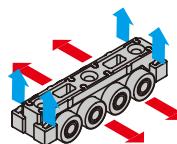
[Remarks]

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

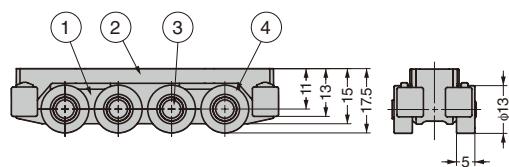
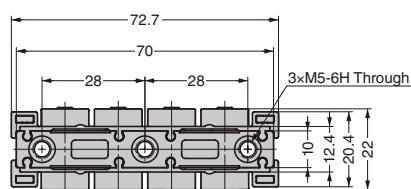
[Load Direction]



Use the rail horizontally as shown above.



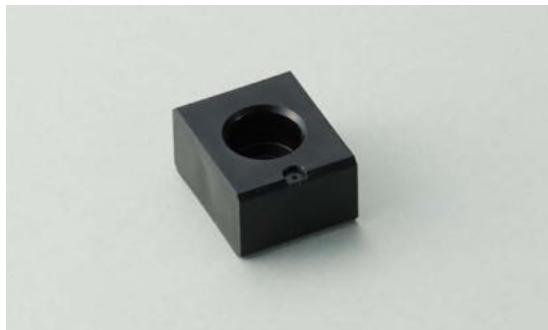
Pre-load direction



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)
Green	Pink	190-054-829	LGB-30CB	294	30	76

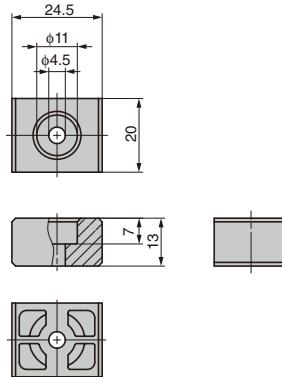
STOPPER LGB30-ST



- 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.



RoHS	CAD	Item Code	Item Name	Material	Colour	Weight (g)	Box (pcs)	Carton (pcs)
Green	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



[Installation]

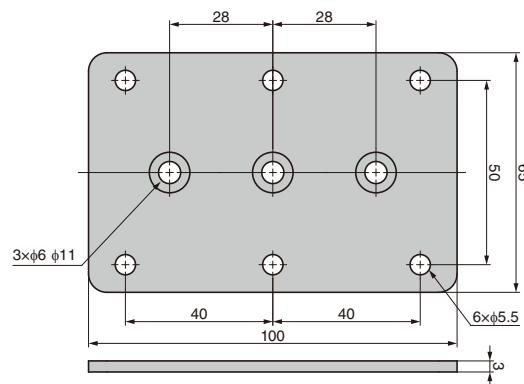


- The mounting plate facilitates attachment when mounting requires additional contact area and mounting holes.
- Install to guide block LGB-30CM 1 with supplied screws.

[Parts Included]

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

[Dimensions]

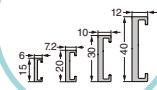


RoHS	CAD	Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)	Carton (pcs)
Green	3D	190-036-465	LGB30-P65-100	Stainless Steel (SUS304)	Barrel Polished	137	50	—

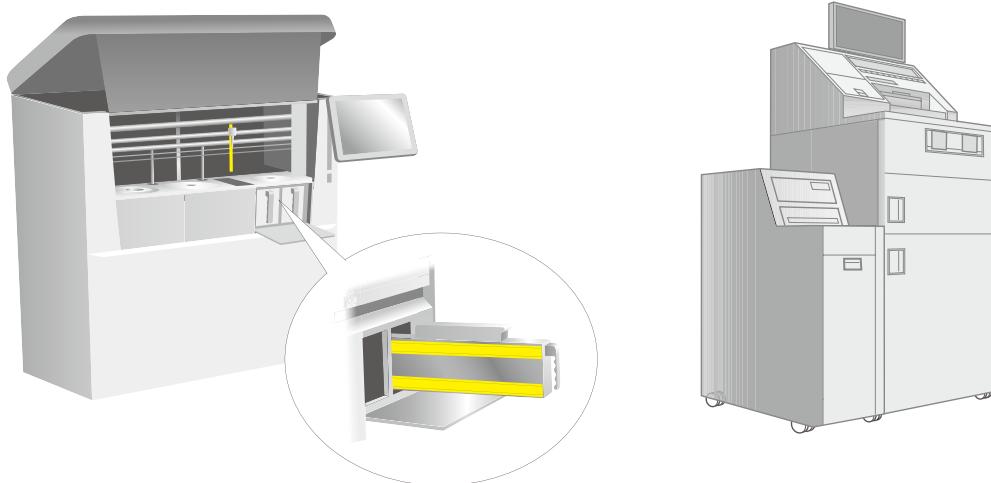
Refer to 1 : P.16

**Simple**

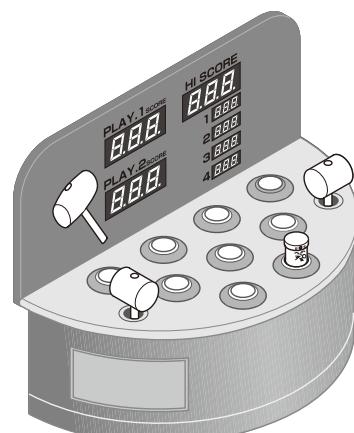
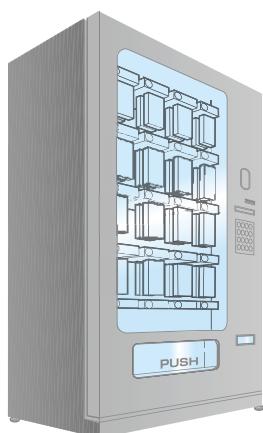
For applications not requiring high precision.

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 ^{※1}	Preload Type	Options	Page	
MRS 15		100 ~ 1200	No moment load Approx. 1.2 kg Approx. 0.6 kg with vibration/impact	×	Clamp (for temporary fixing)	×	P.20
MRS 20		100 ~ 2000	Approx. 5.3 kg Approx. 3.5 kg with vibration/impact	○	Clamp (for temporary fixing)	×	P.21
MRS 30		100 ~ 2000	Approx. 12.4 kg Approx. 6.2 kg with vibration/impact	○	Clamp (for temporary fixing)	Bracket for censer ^{※2}	P.22
MRS 40		400 ~ 2000	Approx. 20 kg Approx. 10kg 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.						
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		

Horizontal load application: Fx and Fy

Vertical load application: Fx and Fy

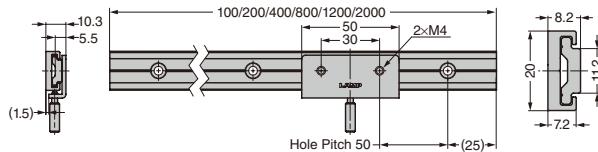
Moment load application: Mx and Mz

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 MRS20



Combination Dimensions for Guide Rail, Carriage, & Clamp



[MINI GUIDE RAIL MRS20]



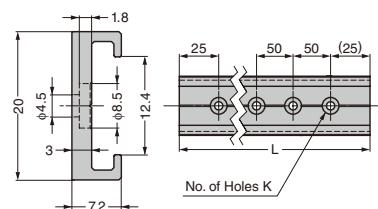
- Grease or oil not required due to the utilization of a special polyethylene resin with outstanding sliding properties.
- Special polyethylene resin with excellent chemical resistance.
- UL94HB rated flame retardant material.
- Preload type carriage with minimal gap is also available.
- Recyclable.

[Recommended Mounting Bolts]

● (Rail) M4 hexagon socket button head screws

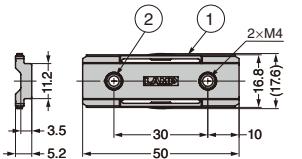
[Remarks]

- 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.



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]



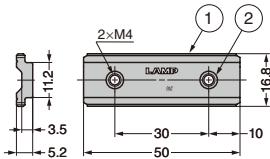
[Specifications]

● Operating temperature: 0°C ~ 40°C

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

[MINI GUIDE CARRIAGE MR-20CS]

[MINI GUIDE CARRIAGE MR-20CS]



[Specifications]

● Operating temperature: 0°C ~ 40°C

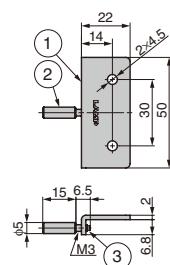
[Remarks]

- 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

[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

- Tighten the knob to the rail for simple fixing.

- Mount to the carriage with screws.

[Remarks]

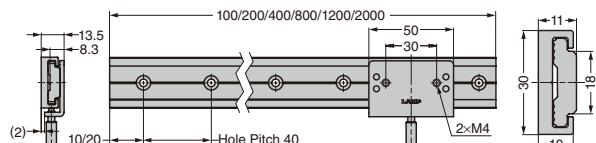
- If external force exceeding the retaining force (reference value) is applied, the retaining position may deviate.
- If the knob tightening torque is exceeded, the knob tip may be damaged.
- Mounting screws are to be supplied by the customer.

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.

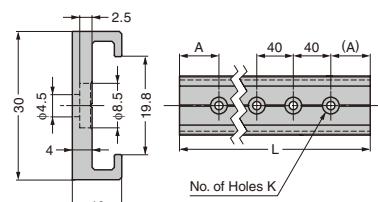
[Recommended Mounting Bolts]

- (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)
Gr	3D	190-112-860	MRS30-100	100	20	3	Aluminium Alloy	Silver Anodised	39
Gr	3D	190-112-861	MRS30-200	200		5			79
Gr	3D	190-112-862	MRS30-400	400		10			159
Gr	3D	190-112-863	MRS30-800	800		20			312
Gr	3D	190-046-492	MRS30-1200	1200		30			468
Gr	3D	190-112-864	MRS30-2000	2000		50			790

[Rated Load Guidelines]

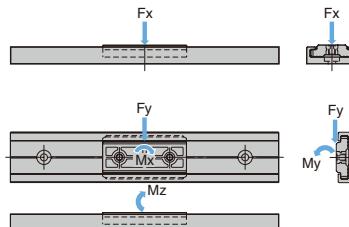
The rated load indicates the limit load.

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

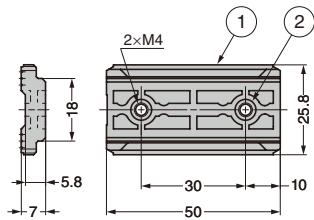
Item Name	Horizontal static rated load Fx		Vertical static rated load Fy		Vertical static rated moment load Mx	
	N	kgf	N	kgf	N-m	kgf-cm
MR-15CS	100	10.2	30	3.0	-	-
MR-20CS	300	30.6	175	17.8	3	30.6
MR-30CS	520	53.0	305	31.1	5	51.0
MR-40CS	700	71.4	490	50.0	7	71.4

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]



- A guide block without preload.

[Specifications]

- Operating temperature: 0°C ~ 40°C

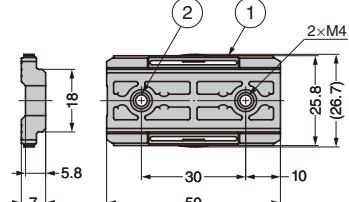
[Remarks]

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

RoHS	CAD	Item Code	Item Name	Weight (g)
G	3D	190-111-489	MR-30CS	7

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

[MINI GUIDE BLOCK MR-30CNB Preloaded Type]



Pre-load direction

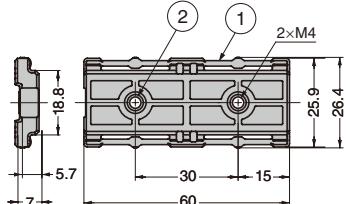
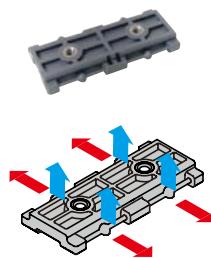
RoHS	CAD	Item Code	Item Name	Weight (g)
G	3D	190-037-639	MR-30CNB	7

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

[Specifications]

- Operating temperature: 0°C ~ 40°C

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



Pre-load direction

RoHS	CAD	Item Code	Item Name	Weight (g)
G	3D	190-048-938	MR-30CB	7

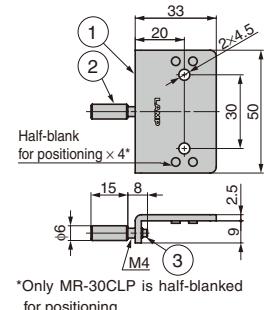
- Preloaded in two directions to significantly reduce the rattling between the guide block and rail.

[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]



*Only MR-30CLP is half-blanked for positioning.

- 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

RoHS	CAD	Item Code	Item Name	Retaining Force N (reference value)	Knob Tightening Torque N·m	Weight (g)
G	3D	190-035-312	MR-30CLP	14 or below	0.1 or below	40.8

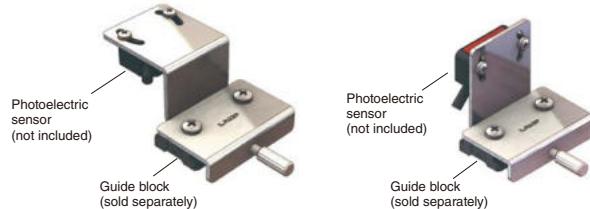
BRACKET FOR SENSOR MR-30BKT



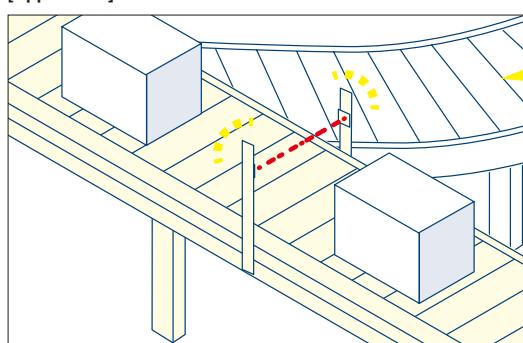
Horizontal Mount Type

Vertical Mount Type

[With a Photoelectric Sensor]



[Application]



Easy Position Adjustments

[Height]



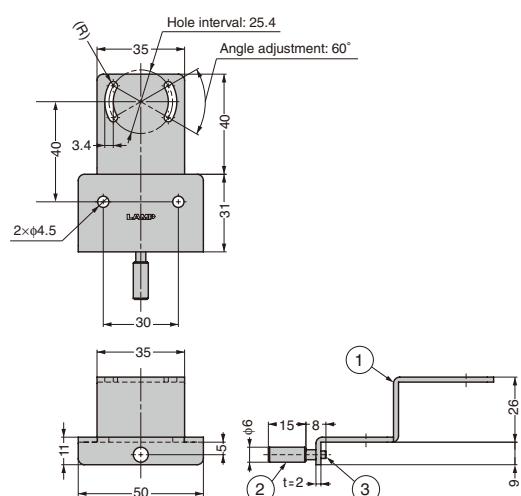
Turn the knob to adjust the height of the photoelectric sensor.

[Angle]

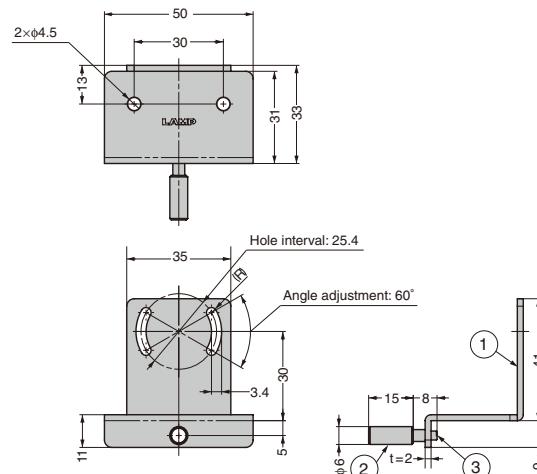


Turn the screws to adjust the angle of the photoelectric sensor.

[Horizontal Mount Type]



[Vertical Mount Type]



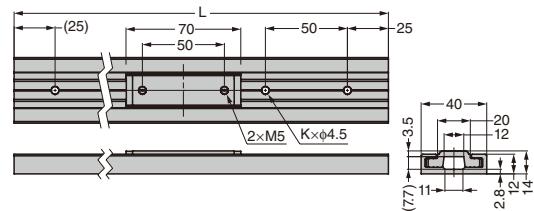
RoHS	CAD	Item Code	Item Name	Mount Type	Retaining Force N (reference)	Knob Tightening Torque N	Weight (g)
GT	3D	190-048-569	MR-30BKT-PH	Horizontal	14 and under	0.1 and under	60
GT	3D	190-048-568	MR-30BKT-PV	Vertical			50

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

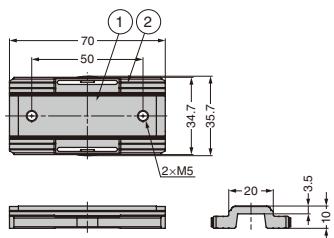


[MINI GUIDE RAIL MRS40]



RoHS	CAD	Item Code	Item Name	L	No. of Holes K	Material	Finish	Weight (g)
G	3D	190-037-686	MRS40-400	400	8	Aluminium Alloy	Silver Anodised	236
G	3D	190-037-687	MRS40-800	800	16			472
G	3D	190-043-711	MRS40-1200	1200	24			708
G	3D	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)
G	3D	190-041-093	MR-40CNB	40

- 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.

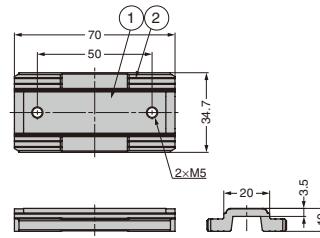
[Recommended Mounting Screws]

- (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 fit 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 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)
G	3D	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						
5.2			177~235													
15.5			177~235								Stainless Steel	SCRL2	P.565			
5.2			177~235													
15.5			177~235								Stainless Steel	SCRL2-15S	P.565			
6.0			20/49				8/18									
16.0			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				
9.7	80	98~118								
15.5	80	98~118								
9.7	150									
15.5	150									
5.2	80	137~177								
15.5	80	137~177								
5.2	150									
15.5	150									
11.0	80	20~39								
16.0	80	20~39								
11.0	150									
16.0	150									
6.0	70	11~69								
16.0	70	11~69								
6.0	150									
16.0	150									



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