No.500



Stylishly subtle hardware **highlights displays**





SUGATSUNE

Since 1930

Manufacturer of LAMP® brand products

Furniture & Architectural Hardware



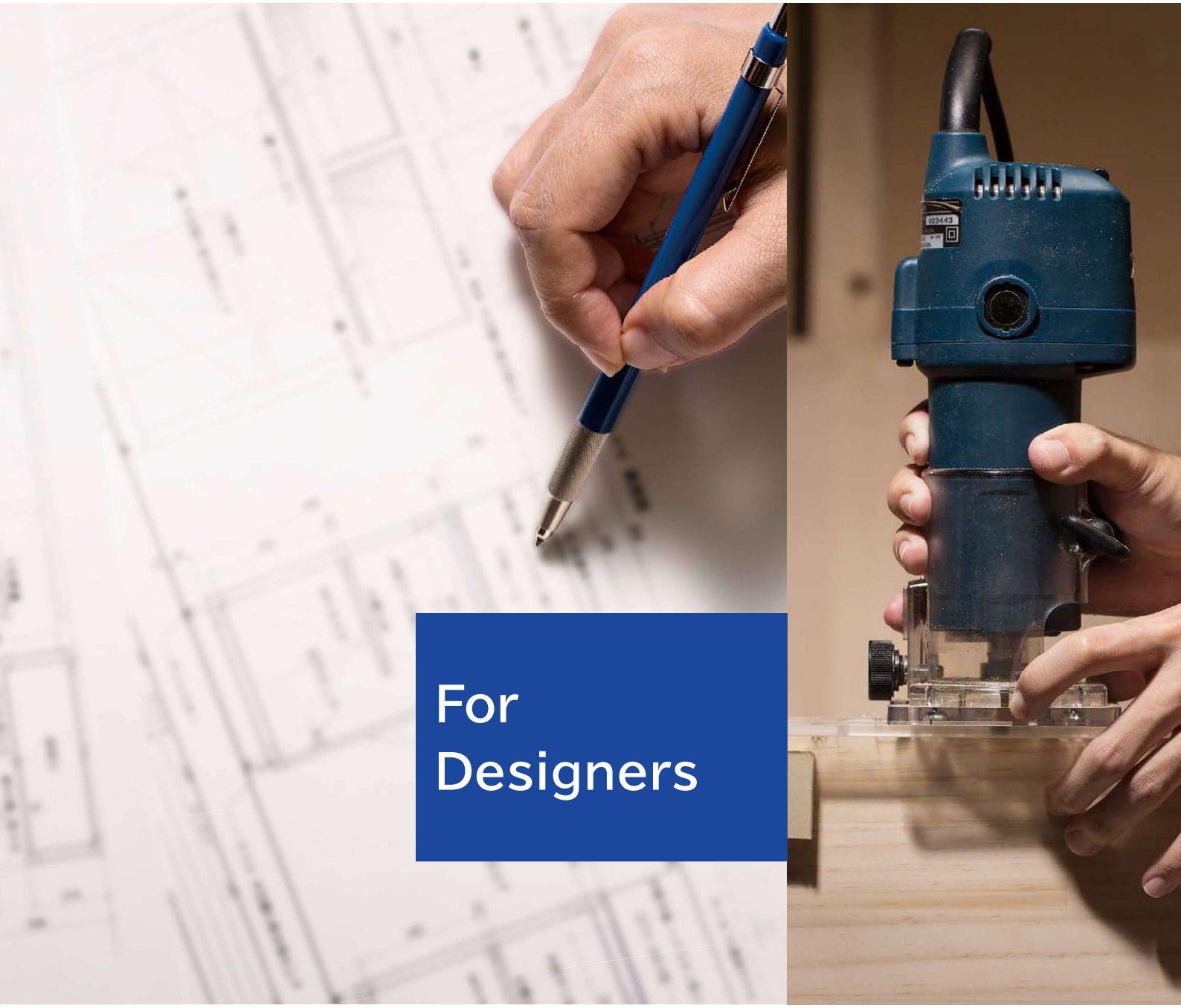
Hinges **integrated** with thin door frames





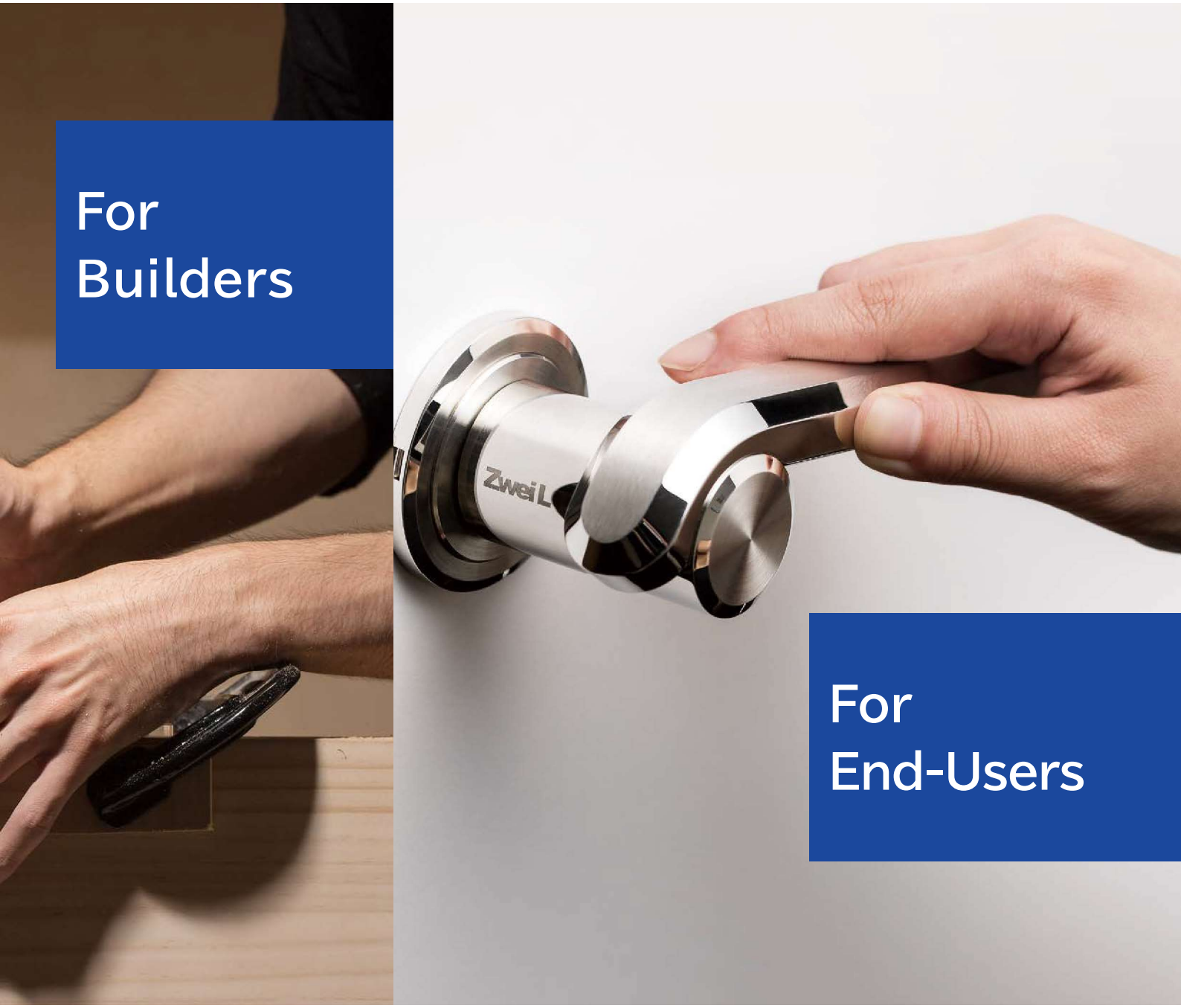
Innovation beyond expectation

Because Details Matter



For
Designers

Realising Your Vision with Diversity and Expertise



Sugatsune connects the ideas and aspirations of various people by expanding the potential of hardware and meticulously designing each product.
We meet the demands of furniture and architectural projects with unmatched functionality, quality, and service. Sugatsune' s unwavering dedication remains steadfast now and in the future.

LAMP®

High-Quality Products, Expertly Designed in Japan

September 2024

Enriching the meaning of “Manufacturing”

Product Development

The creativity and ability to create new products



Sugatsune recognises originality as a key component to creating products that are long time favourites in the market and that can also drive sales. With enhancing originality comes increasing difficulty to conceptualise and make original products. But by challenging these hurdles, a new and tailored market can be conceived.

Core Technology

A legacy of expertise



Sugatsune’s Motion Design Tec delivers specialised movements solutions such as “free stop motion,” “soft motion,” and “assist motion” for a better user experience. Cultivated over the decades, Sugatsune can provide highly original, reliable, and quality products with Motion Design Tec technologies worldwide.

Expanding Globally with Partners in Over 80 Countries

Please enquire about custom-made products!

- Finish change
- Dimension change
- Processing
- Function addition
- Specification change
- Development

Our Factory

Sugatsune has it's own exclusive factory and within its facilities is a development research centre specializing in motion design. It is here that Sugatsune's new and unique technologies emerge.



Design

Commitment to Functional Design



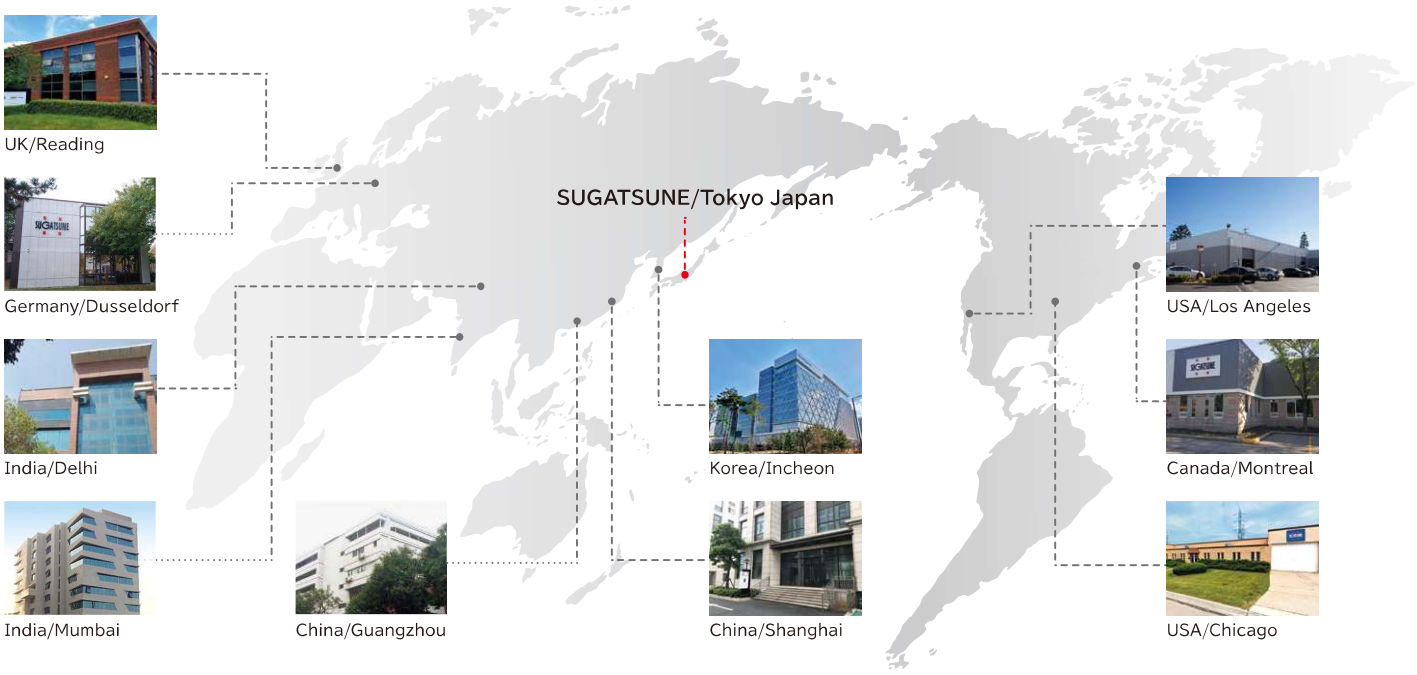
Design is no longer just about shape and colour. To deepen the meaning of "design," practicality and functionality have become integral elements in the Sugatsune manufacturing development process. Without ignoring the traditional design approach, resulting products undoubtedly possess a distinct visually appealing quality.

Product Variety

A product lineup to meet all needs



With over 30,000 products in its lineup, Sugatsune can quickly and accurately meet the needs of its customers. Moreover, support for specialised custom made items is also available.





Zwei Lichter

[Two Lights]

High precision polish, artfully sculpted shine

Flawless, distortion free lines. Stainless steel surfaces polished to the smoothness of a mirror juxtaposed seamlessly against a soft metallic satin finish creating a stately radiance.

Zwei L®



Exquisite Distortion-free Straight Lines

Beauty, lives in the finer details.

“The pursuit of the essential and the ideal” is Sugatsune Kogyo’s vow, given form in Zwei L.

With its dual gleams of light, premium interiors are enhanced with a lustrous glow.

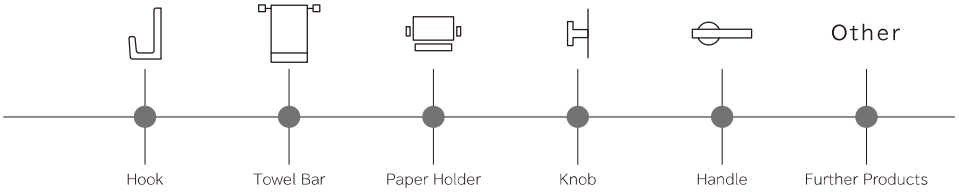








LINE UP





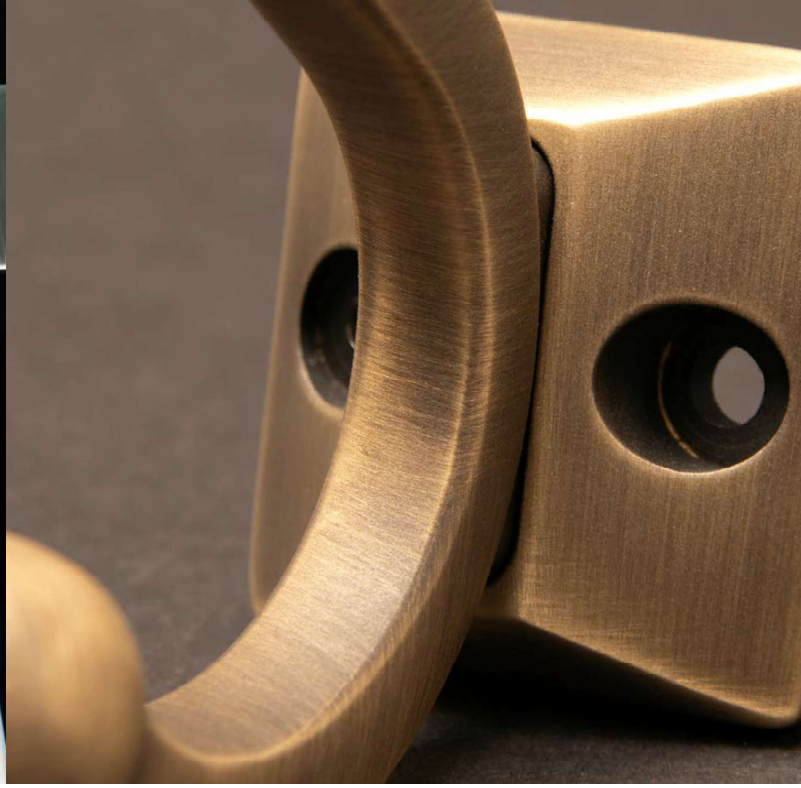
LAMP®

An original brand of Sugatsune quality

LAMP brand represents our answers to numerous manufacturing challenges and Sugatsune's commitment to quality and function is evident in the design, construction, material selection, finishing, and quality control of our products.







Confidence in our quality

Due to our “manufacturing by pursuing the ideal” strategy, which includes stringent quality control, a reliable testing system, and a dedication to exquisite finishes, you can use LAMP products with confidence for a long time. This ensures a consistent supply of goods of high calibre.

Specialised mechanisms

The components of LAMP are symbolised by their unique mechanisms, which are the outcome of our creative vision. By choosing the best mechanism for the project during the design phase, we maximise the potential of the components and produce a product of a quality that our clients can rely on.

The art of attention to detail

Design is an integral part of our hardware. With this in mind, we make no compromises with materials and finishes. Sugatsune’s dedication is demonstrated by the stunning finishes and exquisite craftsmanship of our products, which are like works of art.





MonoFlat UNISON MFU1200 Flush Sliding Door System





The MFU1200 Flush Sliding Door System by Sugatsune offers a sleek and integrated design, effortlessly blending with your wall for a concealed appearance. This system supports a maximum door mass of 70 kg and features a two-way damper, ensuring doors open and close smoothly and quietly, enhancing your space's luxurious feel.
Installation is straightforward with a minimal number of parts and no need for floor rail or groove processing. The door pushes open, eliminating the need for a handle on the front side, creating a perfectly flat surface when closed.

Seamlessly Blends with Any Interiors







No lower rail or grooving is required on the floor.

MonoFlat UNISON

Concealed Hinge The HES Series



The HES series offers superb hinges that are virtually invisible from the outside.
It discreetly enhances the beauty of doors without obstructing original designs.
Various interior styles look better with the HES hinges.
For example, the HES1F seamlessly integrates into door frames
and it enhances the overall aesthetic of interior spaces.

Enhance the Interior Space You Design







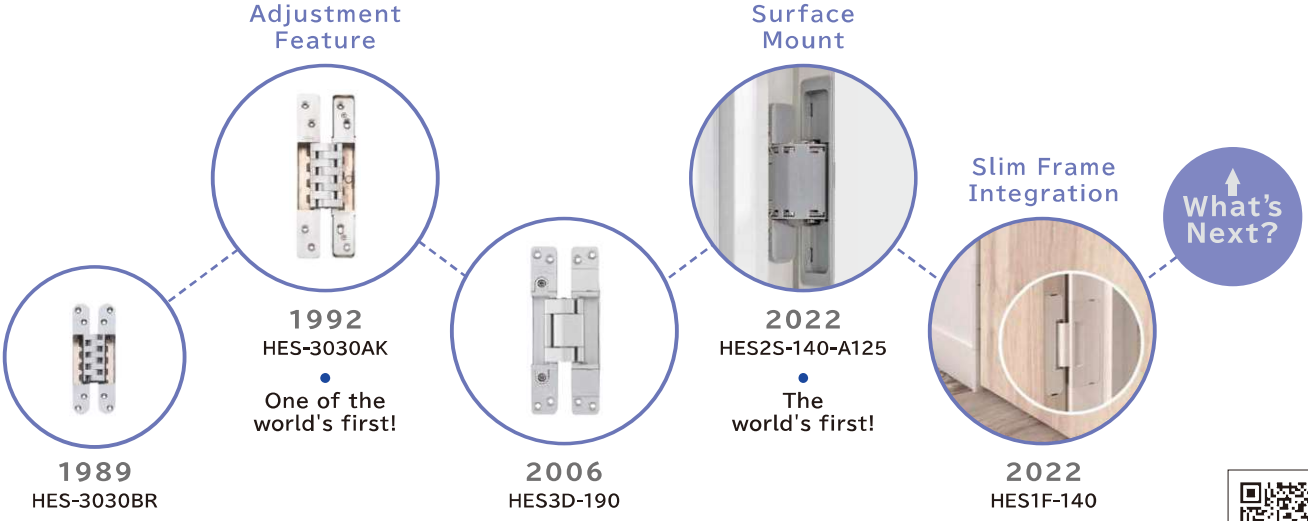
HES1F



HES2S



HES3D



HES Series Milestones at a Glance

MonoFlat LIN-X Hinge For Heavy Doors



When closed, the LIN-X Series doors seamlessly align with the wall, creating a clean and sophisticated space. This system can accommodate large doors with a width of up to 1100 mm and a weight of 90 kg. With a wide opening of 930 mm, it also allows for easy wheelchair access.

Elegant Flush Design for Compact & Functional Spaces

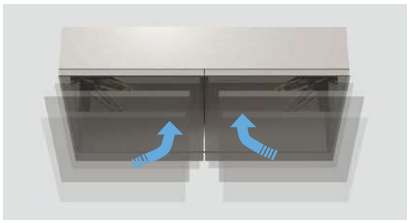
LAMP

Simple & High Quality-Design













MonoFlat LIN-X hinge

GS-G Series Glass Showcase Hardware




Silver


Gold


Black

Crafted with sleek, modern lines, this showcase hardware enhances your exhibited pieces without stealing the spotlight.



Premium Stainless Steel Solutions for Modern and Durable Design

Stainless steel products are favoured for all applications due to their modern finish, durability, and non-corrosive quality. This material is also known for being low-maintenance, making it easy to care for while offering great aesthetic appeal. Sugatsune offers a wide range of stainless steel products, from simple decorative hardware to complex functional hardware. Choose Sugatsune's quality stainless steel for a long-lasting, simple, and modern design.



SUGATSUNE HELP HUB

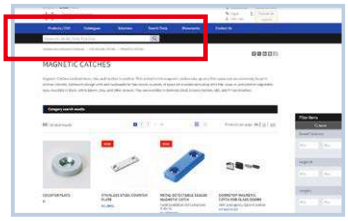
Build Better with Sugatsune!

Explore Our Comprehensive Support Resources

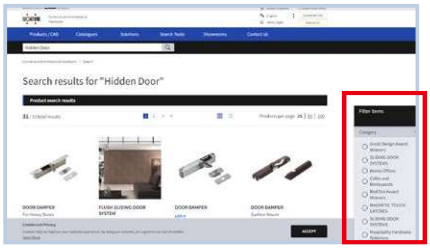


Keyword Search & Product Filters

Search for products by keyword and utilize our product filters. Access comprehensive information including our online catalogue, CAD data and instruction manuals!



Find relevant products with fuzzy search strings like "Hidden Door"!

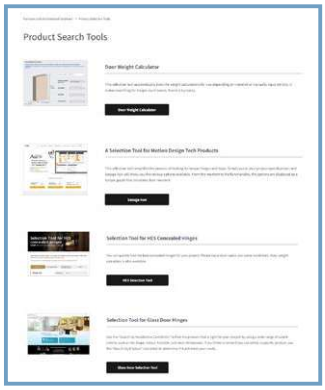


Filter by size, colour, or material as well!

Product Search Tools

The product search tools allow you to choose products tailored to your installation conditions, such as damper stays, damper hinges, torque hinges, torque stays, and more. With moment calculation and operation force simulation, you can easily identify the products that best meet your product requirements.

- Selection Tool for Motion Design Tech Products (Damper stays and hinges, Free stop hinges, etc.)
- Selection Tool for HES Concealed Hinges
- Selection Tool for Glass Door Hinges
- Selection Tool for Pocket Door System



Customer Solutions Case Studies

Our case studies introduce our products and demonstrate how they have been used to solve customer project issues.



Hardware Basics

Discover the basics of our products here. Learn about hinge and stay mechanisms, as well as the differences between various product types.



Official Sugatsune Global Channel

/@SugatsuneGlobal

Videos explain product characteristics and installation methods. Watching the product in action promotes deeper understanding.





J

DRAWER SLIDES & LINEAR GUIDES

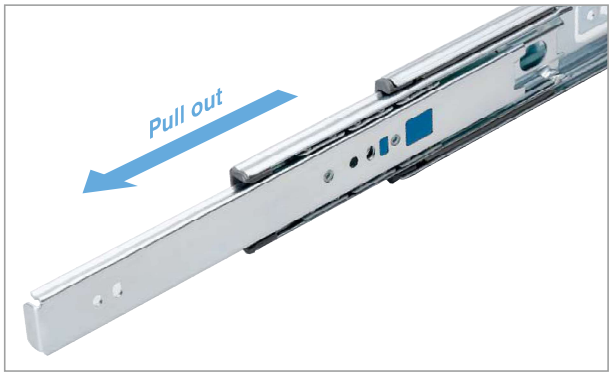
These components are designed for furniture drawers and can be used in system kitchens, storage furniture, office cabinets, desks, and more. The extensive lineup includes products suited to various applications, such as stainless steel options, compact and slim designs, push-open, self-closing, and soft-closing mechanisms, and more.

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3/4 EXTENSION
UNDER MOUNT
MINI SLIDES
PUSH-TO-OPEN
STAINLESS STEEL
ALUMINIUM
STEEL

Selection Guide for Drawer Slides & Linear Guides

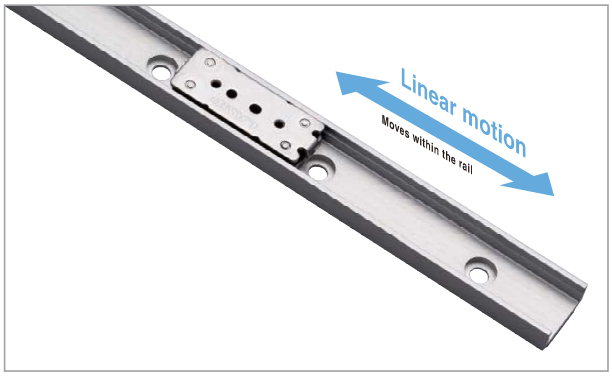
Explore our extensive range of products. The listing is organised by key criteria to help you make the best choice.

Drawer Slide



▶ P.1150

Linear Guides



▶ P.1188

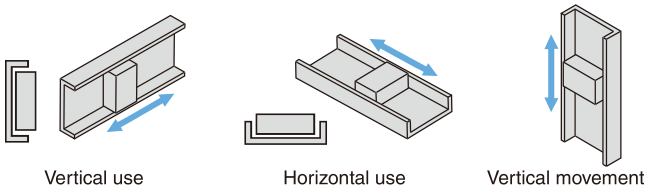
Important Considerations

Drawer Slides

- For a single cabinet, select slides from the same series to maintain consistent sliding feel and noise levels.
- Some stainless steel slides incorporate plastic parts. Please verify their suitability when used in high-temperature or chemical environments.
- Detachable ball bearing type slides (not including those with drawer bracket) combine the inner member and outer member with high precision fitting, so do not change the combination arbitrarily.
- For slides with holding function in closed/opened position, holding force varies depending on their structure.
- The structure of the self-closing mechanism varies depending on the type of slides.
- Slides with a bumper reduce metal-to-metal noise at the end of the travel, but cannot completely eliminate it. Additionally, noise from the retainer movement cannot be minimised.

Linear Guides

- Linear slide has different load capacity for vertical use and horizontal use.
- For vertical movement, some linear slides can be used, some cannot or unsuitable. Refer to relevant product pages for details.



Vertical use　Horizontal use　Vertical movement

Functions

LOAD CAPACITY The range of load capacity is in N (Newton).

CLOSED LOCK The drawer can be locked in fully closed position. Released by lever operation.

OPEN LOCK The drawer can be locked in fully opened position. Released by lever operation.

FRICTION The drawer can be stopped at any position by the resistance of the ball retainer. The drawer can be detached by pulling outward.

DETACH The drawer is detachable.

BUMPER With a bumper to avoid metal-to-metal noise at the end of the course.

HOLD CLOSED The drawer can be held in fully closed position.

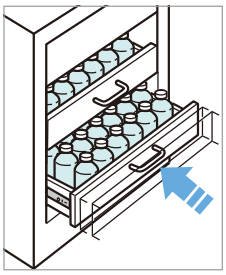
HOLD OPENED The drawer can be held in fully opened position.

2-WAYS The drawer can be moved to two ways.

CATCH Self-closing system catches the drawer when closing.

Select by function and features

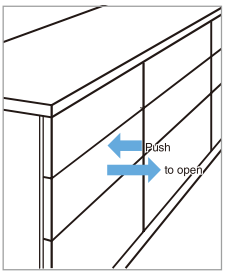
Self and Soft Closing



Slow and silent closing reduces impact. No need to push in all the way.

▶ Listing P.1150

Push Open

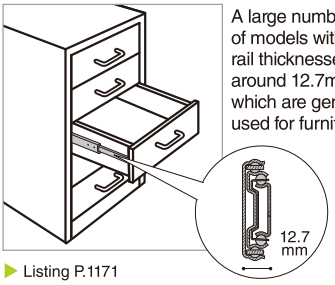


Simply push the front panel to open the drawer.

▶ Listing P.1180

Furniture Standard

(Rail thickness approx. 12.7 mm)



A large number of models with rail thicknesses of around 12.7mm, which are generally used for furniture.

▶ Listing P.1171

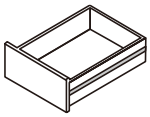
Black and gold slides are also available.

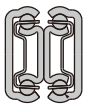


▶ P.1172, P.1175
▶ P.1173, P.1176

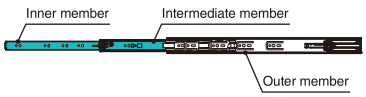
Choose by category

Mounting on Drawer Sides





Full Extension (3 Members)

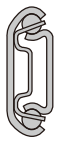


The inner member can be fully extended (except for certain products).

Steel ▶ Listing P.1143

Stainless Steel ▶ Listing P.1142

Aluminium ▶ Listing P.1142



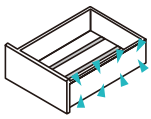
3/4 Extension (2 Members)



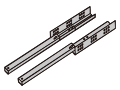
Slides about 3/4 of the way out.

Stainless Steel ▶ Listing P.1143

Mounted on Underside of Drawer



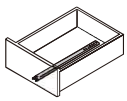
The slides are concealed when extended.



Under Mount

Drawer Slides for Drawers

2020 Soft close 40kg ▶ P.1178



Bottom-draw type

Single Slide

C203V Invisible when extended ▶ P.1184

See also. ▶ Listing P.1140

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STEEL

Drawer Slides by Criteria

Self & Soft Closing Mechanism

Rail height		Size	Length	Main material (Finish/colour)	Closing	Opening	Attachment/ Detachment	Other	Load Capacity kgf/ pair (20 40 60 80 100)	Item Name	Listing page
35mm	NEW Black	12.5 / 36.0	250 – 600	Steel (chromate) Steel (black) Steel (gold)	Self & Soft closing		DETACH	BUMPER	15-20	3670	P.1171
		12.2 / 37.0	200 – 600	Stainless Steel	HOLD CLOSED		DETACH	BUMPER	29-45	ESR-3813	P.1152
		12.7 / 44.7	200 – 700	Stainless Steel	HOLD CLOSED		DETACH		40-54	ESR-DC4513	P.1151
	NEW Gold	12.5 / 45.5	250 – 700	Steel (chromate) Steel (black) Steel (gold)	Self & Soft closing		DETACH	BUMPER	15-40	4670	P.1174
	NEW	12.7 / 45.2	300 – 700	Stainless Steel	Self & Soft closing		DETACH		16-35	ESR4670	P.1150
50mm	NEW	19.1 / 53	400 – 700	Steel	Self & Soft closing		DETACH		80-100	5370	P.1177
	NEW		230 – 405	Steel	Self & Soft closing	Push-to-open	DETACH		40	2020	P.1178

Push-to-Open Mechanism

Rail height	Size	Length	Main material (Finish/colour)	Closing	Opening	Attachment/ Detachment	Other	Load Capacity kgf/ pair (20 40 60 80 100)	Item Name	Listing page
35mm	12.5 / 36.0	250 – 600	Steel		Push-to-open	DETACH	BUMPER	15-20	3660	P.1180
45mm	12.7 / 45.4	350 – 700	Steel		HOLD OPENED Push-to-open	DETACH		27-45	4638	P.1181
	12.5 / 45.5	250 – 700	Steel		Push-to-open	DETACH	BUMPER	15-45	4660	P.1182

Underside Mount Type

	Size	Length	Main material (Finish/colour)	Closing	Opening	Attachment/ Detachment	Other	Load Capacity kgf/ pair (20 40 60 80 100)	Item Name	Listing page
NEW	72 / 19.5	300 – 600	Steel			DETACH		10-25	C203V	P.1184
	38.4 / 9.5	323.8 – 679.4	Stainless Steel			DETACH	FRICTION	5-8 *Per slide	ESR2	P.1165

For Furniture (rail thickness approx. 12.7 mm)

Rail height	Size		Length	Main material (Finish/colour)	Closing	Opening	Attachment/ Detachment	Other	Load Capacity kgf/ pair (20 40 60 80 100)	Item Name	Listing page
35mm	36.0	12.5	250 – 600	Steel (chromate) Steel (black) Steel (gold)	Self & Soft closing		DETACH	BUMPER	15-20	3670 with Self & Soft Closing Mechanism	P.1171
NEW Black	36.0	12.5	250 – 600	Steel		Push-to-open	DETACH	BUMPER	15-20	3660 with Push-to-open mechanism	P.1180
	37.0	12.2	200 – 600	Stainless Steel	HOLD CLOSED		DETACH	BUMPER	29-45	ESR-3813	P.1152
	44.7	12.7	200 – 700	Stainless Steel	HOLD CLOSED		DETACH		40-54	ESR-DC4513	P.1151
45mm	45.4	12.7	350 – 700	Steel		HOLD OPENED Push-to-open	DETACH		27-45	4638 with Push-to-open mechanism	P.1181
NEW	45.2	12.7	300 – 700	Stainless Steel	Self & Soft closing		DETACH		16-35	ESR4670 with Self & Soft Closing Mechanism	P.1150
NEW Gold	45.5	12.5	250 – 700	Steel (chromate) Steel (black) Steel (gold)	Self & Soft closing		DETACH	BUMPER	15-40	4670 with Self & Soft Closing Mechanism	P.1174
	45.5	12.5	250 – 700	Steel		Push-to-open	DETACH	BUMPER	15-45	4660 with Push-to-open mechanism	P.1182

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PUSH-TO-OPEN
STAINLESS STEEL
ALUMINIUM
STEEL

Drawer Slides by Criteria

Full Extension (3 Members) Stainless Steel

Rail height	Size	Length	Main material (Finish/colour)	Closing	Opening	Attachment/ Detachment	Other	Load Capacity kgf/ pair (20 40 60 80 100)	Item Name	Listing page
20mm	16 / 20.0	200 – 500	Stainless Steel					13-17	ESR 2031	P.1153
25mm	19.2 / 27.0	200 – 500	Stainless Steel			DETACH		12-18	273SL	P.1154
	19.1 / 27.0	200 – 500	Stainless Steel					28-38	SNS 27D	P.1153
35mm	19.1 / 35.3	304.8 – 711.2	Stainless Steel		HOLD OPENED	DETACH		36-62	SNS35W	P.1156
NEW Low Particle Emissions Grease Type	19.1 / 35.3	304.8 – 711.2	Stainless Steel					45-60	SNS35D	P.1154
	19.2 / 35.4	304.8 – 711.2	Stainless Steel		OPEN LOCK	DETACH		36.2-63.5	ESR7	P.1156
45mm	25 / 45.0	300 – 1000	Stainless Steel					50-95	TSS3	P.1157
	12.7 / 45.0	350 – 700	Stainless Steel	HOLD CLOSED		DETACH	BUMPER	32-50	ESR4658	P.1157
NEW	12.7 / 45.2	300 – 700	Stainless Steel	Self & Soft closing		DETACH		16-35	ESR4670 with Self & Soft Closing Mechanism	P.1150
50mm	19 / 53.0	300 – 800	Stainless Steel	HOLD CLOSED				64-116	5302S Heavy duty	P.1158
	19.2 / 55.0	304.8 – 711.2	Stainless Steel			DETACH	BUMPER	43-65	ESR3	P.1158
70mm	23.2 / 71.3	305 – 711.4	Stainless Steel					182-272	ESR10 Heavy duty	P.1159

Full Extension (3 Members) Aluminium

Rail height	Size	Length	Main material (Finish/colour)	Closing	Opening	Attachment/ Detachment	Other	Load Capacity kgf/ pair (20 40 60 80 100)	Item Name	Listing page
20mm	16 / 20.0	100 – 500	Aluminium Alloy					3.1-11.2	AR3 For Light Weight	P.1169
	16 / 20.0	200 – 500	Aluminium Alloy		HOLD CLOSED			8.7-10.7	AR3-K Simple retaining type	P.1169

Full Extension (3 Members) Steel

Rail height	Size		Length	Main material (Finish/colour)	Closing	Opening	Attachment/ Detachment	Other	Load Capacity kgf/ pair (20 40 60 80 100)	Item Name	Listing page
35mm	36.0	12.5	250 – 600	Steel (chromate) Steel (black) Steel (gold)	Self & Soft closing		DETACH	BUMPER	15-20	3670 with Self & Soft Closing Mechanism	P.1171
NEW Black Gold	36.0	12.5	250 – 600	Steel		Push-to-open	DETACH	BUMPER	15-20	3660 with Push-to-open mechanism	P.1180
45mm	45.4	12.7	350 – 700	Steel		HOLD OPENED Push-to-open	DETACH		27-45	4638 with Push-to-open mechanism	P.1181
NEW Gold	45.5	12.5	250 – 700	Steel (chromate) Steel (black) Steel (gold)	Self & Soft closing		DETACH	BUMPER	15-40	4670 with Self & Soft Closing Mechanism	P.1174
	45.5	12.5	250 – 700	Steel	Self & Soft closing		DETACH	BUMPER	15-45	4660 with Push-to-open mechanism	P.1182
NEW	45.8	12.7	250 – 600	Steel (chromate)	HOLD CLOSED		DETACH		31-41	DFDS-45	P.1170
50mm NEW	53	19.1	400 – 700	Steel	Self & Soft closing		DETACH		80-100	5370 with Self & Soft Closing Mechanism	P.1177

3/4 Extension (2 Members) Stainless Steel

Rail height	Size		Length	Main material (Finish/colour)	Closing	Opening	Attachment/ Detachment	Other	Load Capacity kgf/ pair (20 40 60 80 100)	Item Name	Listing page
20mm	20.0	8	200 – 500	Stainless Steel					11-16	ESR2021	P.1159
25mm	27.0	9.6	300 – 500	Stainless Steel			DETACH		14-18	272SL	P.1160
	27.0	9.55	200 – 500	Stainless Steel					18-26	SNS27S	P.1160
	30.0	13	296 – 596	Stainless Steel		CATCH	DETACH		15	RKA5	P.1165
35mm NEW Low Particle Emissions Grease Type	35.3	9.55	304.8 – 711.2	Stainless Steel					25-49	SNS35S	P.1161
	35.4	9.6	304.8 – 711.2	Stainless Steel	HOLD CLOSED				25-49	ESR13	P.1164
	35.4	9.6	304.8 – 711.2	Stainless Steel		OPEN LOCK	DETACH		25-49	ESR8	P.1163

Drawer Slides by Criteria

SELECTION GUIDE
DRAWER SLIDES
LINEAR GUIDES
SOFT-CLOSE
FULL EXTENSION
3/4 EXTENSION
UNDER MOUNT
MINI SLIDES
PUSH-TO-OPEN
STAINLESS STEEL
ALUMINIUM
STEEL

3/4 Extension (2 Members) Stainless Steel

Rail height	Size	Length	Main material (Finish/colour)	Closing	Opening	Attachment/ Detachment	Other	Load Capacity kgf/ pair (20 40 60 80 100)	Item Name	Listing page
35mm	35.4 / 9.6	304.8 – 711.2	Stainless Steel			DETACH	FRICTION	25-49	ESR1	P.1163
70mm	71.3 / 12.2	305 – 711.4	Stainless Steel					80-114	ESR5 For weights	P.1164

Plastic Drawer Slides

Rail height	Size	Length	Main material (Finish/colour)	Closing	Opening	Attachment/ Detachment	Other	Load Capacity kgf/ pair (20 40 60 80 100)	Item Name	Listing page
	9 / 5	277	Polyethylene					5	SB-275A	P.1186
	14 / 9.5	257	Polyethylene					5	SB-257-R2	P.1186
	15 / 10	300	Polyethylene					5	SB-300R	P.1187

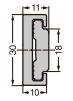
Small and Medium Drawer Slides (Steel and Aluminium)

	Size	Length	Main material (Finish/colour)	Closing	Opening	Attachment/ Detachment	Other	Load Capacity kgf/ pair (20 40 60 80 100)	Item Name	Listing page
15mm	15.5 / 9.7	80 – 150	Steel					10-12	SCR3	P.1166
	15.5 / 5.2	80 – 150	Steel				2-WAYS	14-18	SCRW2	P.1167
	16.0 / 11.0	80 – 150	Aluminium					2-4	AR3-16	P.1168
	16.0 / 6.0	70 – 150	Aluminium				2-WAYS	1.1-7	ARW2-16	P.1168
20mm	20.0 / 8.0	100 – 500	Aluminium					8.2-15.3	AR2	P.1167

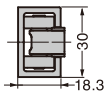
Linear Guides by Criteria

Mini Guide Rails

Linear guides are summarised by specifications and listed in ascending order of guide height.

Rail height		Material	Load Capacity kgf/pc		Item Name	Listing Page
			Vertical Use	Horizontal Use		
			10 20 30 40 50	10 20 30 40 50		
15mm		Aluminium Alloy	3.0	10.2	MRS15	P.1190
20mm			17.8	30.6	MRS20	P.1192
30mm			31.1	53.0	MRS30	P.1194
40mm NEW			50.0	71.4	MRS40	P.1196

Linear Guides

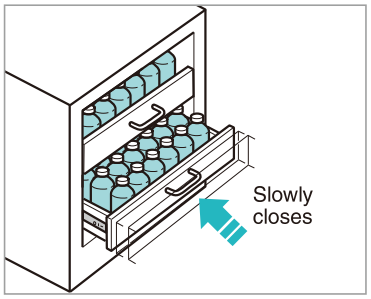
		Material	Load Capacity kgf		Item Name	Listing Page
			Vertical Use	Horizontal Use		
			10 20 30 40 50	10 20 30 40 50		
		Aluminium Alloy	2-5	0.8-1.8	ARL2-16	P.1188
		Stainless Steel	18-24		SCRL2	P.1188
NEW			4.0	4.0	MLG13	P.1201
NEW		Aluminium Alloy	4.0	4.0	MLG20	P.1198
				30	LGB30	P.1203
		Stainless Steel			ESR9 For Light Weight *Suitable for 2 slides use and door weight below 5kg.	P.1206
					TSSL	P.1206
NEW			20.4	20.4	MLGX25	P.1207

Drawer Slide Solutions for Customer Issues: Q&A

Sugatsune has a unique solution!

Q Can impact when closing be reduced?

A Self and Soft Closing is the solution!

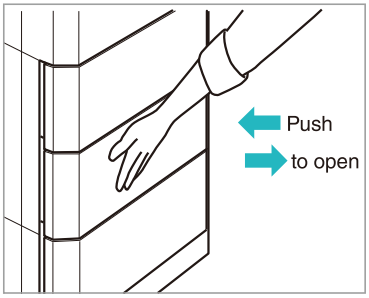


Slow and silent closing reduces impact. No need to push in all the way.

Recommended product: 4670 ...P.1174

Q Is there an option for opening it hands-free when both hands are full?

A Our push-to-open mechanism is ideal.



Simply push the front panel to open the drawer.

Recommended product: 4660 ... P.1182

Q How can I keep the drawer slides from detracting from the drawer's design?

A Concealed and aesthetically pleasing drawer slides are available.

Design-Friendly Slides



Black

3670 ..... P.1172
4670 ..... P.1175



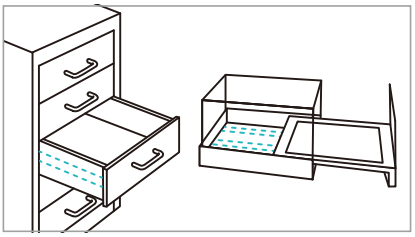
Gold-plating

3670 ..... P.1173
4670 ..... P.1176

Invisible Slides

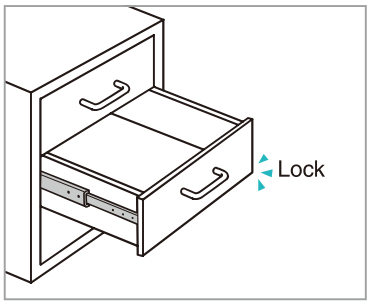
These slides are concealed from the sides or bottom when extended.

P.1184~



Q Can it be locked in position when extended?

A There's a draw open lock!



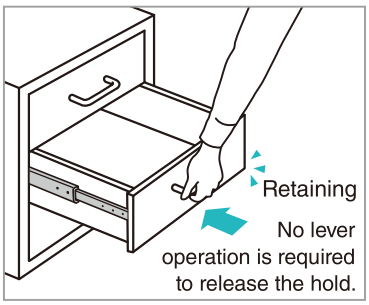
OPEN LOCK

The mechanism locks in the fully opened position.

Recommended product: ESR7 ... P.1156

Q I want to hold the draw in the withdrawn position.

A There's open retention!



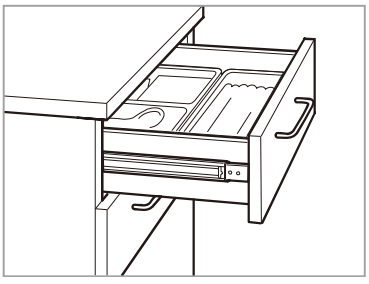
HOLD OPENED

When the rail is fully opened, there's a catch mechanism that holds it in place.

Recommended product: SNS35W ... P.1156

Q I want to mitigate metallic noise when fully opening and closing.

A Products with sound deadening mechanisms are available.

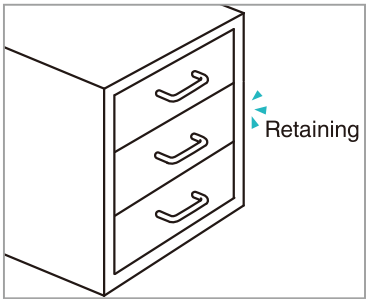


BUMPER

Recommended product: 3670 ... P.1171

Q I want to retain in the closed state

A Retained when closed!



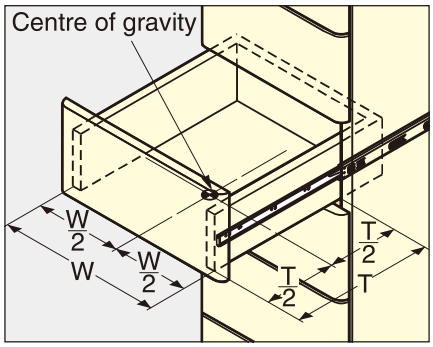
HOLD CLOSED

When the rail is fully closed, there is a simple catch mechanism to hold it in place.

Recommended product: ESR4658 ... P.1157

SELECTION GUIDE
DRAWER SLIDES
LINEAR GUIDES
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FULL EXTENSION
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STAINLESS STEEL
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STEEL

Cautions for Selecting and Installing Slides

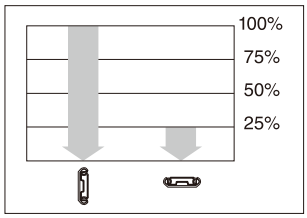


Calculation of Slide Centre of Gravity

The load capacity is determined with the drawer's centre of gravity at the midpoint of the travel length and width in the lateral direction (refer to the figure above). Conditions are set for slide installations with a width of 300mm, approximately 10 times of withdrawal per month, static load, with the slide securely fixed to the cabinet and drawer and installed vertically.

*Load Capacity Change by Installation Method

The load capacity changes significantly if the slide is not installed vertically. For example, the load capacity of a slide installed horizontally may be less than 25% of that listed in this catalogue.



Cautions for Slide Selection and Installation

Slide performance varies depending on its usage conditions. The durability and load capacity of slides greatly depend on cabinet dimensions, centre of gravity position, frequency of use, slide installation method, cabinet installation location, etc.

●Slide Selection Reference

Application Examples

Note: The slide must be installed correctly.

Load: 588N (60kgf) Frequency: 1 time / 3 months Installation place: Laboratory, computer room **Recommended slide: Models with load capacity of 588N (60kgf)**	Load: 196N (20kgf) Frequency: 10 times / day Installation place: Office **Recommended slide: Models with load capacity of 588N (60kgf)**	Load: 588N (60kgf) Frequency: 1 time / day Installation place: Special places **Recommended slide: Models with load capacity of 1176~1960N (120~200kgf)**

●Note: Do not change the combination of inner and outer members.

[Temperature Range]

5°C~35°C

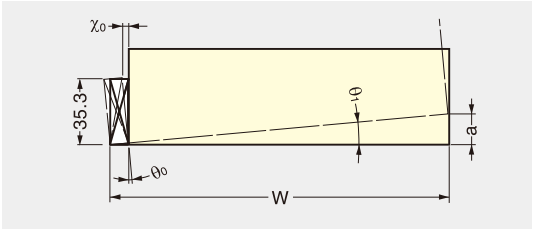
SELECTION GUIDE
DRAWER SLIDES
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Cautions for Selecting and Installing Slides

Various kinds of the parts are made of roll-formed metal sheet which may present sharp edges. Please be careful when installing.

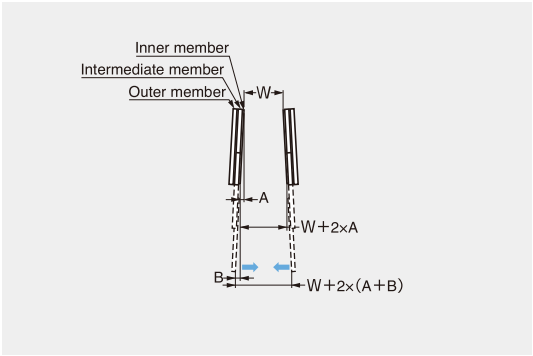
[Installation Parallelism]

1. Front



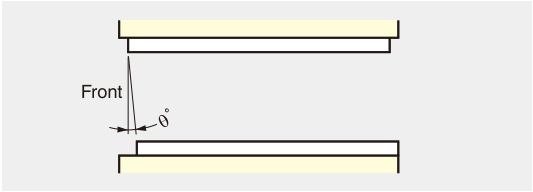
Although it depends on the parallelism (θ_o), even if the angle is small, the wider the front width (W), the greater the value of a. Large front width and inconsistent parallelism of left and right slides may cause lateral swing. So please minimise the parallelism.

2. Front / Rear



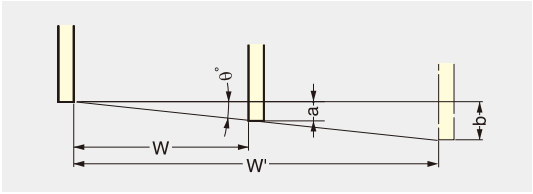
When the rear side is narrowly [widely] installed:
·When the slide is fully closed, the installation width difference between the front and rear sides is A for a single side. When the slide is fully opened, it becomes A+B.
·The installation width difference between the rear side when fully closed and the front side when fully opened is 2x(A+B). Even if the parallelism deviation is very small, the installation width difference when fully opened becomes larger with the increase of travel length. This difference may cause a force pulling to the inside [outside] on the slide.
·As the force increases, the ball sliding surface may sag and the strength may decrease. Also, the slide may not move smoothly. Therefore, please minimise the value of A while considering the installation-side accuracy and installation method (refer to P.No390-4-550 <Installation Examples>).
Allowable range of A: Varies depending on the slide length, travel length, model, and slide use conditions, etc.

[Installation Perpendicularity]



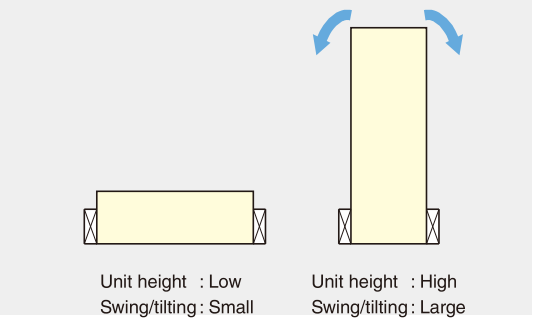
Please minimise the perpendicularity ($\theta°$) to reduce the occurrence of *ball creep (P.1149) and lateral swing.

[Installation Width]



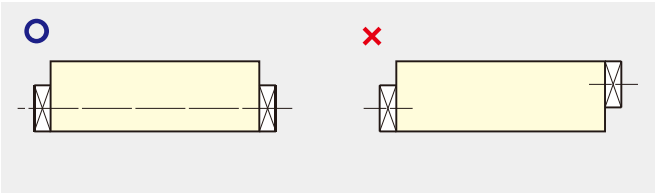
When the slide installation width is large, even if the swing factor of slide is small, the swing becomes strong as the width increases. Also, depending on the handle position and shape, swing may be caused by unstable opening/closing operation of drawer (opening/closing operation is not performed at the centre of the front plate).

[Drawer Unit Height]

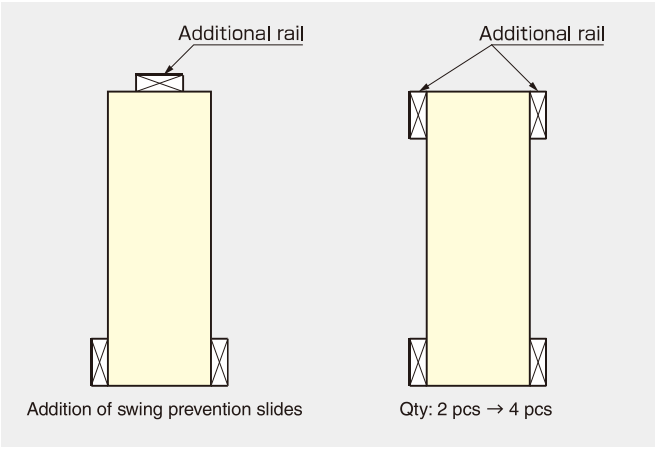


If the drawer unit is high, depending on the installation position, the swing (tilting) of the drawer unit may apply large load to the slide, causing deflection or damage.

nstallation Position of Left and Right Slides Relative to the Drawer Unit



If the left and right drawer slides are not installed level and are misaligned, it can place a significant load on the drawer slides, leading to deformation or damage.

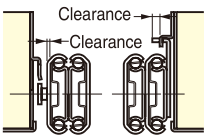


Please consider model selection, installation position, number of used slides (adding slides for preventing swing) and other conditions such as load.
Refer to <Installation Example>

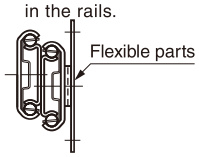
The allowable swing and tolerance may be larger for more flexible slide installation part. To increase the allowance, please devise the installation method carefully.

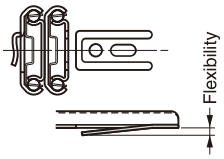
<Installation Example>

1.Provide clearance between the rail and the mounting.

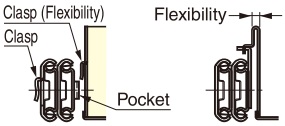


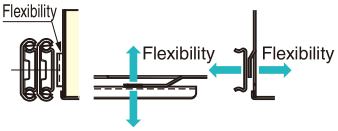
2.Use flexible components in the rails.



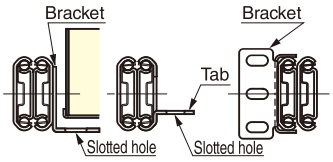


3.Ensure flexibility in the mounting.

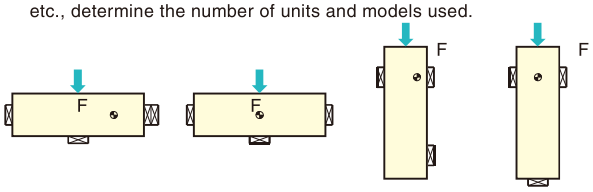




4.Use brackets and tabs, and create slotted holes for mounting.



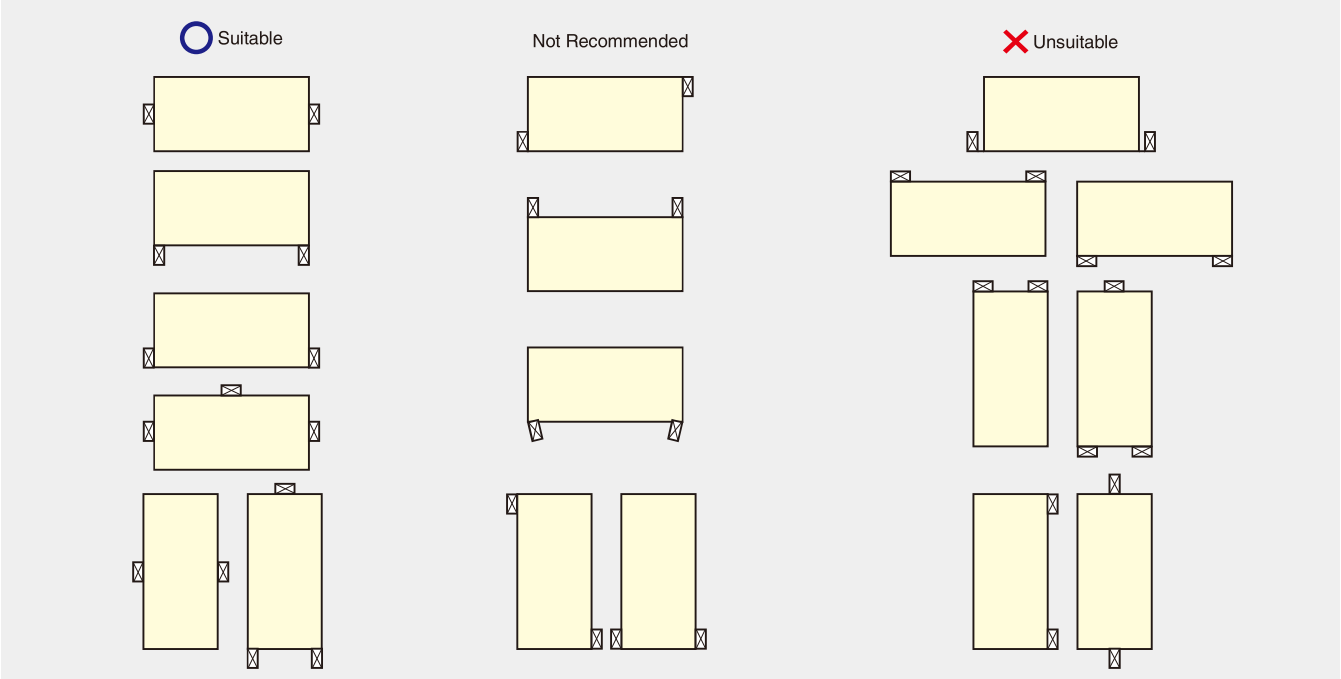
5.Depending on the load, centre of gravity, drawer size (height, width), etc., determine the number of units and models used.



Load: Heavy Centre of gravity: Eccentric Width: Wide	Load: Heavy Centre of gravity: Centre Width: Wide	Load: Heavy Centre of gravity: Eccentric Drawer: High	Load: Heavy Centre of gravity: Centre Drawer: High

Drawer Slide Installation

The following installation methods are classified as suitable, not recommended, or unsuitable. The most important aspect of slide installation is ensuring that the slides are installed in parallel.



***What is ball creep?**

Ball creep occurs when the slide can only move within a range shorter than its full travel length. This issue is likely to happen if the slides are not installed in parallel, if the full travel length is not used, if the movement is not smooth, or if the slide moves up and down, among other reasons.
To correct ball creep, try forcibly opening the slide fully. When doing this, pull it out slowly to avoid damage, as fast or forceful opening can cause harm.

LAMP FULL EXTENSION SOFT-CLOSE SLIDE ESR4670 Stainless steel NEW

Latest Info



LOAD CAPACITY 157~343 N/pair

CLOSED LOCK | OPEN LOCK | FRICTION | DETACH | BUMPER | HOLD CLOSED | HOLD OPENED | 2-WAYS | CATCH

- Soft-closes at 20mm distance from closed position (slide length 350mm or below) or 36mm distance from closed position (slide length 400mm or above).
- With self & soft closing mechanism built-in, possible to install as with conventional slides.
- Full extension (3 members).
- The drawer is detachable by lifting the lever.
- The maximum width of the drawer is the slide length + 200mm.

INSTRUCTION | SUS

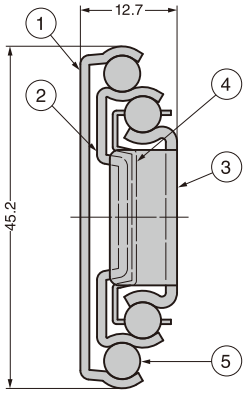
Remarks

- Be sure to read the "Cautions" (P.1147).
- Some parts of this product are made of plastic.
- Do not push with a strong force when soft-closing mechanism is operating. Otherwise, it may cause oil leakage.

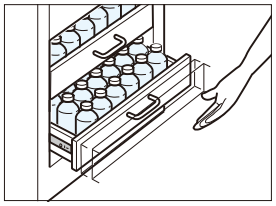
Recommended Screws

- For metal: M4 screw (except for countersunk head)
- For wood: M4 tapping screw (except for countersunk head)

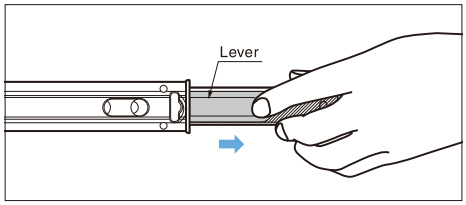
●Slide cross section S=1/1



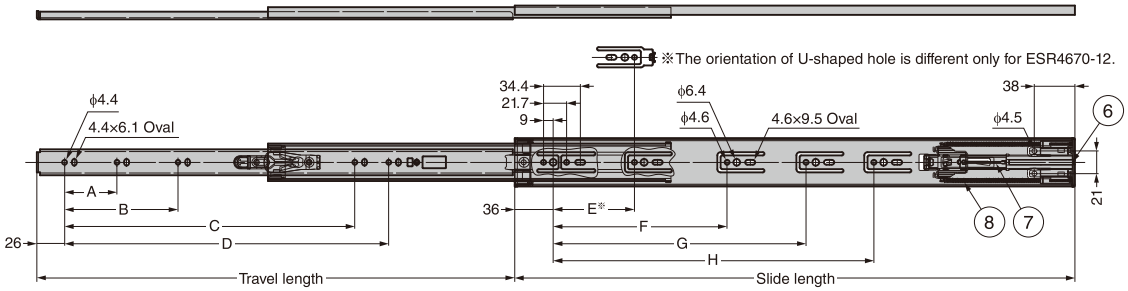
Self & Soft Closing



Easy to Detach



The drawer can be detached by pulling the lever in the direction of the arrow.



No.	Part Name	Material
①	Outer Member	Stainless Steel (SUS304)
②	Intermediate Member	
③	Inner Member	
④	Retainer	
⑤	Balls	
⑥	Damper Case	POM
⑦	Shaft	Stainless Steel (SUS303)
⑧	Spring	Stainless Steel (SUS304)

Sold in pairs (2 pcs).

Item Code	Item Name	Slide Length	Travel Length	A	B	C	D	E	F	G	H	Load Capacity N/pair	Load Capacity kgf/pair	Weight (kg/pair)	Box (pairs)	Carton (pairs)
190-033-964	ESR4670-12	300	265	–	–	–	174	145	–	–	–	157	16	0.78	10	–
190-033-965	ESR4670-14	350	340	–	–	–	224	151	–	–	–	157	16	0.93	10	–
190-033-966	ESR4670-16	400	400	96	–	–	256	167	–	–	–	196	20	1.07	10	–
190-033-967	ESR4670-18	450	450	128	–	–	306	119	215	–	–	294	30	1.21	10	–
190-033-968	ESR4670-20	500	500	96	160	–	344	119	279	–	–	343	35	1.36	10	–
190-033-969	ESR4670-22	550	550	96	160	–	394	119	215	311	–	343	35	1.46	10	–
190-033-970	ESR4670-24	600	600	128	192	–	444	119	247	375	–	343	35	1.66	10	–
190-033-971	ESR4670-26	650	650	128	224	416	494	119	215	311	407	343	35	1.81	10	–
190-033-972	ESR4670-28	700	700	128	224	480	544	119	215	343	471	343	35	1.96	10	–

This information provides a range of quality for the component. It does not ensure the performance or safety of the final product incorporating the component.

FULL EXTENSION SLIDE ESR-DC4513

Latest Info



LOAD CAPACITY 392~529 N/pair

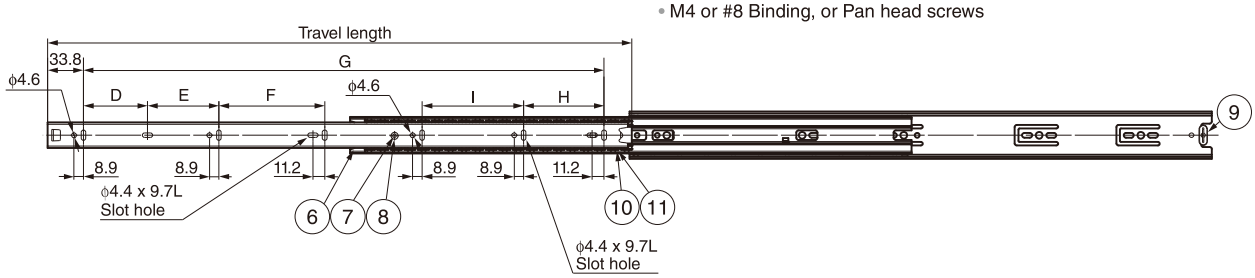
CLOSED LOCK | OPEN LOCK | FRICTION | **DETACH** | BUMPER
HOLD CLOSED | HOLD OPENED | 2-WAYS | CATCH

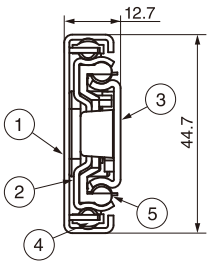
- Full extension.
- Front disconnect.
- Positive stop.
- Hold-in detent.
- Non-handed.
- MOQ upon request.

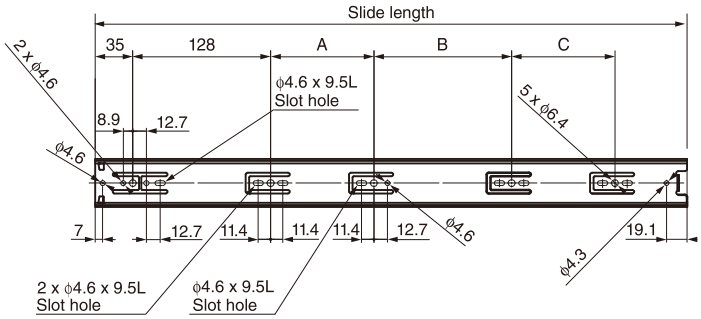
SUS

Recommended Screws

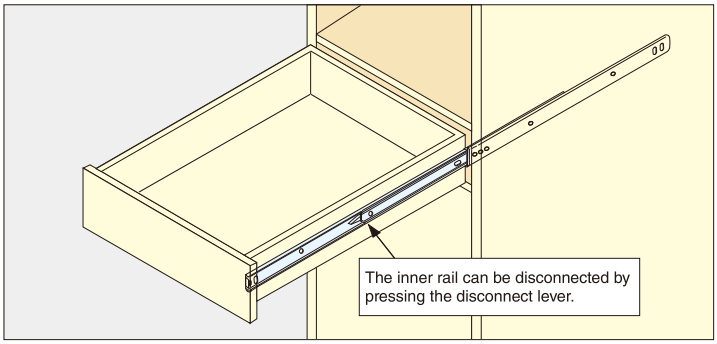
- M4 or #8 Binding, or Pan head screws







Installation



No.	Part Name	Material
①	Outer Member	Stainless Steel (SUS304)
②	Middle Member	
③	Inner Member	
④	Retainer	Polypropylene
⑤	Ball Case	Stainless Steel (SUS304)
⑥	Stopper (Guide)	Nylon 6
⑦	Disconnector	Nylon 66
⑧	Rivet	Stainless Steel (SUS304)
⑨	Stopper	Urethane
⑩	Balls	Stainless Steel (SUS304)
⑪	Grease	H1 Grade

Item Code	Item Name	Slide Length	Travel Length	A	B	C	D	E	F	G	H	I	Load Capacity N/pair	Load Capacity kgf/pair	Weight (g)	Box (pair)
190-043-692	ESR-DC4513-8	200	200	-	-	-	-	-	-	142	-	-	529	54	447	10
190-035-153	ESR-DC4513-10	250	250	-	-	-	60.5	-	-	192	-	-	510	52	603	
190-035-154	ESR-DC4513-12	300	300	96	-	-	60.5	-	-	242	-	-	490	50	754	
190-035-155	ESR-DC4513-14	350	350	96	-	-	60.5	-	-	292	-	-	480	49	919	
190-035-156	ESR-DC4513-16	400	400	96	96	-	60.5	67.5	-	342	-	-	461	47	1064	
190-035-157	ESR-DC4513-18	450	450	96	128	-	60.5	67.5	-	392	72	-	451	46	1228	
190-035-158	ESR-DC4513-20	500	500	96	192	-	60.5	67.5	-	442	122	-	431	44	1373	
190-035-159	ESR-DC4513-22	550	550	96	128	96	60.5	67.5	-	492	76	96	421	43	1528	
190-035-160	ESR-DC4513-24	600	600	96	128	128	60.5	67.5	96	542	126	-	412	42	1687	
190-035-161	ESR-DC4513-26	650	650	96	128	192	60.5	67.5	96	592	48	128	402	41	1854	
190-035-162	ESR-DC4513-28	700	700	96	128	192	60.5	67.5	96	642	98		392	40	2020	

This information provides a range of quality for the component. It does not ensure the performance or safety of the final product incorporating the component.

FULL EXTENSION SLIDE ESR-3813

Latest Info

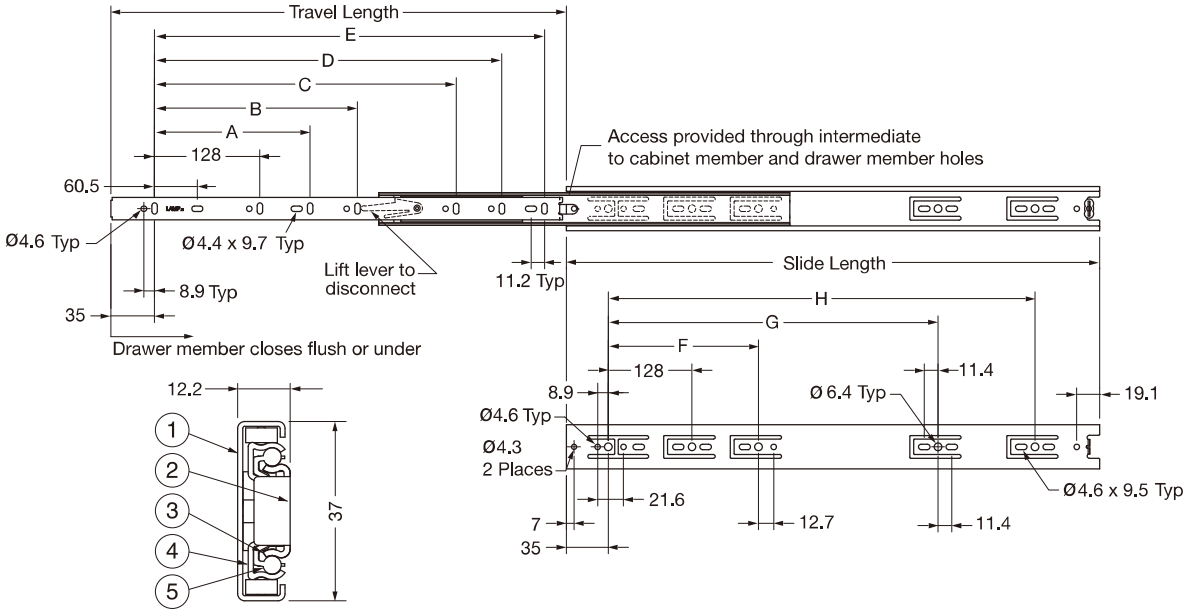


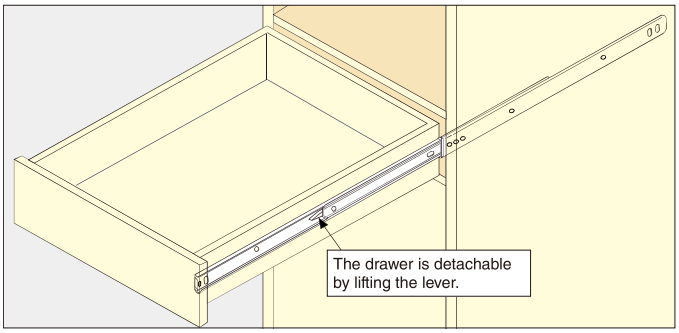
LOAD CAPACITY 29~45 kgf/pair

CLOSED LOCK | OPEN LOCK | FRICTION | DETACH | BUMPER
HOLD CLOSED | HOLD OPENED | 2-WAYS | CATCH

- Full extension.
- The drawer is detachable by lifting the lever.
- With a bumper to avoid metal-to-metal noise at the end of the course.
- The drawer can be held in the fully closed position.
- Non-handed.
- Mount with M4 Binding, Pan, or Truss head screws.
- MOQ upon request.

SUS





Installation

No.	Part	Material
①	Outer Rail	304 Stainless Steel
②	Inner Rail	
③	Retainer	
④	Intermediate Member	
⑤	Balls	

Sold in pairs (2 pcs).

Item Code	Item Name	Slide Length	Travel Length	A	B	C	D	E	F	G	H	Load Capacity	Weight	Box
190-118-877	ESR-3813-8	200	200	–	–	–	–	142	–	–	–	45 kgf/pair	400 g/pair	10 pairs
190-118-878	ESR-3813-10	250	243	–	–	–	–	192	–	–	–	42 kgf/pair	530 g/pair	
190-118-879	ESR-3813-12	300	305	–	–	–	–	242	224	–	–	40 kgf/pair	637 g/pair	
190-118-880	ESR-3813-14	350	355	–	–	–	–	292	224	–	–	38 kgf/pair	726 g/pair	
190-118-881	ESR-3813-16	400	406	–	–	–	–	342	224	320	–	36 kgf/pair	816 g/pair	
190-118-882	ESR-3813-18	450	457	–	–	320	–	392	224	352	–	34 kgf/pair	910 g/pair	
190-118-883	ESR-3813-20	500	508	–	–	320	–	442	224	416	–	33 kgf/pair	1000 g/pair	
190-118-884	ESR-3813-22	550	559	–	–	320	416	492	224	352	448	31 kgf/pair	1090 g/pair	
190-118-885	ESR-3813-24	600	610	224	–	416	–	542	224	352	480	29 kgf/pair	1180 g/pair	

This information provides a range of quality for the component. It does not ensure the performance or safety of the final product incorporating the component.

LAMP FULL EXTENSION SLIDE ESR2031

Latest Info



LOAD CAPACITY 127~167 N/pair

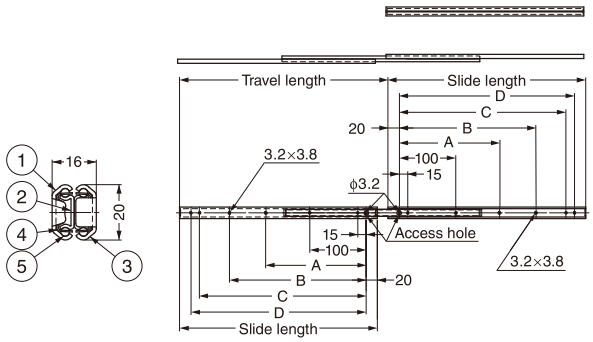
CLOSED LOCK | OPEN LOCK | FRICTION | DETACH | BUMPER | HOLD CLOSED | HOLD OPENED | 2-WAYS | CATCH

- Full extension (3 members).
- Non-handed.

SUS

Recommended Screws

- M3 screw with binding or truss head



No.	Part Name	Material	Finish
①	Outer Rail	Stainless Steel (SUS304)	Plain
②	Intermediate Member	Stainless Steel (SUS304)	Plain
③	Inner Rail	Stainless Steel (SUS304)	Plain
④	Retainer	Stainless Steel (SUS304)	Plain
⑤	Balls	Stainless Steel (SUS304)	–

Sold by piece.

Item Code	Item Name	Slide Length	Travel Length	A	B	C	D	Load Capacity N	Load Capacity kgf	Weight	Box
190-011-656	ESR2031-200	200	229	–	–	145	160	167 N/pair	17 kgf/pair	0.4 kg/pair	96 pcs
190-011-657	ESR2031-250	250	269	–	–	195	210	167 N/pair	17 kgf/pair	0.5 kg/pair	48 pcs
190-011-658	ESR2031-300	300	329	–	160	245	260	167 N/pair	17 kgf/pair	0.6 kg/pair	48 pcs
190-011-659	ESR2031-350	350	369	–	210	295	310	167 N/pair	17 kgf/pair	0.7 kg/pair	48 pcs
190-011-660	ESR2031-400	400	429	–	260	345	360	167 N/pair	17 kgf/pair	0.8 kg/pair	48 pcs
190-011-661	ESR2031-450	450	469	205	310	395	410	157 N/pair	16 kgf/pair	0.9 kg/pair	48 pcs
190-011-662	ESR2031-500	500	529	230	360	445	460	127 N/pair	13 kgf/pair	1 kg/pair	48 pcs

LAMP FULL EXTENSION SLIDE SNS27D

Latest Info



LOAD CAPACITY 275~373 N/pair

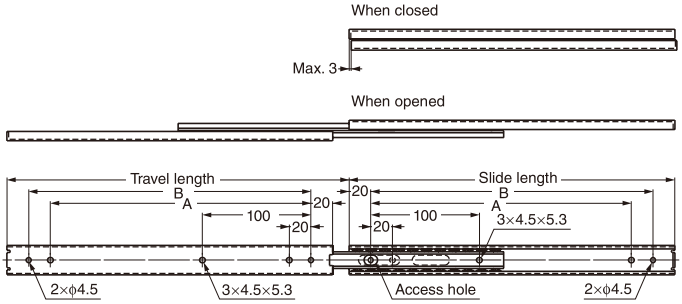
CLOSED LOCK | OPEN LOCK | FRICTION | DETACH | BUMPER | HOLD CLOSED | HOLD OPENED | 2-WAYS | CATCH

- Full extension (3 members).
- Non-handed.

SUS

Recommended Screws

- M4 pan head tapping screw



No.	Part Name	Material	Finish
①	Outer Rail	Stainless Steel (SUS304)	Plain
②	Inner Rail	Stainless Steel (SUS304)	Plain
③	Retainer	Stainless Steel (SUS304)	Plain
④	Balls	Stainless Steel (SUS440)	–

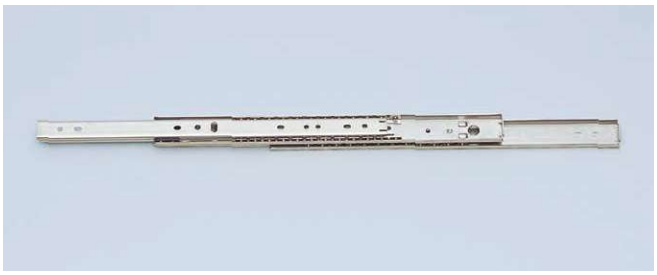
Sold by piece.

Item Code	Item Name	Slide Length	Travel Length	A	B	Load Capacity N	Load Capacity kgf	Weight	Box
190-110-184	SNS27D-20	200	216.8	140	160	373 N/pair	38 kgf/pair	0.67 kg/pair	20 pcs
190-110-185	SNS27D-25	250	266	190	210	363 N/pair	37 kgf/pair	0.83 kg/pair	20 pcs
190-110-186	SNS27D-30	300	315.2	240	260	353 N/pair	36 kgf/pair	1 kg/pair	20 pcs
190-110-187	SNS27D-35	350	364.4	290	310	333 N/pair	34 kgf/pair	1.16 kg/pair	20 pcs
190-110-188	SNS27D-40	400	413.6	340	360	314 N/pair	32 kgf/pair	1.32 kg/pair	20 pcs
190-110-189	SNS27D-45	450	462.8	390	410	294 N/pair	30 kgf/pair	1.48 kg/pair	20 pcs
190-110-190	SNS27D-50	500	512	440	460	275 N/pair	28 kgf/pair	1.642 kg/pair	20 pcs

This information provides a range of quality for the component. It does not ensure the performance or safety of the final product incorporating the component.

LAMP FULL EXTENSION SLIDE 273SL

Latest Info

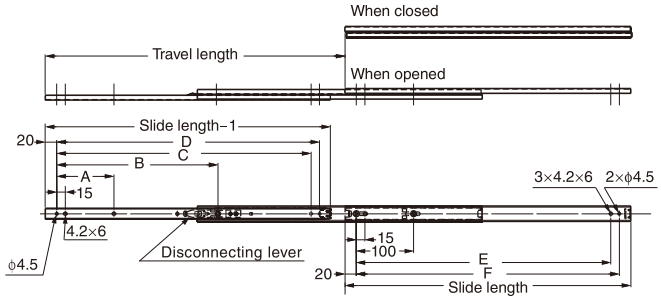


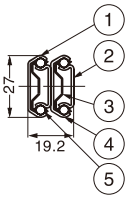
LOAD CAPACITY 118~177 N/pair

CLOSED LOCK | OPEN LOCK | FRICTION | **DETACH** | BUMPER | HOLD CLOSED | HOLD OPENED | 2-WAYS | CATCH

- Full extension (3 members).
- The drawer is detachable by lifting the lever.
- Non-handed.

SUS





Feature

No.	Part Name	Material	Finish
①	Outer Rail	Stainless Steel (SUS304)	Plain
②	Inner Rail	Stainless Steel (SUS304)	Plain
③	Retainer	Stainless Steel (SUS304)	Plain
④	Intermediate Member	Stainless Steel (SUS304)	Plain
⑤	Balls	Stainless Steel (SUS304)	–

Sold in pairs (2 pcs).

Item Code	Item Name	Slide Length	Travel Length	A	B	C	D	E	F	Load Capacity N	Load Capacity kgf	Weight	Box
190-116-712	273SL-200	200	221	–	135	–	–	145	160	177 N/pair	18 kgf/pair	0.55 kg/pair	10 pairs
190-116-713	273SL-250	250	280	–	143.5	195	210	195	210	167 N/pair	17 kgf/pair	0.68 kg/pair	10 pairs
190-116-714	273SL-300	300	327	100	188	245	260	245	260	157 N/pair	16 kgf/pair	0.82 kg/pair	10 pairs
190-116-715	273SL-350	350	376	100	211.5	295	310	295	310	147 N/pair	15 kgf/pair	0.96 kg/pair	10 pairs
190-116-716	273SL-400	400	426	100	236	345	360	345	360	137 N/pair	14 kgf/pair	1.09 kg/pair	10 pairs
190-116-717	273SL-450	450	478	100	261.5	395	410	395	410	128 N/pair	13 kgf/pair	1.24 kg/pair	10 pairs
190-116-718	273SL-500	500	524	100	282	445	460	445	460	118 N/pair	12 kgf/pair	1.35 kg/pair	10 pairs

LAMP FULL EXTENSION SLIDE SNS35D

Latest Info



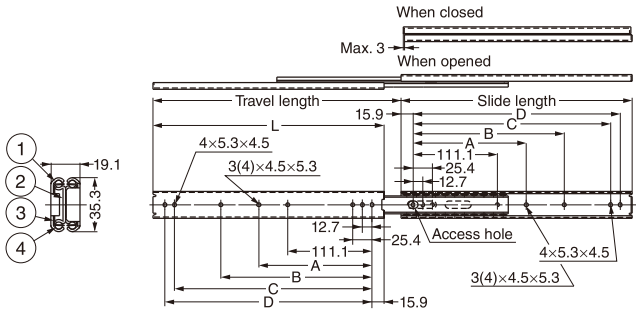
LOAD CAPACITY 441~588 N/pair

CLOSED LOCK | OPEN LOCK | FRICTION | DETACH | BUMPER | HOLD CLOSED | HOLD OPENED | 2-WAYS | CATCH

- Full extension (3 members).
- Non-handed.

SUS

Recommended Screws
- M4 pan head tapping screw



No.	Part Name	Material	Finish
①	Outer Rail	Stainless Steel (SUS304)	Plain
②	Inner Rail	Stainless Steel (SUS304)	Plain
③	Retainer	Stainless Steel (SUS304)	Plain
④	Balls	Stainless Steel (SUS440)	–

Sold by piece.

Item Code	Item Name	Slide Length	Travel Length	A	B	C	D	Load Capacity N	Load Capacity kgf	Weight	Box
190-110-200	SNS35D-30	304.8	327.2	–	149.2	260.3	273	588 N/pair	60 kgf/pair	1.24 kg/pair	10 pcs
190-110-201	SNS35D-35	355.6	377.9	–	200	311.1	323.8	579 N/pair	59 kgf/pair	1.44 kg/pair	10 pcs
190-110-202	SNS35D-40	406.4	428.7	–	250.8	361.9	374.6	559 N/pair	57 kgf/pair	1.64 kg/pair	10 pcs
190-110-203	SNS35D-45	457.2	479.5	212.7	301.6	412.7	425.4	549 N/pair	56 kgf/pair	1.84 kg/pair	10 pcs
190-110-204	SNS35D-50	508	530.3	238.1	352.4	463.5	476.2	530 N/pair	54 kgf/pair	2.05 kg/pair	10 pcs
190-110-205	SNS35D-55	558.8	580.3	263.5	403.2	514.3	527	500 N/pair	51 kgf/pair	2.25 kg/pair	10 pcs
190-110-206	SNS35D-60	609.6	631.9	288.9	454	565.1	577.8	481 N/pair	49 kgf/pair	2.45 kg/pair	10 pcs
190-110-207	SNS35D-65	660.4	682.7	314.3	504.8	615.9	628.6	461 N/pair	47 kgf/pair	2.65 kg/pair	10 pcs
190-110-208	SNS35D-70	711.2	733.5	339.7	555.6	666.7	679.4	441 N/pair	45 kgf/pair	2.85 kg/pair	10 pcs

This information provides a range of quality for the component. It does not ensure the performance or safety of the final product incorporating the component.

ALL STAINLESS STEEL DRAWER SLIDE SNS35D-CV Low Particle Emissions Grease Type NEW

Latest Info



LOAD CAPACITY 441~588 N/pair

CLOSED LOCK | OPEN LOCK | FRICTION | DETACH | BUMPER
HOLD CLOSED | HOLD OPENED | 2-WAYS | CATCH

- We use low particle emissions grease (NSK Ltd. LG2), which is suitable for cleanroom environments.
- This is a stainless steel drawer slide with a height of 35.3mm.

SUS

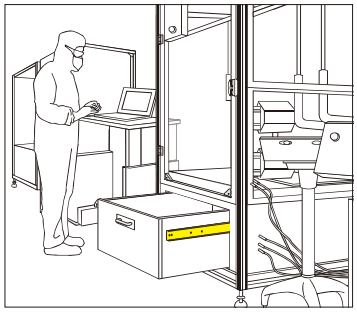
Applications

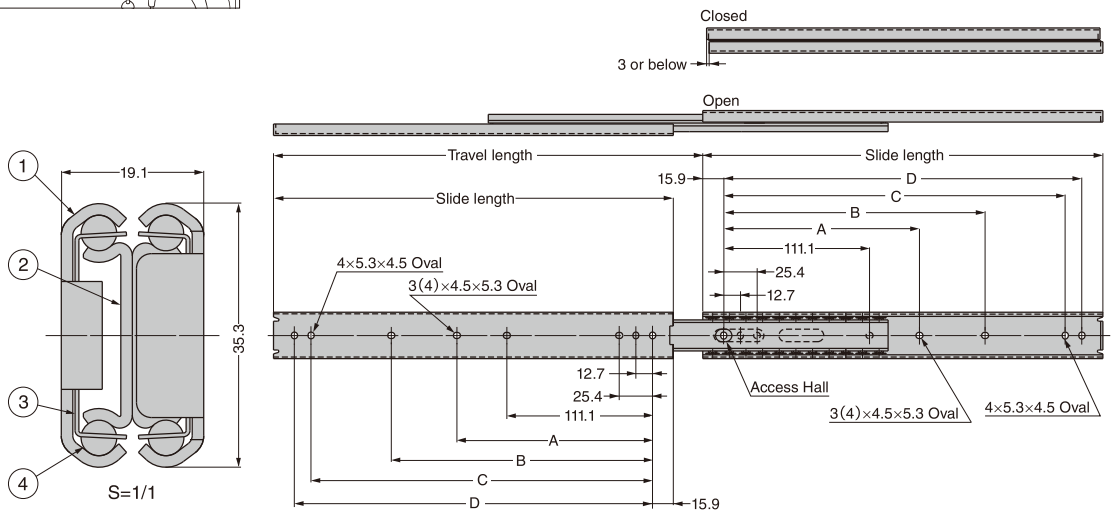
- Cleanrooms, Semiconductor, Liquid Crystal

Recommended screws

- M4 Pan Head Screw, or Nominal 4 Pan Head Tapping Screw

Application Example





We are using low-dust grease (NSK Ltd. LG2).

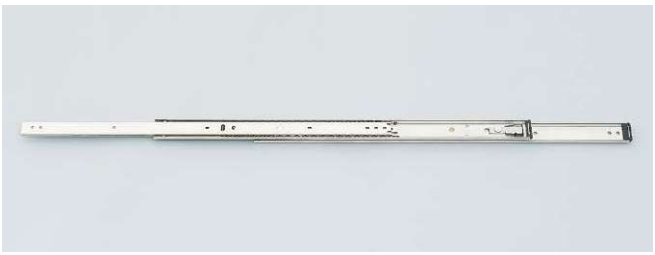
No.	Part Name	Material	Finish
①	Outer member	Stainless (SUS304)	Plain
②	Inner member		
③	Retainer		
④	Ball	Stainless (SUS440)	–

Item Code	Item Name	Slide length	Travel length	A	B	C	D	Load Capacity N/pair	Load Capacity kgf/pair	Weight g/per piece	Box
190-056-287	SNS35D-30CV	304.8	327.2	–	149.2	260.3	273	588	60	620	10 pcs
190-056-288	SNS35D-35CV	355.6	377.9	–	200	311.1	323.8	579	59	720	10 pcs
190-056-289	SNS35D-40CV	406.4	428.7	–	250.8	361.9	374.6	559	57	820	10 pcs
190-056-290	SNS35D-45CV	457.2	479.5	212.7	301.6	412.7	425.4	549	56	920	10 pcs
190-056-291	SNS35D-50CV	508	530.3	238.1	352.4	463.5	476.2	530	54	1030	10 pcs
190-056-292	SNS35D-55CV	558.8	580.3	263.5	403.2	514.3	527	500	51	1130	10 pcs
190-056-293	SNS35D-60CV	609.6	631.9	288.9	454	565.1	577.8	481	49	1230	10 pcs
190-056-294	SNS35D-65CV	660.4	682.7	314.3	504.8	615.9	628.6	461	47	1330	10 pcs
190-056-295	SNS35D-70CV	711.2	733.5	339.7	555.6	666.7	679.4	441	45	1430	10 pcs

This information provides a range of quality for the component. It does not ensure the performance or safety of the final product incorporating the component.

LAMP FULL EXTENSION SLIDE SNS35W

Latest Info



LOAD CAPACITY 355~623 N/pair

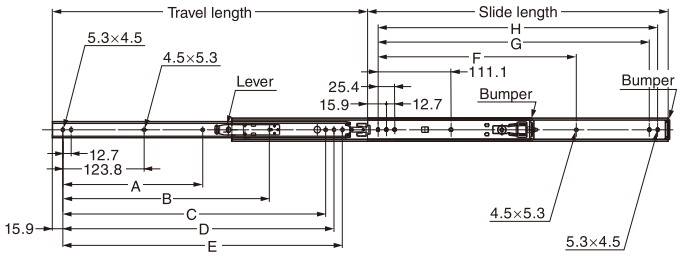
CLOSED LOCK | OPEN LOCK | FRICTION | DETACH | BUMPER
HOLD CLOSED | HOLD OPENED | 2-WAYS | CATCH

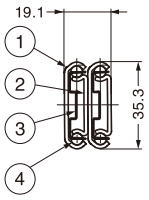
- Full extension (3 members).
- The drawer is detachable by lifting the lever.
- The drawer can be held in the fully opened position.
- Non-handed.

SUS

Recommended Screws

- M4 tapping screw or pan head-screw





No.	Part Name	Material	Finish/Colour
①	Outer Rail	Stainless Steel (SUS304)	Plain
②	Inner Rail	Stainless Steel (SUS304)	Plain
③	Retainer	Stainless Steel (SUS304)	Plain
④	Balls	Stainless Steel (SUS440)	–
⑤	Bumper	Elastomer (TPE)	Black

Sold by piece.

Item Code	Item Name	Slide Length	Travel Length	A	B	C	D	E	F	G	H	Load Capacity N	Load Capacity kgf	Weight	Box
190-112-231	SNS35W-30	304.8	327.2	–	–	–	260.3	273	–	260.3	273	623 N/pair	64 kgf/pair	0.78 kg/pc	10 pcs
190-112-232	SNS35W-35	355.6	377.9	–	–	298.4	311.1	323.8	–	311.1	323.8	586 N/pair	60 kgf/pair	0.903 kg/pc	10 pcs
190-112-233	SNS35W-40	406.4	428.7	–	–	349.2	361.9	374.6	250.8	361.9	374.6	555 N/pair	57 kgf/pair	1.028 kg/pc	10 pcs
190-112-234	SNS35W-45	457.2	479.5	212.7	–	400	412.7	425.4	301.6	412.7	425.4	516 N/pair	53 kgf/pair	1.151 kg/pc	10 pcs
190-112-235	SNS35W-50	508	530.3	238.1	365.1	450.8	463.6	476.2	352.4	463.6	476.2	475 N/pair	48 kgf/pair	1.275 kg/pc	10 pcs
190-112-236	SNS35W-55	558.8	581.2	263.5	415.9	501.6	514.3	527	403.2	514.3	527	444 N/pair	45 kgf/pair	1.399 kg/pc	10 pcs
190-112-237	SNS35W-60	609.6	631.9	288.9	466.7	552.4	565.1	577.8	454	565.1	577.8	413 N/pair	42 kgf/pair	1.523 kg/pc	10 pcs
190-112-238	SNS35W-65	660.4	682.7	314.3	517.5	603.2	615.9	628.6	504.8	615.9	628.6	382 N/pair	39 kgf/pair	1.647 kg/pc	10 pcs
190-112-239	SNS35W-70	711.2	733.5	339.7	568.3	654	666.7	679.4	555.6	666.7	679.4	355 N/pair	36 kgf/pair	1.77 kg/pc	10 pcs

LAMP FULL EXTENSION SLIDE ESR7

Latest Info



LOAD CAPACITY 355~623 N/pair

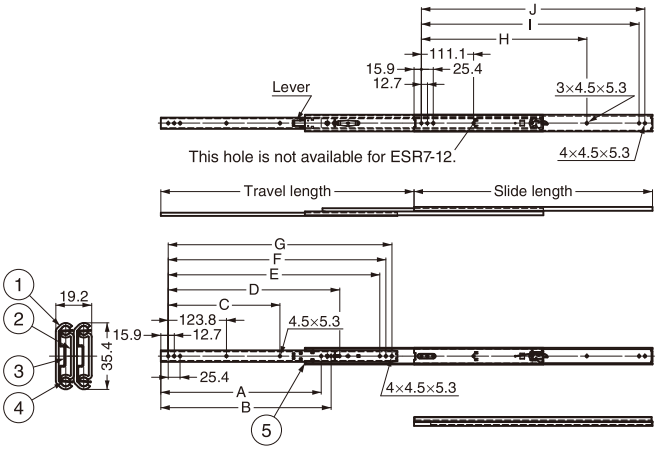
CLOSED LOCK | OPEN LOCK | FRICTION | DETACH | BUMPER
HOLD CLOSED | HOLD OPENED | 2-WAYS | CATCH

- Full extension (3 members).
- The drawer can be held in opened position.
- The drawer is detachable by lifting the lever.
- Non-handed.

SUS

Recommended Screws

- M4 binding screw or truss head screw



No.	Part Name	Material	Finish/Colour
①	Outer Rail	Stainless Steel (SUS304)	Plain
②	Inner Rail	Stainless Steel (SUS304)	Plain
③	Retainer	Stainless Steel (SUS304)	Plain
④	Balls	Stainless Steel (SUS304)	–
⑤	Guide	Polyacetal (POM)	White

Sold by piece.

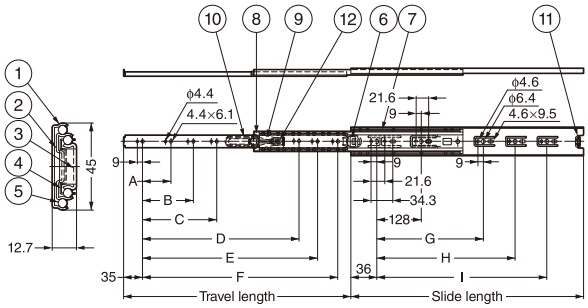
Item Code	Item Name	Slide Length	Travel Length	A	B	C	D	E	F	G	H	I	J	Load Capacity N	Load Capacity kgf	Box
190-111-318	ESR7-12	304.8	336	228	248.4	–	–	–	260.3	273	–	260.3	273	623 N/pair	63.5 kgf/pair	16 pcs
190-111-319	ESR7-14	355.6	386.8	278.8	299.2	–	–	–	311.1	323.8	–	311.1	323.8	586 N/pair	59.8 kgf/pair	16 pcs
190-111-320	ESR7-16	406.4	437.6	291.5	311.9	–	–	349.2	361.9	374.6	250.8	361.9	374.6	555 N/pair	56.6 kgf/pair	16 pcs
190-111-321	ESR7-18	457.2	488.4	316.9	337.3	212.7	–	400	412.7	425.4	301.6	412.7	425.4	516 N/pair	52.6 kgf/pair	16 pcs
190-111-322	ESR7-20	508	539.2	342.3	362.7	238.1	–	450.8	463.5	476.2	352.4	463.5	476.2	476 N/pair	48.5 kgf/pair	16 pcs
190-111-323	ESR7-22	558.8	590	367.7	388.1	263.5	415.9	501.6	514.3	527	403.2	514.3	527	444 N/pair	45.3 kgf/pair	16 pcs
190-111-324	ESR7-24	609.6	640.8	393.1	413.5	288.9	466.7	552.4	565.1	577.8	454	565.1	577.8	413 N/pair	42.1 kgf/pair	16 pcs
190-111-325	ESR7-26	660.4	691.6	418.5	438.9	314.3	517.5	603.2	615.9	628.6	504.8	615.9	628.6	383 N/pair	39 kgf/pair	16 pcs
190-111-326	ESR7-28	711.2	742.4	443.9	464.3	339.7	568.3	654	666.7	679.4	555.6	666.7	679.4	355 N/pair	36.2 kgf/pair	16 pcs

This information provides a range of quality for the component. It does not ensure the performance or safety of the final product incorporating the component.

FULL EXTENSION SLIDE ESR4658

Latest Info





LOAD CAPACITY 314~490 N/pair

CLOSED LOCK | OPEN LOCK | FRICTION | DETACH | BUMPER | HOLD CLOSED | HOLD OPENED | 2-WAYS | CATCH

- Full extension (3 members).
- With a bumper to avoid metal-to-metal noise at the end of the course.
- The drawer is detachable by lifting the lever.
- Non-handed.

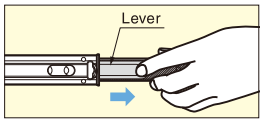
SUS

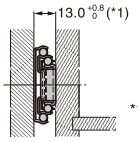
Recommended Screws

- For wood: M4 tapping screw
- For steel: M4 screw

No.	Part Name	Material	Finish/Colour
①	Outer Rail	Stainless Steel (SUS304)	Plain
②	Intermediate Member	Stainless Steel (SUS304)	Plain
③	Inner Rail	Stainless Steel (SUS304)	Plain
④	Retainer	Stainless Steel (SUS304)	Plain
⑤	Balls	Stainless Steel (SUS304)	–
⑥	Rubbing Prevention Bumper	Polypropylene (PP)	Natural
⑦	Retainer	Polyethylene (PE)	Grey
⑧	Guide Block	Polyamide (PA)	Black
⑨	Lever 1	Polyacetal (POM)	Black
⑩	Lever 2	Polyamide (PA)	Black
⑪	Closing Catch Bumper	Polyurethane (PUR)	Black
⑫	Rivet	Stainless Steel (SUS302)	–

Easy to Detach





*1 Make sure the clearance is in the range for safe use.

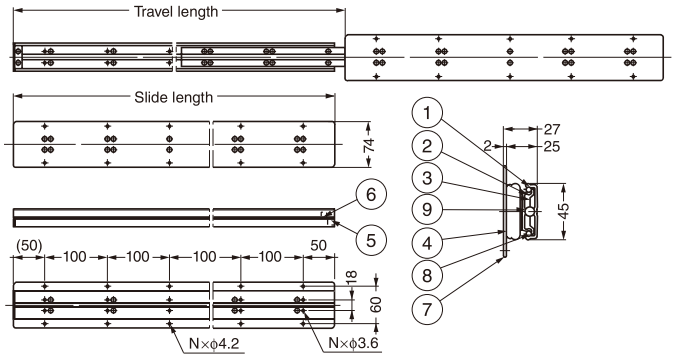
Sold in pairs (2 pcs).

Item Code	Item Name	Slide Length	Travel Length	A	B	C	D	E	F	G	H	I	Load Capacity N	Load Capacity kgf	Weight	Box
190-110-706	ESR4658-14	350	356	–	–	–	–	–	292	224	–	–	490 N/pair	50 kgf/pair	0.99 kg/pair	10 pairs
190-110-707	ESR4658-16	400	406	–	–	320	–	–	342	224	320	–	470 N/pair	48 kgf/pair	1.13 kg/pair	10 pairs
190-110-708	ESR4658-18	450	457	128	–	320	–	–	392	224	352	–	441 N/pair	45 kgf/pair	1.28 kg/pair	10 pairs
190-110-709	ESR4658-20	500	508	128	–	352	–	–	442	224	416	–	421 N/pair	43 kgf/pair	1.42 kg/pair	10 pairs
190-110-710	ESR4658-22	550	559	128	–	–	416	–	492	224	352	448	402 N/pair	41 kgf/pair	1.57 kg/pair	10 pairs
190-110-711	ESR4658-24	600	610	128	–	–	416	–	542	224	352	480	382 N/pair	39 kgf/pair	1.71 kg/pair	10 pairs
190-110-712	ESR4658-26	650	660	128	224	–	416	544	592	224	352	544	353 N/pair	36 kgf/pair	1.86 kg/pair	10 pairs
190-110-713	ESR4658-28	700	711	128	224	–	448	544	642	224	352	544	314 N/pair	32 kgf/pair	2 kg/pair	10 pairs

LAMP FULL EXTENSION SLIDE TSS3

Latest Info





LOAD CAPACITY 490~931 N/pair

CLOSED LOCK | OPEN LOCK | FRICTION | DETACH | BUMPER | HOLD CLOSED | HOLD OPENED | 2-WAYS | CATCH

- Full extension (3 members).
- Non-handed.
- Heavy duty.

No.	Part Name	Material	Colour
①	Outer Rail	Stainless Steel (SUS304)	–
②	Inner Rail	Stainless Steel (SUS304)	–
③	Retainer	Stainless Steel (SUS304)	–
④	End Stopper	Polyamide (PA)	Black
⑤	Outer Guide	Polyacetal (POM)	Black
⑥	Inner Guide	Polyacetal (POM)	Black
⑦	Plate	Stainless Steel (SUS304)	–
⑧	Balls	Carbon Steel	–
⑨	Balls	Carbon Steel	–

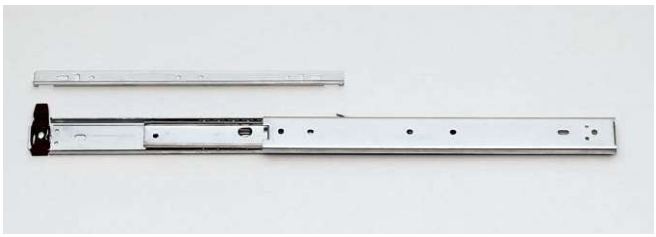
Sold by piece.

Item Code	Item Name	Slide Length	Travel Length	Holes N	Load Capacity N	Load Capacity kgf	Weight	Box
190-110-400	TSS3-300	300	336	6	931 N/pair	95 kgf/pair	1.38 kg/pc	4 pcs
190-110-401	TSS3-400	400	436	8	882 N/pair	90 kgf/pair	1.86 kg/pc	4 pcs
190-110-402	TSS3-500	500	536	10	833 N/pair	85 kgf/pair	2.39 kg/pc	4 pcs
190-110-403	TSS3-600	600	636	12	784 N/pair	80 kgf/pair	2.88 kg/pc	4 pcs
190-110-404	TSS3-800	800	836	16	637 N/pair	65 kgf/pair	3.79 kg/pc	4 pcs
190-110-405	TSS3-1000	1000	1036	20	490 N/pair	50 kgf/pair	4.71 kg/pc	4 pcs

This information provides a range of quality for the component. It does not ensure the performance or safety of the final product incorporating the component.

LAMP FULL EXTENSION SLIDE ESR3

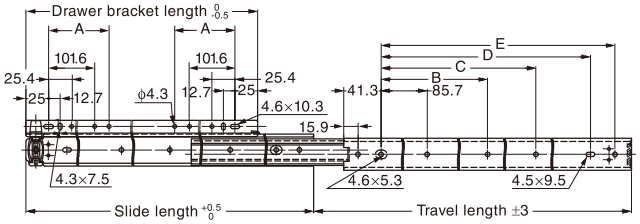
Latest Info



LOAD CAPACITY 422~637 N/pair

CLOSED LOCK | OPEN LOCK | FRICTION | **DETACH** | **BUMPER** | HOLD CLOSED | HOLD OPENED | 2-WAYS | CATCH

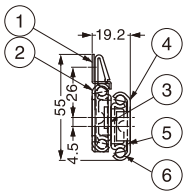
- Full extension (3 members).
- The drawer is detachable by lifting the lever.
- With a bumper to avoid metal-to-metal noise at the end of the course.



SUS

Recommended Screws

- M4 binding screw



No.	Part Name	Material	Finish
①	Drawer Bracket	Stainless Steel (SUS304)	Plain
②	Inner Rail	Stainless Steel (SUS304)	Plain
③	Intermediate Member	Stainless Steel (SUS304)	Plain
④	Outer Rail	Stainless Steel (SUS304)	Plain
⑤	Retainer	Stainless Steel (SUS304)	Plain
⑥	Balls	Stainless Steel (SUS304)	–

Sold in pairs (2 pcs).

Item Code	Item Name	Slide Length	Travel Length	Drawer Bracket Length	A	B	C	D	E	Outer Rail Holes	Load Capacity		Weight	Box
190-115-206	ESR3-12	304.8	348.4	273	–	–	123.1	218.3	245.3	6	637 N/pair	65 kgf/pair	0.68 kg/pair	6 pairs
190-115-207	ESR3-14	355.6	399.2	273	–	–	173.9	269.1	296.1	6	598 N/pair	61 kgf/pair	0.78 kg/pair	6 pairs
190-115-208	ESR3-16	406.4	450	375	–	–	224.7	319.9	346.9	6	598 N/pair	61 kgf/pair	0.91 kg/pair	6 pairs
190-110-413	ESR3-18	457.2	500.8	375	–	187.3	275.5	370.7	397.7	7	549 N/pair	56 kgf/pair	1.01 kg/pair	6 pairs
190-115-210	ESR3-20	508	551.6	375	–	212.7	326.3	421.5	448.5	7	510 N/pair	52 kgf/pair	1.11 kg/pair	6 pairs
190-115-211	ESR3-22	558.8	602.4	527	177.8	238.1	377.1	472.3	499.3	7	510 N/pair	52 kgf/pair	1.26 kg/pair	6 pairs
190-115-212	ESR3-24	609.6	653.2	527	177.8	263.5	427.9	523.1	550.1	7	471 N/pair	48 kgf/pair	1.37 kg/pair	6 pairs
190-110-417	ESR3-26	660.4	704	575.3	177.8	288.9	478.7	573.9	600.9	7	422 N/pair	43 kgf/pair	1.48 kg/pair	6 pairs
190-115-214	ESR3-28	711.2	754.8	575.3	177.8	314.3	529.5	624.7	651.7	7	422 N/pair	43 kgf/pair	1.58 kg/pair	6 pairs

LAMP FULL EXTENSION SLIDE 5302S

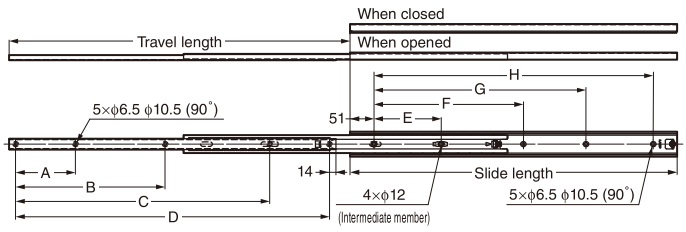
Latest Info



LOAD CAPACITY 627~1137 N/pair

CLOSED LOCK | OPEN LOCK | FRICTION | DETACH | BUMPER | **HOLD CLOSED** | HOLD OPENED | 2-WAYS | CATCH

- Full extension (3 members).
- Non-handed.



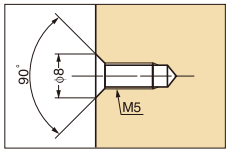
SUS

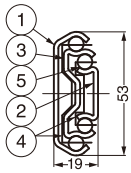
Recommended Screws

- M5 countersunk head screw

Feature

Cut Out Dimensions





No.	Part Name	Material	Finish/Colour
①	Outer Rail	Stainless Steel (SUS304)	Plain
②	Inner Rail	Stainless Steel (SUS304)	Plain
③	Intermediate Member	Stainless Steel (SUS304)	Plain
④	Retainer	Stainless Steel (SUS304)	Plain
⑤	Balls	Stainless Steel (SUS304)	–

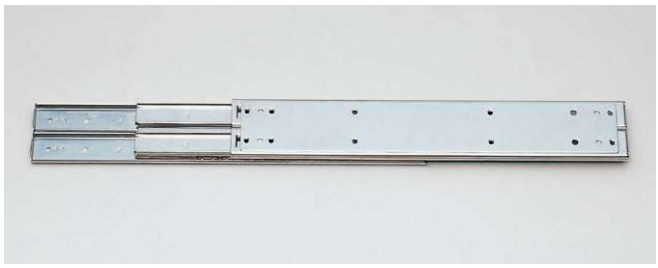
Sold by piece.

Item Code	Item Name	Slide Length	Travel Length	A	B	C	D	E	F	G	H	Load Capacity N	Load Capacity kgf	Weight	Box
190-112-730	5302S-300	300	334	128	256	–	–	112	192	–	–	1137 N/pair	116 kgf/pair	0.86 kg/pc	20 pcs
190-112-731	5302S-350	350	384	160	320	–	–	144	240	–	–	1088 N/pair	111 kgf/pair	1 kg/pc	20 pcs
190-112-732	5302S-400	400	433	160	256	352	–	144	224	304	–	970 N/pair	99 kgf/pair	1.14 kg/pc	16 pcs
190-112-733	5302S-450	450	482	128	288	416	–	80	272	352	–	941 N/pair	96 kgf/pair	1.28 kg/pc	16 pcs
190-112-734	5302S-500	500	532	128	288	448	–	112	272	384	–	902 N/pair	92 kgf/pair	1.43 kg/pc	10 pcs
190-112-735	5302S-550	550	580	192	320	512	–	112	288	448	–	843 N/pair	86 kgf/pair	1.57 kg/pc	10 pcs
190-112-736	5302S-600	600	630	208	336	544	–	112	336	496	–	794 N/pair	81 kgf/pair	1.71 kg/pc	10 pcs
190-112-737	5302S-650	650	677	128	288	480	608	112	272	416	544	745 N/pair	76 kgf/pair	1.85 kg/pc	10 pcs
190-112-738	5302S-700	700	728	128	336	544	672	144	304	448	592	696 N/pair	71 kgf/pair	2 kg/pc	8 pcs
190-112-739	5302S-750	750	777	192	370	530	722	176	336	496	648	666 N/pair	68 kgf/pair	2.14 kg/pc	8 pcs
190-112-740	5302S-800	800	826	224	388	548	772	192	384	576	688	627 N/pair	64 kgf/pair	2.28 kg/pc	8 pcs

This information provides a range of quality for the component. It does not ensure the performance or safety of the final product incorporating the component.

LAMP FULL EXTENSION SLIDE ESR10

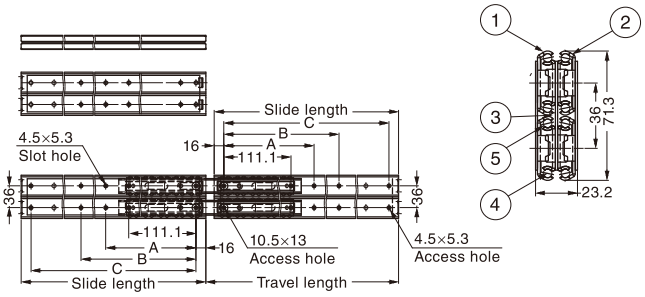
Latest Info



LOAD CAPACITY 1785~2667 N/pair

CLOSED LOCK | OPEN LOCK | FRICTION | DETACH | BUMPER | HOLD CLOSED | HOLD OPENED | 2-WAYS | CATCH

- Full extension (3 members).
- Non-handed.
- Heavy duty.



SUS

Recommended Screws
- M4

No.	Part Name	Material	Finish
①	Outer Rail	Stainless Steel (SUS304)	Satin
②	Inner Rail	Stainless Steel (SUS304)	Satin
③	Intermediate Member	Stainless Steel (SUS304)	Satin
④	Retainer	Stainless Steel (SUS304)	–
⑤	Balls	Stainless Steel (SUS304)	–

Sold by piece.

Item Code	Item Name	Slide Length	Travel Length	A	B	C	Load Capacity N	Load Capacity kgf	Weight	Box
190-110-419	ESR10-12	305	319	–	149.2	273	2667 N/pair	272 kgf/pair	1.7 kg/pc	8 pcs
190-110-420	ESR10-14	355.8	369.8	–	200	323.8	2628 N/pair	268 kgf/pair	1.9 kg/pc	8 pcs
190-110-421	ESR10-16	406.6	420.6	–	250.8	374.6	2540 N/pair	259 kgf/pair	2.2 kg/pc	6 pcs
190-110-422	ESR10-18	457.4	471.4	212.7	301.6	425.4	2452 N/pair	250 kgf/pair	2.5 kg/pc	6 pcs
190-110-423	ESR10-20	508.2	522.2	238.1	352.4	476.2	2363 N/pair	241 kgf/pair	2.8 kg/pc	6 pcs
190-110-424	ESR10-22	559	573	263.5	403.2	527	2246 N/pair	229 kgf/pair	3.1 kg/pc	6 pcs
190-110-425	ESR10-24	609.8	623.8	288.9	454	577.8	2118 N/pair	216 kgf/pair	3.5 kg/pc	4 pcs
190-110-426	ESR10-26	660.6	674.6	314.3	504.8	628.6	1961 N/pair	200 kgf/pair	3.7 kg/pc	4 pcs
190-110-427	ESR10-28	711.4	725.4	339.7	555.6	679.4	1785 N/pair	182 kgf/pair	4 kg/pc	4 pcs

LAMP 3/4 EXTENSION SLIDE ESR2021

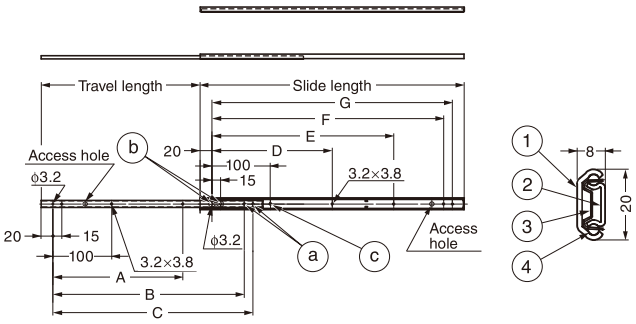
Latest Info



LOAD CAPACITY 108~157 N/pair

CLOSED LOCK | OPEN LOCK | FRICTION | DETACH | BUMPER | HOLD CLOSED | HOLD OPENED | 2-WAYS | CATCH

- 3/4 extension slide (2 members).
- Non-handed.



SUS

Recommended Screws
- M3 screw with binding or truss head

No.	Part Name	Material	Finish
①	Outer Rail	Stainless Steel (SUS304)	Plain
②	Inner Rail	Stainless Steel (SUS304)	Plain
③	Retainer	Stainless Steel (SUS304)	Plain
④	Balls	Stainless Steel (SUS304)	–

Sold by piece.

Item Code	Item Name	Slide Length	Travel Length	A	B	C	D	E	F	G	Load Capacity N	Load Capacity kgf	Weight	Box
190-011-649	ESR2021-200	200	134	–	145	160	–	–	145	160	127 N/pair	13 kgf/pair	0.2 kg/pair	200 pcs
190-011-650	ESR2021-250	250	184	150	195	210	–	–	195	210	147 N/pair	15 kgf/pair	0.25 kg/pair	100 pcs
190-011-651	ESR2021-300	300	224	190	245	260	–	160	245	260	157 N/pair	16 kgf/pair	0.3 kg/pair	100 pcs
190-011-652	*ESR2021-350	350	244	225	295	310	–	210	295	310	157 N/pair	16 kgf/pair	0.35 kg/pair	100 pcs
190-011-653	ESR2021-400	400	294	265	345	360	–	260	345	360	147 N/pair	15 kgf/pair	0.4 kg/pair	100 pcs
190-011-654	ESR2021-450	450	334	300	395	410	205	310	395	410	127 N/pair	13 kgf/pair	0.45 kg/pair	100 pcs
190-011-655	ESR2021-500	500	384	337	445	460	230	360	445	460	108 N/pair	11 kgf/pair	0.5 kg/pair	100 pcs

* When current stock runs out, the model's value in column A will become 190.

This information provides a range of quality for the component. It does not ensure the performance or safety of the final product incorporating the component.

LAMP 3/4 EXTENSION SLIDE 272SL

Latest Info



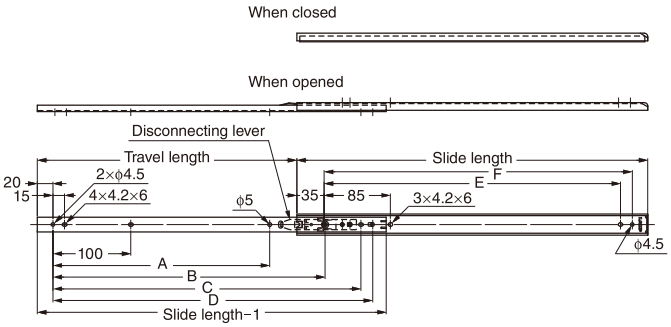
LOAD CAPACITY 137~177 N/pair

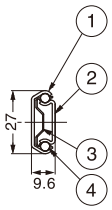
CLOSED LOCK | OPEN LOCK | FRICTION | **DETACH** | BUMPER | HOLD CLOSED | HOLD OPENED | 2-WAYS | CATCH

- 3/4 extension (2 members).
- The drawer is detachable by activating the lever.
- Non-handed.

SUS

Feature





No.	Part Name	Material	Finish
①	Outer Rail	Stainless Steel (SUS304)	Plain
②	Inner Rail	Stainless Steel (SUS304)	Plain
③	Retainer	Stainless Steel (SUS304)	Plain
④	Balls	Stainless Steel (SUS304)	–

Sold in pairs (2 pcs).

Item Code	Item Name	Slide Length	Travel Length	A	B	C	D	E	F	Load Capacity N	Load Capacity kgf	Weight	Box
190-116-707	272SL-300	300	220	165	236	–	–	230	245	177 N/pair	18 kgf/pair	0.42 kg/pair	20 pairs
190-116-708	272SL-350	350	261	206	277	–	–	280	295	167 N/pair	17 kgf/pair	0.49 kg/pair	20 pairs
190-116-709	272SL-400	400	301	246	317	–	362.5	330	345	157 N/pair	16 kgf/pair	0.56 kg/pair	20 pairs
190-116-710	272SL-450	450	333	278	349	395	410	380	395	147 N/pair	15 kgf/pair	0.62 kg/pair	20 pairs
190-116-711	272SL-500	500	373	318	389	445	460	430	445	137 N/pair	14 kgf/pair	0.68 kg/pair	20 pairs

LAMP 3/4 EXTENSION SLIDE SNS27S

Latest Info



LOAD CAPACITY 177~255 N/pair

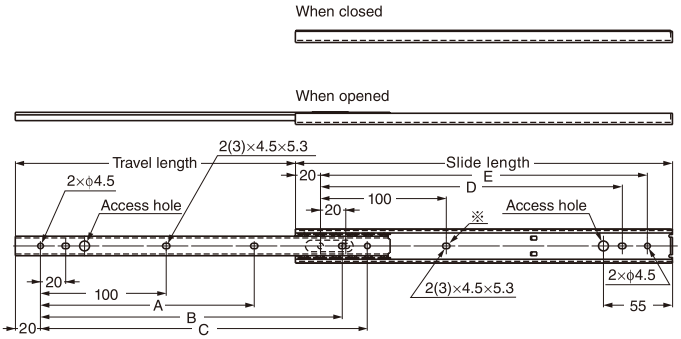
CLOSED LOCK | OPEN LOCK | FRICTION | DETACH | BUMPER | HOLD CLOSED | HOLD OPENED | 2-WAYS | CATCH

- 3/4 extension (2 members).
- All stainless steel slide.
- Non-handed.

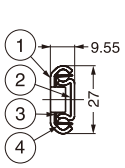
SUS

Recommended Screws

- M4 pan head tapping screw



※The hole cannot be used as a fitting hole for the SNS27S-50



No.	Part Name	Material	Finish
①	Outer Rail	Stainless Steel (SUS304)	Plain
②	Inner Rail	Stainless Steel (SUS304)	Plain
③	Retainer	Stainless Steel (SUS304)	Plain
④	Balls	Stainless Steel (SUS440)	–

Sold by piece.

Item Code	Item Name	Slide Length	Travel Length	A	B	C	D	E	Load Capacity N	Load Capacity kgf	Weight	Box
190-110-177	SNS27S-20	200	135	–	140	160	140	160	255 N/pair	26 kgf/pair	0.33 kg/pair	40 pcs
190-110-178	SNS27S-25	250	185	150	190	210	190	210	235 N/pair	24 kgf/pair	0.41 kg/pair	40 pcs
190-110-179	SNS27S-30	300	222	190	240	260	240	260	235 N/pair	24 kgf/pair	0.5 kg/pair	40 pcs
190-110-180	SNS27S-35	350	260	225	290	310	290	310	226 N/pair	23 kgf/pair	0.58 kg/pair	40 pcs
190-110-181	SNS27S-40	400	297	265	340	360	340	360	206 N/pair	21 kgf/pair	0.66 kg/pair	40 pcs
190-110-182	SNS27S-45	450	334	300	390	410	390	410	196 N/pair	20 kgf/pair	0.74 kg/pair	40 pcs
190-110-183	SNS27S-50	500	371	337	440	460	440	460	177 N/pair	18 kgf/pair	0.82 kg/pair	40 pcs

This information provides a range of quality for the component. It does not ensure the performance or safety of the final product incorporating the component.

LAMP 3/4 EXTENSION SLIDE SNS35S

Latest Info



LOAD CAPACITY 245~481 N/pair

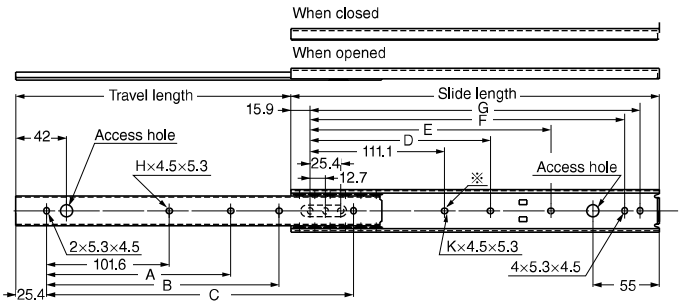
CLOSED LOCK | OPEN LOCK | FRICTION | DETACH | BUMPER
HOLD CLOSED | HOLD OPENED | 2-WAYS | CATCH

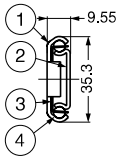
- 3/4 extension (2 members).
- Non-handed.

SUS

Recommended Screws

- M4 pan head tapping screw





※ The hole cannot be used as a fitting hole for the following items.
- SNS35S-45
- SNS35S-50
- SNS35S-55
- SNS35S-60
- SNS35S-65
- SNS35S-70

No.	Part Name	Material	Finish
①	Outer Rail	Stainless Steel (SUS304)	Plain
②	Inner Rail	Stainless Steel (SUS304)	Plain
③	Retainer	Stainless Steel (SUS304)	Plain
④	Balls	Stainless Steel (SUS440)	–

Sold by piece.

Item Code	Item Name	Slide Length	Travel Length	A	B	C	D	E	F	G	H	K	Load Capacity N	Load Capacity kgf	Weight	Box
190-110-191	SNS35S-30	304.8	228.6	–	152.4	254	–	149.2	260.3	273	2	3	481 N/pair	49 kgf/pair	0.62 kg/pair	20 pcs
190-110-192	SNS35S-35	355.6	279.4	–	203.2	304.8	–	200	311.1	323.8	2	3	461 N/pair	47 kgf/pair	0.72 kg/pair	20 pcs
190-110-193	SNS35S-40	406.4	304.8	–	254	355.6	–	250.8	361.9	374.6	2	3	422 N/pair	43 kgf/pair	0.82 kg/pair	20 pcs
190-110-194	SNS35S-45	457.2	330.2	203.2	304.8	406.4	212.7	301.6	412.7	425.4	3	4	402 N/pair	41 kgf/pair	0.92 kg/pair	20 pcs
190-110-195	SNS35S-50	508	381	228.6	355.6	457.2	238.1	352.4	463.5	476.2	3	4	363 N/pair	37 kgf/pair	1.02 kg/pair	20 pcs
190-110-196	SNS35S-55	558.8	406.4	254	406.4	508	263.5	403.2	514.3	527	3	4	333 N/pair	34 kgf/pair	1.12 kg/pair	20 pcs
190-110-197	SNS35S-60	609.6	431.8	279.4	457.2	558.8	288.9	454	565.1	577.8	3	4	294 N/pair	30 kgf/pair	1.22 kg/pair	20 pcs
190-110-198	SNS35S-65	660.4	482.6	304.8	508	609.6	314.3	504.8	615.9	628.6	3	4	265 N/pair	27 kgf/pair	1.32 kg/pair	20 pcs
190-110-199	SNS35S-70	711.2	508	330.2	558.8	660.4	339.7	555.6	666.7	679.4	3	4	245 N/pair	25 kgf/pair	1.42 kg/pair	20 pcs

This information provides a range of quality for the component. It does not ensure the performance or safety of the final product incorporating the component.

ALL STAINLESS STEEL DRAWER SLIDE SNS35S-CV Low Particle Emissions Grease Type NEW

Latest Info



LOAD CAPACITY 245~481 N/pair

CLOSED LOCK | OPEN LOCK | FRICTION | DETACH | BUMPER
HOLD CLOSED | HOLD OPENED | 2-WAYS | CATCH

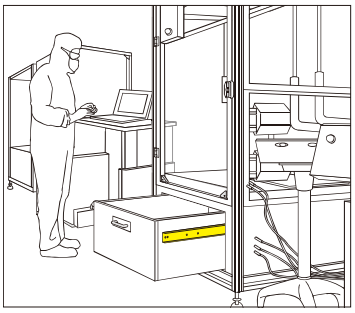
- We use low particle emissions grease (NSK Ltd. LG2), which is suitable for cleanroom environments.
- This is a stainless steel drawer slide with a height of 35.3mm.

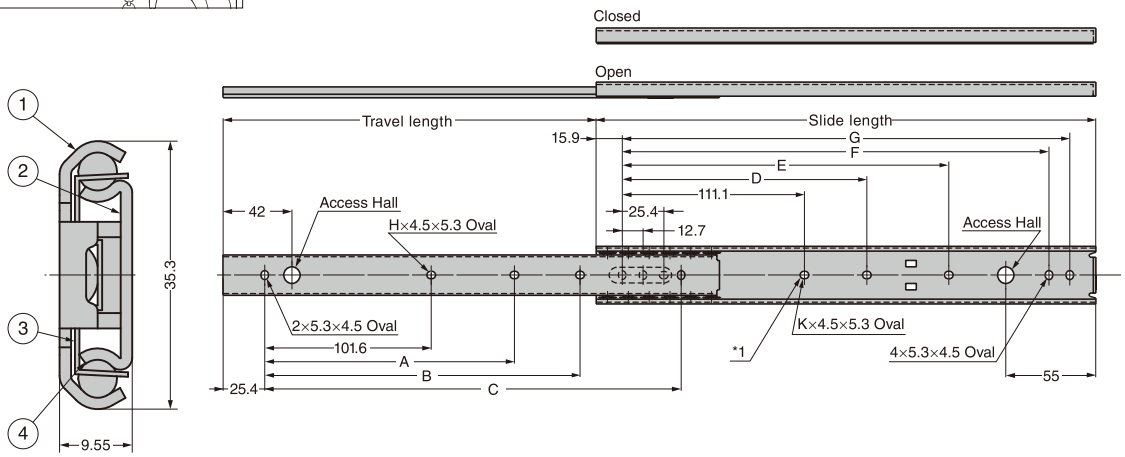
SUS

Applications
- Cleanrooms, Semiconductor, Liquid Crystal

Recommended screws
- M4 Pan Head Screw, or Nominal 4 Pan Head Tapping Screw

Application Example





S=1/1

*1 hole cannot be used with SNS35S-45 to 70.
We are using low-dust grease (NSK Ltd. LG2).

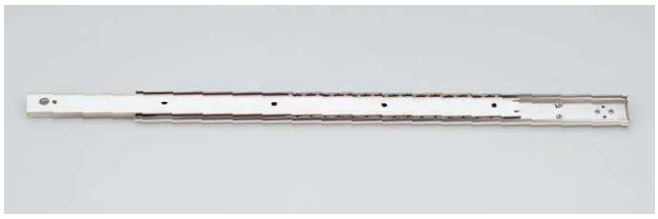
No.	Part Name	Material	Finish
①	Outer member	Stainless Steel (SUS304)	Plain
②	Inner member	Stainless Steel (SUS304)	Plain
③	Retainer	Stainless Steel (SUS304)	Plain
④	Ball	Stainless Steel (SUS440)	–

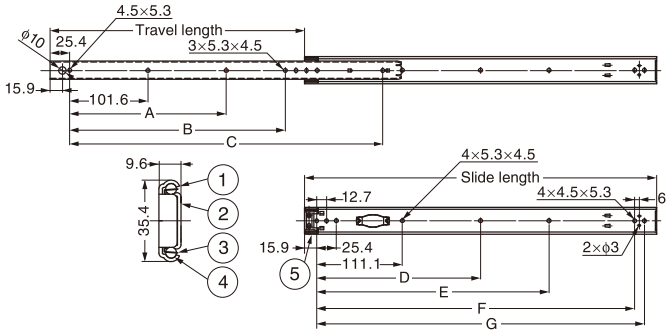
Item Code	Item Name	Slide length	Travel length	A	B	C	D	E	F	G	H	K	Load Capacity N/pair	Load Capacity kgf/pair	Weight g/per piece	BOX
190-056-278	SNS35S-30CV	304.8	228.6	–	152.4	254	–	149.2	260.3	273	2	3	481	49	310	20 pcs
190-056-279	SNS35S-35CV	355.6	279.4	–	203.2	304.8	–	200	311.1	323.8	2	3	461	47	360	20 pcs
190-056-280	SNS35S-40CV	406.4	304.8	–	254	355.6	–	250.8	361.9	374.6	2	3	422	43	410	20 pcs
190-056-281	SNS35S-45CV	457.2	330.2	203.2	304.8	406.4	212.7	301.6	412.7	425.4	3	4	402	41	460	20 pcs
190-056-282	SNS35S-50CV	508	381	228.6	355.6	457.2	238.1	352.4	463.5	476.2	3	4	363	37	510	20 pcs
190-056-283	SNS35S-55CV	558.8	406.4	254	406.4	508	263.5	403.2	514.3	527	3	4	333	34	560	20 pcs
190-056-284	SNS35S-60CV	609.6	431.8	279.4	457.2	558.8	288.9	454	565.1	577.8	3	4	294	30	610	20 pcs
190-056-285	SNS35S-65CV	660.4	482.6	304.8	508	609.6	314.3	504.8	615.9	628.6	3	4	265	27	660	20 pcs
190-056-286	SNS35S-70CV	711.2	508	330.2	558.8	660.4	339.7	555.6	666.7	679.4	3	4	245	25	710	20 pcs

This information provides a range of quality for the component. It does not ensure the performance or safety of the final product incorporating the component.

LAMP 3/4 EXTENSION SLIDE ESR1

Latest Info





LOAD CAPACITY 245~481 N/pair

CLOSED LOCK | OPEN LOCK | FRICTION | DETACH | BUMPER
HOLD CLOSED | HOLD OPENED | 2-WAYS | CATCH

- 3/4 extension slide (2 members).
- The drawer can be stopped at any position by the resistance of the ball retainer.
  The drawer can be detached by pulling outward.

TEST METHOD 12 | SUS

Recommended Screws

- M4 binding screw or M4 truss screw

Feature

No.	Part Name	Material	Finish/Color
①	Outer Rail	Stainless Steel (SUS304)	Plain
②	Inner Rail	Stainless Steel (SUS304)	Plain
③	Retainer	Stainless Steel (SUS304)	Plain
④	Balls	Stainless Steel (SUS304)	–
⑤	Guide	Polyacetal (POM)	White

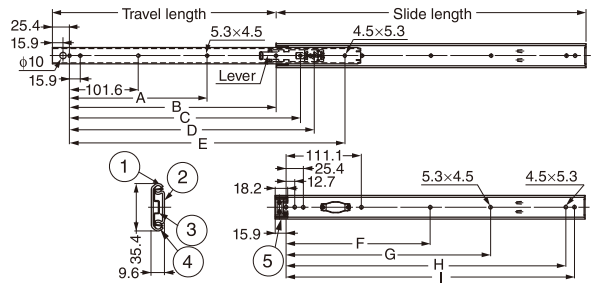
Sold by piece.

Item Code	Item Name	Slide Length	Travel Length	A	B	C	D	E	F	G	Load Capacity		Weight	Box
190-111-301	ESR1-12	304.8	228.6	–	152.4	254	–	149.2	260.3	273	481 N/pair	49 kgf/pair	0.32 kg/pc	30 pcs
190-111-302	ESR1-14	355.6	279.4	–	203.2	304.8	–	200	311.1	323.8	461 N/pair	47 kgf/pair	0.37 kg/pc	30 pcs
190-111-303	ESR1-16	406.4	304.8	–	254	355.6	–	250.8	361.9	374.6	422 N/pair	43 kgf/pair	0.43 kg/pc	30 pcs
190-111-304	ESR1-18	457.2	330.2	203.2	304.8	406.4	212.7	301.6	412.7	425.4	402 N/pair	41 kgf/pair	0.48 kg/pc	30 pcs
190-111-305	ESR1-20	508	381	228.6	355.6	457.2	238.1	352.4	463.5	476.2	363 N/pair	37 kgf/pair	0.54 kg/pc	30 pcs
190-111-306	ESR1-22	558.8	406.4	254	406.4	508	263.5	403.2	514.3	527	333 N/pair	34 kgf/pair	0.60 kg/pc	30 pcs
190-111-307	ESR1-24	609.6	432.8	279.4	457.2	558.8	288.9	454	565.1	577.8	294 N/pair	30 kgf/pair	0.66 kg/pc	30 pcs
190-111-308	ESR1-26	660.4	482.6	304.8	508	609.6	314.3	504.8	615.9	628.6	265 N/pair	27 kgf/pair	0.71 kg/pc	30 pcs
190-111-309	ESR1-28	711.2	508	330.2	558.8	660.4	339.7	555.6	666.7	679.4	245 N/pair	25 kgf/pair	0.76 kg/pc	30 pcs

LAMP 3/4 EXTENSION SLIDE ESR8

Latest Info





LOAD CAPACITY 245~481 N/pair

CLOSED LOCK | OPEN LOCK | FRICTION | DETACH | BUMPER
HOLD CLOSED | HOLD OPENED | 2-WAYS | CATCH

- 3/4 extension (2 members).
- The drawer can be held in opened position.
- The drawer is detachable by lifting the lever.
- Non-handed.

SUS

Feature

No.	Part Name	Material	Finish/Colour
①	Outer Rail	Stainless Steel (SUS304)	Plain
②	Inner Rail	Stainless Steel (SUS304)	Plain
③	Retainer	Stainless Steel (SUS304)	Plain
④	Balls	Stainless Steel (SUS304)	–
⑤	Guide	Polyacetal (POM)	White

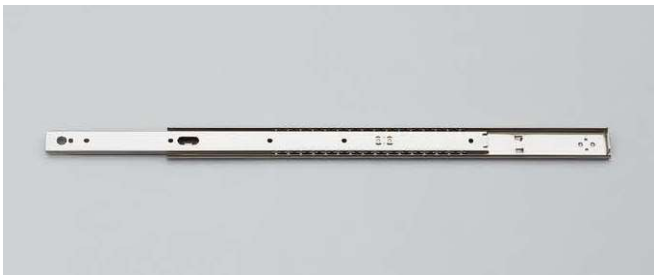
Sold by piece.

Item Code	Item Name	Slide Length	Travel Length	A	B	C	D	E	F	G	H	I	Load Capacity		Weight	Box
190-111-327	ESR8-12	304.8	228.6	–	152.4	–	259.5	–	–	149.2	260.3	273	481 N/pair	49 kgf/pair	0.32 kg/pc	30 pcs
190-111-328	ESR8-14	355.6	279.4	–	203.2	–	310.3	–	–	200	311.1	323.8	461 N/pair	47 kgf/pair	0.38 kg/pc	30 pcs
190-111-329	ESR8-16	406.4	304.8	–	203.2	–	335.7	355.6	–	250.8	361.9	374.6	422 N/pair	43 kgf/pair	0.43 kg/pc	30 pcs
190-111-330	ESR8-18	457.2	330.2	203.2	–	340.7	366.1	406.4	212.7	301.6	412.7	425.4	402 N/pair	41 kgf/pair	0.48 kg/pc	30 pcs
190-111-331	ESR8-20	508	381	228.6	–	391.5	411.9	457.2	238.1	352.4	463.5	476.2	363 N/pair	37 kgf/pair	0.53 kg/pc	30 pcs
190-111-332	ESR8-22	558.8	406.4	254	–	416.9	437.3	508	263.5	403.2	514.3	527	333 N/pair	34 kgf/pair	0.58 kg/pc	30 pcs
190-111-333	ESR8-24	609.6	432.8	279.4	–	443.3	463.7	558.8	288.9	454	565.1	577.8	294 N/pair	30 kgf/pair	0.63 kg/pc	30 pcs
190-111-334	ESR8-26	660.4	482.6	304.8	–	493.1	513.5	609.6	314.3	504.8	615.9	628.6	265 N/pair	27 kgf/pair	0.68 kg/pc	30 pcs
190-111-335	ESR8-28	711.2	508	330.2	–	538.9	558.8	660.4	339.7	555.6	666.7	679.6	245 N/pair	25 kgf/pair	0.73 kg/pc	30 pcs

This information provides a range of quality for the component. It does not ensure the performance or safety of the final product incorporating the component.

LAMP 3/4 EXTENSION SLIDE ESR13

Latest Info

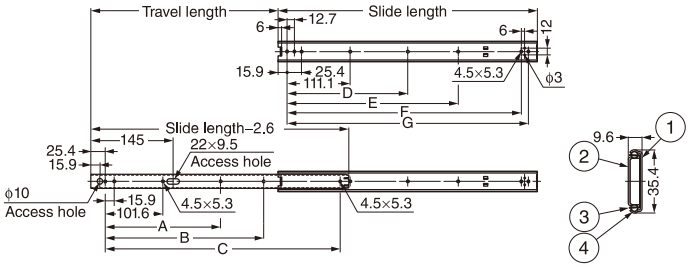


LOAD CAPACITY 245~481 N/pair

CLOSED LOCK | OPEN LOCK | FRICTION | DETACH | BUMPER
HOLD CLOSED | HOLD OPENED | 2-WAYS | CATCH

- 3/4 extension slide (2 members).
- The drawer can be held in the fully closed position.
- Non-handed.

SUS



Feature

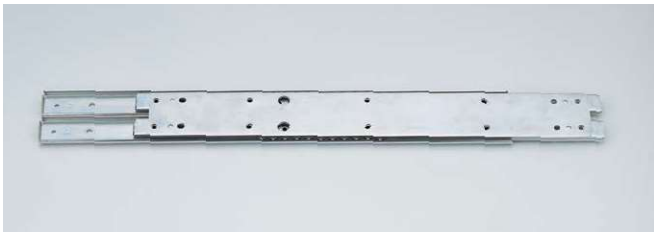
No.	Part Name	Material	Finish
①	Outer Rail	Stainless Steel (SUS304)	Plain
②	Inner Rail	Stainless Steel (SUS304)	Plain
③	Retainer	Stainless Steel (SUS304)	Plain
④	Balls	Stainless Steel (SUS304)	–

Sold by piece.

Item Code	Item Name	Slide Length	Travel Length	A	B	C	D	E	F	G	Load Capacity N	Load Capacity kgf	Weight	Box
190-111-345	ESR13-12	304.8	228.6	–	177.8	258	–	149.2	260.3	273	481 N/pair	49 kgf/pair	0.33 kg/pc	30 pcs
190-111-346	ESR13-14	355.6	279.4	–	228.6	308.8	–	200	311.1	323.8	461 N/pair	47 kgf/pair	0.38 kg/pc	30 pcs
190-111-347	ESR13-16	406.4	304.8	–	254	359.6	–	250.8	361.9	374.6	422 N/pair	43 kgf/pair	0.42 kg/pc	30 pcs
190-111-348	ESR13-18	457.2	330.2	203.2	279.4	410.4	212.7	301.6	412.7	425.4	402 N/pair	41 kgf/pair	0.49 kg/pc	30 pcs
190-111-349	ESR13-20	508	381	228.6	330.2	461.2	238.1	352.4	463.5	476.2	363 N/pair	37 kgf/pair	0.54 kg/pc	30 pcs
190-111-350	ESR13-22	558.8	406.4	254	355.6	512	263.5	403.2	514.3	527	333 N/pair	34 kgf/pair	0.59 kg/pc	30 pcs
190-111-351	ESR13-24	609.6	431.8	254	381	562.8	288.9	454	565.1	577.8	294 N/pair	30 kgf/pair	0.63 kg/pc	30 pcs
190-111-352	ESR13-26	660.4	482.6	254	431.8	613.6	314.3	504.8	615.9	628.6	265 N/pair	27 kgf/pair	0.68 kg/pc	30 pcs
190-111-353	ESR13-28	711.2	508	279.4	457.2	664.4	339.7	555.6	666.7	679.4	245 N/pair	25 kgf/pair	0.75 kg/pc	30 pcs

LAMP 3/4 EXTENSION SLIDE ESR5

Latest Info



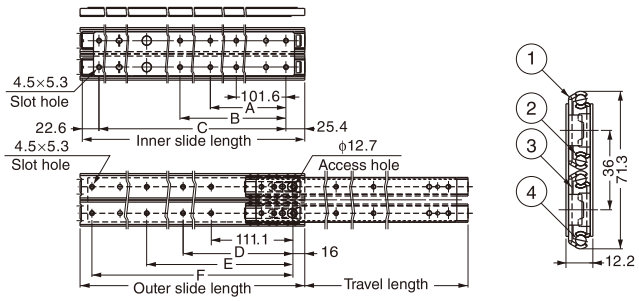
LOAD CAPACITY 785~1118 N/pair

CLOSED LOCK | OPEN LOCK | FRICTION | DETACH | BUMPER
HOLD CLOSED | HOLD OPENED | 2-WAYS | CATCH

- 3/4 extension (2 members) for heavy duty applications.

SUS

Recommended Screws
- M4 binding screw or truss head screw



No.	Part Name	Material	Finish
①	Outer Rail	Stainless Steel (SUS304)	Satin
②	Inner Rail	Stainless Steel (SUS304)	Satin
③	Retainer	Stainless Steel (SUS304)	Plain
④	Balls	Stainless Steel (SUS304)	Plain

Sold by piece.

Item Code	Item Name	Slide Length	Travel Length	A	B	C	D	E	F	Inner Rail Holes	Outer Rail Holes	Load Capacity N	Load Capacity kgf	Weight	Box
190-110-428	ESR5-12	305	221.8	–	152.4	254	–	149.2	273	6	8	1118 N/pair	114 kgf/pair	0.9 kgf/pc	12 pcs
190-110-429	ESR5-14	355.8	259.9	–	203.2	304.8	–	200	323.8	6	8	1069 N/pair	109 kgf/pair	1.0 kgf/pc	12 pcs
190-110-430	ESR5-16	406.6	298	–	254	355.6	–	250.8	374.6	6	8	1020 N/pair	104 kgf/pair	1.2 kgf/pc	12 pcs
190-110-431	ESR5-18	457.4	348.8	203.2	304.8	406.4	212.7	301.6	425.4	6	10	1000 N/pair	102 kgf/pair	1.3 kgf/pc	12 pcs
190-110-432	ESR5-20	508.2	361.5	228.6	355.6	457.2	238.1	352.4	476.2	6	10	971 N/pair	99 kgf/pair	1.5 kgf/pc	12 pcs
190-110-433	ESR5-22	559	425	254	406.4	508	263.5	403.2	527	6	10	922 N/pair	94 kgf/pair	1.6 kgf/pc	12 pcs
190-110-434	ESR5-24	609.8	450.4	279.4	457.2	558.8	288.9	454	577.8	6	10	873 N/pair	89 kgf/pair	1.8 kgf/pc	12 pcs
190-110-435	ESR5-26	660.6	463.1	304.8	508	609.6	314.3	504.8	628.6	6	10	843 N/pair	86 kgf/pair	1.9 kgf/pc	12 pcs
190-110-436	ESR5-28	711.4	501.2	330.2	558.8	660.4	339.7	555.6	679.4	6	10	785 N/pair	80 kgf/pair	2.0 kgf/pc	12 pcs

This information provides a range of quality for the component. It does not ensure the performance or safety of the final product incorporating the component.

LAMP 3/4 EXTENSION SLIDE ESR2

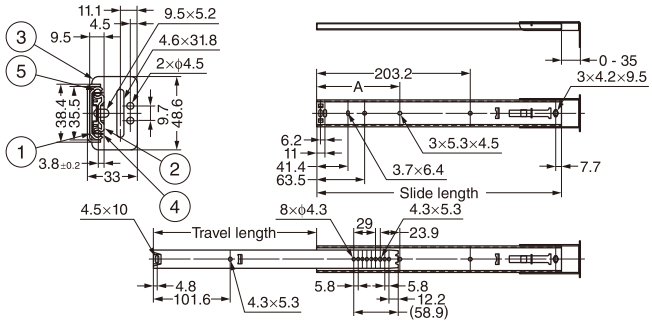
Latest Info



LOAD CAPACITY 49~78 N/pair

CLOSED LOCK | OPEN LOCK | FRICTION | DETACH | BUMPER
HOLD CLOSED | HOLD OPENED | 2-WAYS | CATCH

- Under-mount type. Ideal for limited spaces.
- 3/4 extension slide (2 members).
- The drawer can be stopped at any position by the resistance of the ball retainer.
  The drawer can be detached by pulling outward.

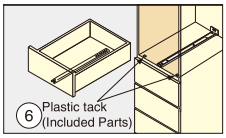


SUS

Parts Included
- Two plastic tacks.

Feature

Application Example



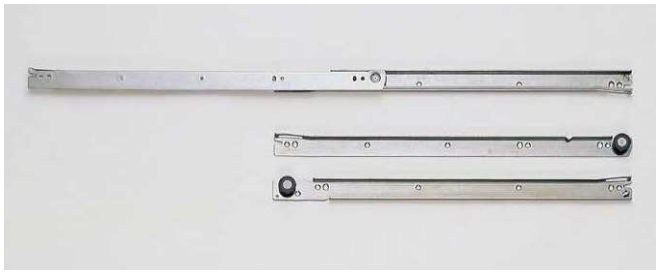
No.	Part Name	Material	Finish
①	Outer Rail	Stainless Steel (SUS304)	Plain
②	Inner Rail	Stainless Steel (SUS304)	Plain
③	Bracket	Stainless Steel (SUS304)	Plain
④	Retainer	Stainless Steel (SUS304)	Plain
⑤	Balls	Stainless Steel (SUS304)	–
⑥	Plastic Tack	Plastic	–

Sold by piece.

Item Code	Item Name	Slide Length	Travel Length	A	Load Capacity N	Load Capacity kgf	Weight	Box
190-111-310	ESR2-12	323.8	215.9	109.9	78 N/piece	8 kgf/piece	0.4 kg/pc	20 pcs
190-111-311	ESR2-14	374.6	266.7	160.7	74 N/piece	7.5 kgf/piece	0.43 kg/pc	20 pcs
190-111-312	ESR2-16	425.4	304.8	–	69 N/piece	7 kgf/piece	0.48 kg/pc	20 pcs
190-111-313	ESR2-18	476.2	317.5	262.3	69 N/piece	7 kgf/piece	0.53 kg/pc	20 pcs
190-111-314	ESR2-20	527	368.3	313.1	64 N/piece	6.5 kgf/piece	0.57 kg/pc	20 pcs
190-111-315	ESR2-22	577.8	419.1	363.9	59 N/piece	6 kgf/piece	0.62 kg/pc	20 pcs
190-111-316	ESR2-24	628.6	444.5	414.7	54 N/piece	5.5 kgf/piece	0.66 kg/pc	20 pcs
190-111-317	ESR2-26	679.4	495.3	465.5	49 N/piece	5 kgf/piece	0.71 kg/pc	20 pcs

LAMP STAINLESS STEEL DRAWER RUNNER RKA5

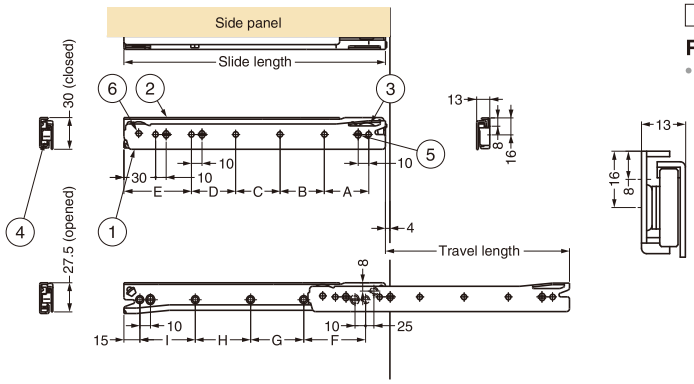
Latest Info



LOAD CAPACITY 147 N/pair

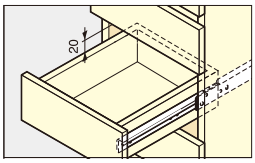
CLOSED LOCK | OPEN LOCK | FRICTION | DETACH | BUMPER
HOLD CLOSED | HOLD OPENED | 2-WAYS | CATCH

- 3/4 extension (2 members).
- Urethane roller provides smooth and silent movement.
- The drawer is detachable.
- Self-closing.



SUS

Recommended Screws
- M3 or M3.5 screw



No.	Part Name	Material	Finish/Colour
①	Inner Rail	Stainless Steel (SUS430)	-
②	Outer Rail	Stainless Steel (SUS430)	-
③	Roller	Polyurethane (PUR)/ Polyacetal (POM)	Black/ White
④	Rail Guide	Polyacetal (POM)	White
⑤	Roller Washer	Stainless Steel (SUS430)	-
⑥	Shaft	Stainless Steel (SUS430)	-

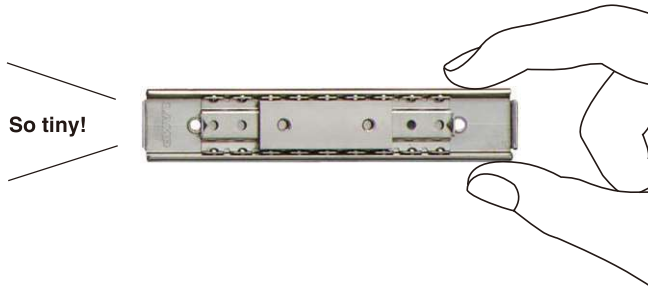
Sold in pairs (2 pcs).

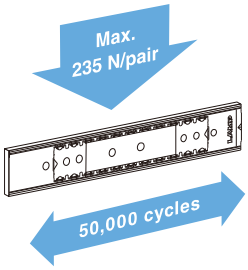
Item Code	Item Name	Slide Length	Travel Length	Inner Rail						Outer Rail					Load Capacity N	Load Capacity kgf	Weight	Box
				A	B	C	D	E	Holes	F	G	H	I	Holes				
190-110-170	RKA5-300 (SUS430)	296	205	165	–	–	–	115	6	112.5	112.5	–	–	6	147 N/pair	15 kgf/pair	0.48 kg/pair	20 pairs
190-110-171	RKA5-350 (SUS430)	346	250	105	105	–	–	120	7	91.5	92	91.5	–	7	147 N/pair	15 kgf/pair	0.57 kg/pair	20 pairs
190-110-172	RKA5-400 (SUS430)	396	295	127.5	127.5	–	–	125	7	108.5	108	108.5	–	7	147 N/pair	15 kgf/pair	0.65 kg/pair	20 pairs
190-110-173	RKA5-450 (SUS430)	446	340	100	100	100	–	130	8	125	125	125	–	7	147 N/pair	15 kgf/pair	0.7 kg/pair	10 pairs
190-110-174	RKA5-500 (SUS430)	496	380	113	114	113	–	140	8	106	106.5	106.5	106	8	147 N/pair	15 kgf/pair	0.82 kg/pair	10 pairs
190-110-175	RKA5-550 (SUS430)	546	420	126.5	127	126.5	–	150	8	119	118.5	118.5	119	8	147 N/pair	15 kgf/pair	0.9 kg/pair	10 pairs
190-110-176	RKA5-600 (SUS430)	596	460	105	105	105	105	160	9	131.5	131	131	131.5	8	147 N/pair	15 kgf/pair	0.98 kg/pair	10 pairs

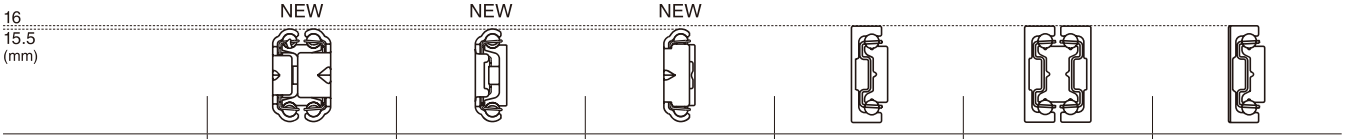
This information provides a range of quality for the component. It does not ensure the performance or safety of the final product incorporating the component.

COMPACT SLIDE RAIL – SERIES DIGEST

- SCR series are newly launched.
- Special inner and intermediate profile allows ultra thin size.
- All SCR types successfully passed for the 50,000 open/close cycle test.







Item Name	SCR3	SCRW2	SCRL2	ARW2-16	AR3-16	ARL2-16
Load Capacity (N)	98 - 118	137 - 177	177 - 235	11 - 69	20 - 39	8 - 49
Material	Stainless Steel			Aluminium Alloy		

LAMP. MINI SLIDE (FULL EXTENSION) SCR3

Latest Info



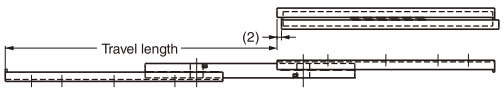
LOAD CAPACITY 98~118 N/pair

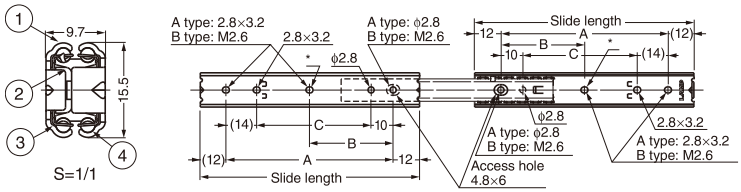
CLOSED LOCK | OPEN LOCK | FRICTION | DETACH | BUMPER
HOLD CLOSED | HOLD OPENED | 2-WAYS | CATCH

- Full extension (3 members).
- Ultra slim profile.
- Special inner member allows smooth movement.

Recommended Screws

- M2.6 low head screw (for A type)
- M2.6 screw (for B type)
- Max. screw length = Board thickness + 1.7 mm





*No hole on 80 mm type.

No.	Part Name	Material
①	Outer Rail	Stainless Steel (SUS304)
②	Inner Rail	Stainless Steel (SUS304)
③	Retainer	Stainless Steel (SUS304)
④	Balls	Steel

Sold by piece.

Item Code	Item Name	Holes	Slide Length	Travel Length	A	B	C	Load Capacity N	Load Capacity kgf	Weight	Box	Carton
190-026-614	SCR3-15-80A	A Type	80	97	56	–	32	98 N/pair	10 kgf/pair	36 g	50 pcs	200 pcs
190-026-615	SCR3-15-100A	A Type	100	125	76	38	52	108 N/pair	11 kgf/pair	45 g	50 pcs	200 pcs
190-026-616	SCR3-15-150A	A Type	150	177	126	63	102	118 N/pair	12 kgf/pair	70 g	50 pcs	200 pcs
190-026-617	SCR3-15-80B	B Type	80	97	56	–	32	98 N/pair	10 kgf/pair	36 g	50 pcs	200 pcs
190-026-618	SCR3-15-100B	B Type	100	125	76	38	52	108 N/pair	11 kgf/pair	45 g	50 pcs	200 pcs
190-026-619	SCR3-15-150B	B Type	150	177	126	63	102	118 N/pair	12 kgf/pair	70 g	50 pcs	200 pcs

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LAMP MINI SLIDE (2-WAY) SCRW2

Latest Info



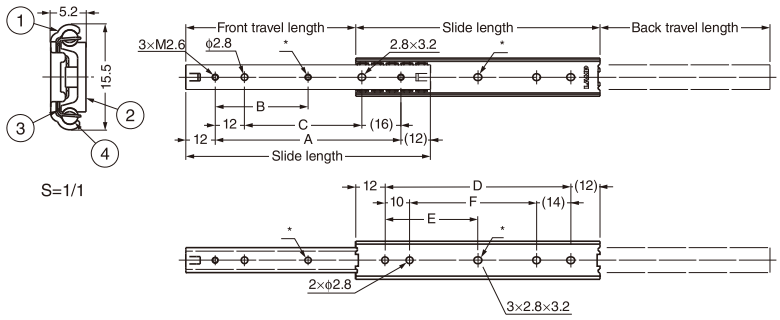
LOAD CAPACITY 137~177 N/pair

CLOSED LOCK | OPEN LOCK | FRICTION | DETACH | BUMPER | HOLD CLOSED | HOLD OPENED | 2-WAYS | CATCH

- 3/4 extension (2 members).
- Ultra slim profile.
- Special inner member allows smooth movement.
- The drawer can be moved to both directions.

Recommended Screws

- M2.6 low head screw (for outer rail)
- M2.6 screw (for inner rail)
- Max. screw length = Board thickness + 1.5 mm



*No hole on 80 mm type.

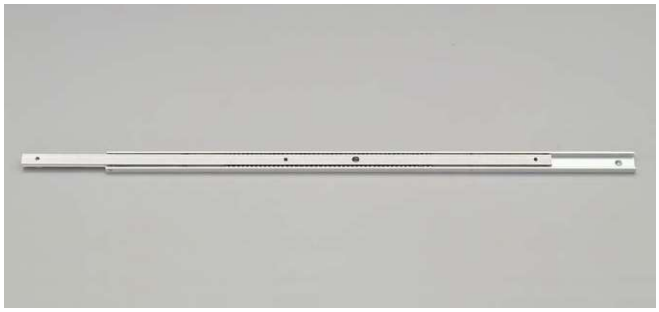
No.	Part Name	Material
①	Outer Rail	Stainless Steel (SUS304)
②	Inner Rail	Stainless Steel (SUS304)
③	Retainer	Stainless Steel (SUS304)
④	Balls	Steel

Sold by piece.

Item Code	Item Name	Slide Length	Front Travel Length	Back Travel Length	A	B	C	D	E	F	Load Capacity N	Load Capacity kgf	Weight	Box	Carton
190-026-620	SCRW2-15-80A	80	48.5	48.5	56	–	28	56	–	32	137 N/pair	14 kgf/pair	21 g	200 pcs	400 pcs
190-026-621	SCRW2-15-100A	100	68.5	68.5	76	38	48	76	38	52	157 N/pair	16 kgf/pair	26 g	200 pcs	400 pcs
190-026-622	SCRW2-15-150A	150	94.5	94.5	126	63	98	126	63	102	177 N/pair	18 kgf/pair	41 g	100 pcs	200 pcs

LAMP 3/4 EXTENSION SLIDE AR2

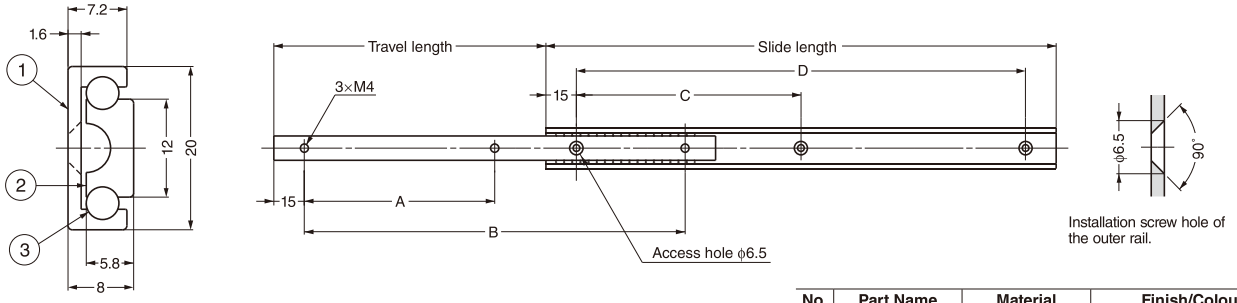
Latest Info



LOAD CAPACITY 80~150 N/pair

CLOSED LOCK | OPEN LOCK | FRICTION | DETACH | BUMPER | HOLD CLOSED | HOLD OPENED | 2-WAYS | CATCH

- 3/4 extension (2 members).
- Non-handed.
- Recommended Screw: M3



No.	Part Name	Material	Finish/Colour
①	Outer Rail	Aluminium Alloy	White Anodized
②	Inner Rail	Aluminium Alloy	White Anodized
③	Balls	Steel	–

Sold by piece.

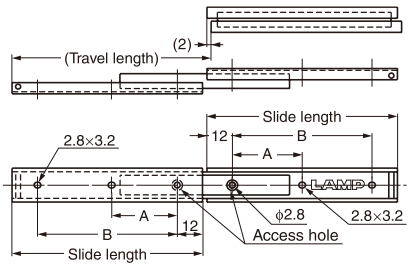
Item Code	Item Name	Slide Length	Travel Length	A	B	C	D	Load Capacity N	Load Capacity kgf	Weight	Box
190-119-533	AR2-100	100	60	–	70	–	70	150 N/pair	15.3 kgf/pair	31 g	400 pcs
190-119-534	AR2-200	200	120	85	170	85	170	120 N/pair	12.2 kgf/pair	63 g	200 pcs
190-119-535	AR2-300	300	180	135	270	135	270	100 N/pair	10.2 kgf/pair	76 g	150 pcs
190-119-536	AR2-400	400	240	185	370	185	370	90 N/pair	9.2 kgf/pair	129 g	100 pcs
190-119-537	AR2-500	500	300	235	470	235	470	80 N/pair	8.2 kgf/pair	161 g	80 pcs

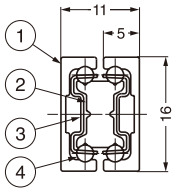
This information provides a range of quality for the component. It does not ensure the performance or safety of the final product incorporating the component.

LAMP ALUMINIUM MINI SLIDE (FULL EXTENSION) AR3-16

Latest Info







LOAD CAPACITY 20~39 N/pair

CLOSED LOCK | OPEN LOCK | FRICTION | DETACH | BUMPER
HOLD CLOSED | HOLD OPENED | 2-WAYS | CATCH

- Full extension (3 members).
- Thin profile for various applications.
- Light-weight aluminium body.

Recommended Screws
- For outer rail: M2.5 low head screw

No.	Part Name	Material	Finish
①	Outer Rail	Aluminium Alloy	Anodized Silver
②	Inner Rail	Aluminium Alloy	Anodized Silver
③	Retainer	Steel	Zinc Chromate Steel
④	Balls	Steel	–

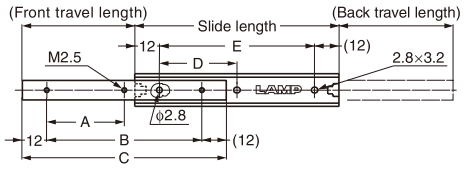
Sold by piece.

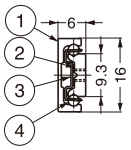
Item Code	Item Name	Slide Length	Travel Length	A	B	Load Capacity N	Load Capacity kgf	Weight	Box
190-012-581	AR3-16-80	80	77	–	56	20 N/pair	2 kgf/pair	31.44 g	10 pcs
190-012-582	AR3-16-100	100	117	38	76	29 N/pair	3 kgf/pair	35.6 g	10 pcs
190-012-583	AR3-16-150	150	151	63	126	39 N/pair	4 kgf/pair	54.3 g	10 pcs

LAMP ALUMINIUM MINI SLIDE (2-WAY) ARW2-16

Latest Info







LOAD CAPACITY 29~69 N/pair

CLOSED LOCK | OPEN LOCK | FRICTION | DETACH | BUMPER
HOLD CLOSED | HOLD OPENED | 2-WAYS | CATCH

- 3/4 extension (2 members).
- The drawer can be moved to the both directions.
- Thin profile for various applications.
- Light-weight aluminium body.
- Designed without positive stop for easy assembly. Please add a secondary stop if necessary.

Recommended Screws
- For outer rail: M2.5 low head screw
- For inner rail: M2.5 screw

No.	Part Name	Material	Finish
①	Outer Rail	Aluminium Alloy	Anodized Silver
②	Inner Rail	Aluminium Alloy	Anodized Silver
③	Retainer	Steel	Zinc Chromate Steel
④	Balls	Steel	–

Sold by piece.

Item Code	Item Name	Slide Length	Front Travel Length	Back Travel Length	A	B	C	D	E	Load Capacity N	Load Capacity kgf	Load Capacity N	Load Capacity kgf	Weight	Box
										[▮▮]		▬ ▬			
190-012-578	ARW2-16-70	70	32	32	–	46	70	–	46	29 N/pair	3 kgf/pair	11 N/pair	1.1 kgf/pair	15.34 g	20 pcs
190-012-579	ARW2-16-100	100	40	40	38	76	100	38	76	49 N/pair	5 kgf/pair	20 N/pair	2 kgf/pair	21.2 g	20 pcs
190-012-580	ARW2-16-150	150	79	79	63	126	150	63	126	69 N/pair	7 kgf/pair	30 N/pair	3.1 kgf/pair	29.1 g	20 pcs

This information provides a range of quality for the component. It does not ensure the performance or safety of the final product incorporating the component.

LAMP FULL EXTENSION SLIDE AR3

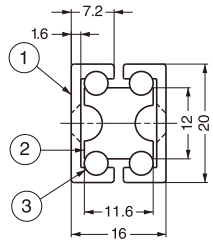
Latest Info

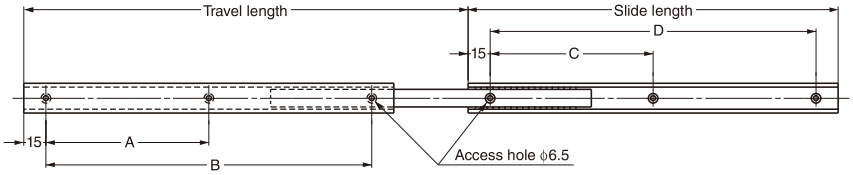


LOAD CAPACITY 30~110 N/pair

CLOSED LOCK | OPEN LOCK | FRICTION | DETACH | BUMPER | HOLD CLOSED | HOLD OPENED | 2-WAYS | CATCH

- Full extension (3 members).
- Non-handed.
- Recommended Screw: M3







Installation screw hole of the outer rail.

No.	Part Name	Material	Finish/Colour
①	Outer Rail	Aluminium Alloy	White Anodized
②	Inner Rail	Aluminium Alloy	White Anodized
③	Balls	Steel	–

Sold by piece.

Item Code	Item Name	Slide Length	Travel Length	A	B	C	D	Load Capacity N	Load Capacity kgf	Weight	Box
190-119-538	AR3-100	100	100	–	70	–	70	110 N/pair	11.2 kgf/pair	63 g	200 pcs
190-119-539	AR3-200	200	223	85	170	85	170	90 N/pair	9.2 kgf/pair	128 g	100 pcs
190-119-540	AR3-300	300	345	135	270	135	270	70 N/pair	7.1 kgf/pair	194 g	70 pcs
190-119-541	AR3-400	400	460	185	370	185	370	50 N/pair	5.1 kgf/pair	260 g	50 pcs
190-119-542	AR3-500	500	576	235	470	235	470	30 N/pair	3.1 kgf/pair	325 g	40 pcs

LAMP FULL EXTENSION SLIDE AR3-K

Latest Info

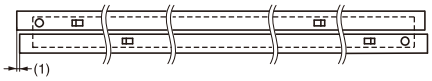


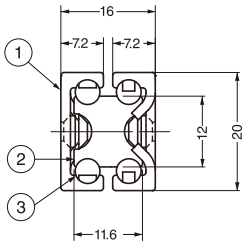
LOAD CAPACITY 85~105 N/pair

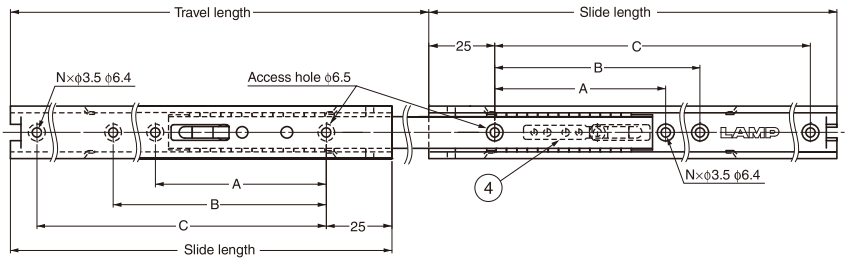
CLOSED LOCK | OPEN LOCK | FRICTION | DETACH | BUMPER | HOLD CLOSED | **HOLD OPENED** | 2-WAYS | CATCH

- Full extension (3 members).
- Non-handed.
- The drawer can be held in the fully opened position.
- Recommended Screw: M3

Feature







No.	Part Name	Material	Finish
①	Outer Rail	Aluminium Alloy	Anodized Silver
②	Inner Rail	Aluminium Alloy	Anodized Silver
③	Balls	Steel	–
④	Detent Catch	Stainless Steel (SUS304)	–

Sold by piece.

Item Code	Item Name	Slide Length	Travel Length	A	B	C	N	Load Capacity N	Load Capacity kgf	Weight	Box
190-112-255	AR3-K200	200	214	150	–	–	2	105 N/pair	10.7 kgf/pair	130 g	100 pcs
190-112-256	AR3-K300	300	314	130	250	–	3	100 N/pair	10.2 kgf/pair	198 g	70 pcs
190-112-257	AR3-K400	400	414	130	280	350	4	90 N/pair	9.2 kgf/pair	263 g	50 pcs
190-112-258	AR3-K500	500	514	130	280	450	4	85 N/pair	8.7 kgf/pair	304 g	40 pcs

This information provides a range of quality for the component. It does not ensure the performance or safety of the final product incorporating the component.

FULL EXTENSION SLIDE DFDS-45 NEW

Latest Info



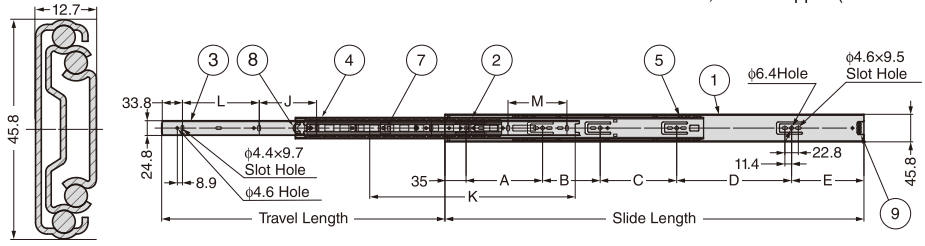
LOAD CAPACITY 300~400 N/pair

CLOSED LOCK | OPEN LOCK | FRICTION | DETACH | BUMPER
HOLD CLOSED | HOLD OPENED | 2-WAYS | CATCH

- Full extension (3 members).
- The drawer is detachable by pushing the lever.
- The drawer can be held in the fully closed position.
- Non-handed.

Remarks

- To prevent damage from strong impacts when fully closing or opening the slide, use a stopper (not included).



No.	Part Name	Material	Finish
①	Outer Member	SPCC	Chromate
②	Intermediate Member	SPCC	Chromate
③	Inner Member	SPCC	Chromate
④	Ball Retainer A	SPCC	Chromate
⑤	Ball Retainer B	PA	–
⑥	Ball Bearings	Steel	–
⑦	Disconnecting Lever	POM	–
⑧	Bumper	PA	–
⑨	Detent	PVC	–

Sold in pairs (2 pcs)

Item Code	Item Name	Slide Length	Travel Length	A	B	C	D	E	J	K	L	M	Load Capacity / pair		Weight / pair (g)
													N	kgf	
–	DFDS-45-250	250	250	128	–	–	–	87	–	91	–	–	400	41	760
–	DFDS-45-300	300	300	128	96	–	–	41	–	111.5	–	–	400	41	910
–	DFDS-45-350	350	350	128	96	–	–	91	–	135.5	–	–	400	41	1060
–	DFDS-45-400	400	400	128	96	96	–	45	214	159	128	–	400	41	1210
–	DFDS-45-450	450	450	128	96	128	–	63	192	184.5	128	72	400	41	1360
–	DFDS-45-500	500	500	128	96	192	–	49	192	206.5	128	122	360	37	1510
–	DFDS-45-550	550	550	128	96	128	96	67	287.5	230.5	128	76	327	33	1660
–	DFDS-45-600	600	600	128	96	128	128	85	96	256	128	126	300	31	1810

This information provides a range of quality for the component. It does not ensure the performance or safety of the final product incorporating the component.

LAMP FULL EXTENSION SOFT-CLOSE SLIDE 3670

Latest Info



LOAD CAPACITY 147~196 N/pair

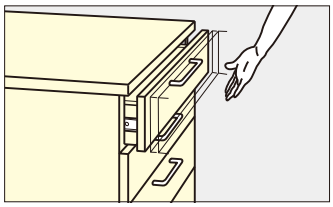
CLOSED LOCK | OPEN LOCK | FRICTION | DETACH | BUMPER
HOLD CLOSED | HOLD OPENED | 2-WAYS | CATCH

- Smooth and elegant soft-closing mechanism.
- With a bumper to avoid metal-to-metal noise at the end of the course.
- The drawer is detachable by lifting the lever.
- Self-closes at 20 mm distance from closed position (250-350 mm slide) and at 36 mm distance from closed position (400-600 mm slide).
- Heavy duty type: 4670 series are also available (P.1174 & P.1175).

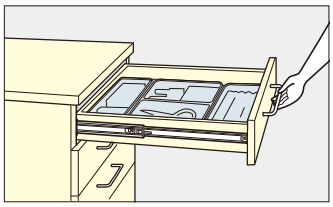
SCREW

Parts Included
- Truss head tapping screw 4x12

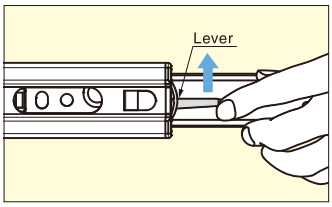
Self and Soft Closing

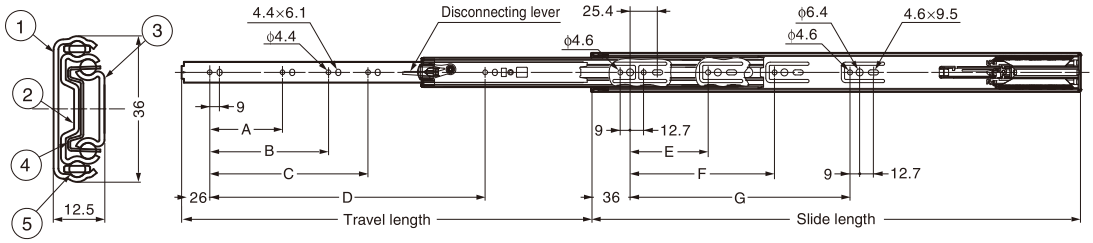


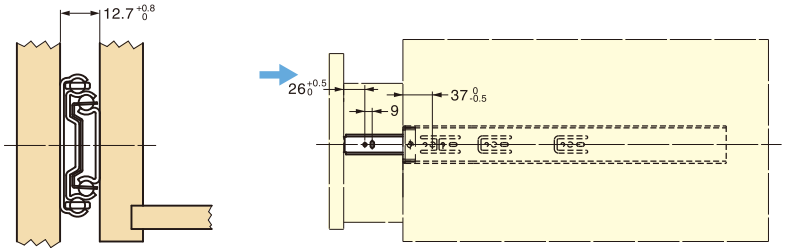
Full Extension (3 Members)



Easy to Detach







No.	Part Name	Material	Finish/Colour
①	Outer Member	Steel	Clear Zinc Chromate
②	Intermediate Member	Steel	Clear Zinc Chromate
③	Inner Member	Steel	Clear Zinc Chromate
④	Retainer	Steel	(Zinc Chromate Steel)
⑤	Balls	Steel	-

Sold in pairs (2 pcs).

Item Code	Item Name	Slide Length	Travel Length	A	B	C	D	E	F	G	Load Capacity N	Load Capacity kgf	Weight	Box
190-027-543	3670-250	250	200	124	–	–	–	87	–	–	147 N/pair	15 kgf/pair	0.60 kg/pair	20 pairs
190-027-544	3670-300	300	300	174	–	–	–	119	–	–	147 N/pair	15 kgf/pair	0.70 kg/pair	20 pairs
190-027-545	3670-350	350	350	96	224	–	–	119	183	–	147 N/pair	15 kgf/pair	0.81 kg/pair	10 pairs
190-027-546	3670-400	400	400	160	256	–	–	119	199	–	196 N/pair	20 kgf/pair	0.93 kg/pair	10 pairs
190-027-547	3670-450	450	450	96	192	306	–	119	247	–	196 N/pair	20 kgf/pair	1.05 kg/pair	10 pairs
190-027-548	3670-500	500	500	128	224	356	–	119	215	295	196 N/pair	20 kgf/pair	1.16 kg/pair	10 pairs
190-027-549	3670-550	550	550	128	224	352	406	119	215	343	196 N/pair	20 kgf/pair	1.29 kg/pair	10 pairs
190-027-550	3670-600	600	600	128	224	384	456	119	247	375	196 N/pair	20 kgf/pair	1.41 kg/pair	10 pairs

This information provides a range of quality for the component. It does not ensure the performance or safety of the final product incorporating the component.

LAMP FULL EXTENSION SOFT-CLOSE SLIDE 3670 Black Finish NEW

Latest Info

Self & Soft Closing



LOAD CAPACITY 147~196 N/pair

CLOSED LOCK | OPEN LOCK | FRICTION | DETACH | BUMPER
HOLD CLOSED | HOLD OPENED | 2-WAYS | CATCH

- Black version of the 3670 slide.
- Full extension (3 members).
- Slides smoothly even if cabinet is slightly deformed due to shock absorbing effect of the outer member.
- The drawer can be detached by lifting the lever.
- With a bumper to avoid metal-to-metal contact noise.

Smooth Black Finish



INSTRUCTION

Specification

- Self and soft closing position:
  - 250-350 type: 20 mm distance from closed position
  - 400-600 type: 36 mm distance from closed position
- The maximum width of the drawer is the slide length + 200mm.

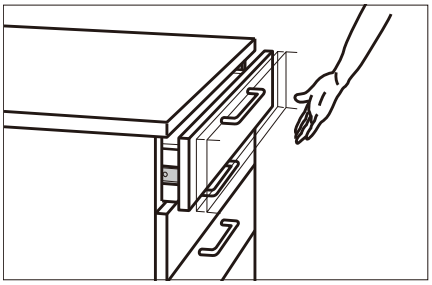
Remarks

- Do not push with a strong force when soft-closing mechanism is in operation.
- Scratches on black surface may become conspicuous. Please handle it with care during installation.

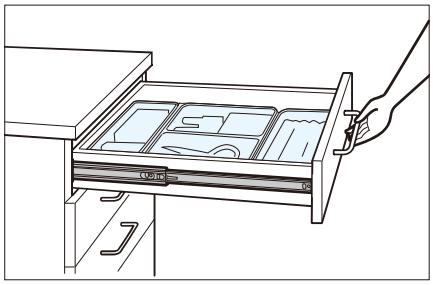
Parts Included

- Truss head tapping screw 4 x 12 (black chrome)

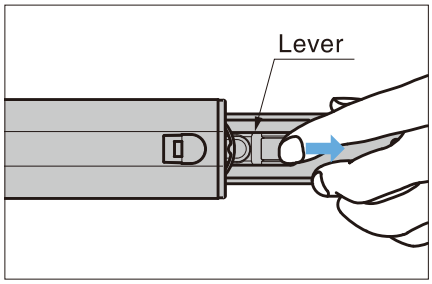
Self and Soft Closing

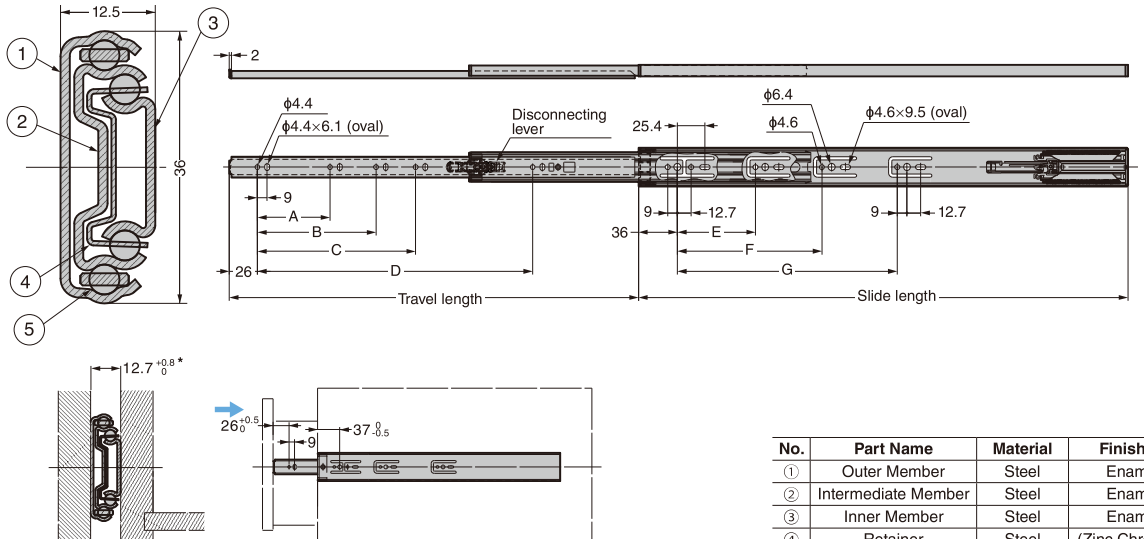


Full Extension (3 Members)



Easy to Detach





* Clearance between the drawer and cabinet must be within the range of the allowance.

No.	Part Name	Material	Finish / Colour
①	Outer Member	Steel	Enamel Black
②	Intermediate Member	Steel	Enamel Black
③	Inner Member	Steel	Enamel Black
④	Retainer	Steel	(Zinc Chromate Steel)
⑤	Balls	Steel	–

Sold in pairs (2 pcs)

Item Code	Item Name	Slide Length	Travel Length	A	B	C	D	E	F	G	Load Capacity / pair		Weight / pair (g)	Box (set)
											N	kgf		
190-048-809	3670-250BL	250	200	124	–	–	–	87	–	–	147	15	540	20
190-048-810	3670-300BL	300	300	174	–	–	–	119	–	–	147	15	660	20
190-048-811	3670-350BL	350	350	96	224	–	–	119	183	–	147	15	780	10
190-048-812	3670-400BL	400	400	160	256	–	–	119	199	–	196	20	900	10
190-048-813	3670-450BL	450	450	96	192	306	–	119	247	–	196	20	1020	10
190-048-814	3670-500BL	500	500	128	224	356	–	119	215	295	196	20	1120	10
190-048-815	3670-550BL	550	550	128	224	352	406	119	215	343	196	20	1240	10
190-048-816	3670-600BL	600	600	128	224	384	456	119	247	375	196	20	1380	10

This information provides a range of quality for the component. It does not ensure the performance or safety of the final product incorporating the component.

LAMP FULL EXTENSION SOFT-CLOSE SLIDE 3670 Gold Finish NEW

Latest Info

Self & Soft Closing



LOAD CAPACITY 147~196 N/pair

CLOSED LOCK | OPEN LOCK | FRICTION | DETACH | BUMPER
HOLD CLOSED | HOLD OPENED | 2-WAYS | CATCH

- Gold-plated version of the 3670 slide.
- Full extension (3 members).
- Slides smoothly even if cabinet is slightly deformed due to shock absorbing effect of the outer member.
- The drawer can be detached by lifting the lever.
- With a bumper to avoid metal-to-metal contact noise.

Application



INSTRUCTION

Specification

- Self and soft closing position:
  - 300-350 type: 20 mm distance from closed position
  - 400-500 type: 36 mm distance from closed position
- The maximum width of the drawer is the slide length + 200mm.

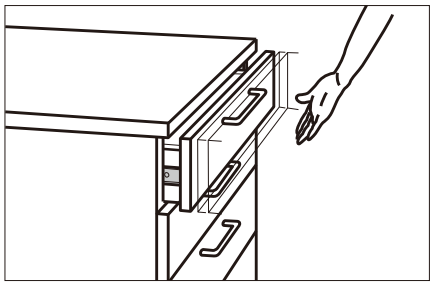
Remarks

- Do not push with a strong force when soft-closing mechanism is in operation.
- Scratches on gold plating may become conspicuous. Please handle it with care during installation.

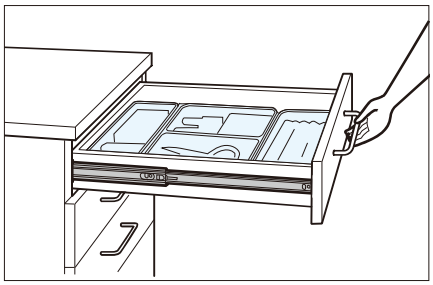
Parts Included

- Truss head tapping screw 4 x 12 (Gold plating)

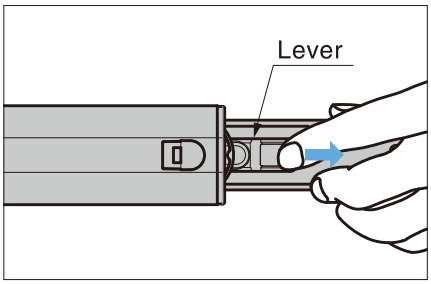
Self and Soft Closing

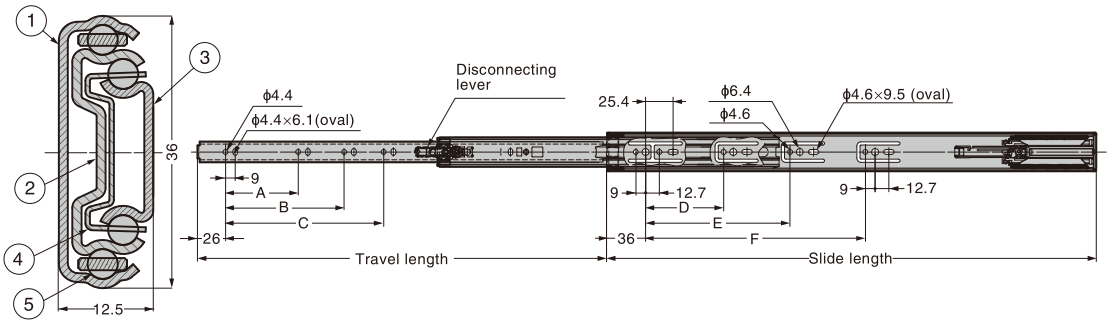


Full Extension (3 Members)

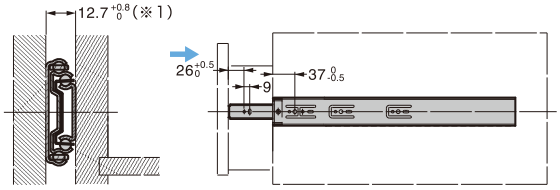


Easy to Detach





S=1/1



No.	Part Name	Material	Finish / Colour
①	Outer Member	Steel	Gold Plating
②	Intermediate Member	Steel	Gold Plating
③	Inner Member	Steel	Gold Plating
④	Retainer	Steel	(Zinc Chromate Steel)
⑤	Balls	Steel	–

Sold in pairs (2 pcs)

Item Code	Item Name	Slide Length	Travel Length	A	B	C	D	E	F	Load Capacity / pair		Weight / pair (g)	Box (set)
										N	kgf		
190-037-612	3670-300GA	300	300	174	–	–	119	–	–	147	15	660	20
190-037-613	3670-350GA	350	350	96	224	–	119	183	–	147	15	780	10
190-037-614	3670-400GA	400	400	160	256	–	119	199	–	196	20	900	10
190-037-615	3670-450GA	450	450	96	192	306	119	247	–	196	20	1020	10
190-037-616	3670-500GA	500	500	128	224	356	119	215	295	196	20	1120	10

This information provides a range of quality for the component. It does not ensure the performance or safety of the final product incorporating the component.

LAMP. FULL EXTENSION SOFT-CLOSE SLIDE 4670

Latest Info

Self & Soft Closing



LOAD CAPACITY 147~392 N/pair

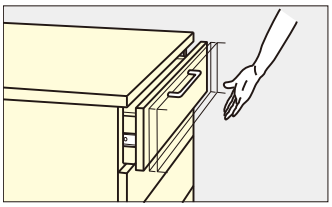
CLOSED LOCK | OPEN LOCK | FRICTION | DETACH | BUMPER
HOLD CLOSED | HOLD OPENED | 2-WAYS | CATCH

- Self and soft closing slide.
- Full extension (3 members).
- With a bumper to avoid metal-to-metal noise at the end of the course.
- The drawer is detachable by lifting the lever.
- Self-closes at 20 mm distance from closed position (250-350 mm slide) and at 36 mm distance from closed position (400-600 mm slide).

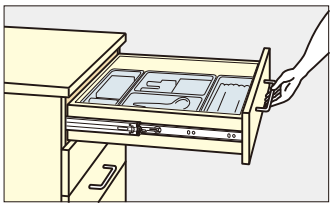
SCREW

Parts Included
- Truss head tapping screw 4x12

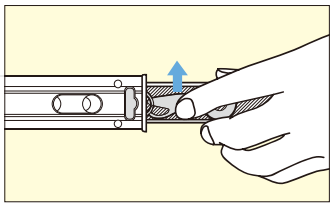
Self and Soft Closing

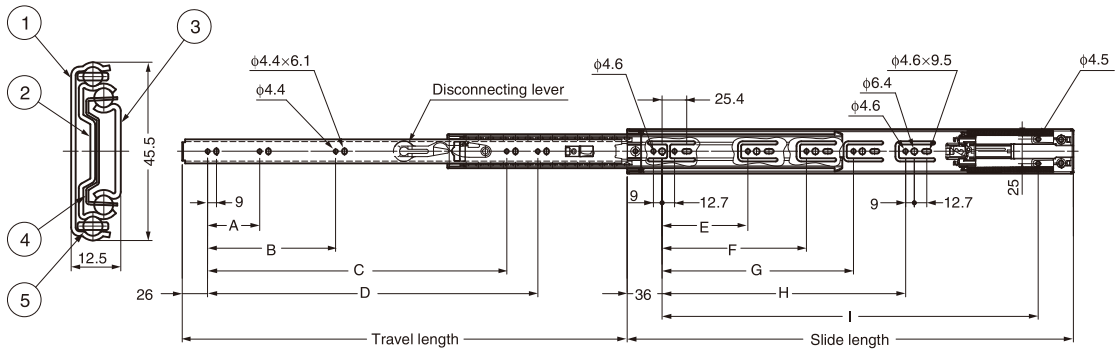


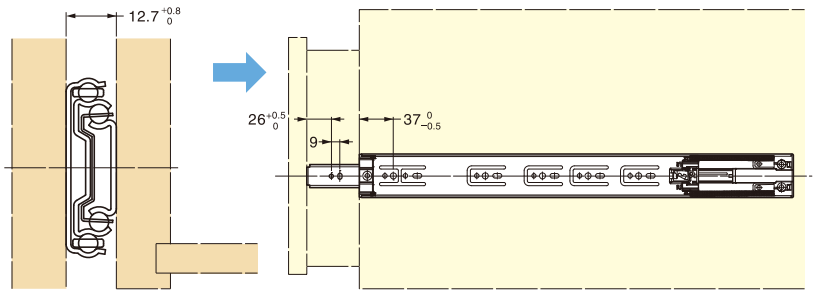
Full Extension (3 Members)



Easy to Detach







No.	Part Name	Material	Finish/Colour
①	Outer Rail	Steel	Clear Zinc Chromate
②	Intermediate Member	Steel	Clear Zinc Chromate
③	Inner Rail	Steel	Clear Zinc Chromate
④	Retainer	Steel	(Zinc Chromate Steel)
⑤	Balls	Steel	–

Sold in pairs (2 pcs).

Item Code	Item Name	Slide Length	Travel Length	A	B	C	D	E	F	G	H	I	Load Capacity N	Load Capacity kgf	Weight	Box
190-021-265	4670-250	250	175	–	–	124	–	87	–	–	–	179	147 N/pair	15 kgf/pair	0.72 kg/pair	10 pairs
190-021-266	4670-300	300	275	–	–	174	–	119	–	–	–	229	196 N/pair	20 kgf/pair	0.88 kg/pair	10 pairs
190-021-267	4670-350	350	353	96	–	224	–	119	183	–	–	279	245 N/pair	25 kgf/pair	1.02 kg/pair	10 pairs
190-021-268	4670-400	400	404	96	–	254	–	119	199	–	–	329	245 N/pair	25 kgf/pair	1.17 kg/pair	10 pairs
190-021-269	4670-450	450	455	128	–	294	–	119	247	–	–	379	294 N/pair	30 kgf/pair	1.31 kg/pair	10 pairs
190-021-270	4670-500	500	505	96	160	344	–	119	295	–	–	429	343 N/pair	35 kgf/pair	1.48 kg/pair	10 pairs
190-021-271	4670-550	550	556	96	160	394	–	119	215	343	–	479	392 N/pair	40 kgf/pair	1.62 kg/pair	6 pairs
190-021-272	4670-600	600	606	128	192	444	–	119	215	343	–	529	294 N/pair	30 kgf/pair	1.77 kg/pair	6 pairs
190-021-273	4670-650	650	653	128	224	416	494	119	215	343	439	579	294 N/pair	30 kgf/pair	1.94 kg/pair	6 pairs
190-021-274	4670-700	700	704	128	224	480	544	119	215	343	487	629	294 N/pair	30 kgf/pair	2.10 kg/pair	6 pairs

This information provides a range of quality for the component. It does not ensure the performance or safety of the final product incorporating the component.

LAMP FULL EXTENSION SOFT-CLOSE SLIDE Black 4670BL

Latest Info



LOAD CAPACITY 147~392 N/pair

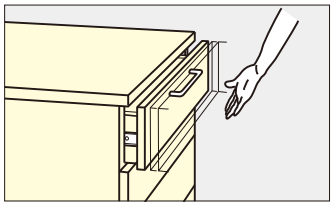
CLOSED LOCK | OPEN LOCK | FRICTION | DETACH | BUMPER
HOLD CLOSED | HOLD OPENED | 2-WAYS | CATCH

- Self and soft closing slide.
- Full extension (3 members).
- With a bumper to avoid metal-to-metal noise at the end of the course.
- The drawer is detachable by lifting the lever.
- Self-closes at 20 mm distance from closed position (250-350 mm slide) and at 36 mm distance from closed position (400-600 mm slide).

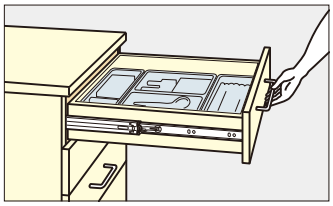
SCREW

Parts Included
- Truss head tapping screw 4x12 (black finish)

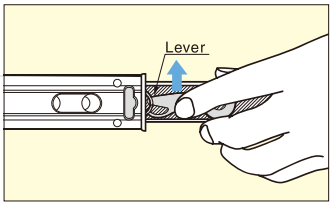
Self and Soft Closing

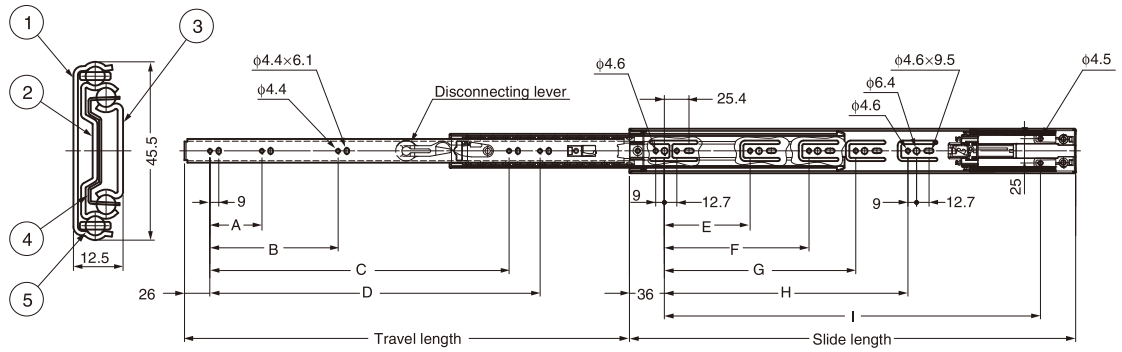


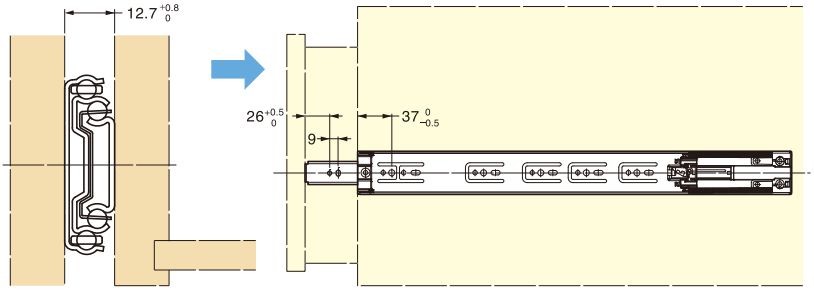
Full Extension (3 Members)



Easy to Detach







No.	Part Name	Material	Finish/Colour
①	Outer Rail	Steel	Black Electrodeposition
②	Intermediate Member	Steel	Black Electrodeposition
③	Inner Rail	Steel	Black Electrodeposition
④	Retainer	Steel	(Zinc Chromate Steel)
⑤	Balls	Steel	–

Sold in pairs (2 pcs).

Item Code	Item Name	Slide Length	Travel Length	A	B	C	D	E	F	G	H	I	Load Capacity N	Load Capacity kgf	Weight	Box
190-028-947	4670-250BL	250	175	–	–	124	–	87	–	–	–	179	147 N/pair	15 kgf/pair	0.72 kg/pair	10 pairs
190-028-948	4670-300BL	300	275	–	–	174	–	119	–	–	–	229	196 N/pair	20 kgf/pair	0.88 kg/pair	10 pairs
190-028-949	4670-350BL	350	353	96	–	224	–	119	183	–	–	279	245 N/pair	25 kgf/pair	1.02 kg/pair	10 pairs
190-028-950	4670-400BL	400	404	96	–	254	–	119	199	–	–	329	245 N/pair	25 kgf/pair	1.17 kg/pair	10 pairs
190-028-951	4670-450BL	450	455	128	–	294	–	119	247	–	–	379	294 N/pair	30 kgf/pair	1.31 kg/pair	10 pairs
190-028-952	4670-500BL	500	505	96	160	344	–	119	295	–	–	429	343 N/pair	35 kgf/pair	1.48 kg/pair	10 pairs
190-028-953	4670-550BL	550	556	96	160	394	–	119	215	343	–	479	392 N/pair	40 kgf/pair	1.62 kg/pair	6 pairs
190-028-954	4670-600BL	600	606	128	192	444	–	119	215	343	–	529	294 N/pair	30 kgf/pair	1.77 kg/pair	6 pairs

This information provides a range of quality for the component. It does not ensure the performance or safety of the final product incorporating the component.

LAMP FULL EXTENSION SOFT-CLOSE SLIDE 4670 Gold Finish NEW

Latest Info

Self & Soft Closing



LOAD CAPACITY 196~343 N/pair

CLOSED LOCK | OPEN LOCK | FRICTION | DETACH | BUMPER
HOLD CLOSED | HOLD OPENED | 2-WAYS | CATCH

- Gold-plated version of the 4670 slide.
- Full extension (3 members).
- Slides smoothly even if cabinet is slightly deformed due to shock absorbing effect of the outer member.
- The drawer can be detached by lifting the lever.
- With a bumper to avoid metal-to-metal contact noise.

INSTRUCTION

Application



Specification

- Self and soft closing position:
  - 300-350 type: 20 mm distance from closed position
  - 400-500 type: 36 mm distance from closed position
- The maximum width of the drawer is the slide length + 200mm.

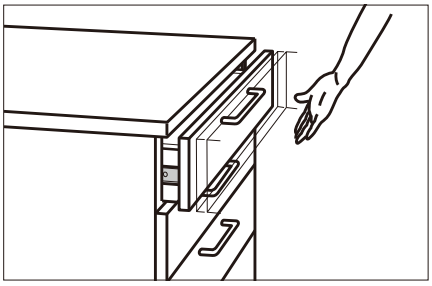
Remarks

- Do not push with a strong force when soft-closing mechanism is in operation.
- Scratches on gold plating may become conspicuous. Please handle it with care during installation.

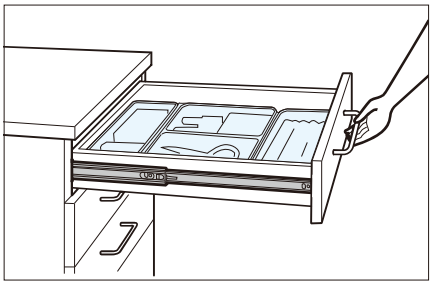
Parts Included

- Truss head tapping screw 4 x 12 (Gold plating)

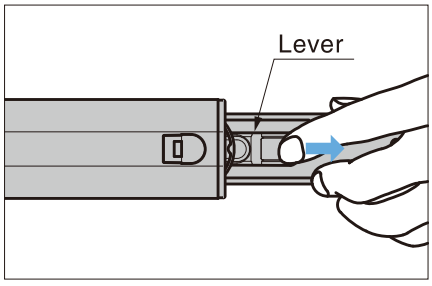
Self and Soft Closing

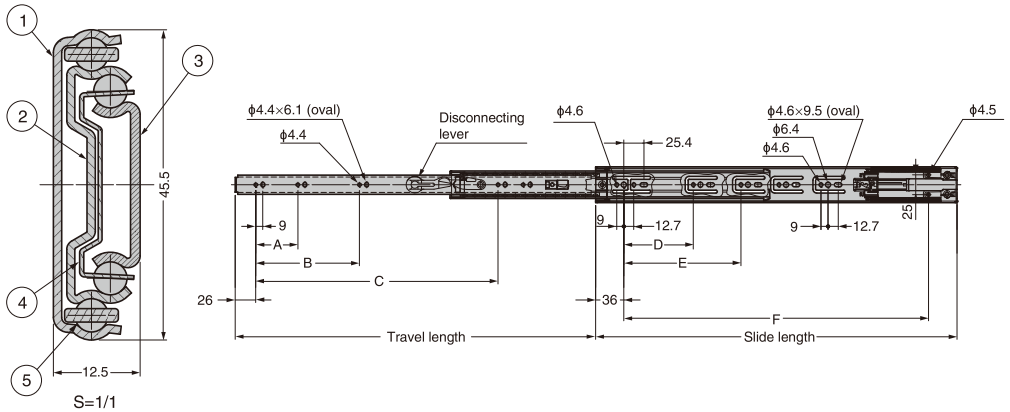


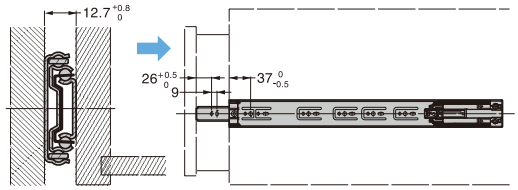
Full Extension (3 Members)



Easy to Detach







No.	Part Name	Material	Finish / Colour
①	Outer Member	Steel	Gold Plating
②	Intermediate Member	Steel	Gold Plating
③	Inner Member	Steel	Gold Plating
④	Retainer	Steel	(Zinc Chromate Steel)
⑤	Balls	Steel	–

Sold in pairs (2 pcs)

Item Code	Item Name	Slide Length	Travel Length	A	B	C	D	E	F	Load Capacity / pair		Weight / pair (g)	Box (set)
										N	kgf		
190-037-617	4670-300GA	300	275	–	–	174	119	–	229	196	20	850	10
190-037-618	4670-350GA	350	353	96	–	224	119	183	279	245	25	990	10
190-037-619	4670-400GA	400	404	96	–	254	119	199	329	245	25	1130	10
190-037-620	4670-450GA	450	455	128	–	294	119	247	379	294	30	1270	10
190-037-621	4670-500GA	500	505	96	160	344	119	295	429	343	35	1440	10

This information provides a range of quality for the component. It does not ensure the performance or safety of the final product incorporating the component.

SOFT-CLOSE SLIDE 5370 For Heavy Duty NEW

Latest Info

Soft Closing



LOAD CAPACITY 784-980 N/pair

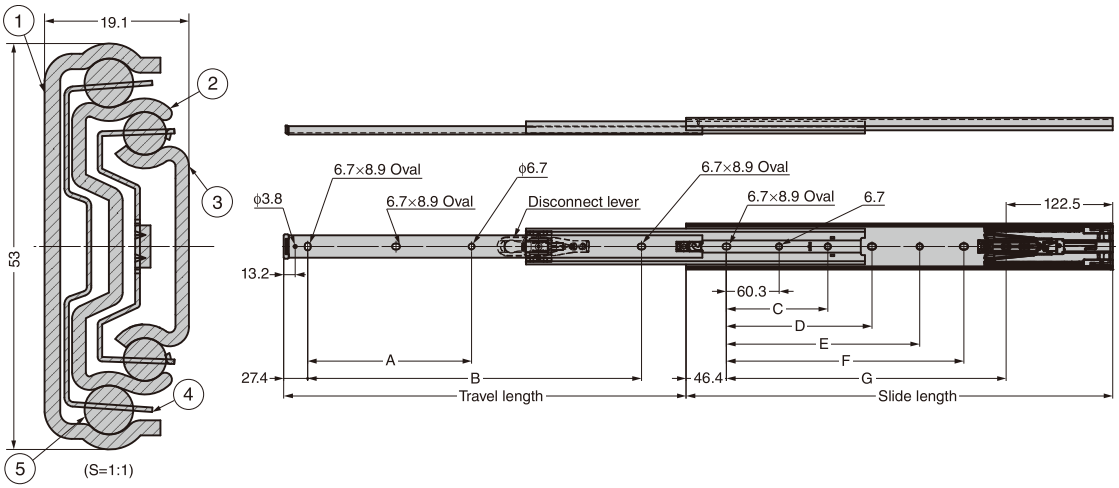
CLOSED LOCK | OPEN LOCK | FRICTION | DETACH | BUMPER
HOLD CLOSED | HOLD OPENED | 2-WAYS | CATCH

- A soft-closing rail for heavy weights (load capacity up to 100 kgf).
- Soft-closing spring force can be manually switched.
- The inner member is detachable by lifting the lever.

Specifications
- Soft-closes at 55 mm distance from closed position.

Remarks
- Be sure to read the “Cautions” (P.1147).
- Install a stopper to prevent the slide from being pushed in too far when stored.

Recommended Screws
- M5 flat head screws



Adjusting the Soft Closing Force




For greater pull-in force




For lower pull-in force

*When adjusting, keep the two springs (red parts) at the same position.

No.	Part Name	Material	Finish
①	Outer Member	Steel	Bright Chromate (Trivalent)
②	Intermediate Member	Steel	Bright Chromate (Trivalent)
③	Inner Member	Steel	Bright Chromate (Trivalent)
④	Retainer	Steel	(Zinc Chromate Steel)
⑤	Balls	Steel	–

Sold in pairs (2 pcs).

Item Code	Item Name	Slide Length	Travel Length	A	B	C	D	E	F	G	Load Capacity N/pair	Load Capacity kgf/pair	Weight (g/pair)
190-045-778	5370-400	400	375	–	317.5	–	–	127	177.8	231.2	784	80	2150
190-045-779	5370-450	450	450	–	355.6	–	–	177.8	228.6	281.2	882	90	2450
190-045-780	5370-500	500	500	228.6	406.4	–	–	228.6	279.4	331.2	931	95	2750
190-045-781	5370-550	550	550	228.6	457.2	–	–	279.4	330.4	381.2	980	100	3050
190-045-782	5370-600	600	600	228.6	508	–	–	330.2	381	431.2	882	90	3350
190-045-783	5370-650	650	650	228.6	558.8	228.6	279.4	381	431.8	481.2	882	90	3650
190-045-784	5370-700	700	700	228.6	584.2	228.6	279.4	431.8	482.6	531.2	882	90	3930

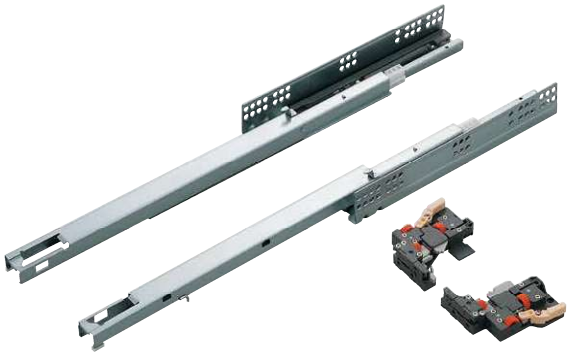
Please contact your local agent or your nearest Sugatsune subsidiary for detail/availability.

This information provides a range of quality for the component. It does not ensure the performance or safety of the final product incorporating the component.

LAMP DRAWER SLIDE 2020 Under Mount / Self and Soft Closing NEW

Latest Info

Self & Soft Closing



LOAD CAPACITY 392 N/pair

CLOSED LOCK | OPEN LOCK | FRICTION | DETACH | BUMPER
HOLD CLOSED | HOLD OPENED | 2-WAYS | CATCH

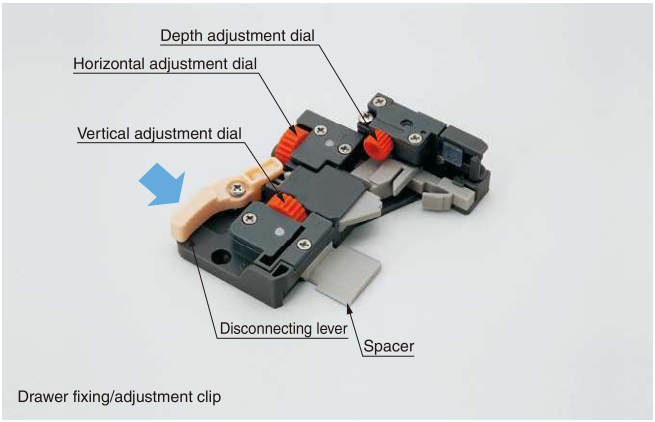
- Full extension (3 members).
- Slides are hidden from view. (under mount)
- Self and soft closing: 30 mm from closed position
- Drawers can be easily detached with the lever.
- With 3-way adjustment.
  - Vertical : 2.5 mm
  - Depth : 3 mm
  - Horizontal : ±1.5 mm

INSTRUCTION

Recommended Screw
- Countersunk head tapping screw 3.5

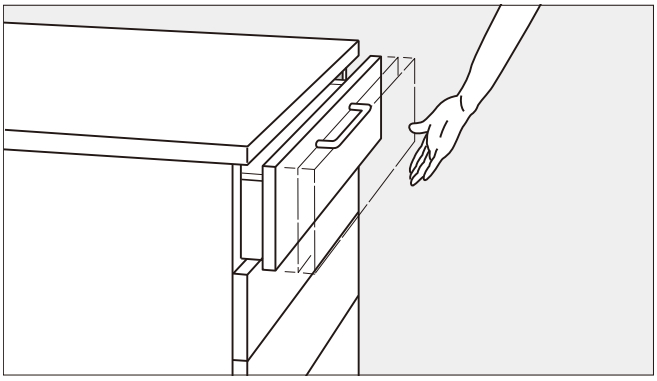
Remarks
- See the front panel fixing clip mounting illustration for drawer fixing/adjustment clip mounting.
- Do not push the drawers forcefully in when the soft closing mechanism is operating. Otherwise, oil leaks will occur.

3-way Adjustment / Easy Detachment

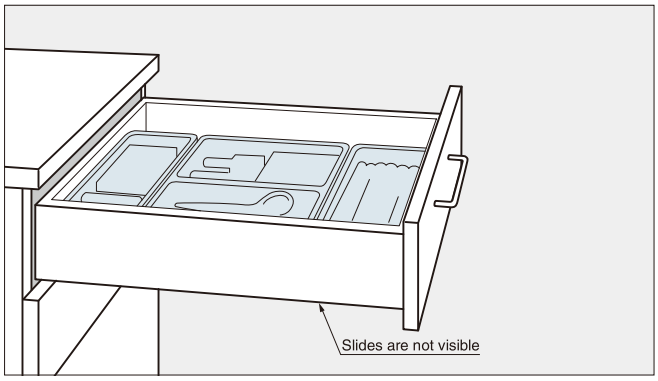


The drawer fixing/adjustment clip is used for 3-way adjustment and detachment. Rotate the three dials to make adjustments. Push the lever in the arrow direction to remove the drawer.

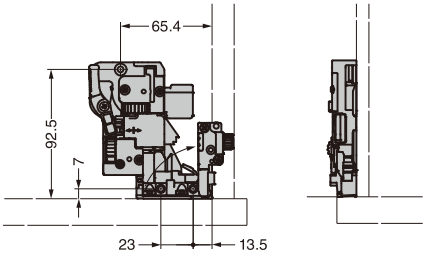
Self and Soft Closing



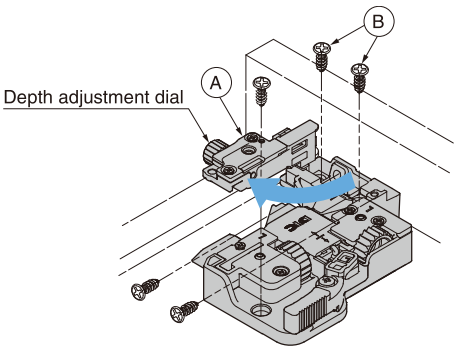
Full Extension (3 Members)



Drawer Fixing/Adjustment Clip Layout Diagram

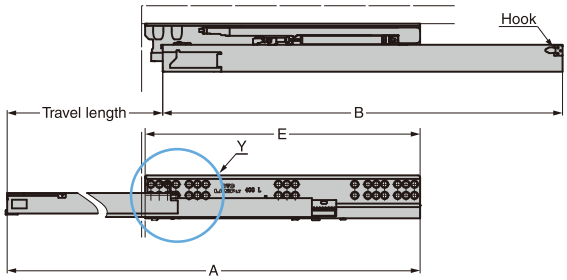


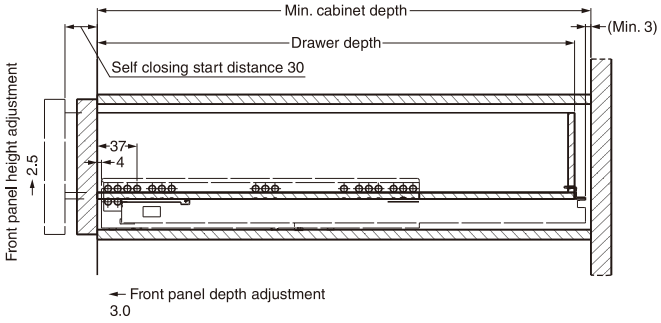
Mounting Drawer Fixing/Adjustment Clip



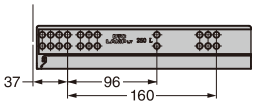
Mount screws Ⓑ after turning lever Ⓐ 90° in the arrow direction.
After mounting, return it to the original position.
*Fixing to the bottom plate is optional.

This information provides a range of quality for the component. It does not ensure the performance or safety of the final product incorporating the component.

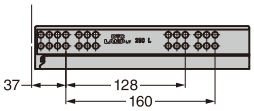




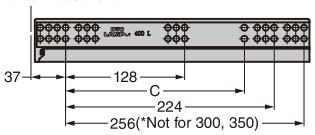
2020-250



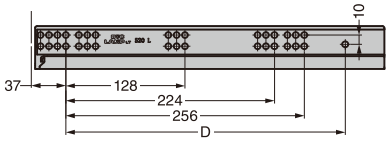
2020-270



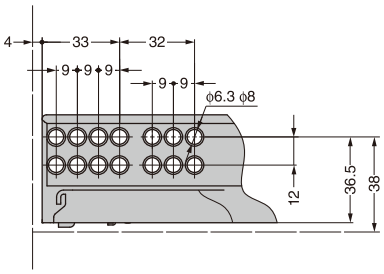
2020-300/350/400/450/500

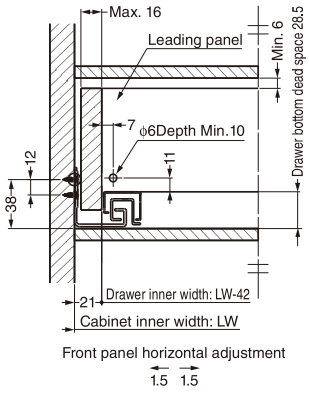


2020-550/600



Y detail





Part Name	Material	Finish
Rail	Steel	Zinc Plating
clip	Polyacetal(POM)	–

Sold in pairs (2 pcs).

Item Code	Item Name	Drawer depth	Minimum cabinet depth	Travel length	A	B	C	D	E	Load Capacity / pair		Weight / pair (g)	Box (set)
										N	kgf		
190-032-434	2020-250	240	255	213	424	229	–	–	230	392	40	1400	10
190-032-435	2020-270	260	275	233	444	249	–	–	230	392	40	1500	10
190-032-436	2020-300	290	305	263	507	279	160	–	263	392	40	1600	10
190-032-437	2020-350	340	355	313	579	329	192	–	285	392	40	1800	10
190-032-438	2020-400	390	405	363	639	379	192	–	295	392	40	2000	10
190-032-439	2020-450	440	455	413	689	429	192	–	295	392	40	2100	6
190-032-440	2020-500	490	505	463	774	479	–	–	330	392	40	2300	6
190-032-441	2020-550	540	555	513	862	529	–	292	368	392	40	2500	6
190-032-442	2020-600	590	605	563	949	579	–	330	405	392	40	2800	6

This information provides a range of quality for the component. It does not ensure the performance or safety of the final product incorporating the component.

LAMP PUSH-TO-OPEN SLIDE 3660

Latest Info



LOAD CAPACITY 147~196 N/pair

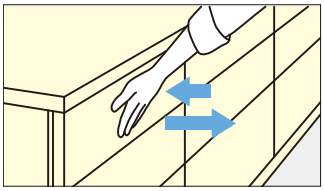
CLOSED LOCK | OPEN LOCK | FRICTION | DETACH | BUMPER
HOLD CLOSED | HOLD OPENED | 2-WAYS | CATCH

- Push-to-open mechanism.
- No handle or knobs required for a sleek, modern look.
- With a bumper to avoid metal-to-metal noise at the end of the course.
- The drawer is detachable by lifting the lever.
- Heavy duty type: 4660 series are also available (P.1182).

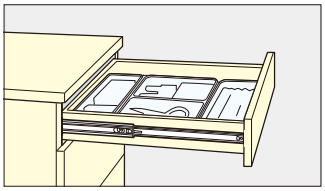
SCREW

Parts Included
- Truss head tapping screw 4x12
- Hex key

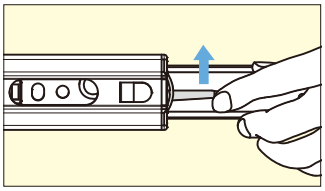
Push to Open

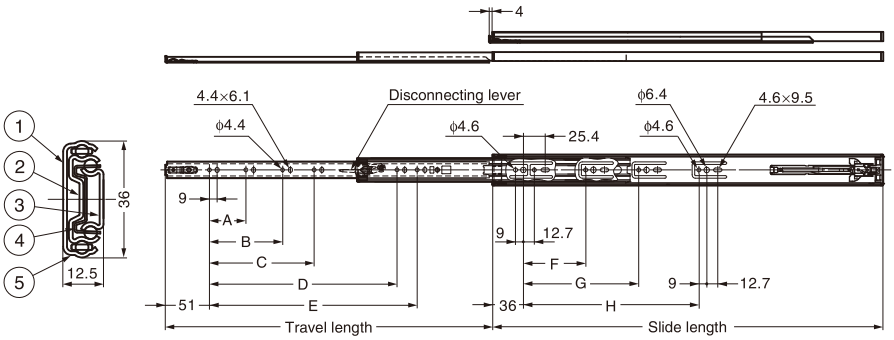


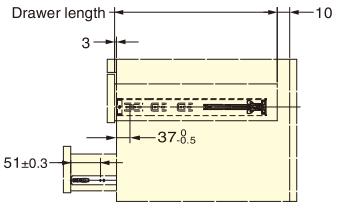
Full Extension (3 Members)

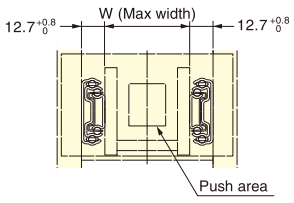


Easy to Detach

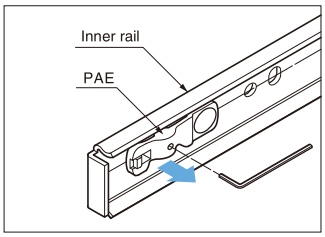








Adjustment for the Installation Dimensions 12.7 mm



No.	Part Name	Material	Finish/Colour
①	Outer Member	Steel	Clear Zinc Chromate
②	Intermediate Member	Steel	Clear Zinc Chromate
③	Inner Member	Steel	Clear Zinc Chromate
④	Retainer	Steel	(Zinc Chromate Steel)
⑤	Balls	Steel	-

Sold in pairs (2 pcs).

Item Code	Item Name	Slide Length	Travel Length	A	B	C	D	E	F	G	H	W	Load Capacity N	Load Capacity kgf	Weight	Box
190-027-551	3660-250	250	250	–	–	–	–	121	87	–	–	450	147 N/pair	15 kgf/pair	0.61 kg/pair	20 pairs
190-027-552	3660-300	300	300	71	–	–	–	171	119	–	–	500	147 N/pair	15 kgf/pair	0.73 kg/pair	20 pairs
190-027-553	3660-350	350	350	103	–	–	–	221	119	183	–	550	147 N/pair	15 kgf/pair	0.84 kg/pair	10 pairs
190-027-554	3660-400	400	400	103	231	–	–	271	119	199	–	600	196 N/pair	20 kgf/pair	0.97 kg/pair	10 pairs
190-027-555	3660-450	450	450	103	263	–	–	321	119	247	–	650	196 N/pair	20 kgf/pair	1.09 kg/pair	10 pairs
190-027-556	3660-500	500	500	103	167	295	–	371	119	215	295	700	196 N/pair	20 kgf/pair	1.21 kg/pair	10 pairs
190-027-557	3660-550	550	550	103	199	327	–	421	119	215	345	750	196 N/pair	20 kgf/pair	1.33 kg/pair	10 pairs
190-027-558	3660-600	600	600	103	199	327	391	471	119	247	375	800	196 N/pair	20 kgf/pair	1.55 kg/pair	10 pairs

This information provides a range of quality for the component. It does not ensure the performance or safety of the final product incorporating the component.

PUSH-TO-OPEN SLIDE 4638

Latest Info

Push-to-Open



LOAD CAPACITY 265~441 N/pair

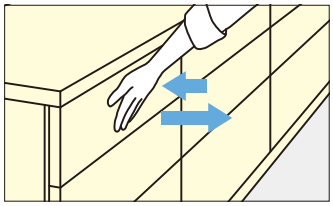
CLOSED LOCK | OPEN LOCK | FRICTION | DETACH | BUMPER
HOLD CLOSED | HOLD OPENED | 2-WAYS | CATCH

- Push-to-open mechanism.
- No handle or knobs required for a sleek, modern look.
- The drawer is detachable by lifting the lever.
- The drawer can be held in the fully opened position.
- Full extension (3 members).

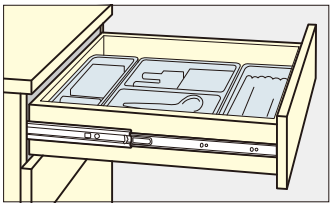
Recommended Screws

- M4 round head screw, M4 bind head screw, M4 truss head screw

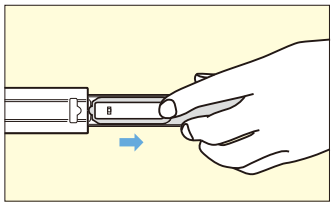
Push Open



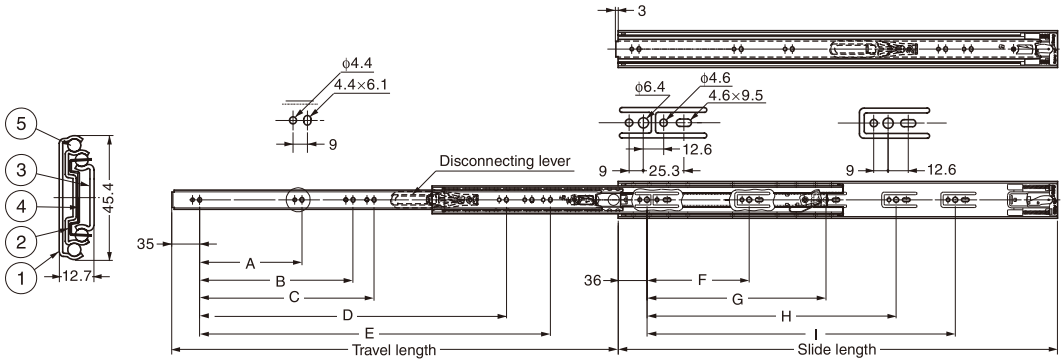
Full Extension (3 Members)

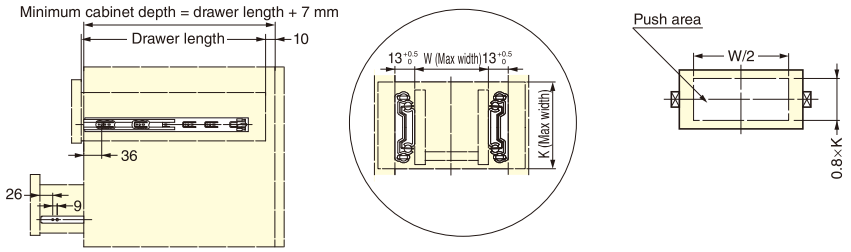


Easy to Detach



Feature





No.	Part Name	Material	Finish
①	Outer Rail	Steel	Clear Zinc Chromate
②	Intermediate Member	Steel	Clear Zinc Chromate
③	Inner Rail	Steel	Clear Zinc Chromate
④	Retainer	Steel	Clear Zinc Chromate
⑤	Balls	Steel	–

Sold in pairs (2 pcs).

Item Code	Item Name	Slide Length	Travel Length	A	B	C	D	E	F	G	H	I	Max. Drawer Length W	Max. Drawer Length K	Load Capacity N	Load Capacity kgf	Weight	Box
190-012-468	4638-14	350	356	–	–	–	–	224	128	–	–	224	550	215	441 N/pair	45 kgf/pair	0.96 kg/pair	20 pairs
190-012-469	4638-16	400	406	–	–	–	–	288	–	256	–	–	600	250	422 N/pair	43 kgf/pair	1.12 kg/pair	20 pairs
190-012-470	4638-18	450	457	128	–	–	–	320	–	224	320	–	650	280	392 N/pair	40 kgf/pair	1.27 kg/pair	10 pairs
190-012-471	4638-20	500	508	128	–	–	–	384	–	224	352	–	700	310	373 N/pair	38 kgf/pair	1.42 kg/pair	10 pairs
190-012-472	4638-22	550	559	128	–	–	192	416	128	224	320	416	750	340	353 N/pair	36 kgf/pair	1.57 kg/pair	10 pairs
190-012-473	4638-24	600	610	128	224	–	416	480	128	–	352	448	800	375	330 N/pair	34 kgf/pair	1.72 kg/pair	10 pairs
190-012-474	4638-26	650	660	128	224	–	416	512	128	–	352	512	850	405	304 N/pair	31 kgf/pair	1.86 kg/pair	10 pairs
190-012-475	4638-28	700	711	128	224	448	512	576	128	–	352	544	900	435	265 N/pair	27 kgf/pair	2.02 kg/pair	10 pairs

This information provides a range of quality for the component. It does not ensure the performance or safety of the final product incorporating the component.

LAMP PUSH-TO-OPEN SLIDE 4660

Latest Info

Push-to-Open



LOAD CAPACITY 147~441 N/pair

CLOSED LOCK | OPEN LOCK | FRICTION | DETACH | BUMPER
HOLD CLOSED | HOLD OPENED | 2-WAYS | CATCH

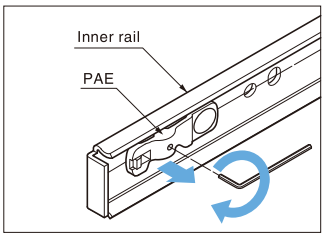
- Push-to-open mechanism.
- No handle or knobs required for a sleek, modern look.
- With a bumper to avoid metal-to-metal noise at the end of the course.
- The drawer is detachable by lifting the lever.
- Light-weight type: 3660 (P.1180) is also available (36 mm wide/ 15-20 kgf).

SCREW

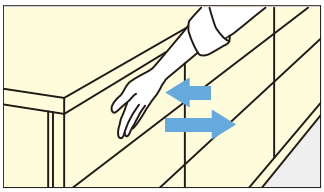
Parts Included

- Truss head tapping screw 4x12
- Hex key

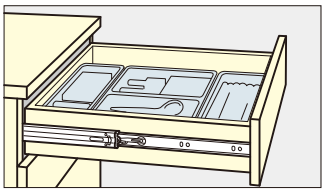
Adjustment for the Installation Dimensions 12.7 mm



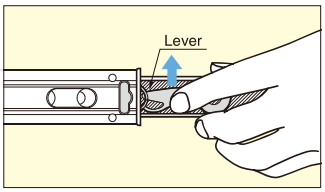
Push to Open

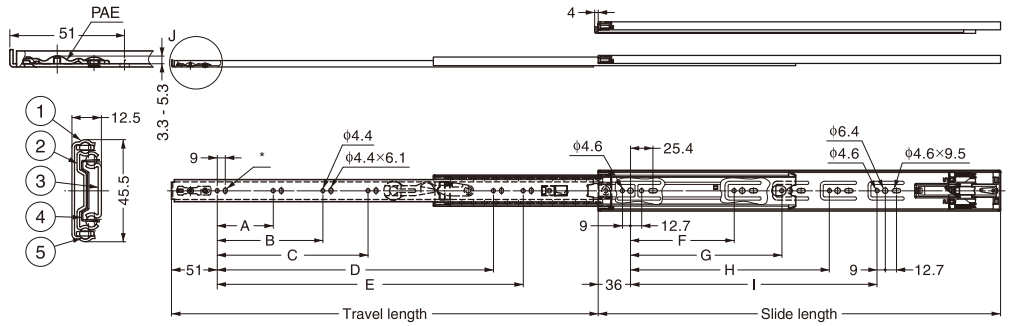


Full Extension (3 Members)



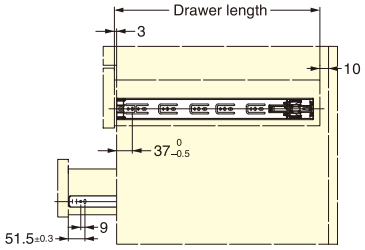
Easy to Detach

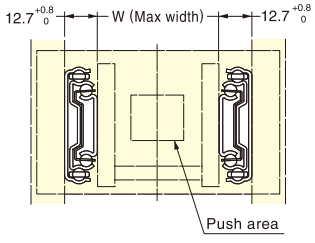




Minimum cabinet depth = drawer length + 10 mm

*No hole on the 250 mm type.





No.	Part Name	Material	Finish
①	Outer Rail	Steel	Clear Zinc Chromate
②	Intermediate Member	Steel	Clear Zinc Chromate
③	Inner Rail	Steel	Clear Zinc Chromate
④	Retainer	Steel	(Zinc Chromate Steel)
⑤	Balls	Steel	-

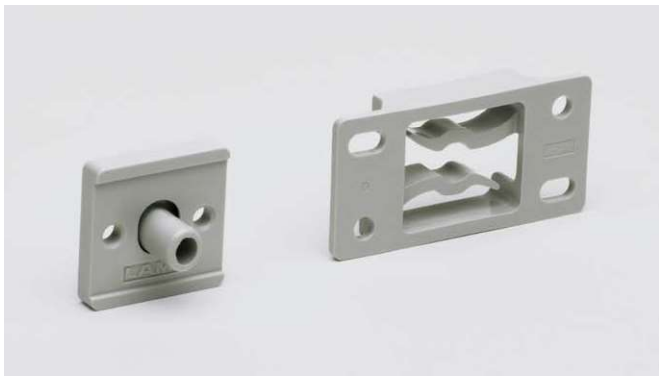
Sold in pairs (2 pcs).

Item Code	Item Name	Slide Length	Travel Length	A	B	C	D	E	F	G	H	I	W	Load Capacity N	Load Capacity kgf	Weight	Box
190-021-275	4660-250	250	200	–	–	–	117	–	87	–	–	–	450	147 N/pair	15 kgf/pair	0.76 kg/pair	10 pairs
190-021-276	4660-300	300	296	–	–	–	167	–	119	–	–	–	500	196 N/pair	20 kgf/pair	0.90 kg/pair	10 pairs
190-021-277	4660-350	350	348	71	–	–	217	–	119	183	–	–	550	245 N/pair	25 kgf/pair	1.02 kg/pair	10 pairs
190-021-278	4660-400	400	406	103	–	–	267	–	119	215	–	–	600	294 N/pair	30 kgf/pair	1.19 kg/pair	10 pairs
190-021-279	4660-450	450	458	71	135	–	317	–	119	279	–	–	650	343 N/pair	35 kgf/pair	1.35 kg/pair	10 pairs
190-021-280	4660-500	500	509	71	135	–	327	367	119	215	335	–	700	392 N/pair	40 kgf/pair	1.49 kg/pair	10 pairs
190-021-281	4660-550	550	560	103	167	–	359	417	119	215	343	–	750	441 N/pair	45 kgf/pair	1.65 kg/pair	6 pairs
190-021-282	4660-600	600	611	103	199	–	391	467	119	215	343	439	800	343 N/pair	35 kgf/pair	1.81 kg/pair	6 pairs
190-021-283	4660-650	650	661	103	199	–	441	517	119	215	343	471	850	343 N/pair	35 kgf/pair	1.95 kg/pair	6 pairs
190-021-284	4660-700	700	712	103	199	263	491	567	119	215	343	535	900	343 N/pair	35 kgf/pair	2.10 kg/pair	6 pairs

This information provides a range of quality for the component. It does not ensure the performance or safety of the final product incorporating the component.

LAMP TWO-WAY CATCH FOR SLIDES JC-30TW NEW

Latest Info



- Holds a slide in position from both directions.
- Retaining force can be adjusted by rotating the strike.
- Designed to be used with a two-way travel slide, holding it in the center.
- Can be used with slides between 19 and 21 mm in thickness.

SCREW

Applications

- A two-way travel slide to hold in the center.
- A one-way travel slide to hold in open or closed position.
- A one-way travel slide to hold in the middle.

Remarks

- Should be used with slides.
- It is recommended to use one per slide.
- Retaining force may vary. Please check actual performance with an actual product.

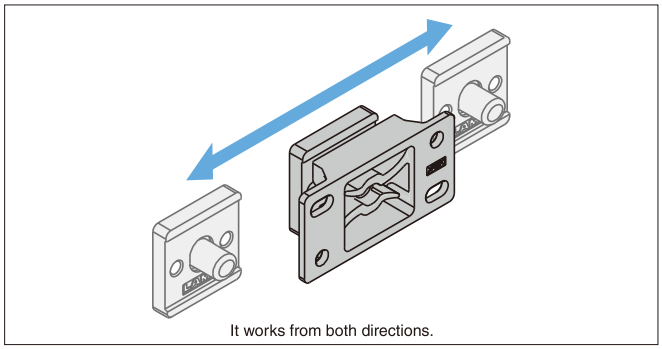
Parts Included

- Truss head tapping tapping screw 4 × 16

Recommended Screw

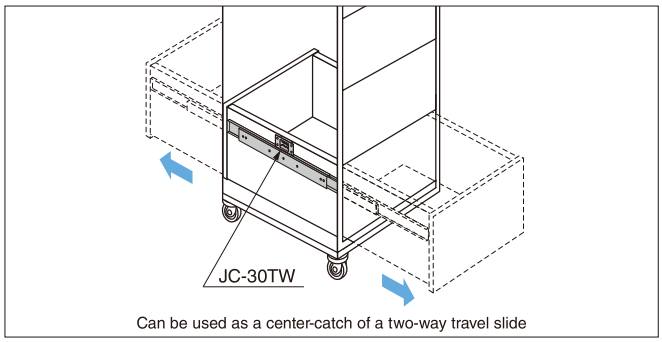
- M4 binding head screw, M4 truss head screw

Feature



It works from both directions.

Application Example

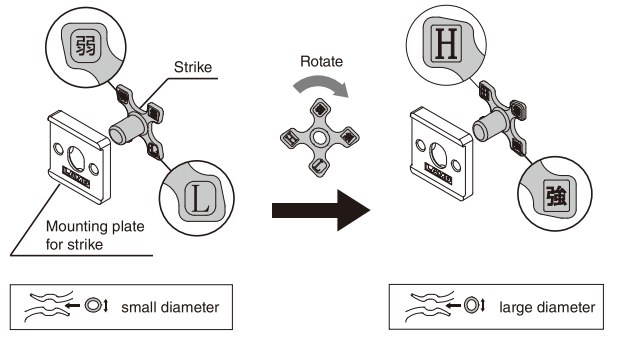


Can be used as a center-catch of a two-way travel slide

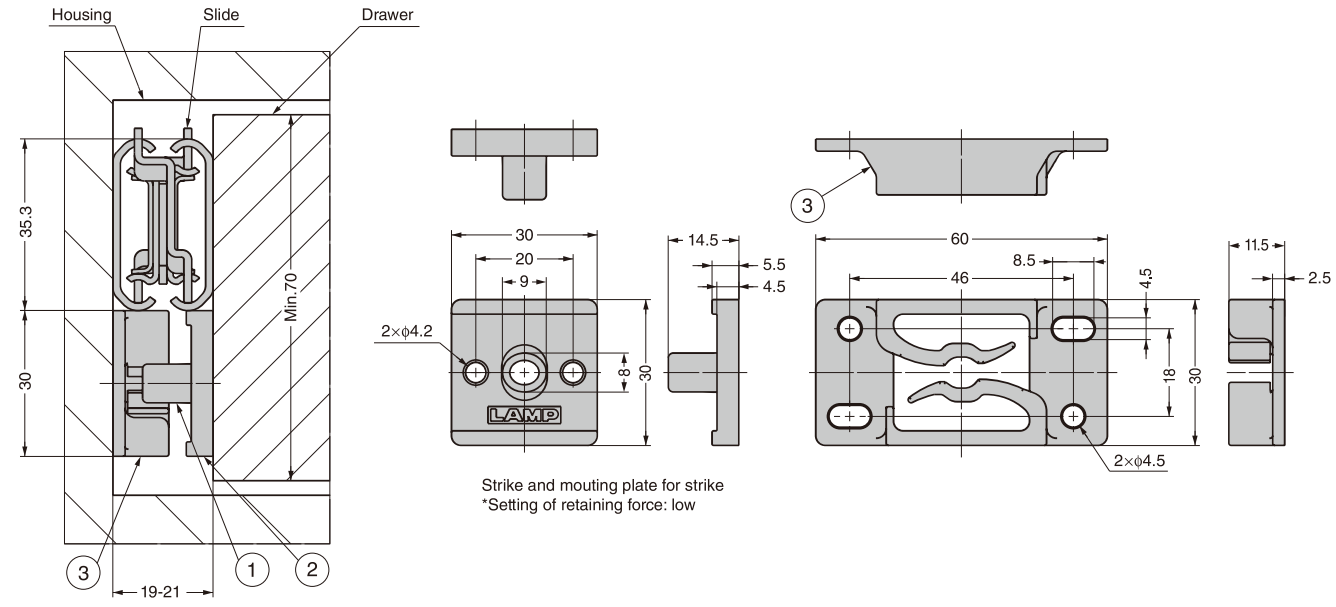
Adjusting Retaining Force

Rotate the strike to change retaining force.

[The letter "L" is in the right direction] [The letter "H" is in the right direction]



Retaining force: low Retaining force: high



Strike and mouting plate for strike
*Setting of retaining force: low

No.	Part Name	Material	Finish / Colour
①	Strike	Polyamide (PA)	Grey
②	Mounting plate for strike	Polyamide (PA)	Grey
③	Strike plate	POM	Grey

Item Code	Item Name	Push-in Force N		Push-in Force kgf		Pulling Force N		Pulling Force kgf		Weight (g)	Box (pcs)	Carton (pcs)
		Low	High	Low	High	Low	High	Low	High			
140-041-094	JC-30TW	18.5	27.9	1.9	2.8	32.6	65.9	3.3	6.7	12.4	30	300

This information provides a range of quality for the component. It does not ensure the performance or safety of the final product incorporating the component.

DRAWER SLIDE C203V Under Mount NEW

Latest Info



LOAD CAPACITY 98~245 N/pair

CLOSED LOCK | OPEN LOCK | FRICTION | DETACH | BUMPER
HOLD CLOSED | HOLD OPENED | 2-WAYS | CATCH

- The slides are mounted to the underside of drawers or decks.
- Hidden from view when opened, unlike side-mount slides.
- The outer member can be removed by operating the lever.
- The main body is only 19.5 mm thick.

Application

- Showcase for jewelry, watches, etc. in the store
- Cupboard, etc. in hotel

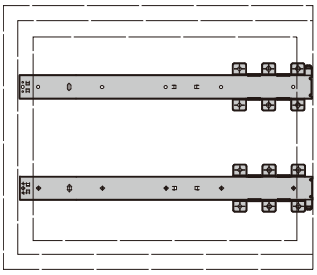
Recommended Screw

- Outer member: M4-binding head screw, M4 truss head screw
- Inner member: M5-binding head screw, M5 truss head screw

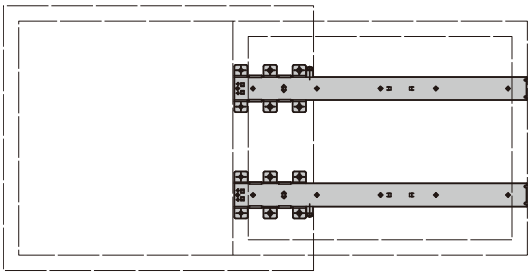
Remarks

- Be sure to read the cautions (P.1147).

Feature



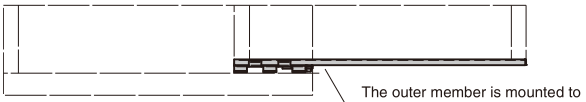
Top View (when closed)



Top View (when opened)



The slides are concealed underneath the drawer/deck for a modern and sleek look.



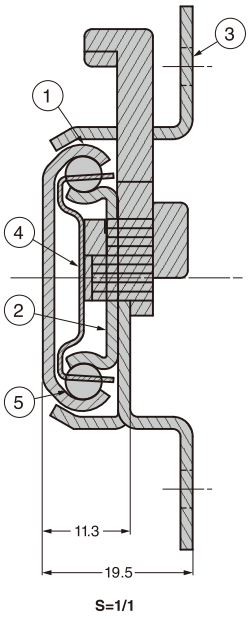
Side View (when opened)



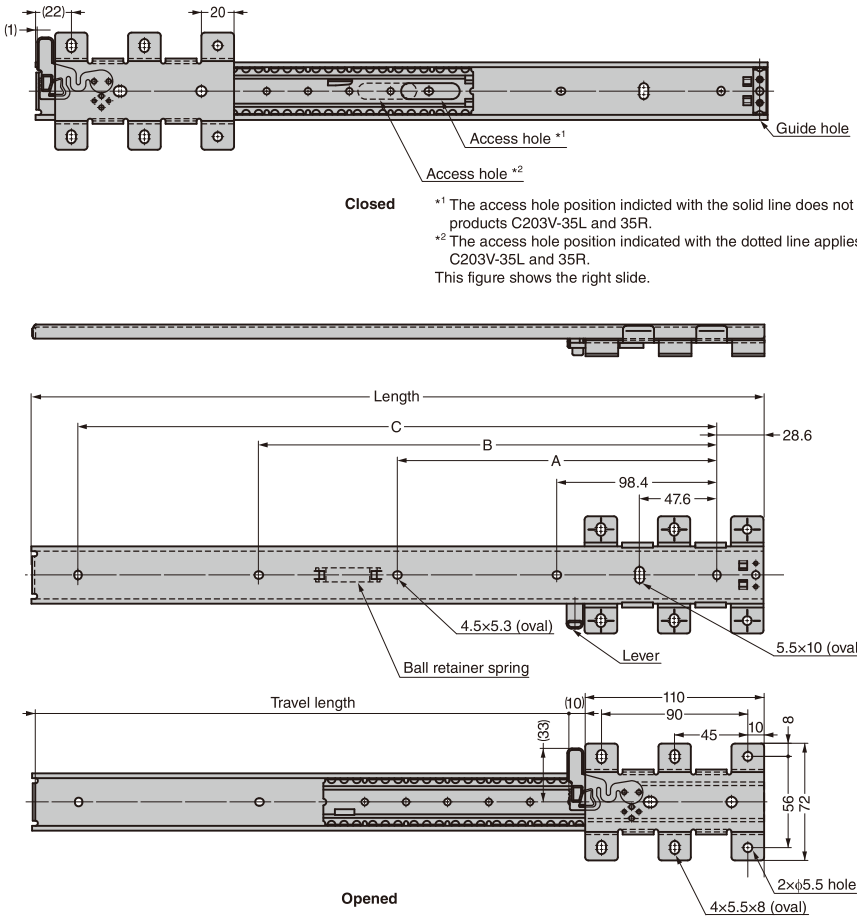
Front View

SELECTION GUIDE
DRAWER SLIDES
LINEAR GUIDES
SOFT-CLOSE
FULL EXTENSION
3/4 EXTENSION
UNDER MOUNT
MINI SLIDES
PUSH-TO-OPEN
STAINLESS STEEL
ALUMINIUM
STEEL

This information provides a range of quality for the component. It does not ensure the performance or safety of the final product incorporating the component.



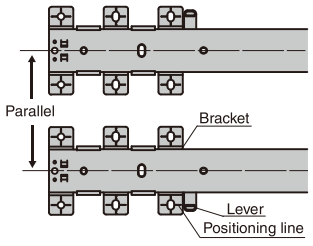
S=1/1



Closed

*1 The access hole position indicted with the solid line does not apply to products C203V-35L and 35R.
*2 The access hole position indicated with the dotted line applies to products C203V-35L and 35R.
This figure shows the right slide.

Opened



The slides can easily be mounted in parallel because of the bracket's slotted holes and positioning line.

No.	Part Name	Material	Finish
①	Outer member	Steel (SPCC)	Nitriding, bright chromate treatment (trivalent)
②	Inner member	Steel (SPCC)	Nitriding, bright chromate treatment (trivalent)
③	Reinforcement bracket	Steel (SPCC)	Bright chromate treatment (trivalent)
④	Retainer	Steel (SECC)	(Galvanized steel sheet)
⑤	Steel ball	Steel	–

Sold in unit of one piece.

Item Code	Item Name	Note	Length	Travel Length	A	B	C	Load Capacity N/pair	Load Capacity kgf/pair	Weight (g)	Box (pcs)
190-036-244	C203V-30L		300	178	–	181.7	242.8	245	25	350	10
190-036-245	C203V-30R		300	178	–	181.7	242.8	245	25	350	10
190-036-246	C203V-35L		350	228	–	201.7	292.8	215	22	380	10
190-036-247	C203V-35R		350	228	–	201.7	292.8	215	22	380	10
190-036-248	C203V-40L		400	278	171.4	231.7	342.8	196	20	420	10
190-036-249	C203V-40R		400	278	171.4	231.7	342.8	196	20	420	10
190-036-250	C203V-45L		450	328	196.4	281.7	392.8	166	17	450	10
190-036-251	C203V-45R		450	328	196.4	281.7	392.8	166	17	450	10
190-036-252	C203V-50L		500	378	221.4	331.7	442.8	147	15	490	10
190-036-253	C203V-50R		500	378	221.4	331.7	442.8	147	15	490	10
190-036-254	C203V-55L	*	550	428	246.4	381.7	492.8	117	12	520	10
190-036-255	C203V-55R	*	550	428	246.4	381.7	492.8	117	12	520	10
190-036-256	C203V-60L	*	600	478	271.4	431.7	542.8	98	10	550	10
190-036-257	C203V-60R	*	600	478	271.4	431.7	542.8	98	10	550	10

* This item is not available through Sugatsune Europe.

This information provides a range of quality for the component. It does not ensure the performance or safety of the final product incorporating the component.

LAMP PLASTIC SLIDE SB-275A

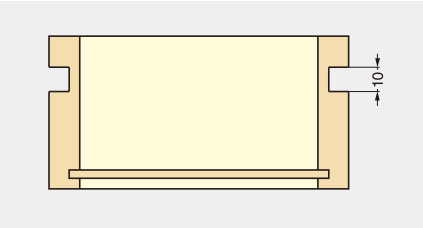
Latest Info

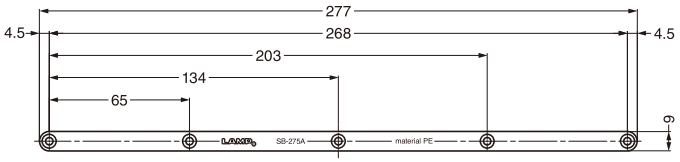


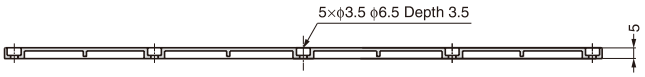
LOAD CAPACITY 49 N/pair

CLOSED LOCK | OPEN LOCK | FRICTION | DETACH | BUMPER
HOLD CLOSED | HOLD OPENED | 2-WAYS | CATCH

- Plastic slide with smooth movement.
- Easy to install. Great solution for mass production furniture and storage items.
- Used in pairs.





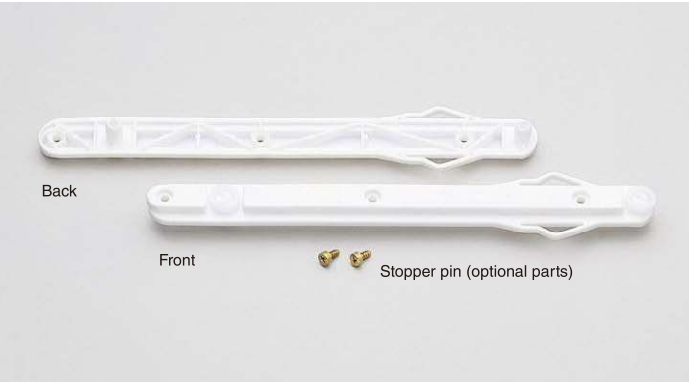


Sold by piece.

Item Code	Item Name	Material	Colour	Load Capacity N	Load Capacity kgf	Weight	Box
190-110-500	SB-275A	Polyethylene (PE)	White	49 N/pair	5 kgf/pair	6 g	1,000 pcs

LAMP PLASTIC SLIDE SB-257-R2

Latest Info



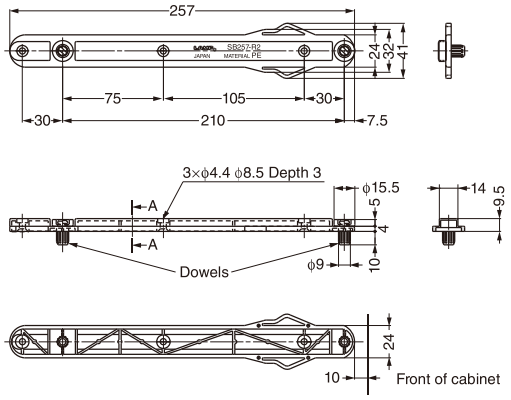
LOAD CAPACITY 49 N/pair

CLOSED LOCK | OPEN LOCK | FRICTION | DETACH | BUMPER
HOLD CLOSED | HOLD OPENED | 2-WAYS | CATCH

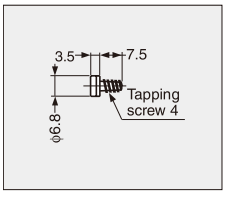
- Plastic slide with smooth movement.
- Easy to install. To fix in place tightly, please use screws.
- Used in pairs.

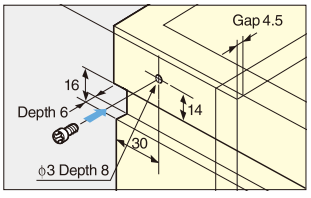
Optional Parts

- Stopper pin SBSP



Stopper Pin (Optional Parts)





Slide

Sold by piece.

Item Code	Item Name	Material	Colour	Load Capacity N	Load Capacity kgf	Weight	Box
190-111-300	SB-257-R2	Polyethylene (PE)	White	49 N/pair	5 kgf/pair	20 g	400 pcs

Stopper Pin (Optional Parts)

Item Code	Item Name	Material	Finish	Box	Carton
190-110-013	SBSP	Steel	Yellow Zinc Chromate	1,600 pcs	8,000 pcs

This information provides a range of quality for the component. It does not ensure the performance or safety of the final product incorporating the component.

LAMP PLASTIC SLIDE SB-300R

Latest Info



LOAD CAPACITY 49 N/pair

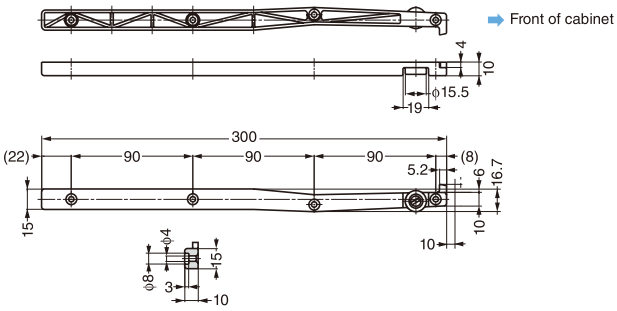
CLOSED LOCK | OPEN LOCK | FRICTION | DETACH | BUMPER
HOLD CLOSED | HOLD OPENED | 2-WAYS | CATCH

- Plastic slide with smooth movement.
- Used in pairs.

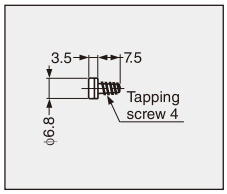
TEST METHOD 13

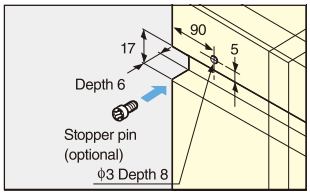
Optional Parts

- Stopper pin SBSP



Stopper Pin (Optional Parts)





Slide

Sold by piece.

Item Code	Item Name	Type	Material	Colour	Load Capacity N	Load Capacity kgf	Weight	Box
190-110-502	SB-300RR	Right	Polyethylene (PE)	White	49 N/pair	5 kgf/pair	20 g	600 pcs
190-110-503	SB-300RL	Left	Polyethylene (PE)	White	49 N/pair	5 kgf/pair	20 g	600 pcs

Stopper Pin (Optional Parts)

Item Code	Item Name	Material	Finish	Box	Carton
190-110-013	SBSP	Steel	Yellow Zinc Chromate	1,600 pcs	8,000 pcs

This information provides a range of quality for the component. It does not ensure the performance or safety of the final product incorporating the component.

LAMP MINI GUIDE SCRL2

Latest Info

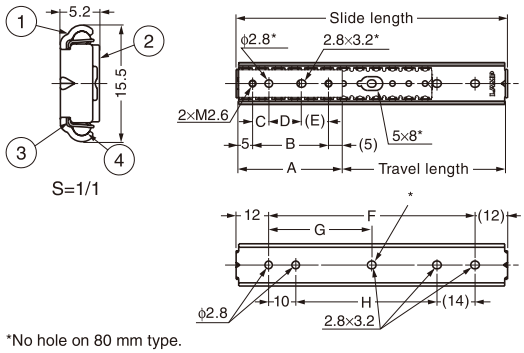


LOAD CAPACITY 177~235 N/pair

- Ultra slim profile.
- Special inner member allows smooth movement.

Recommended Screws

- M2.6 low head screw (for outer rail)
- M2.6 screw (for inner rail) Screw length = Panel thickness + Max. 1.5



*No hole on 80 mm type.

No.	Part Name	Material
①	Outer Rail	Stainless steel (SUS304)
②	Inner Rail	Stainless steel (SUS304)
③	Retainer	Stainless steel (SUS304)
④	Balls	Steel

Sold by piece.

Item Code	Item Name	Slide Length	Travel Length	A	B	C	D	E	F	G	H	Load Capacity N	Load Capacity kgf	Weight	Box	Carton
190-026-623	SCRL2-15-80A	80	49	28	18	–	–	–	56	–	32	177 N/pair	18 kgf/pair	16 g	200 pcs	400 pcs
190-026-624	SCRL2-15-100A	100	59	38	28	6	12	10	76	38	52	206 N/pair	21 kgf/pair	20 g	200 pcs	400 pcs
190-026-625	SCRL2-15-150A	150	109	38	28	6	12	10	126	63	102	206 N/pair	21 kgf/pair	29 g	100 pcs	200 pcs
190-026-626	SCRL2-15-200A	200	149	48	38	10	14	14	176	88	152	235 N/pair	24 kgf/pair	38 g	100 pcs	200 pcs

LAMP ALUMINIUM MINI GUIDE ARL2-16

Latest Info

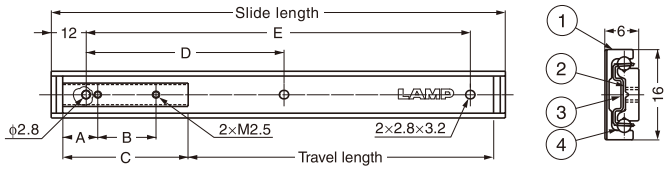


LOAD CAPACITY 20~49 N/pair

- Thin profile for various applications.
- Light-weight aluminium body.

Recommended Screws

- For outer rail: M2.5 low head screw
- For inner rail: M2.5 screw



No.	Part Name	Material	Finish
①	Outer Rail	Aluminium Alloy	Anodized Silver
②	Inner Rail	Aluminium Alloy	Anodized Silver
③	Retainer	Steel	Zinc Chromate Steel
④	Balls	Steel	–

Sold by piece.

Item Code	Item Name	Slide Length	Travel Length	A	B	C	D	E	Load Capacity N	Load Capacity kgf	Load Capacity N	Load Capacity kgf	Weight	Box
190-012-584	ARL2-16-70	70	(30)	5	18	28	–	46	20 N	2 kgf	8 N	0.8 kgf	13.37 g	20 pcs
190-012-585	ARL2-16-100	100	(52)	10	19	39	38	76	49 N	5 kgf	18 N	1.8 kgf	17.98 g	20 pcs
190-012-586	ARL2-16-150	150	(96)	10	19	39	63	126	49 N	5 kgf	18 N	1.8 kgf	23.28 g	20 pcs

This information provides a range of quality for the component. It does not ensure the performance or safety of the final product incorporating the component.

Series Overview

LAMP. MINI GUIDE RAIL MRS

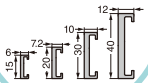


Simple
Ideal when precision is not required.

Greaseless

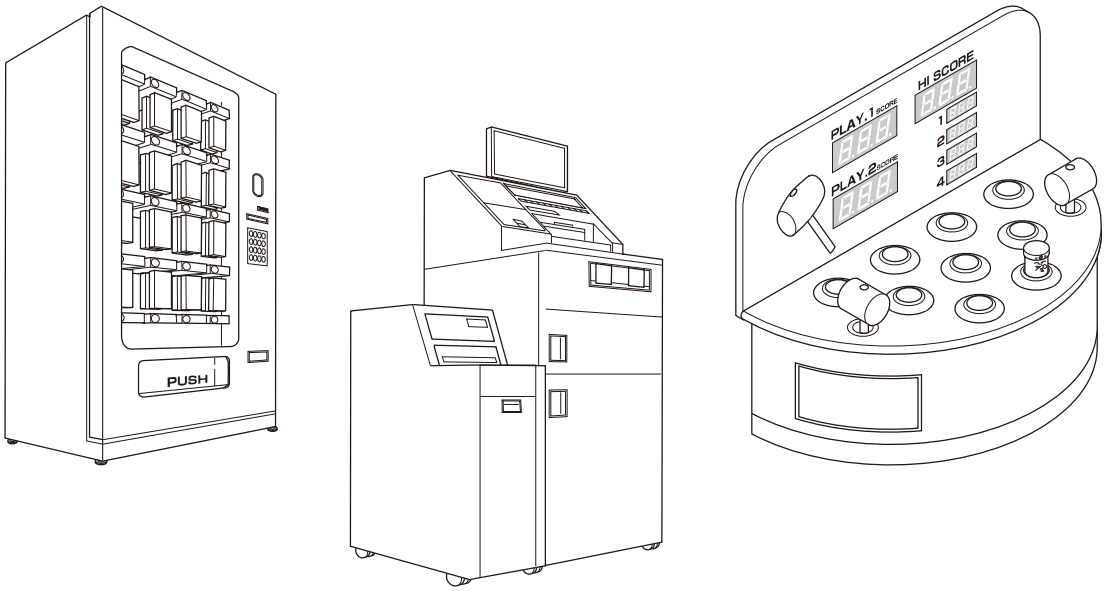


Compact



- No grease or oil application required, thanks to the use of special polyethylene resin with excellent sliding properties.
- Special polyethylene resin with excellent chemical resistance.
- Uses flame retardant material rated UL94HB.
- Recyclable.
- Preload type carriage with minimal gap is also available (MRS-20, 30, 40 only).

Installation Image



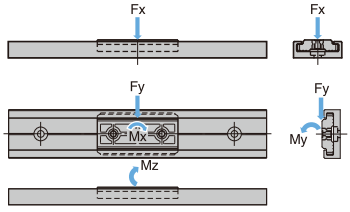
Operating Dynamic Load Guidelines

- Max. Static Load = Static Rated Load x Static Safety Coefficient
- Operating Dynamic 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 travel frequency and loose travel conditions	0.4 ~ 0.5	0.9 ~ 1.0
High travel frequency and demand for smooth running performance	0.3 ~ 0.4	0.6 ~ 0.8
High travel frequency with vibration/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
MR-15CS	100	10.2	30	3.0
MR-20CS	300	30.6	175	17.8
MR-30CS	520	53.0	305	31.1
MR-40CS	700	71.4	490	50.0

Item Name	Vertical static rated moment load Mx		Horizontal static rated moment load My		Horizontal static rated moment load Mz	
	N·m	kgf·cm	N·m	kgf·cm	N·m	kgf·cm
MR-15CS	-	-	-	-	-	-
MR-20CS	3	30.6	1.5	15.3	1.5	15.3
MR-30CS	5	51.0	2.5	25.5	2.5	25.5
MR-40CS	7	71.4	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.

This information provides a range of quality for the component. It does not ensure the performance or safety of the final product incorporating the component.

MINI GUIDE RAIL MRS15

Latest Info



- Grease or oil is not required due to the use of a special polyethylene resin that has excellent sliding properties.
- Resin also provides strong corrosion resistance to several types of chemicals.
- Uses flame retardant material rated UL94HB.

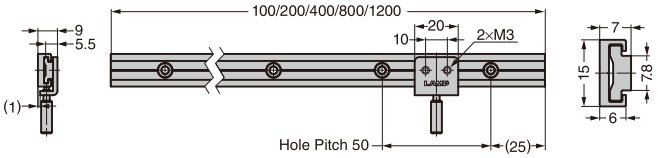
Recommended Mounting Screws

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

Remarks

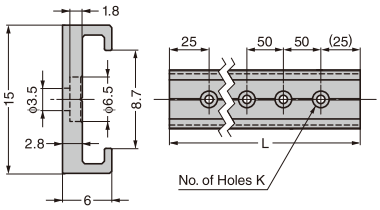
- Refer to the Rated Load Guidelines (P.1189) to prevent moment from being applied.
- The rail mounting holes and ends are uncoated.

Combination Dimensions for Guide Rail, Guide Block, & Clamp



MINI GUIDE RAIL MRS15

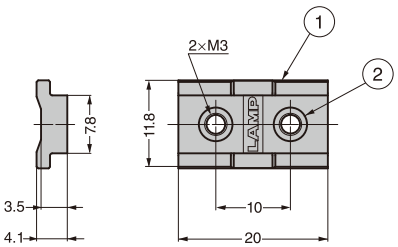




Item Code	Item Name	L	No. of Holes K	Material	Finish	Weight (g)
190-027-331	MRS15-100	100	2	Aluminium Alloy	Silver Anodised	14.5
190-027-332	MRS15-200	200	4	Aluminium Alloy	Silver Anodised	29
190-027-333	MRS15-400	400	8	Aluminium Alloy	Silver Anodised	58
190-027-334	MRS15-800	800	16	Aluminium Alloy	Silver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

MINI GUIDE BLOCK MR-15CS





Specifications

- Operating temperature: 0°C ~ 40°C

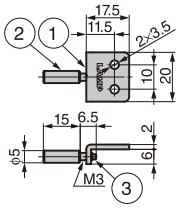
No.	Material	Finish/Colour
①	Special Polyethylene	High Sliding Grade/Grey
②	Stainless Steel (SUS304)	Plain

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

This information provides a range of quality for the component. It does not ensure the performance or safety of the final product incorporating the component.

MINI GUIDE CLAMP MR-15CLP NEW





- Tighten the knob onto the rail for easy attachment.
- 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 not included. Please prepare before installation.

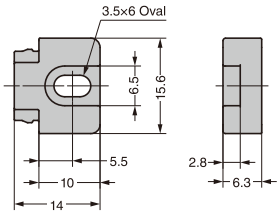
No.	Part Name	Material	Finish/Colour
①	Plate	Stainless Steel (SUS304)	Barrel Polished
②	Knob Body	Stainless Steel (SUS303)	Plain
③	Knob Tip	Polyacetal (POM)	Black

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

MINI GUIDE END CAP MRS15-EC NEW



End Cap on Rail



- Prevents the guide block from falling off of the rail.
- Protects the edge of the rail.

Remarks

- This product is not designed to stop or absorb impacts on the guide block.
- Installation of this product will reduce the stroke by 4mm on each side.
- Recommended tightening torque: 0.32N·m

Recommended Screw

- Hexagon socket button head screw M3, or pan head screw M3

Item Code	Item Name	Material	Colour	Weight (g)	Box (pcs)	Carton (pcs)
190-055-878	MRS15-EC	Polyacetal (POM)	Black	1.0	500	5000

This information provides a range of quality for the component. It does not ensure the performance or safety of the final product incorporating the component.

MINI GUIDE RAIL MRS20

Latest Info

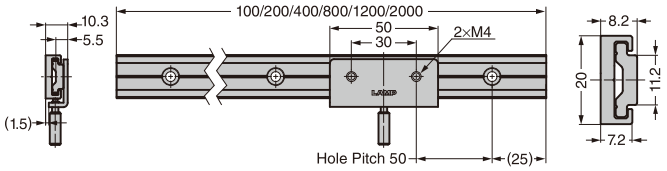


- Grease or oil is not required due to the use of a special polyethylene resin that has excellent sliding properties.
- Resin also provides strong corrosion resistance to several types of chemicals.
- Uses flame retardant material rated UL94HB.
- Preload type guide block with minimal clearance is also available.

Recommended Mounting Bolts
- (Rail) M4 hexagon socket button head screws

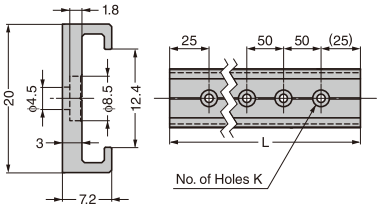
Remarks
- When combined with a clamp, use under moment load is not possible.
- The rail mounting holes and ends are uncoated.
- The preload type block does not fix the slider. Do not use the MINI GUIDE RAIL in a vertical or diagonal position, as it will lead to danger when the slider falls.

Combination Dimensions for Guide Rail, Guide Block, & Clamp



MINI GUIDE RAIL MRS20

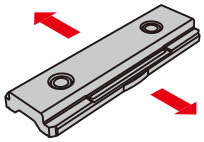




Item Code	Item Name	L	No. of Holes K	Material	Finish	Weight (g)
190-111-491	MRS20-100	100	2	Aluminium Alloy	Silver Anodised	20
190-111-492	MRS20-200	200	4	Aluminium Alloy	Silver Anodised	40
190-111-493	MRS20-400	400	8	Aluminium Alloy	Silver Anodised	80
190-111-494	MRS20-800	800	16	Aluminium Alloy	Silver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

MINI GUIDE BLOCK MR-20CNB Preload Type



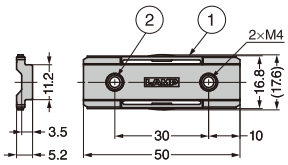


Preload direction

- Designed with preload to minimise backlash.

Specifications
- Operating temperature: 0°C ~ 40°C

Remarks
- Operating force to the guide block changes depending on the temperature.



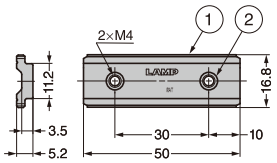
No.	Material	Finish/Colour
①	Special Polyethylene	High Sliding Grade/Grey
②	Stainless Steel (SUS304)	Plain

Item Code	Item Name	Weight (g)
190-037-638	MR-20CNB	5

This information provides a range of quality for the component. It does not ensure the performance or safety of the final product incorporating the component.

MINI GUIDE BLOCK MR-20CS





- A guide block without preload.

Specifications
- Operating temperature: 0°C ~ 40°C

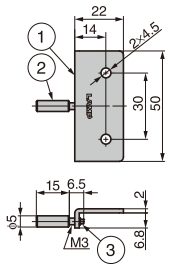
Remarks
- The block unit working force changes depending on the operating temperature.

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

Item Code	Item Name	Weight (g)
190-111-496	MR-20CS	6

MINI GUIDE CLAMP MR-20CLP NEW





- Tighten the knob onto the rail for easy attachment.
- 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 not included. Please prepare before installation.

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

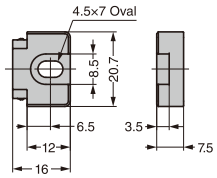
Item Code	Item Name	Retaining Force N (reference value)	Knob Tightening Torque N·m	Weight (g)
190-035-311	MR-20CLP	7 or below	0.05 or below	22.6

MINI GUIDE END CAP MRS20-EC NEW





End Cap on Rail



- Prevents the guide block from falling off of the rail.
- Protects the edge of the rail.

Remarks
- This product is not designed to stop or absorb impacts on the guide block.
- Installation of this product will reduce the stroke by 4mm on each side.
- Recommended tightening torque: 0.75N·m

Recommended Screw
- Hexagon socket button head screw M4, or pan head screw M4

Item Code	Item Name	Material	Colour	Weight (g)	Box (pcs)	Carton (pcs)
190-055-879	MRS20-EC	Polyacetal (POM)	Black	1.9	500	5000

This information provides a range of quality for the component. It does not ensure the performance or safety of the final product incorporating the component.

MINI GUIDE RAIL MRS30

Latest Info



- Grease or oil is not required due to the use of a special polyethylene resin that has excellent sliding properties.
- Resin also provides strong corrosion resistance to several types of chemicals.
- Uses flame retardant material rated UL94HB.
- Preload type guide block with minimal clearance is also available.

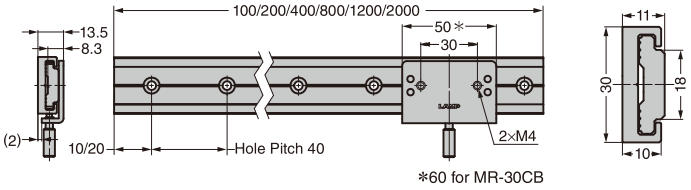
Recommended Mounting Bolts

- (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 uncoated.
- The preload type block 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.

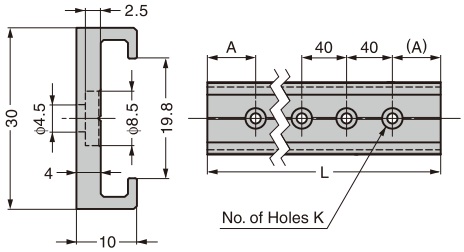
Combination Dimensions for Guide Rail, Guide Block, & Clamp



*60 for MR-30CB

MINI GUIDE RAIL MRS30

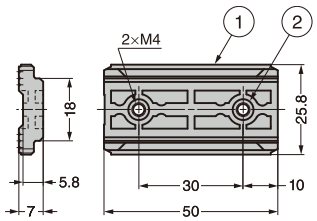




Item Code	Item Name	L	A	No. of Holes K	Material	Finish	Weight (g)
190-112-860	MRS30-100	100	10	3	Aluminium Alloy	Silver Anodised	39
190-112-861	MRS30-200	200	20	5	Aluminium Alloy	Silver Anodised	79
190-112-862	MRS30-400	400	20	10	Aluminium Alloy	Silver Anodised	159
190-112-863	MRS30-800	800	20	20	Aluminium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

MINI GUIDE BLOCK MR-30CS





- A guide block without preload.

Specifications

- Operating temperature: 0°C ~ 40°C

Remarks

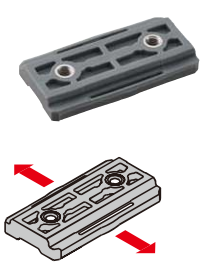
- The guide block working force changes depending on the operating temperature.

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

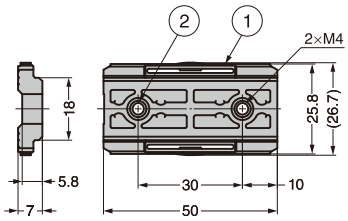
Item Code	Item Name	Weight (g)
190-111-489	MR-30CS	7

This information provides a range of quality for the component. It does not ensure the performance or safety of the final product incorporating the component.

MINI GUIDE BLOCK MR-30CNB Preloaded Type



Preload direction



- Designed with preload to minimise backlash.

Specifications
- Operating temperature: 0°C ~ 40°C

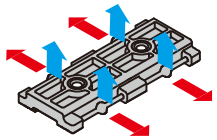
Remarks
- Operating force to the guide block changes depending on the temperature.

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

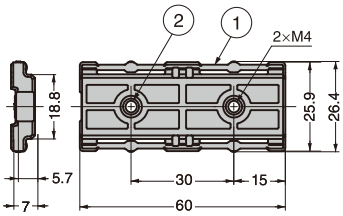
Item Code	Item Name	Weight (g)
190-037-639	MR-30CNB	7

MINI GUIDE BLOCK MR-30CB Bidirectional Preloaded Type NEW





Preload direction



- Preloaded in two directions to significantly reduce backlash.

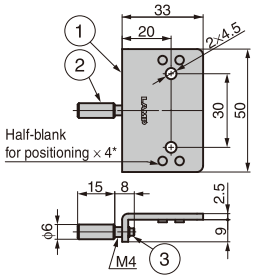
Specifications
- Operating temperature: 0 °C to 40 °C

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

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

MINI GUIDE CLAMP MR-30CLP NEW





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

- Tighten the knob onto the rail for easy attachment.
- 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 not included. Please prepare before installation.

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

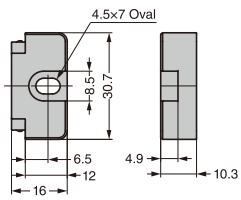
Item Code	Item Name	Retaining Force N (reference value)	Knob Tightening Torque N·m	Weight (g)
190-035-312	MR-30CLP	14 or below	0.1 or below	40.8

MINI GUIDE END CAP MRS30-EC NEW





End Cap on Rail



- Prevents the guide block from falling off of the rail.
- Protects the edge of the rail.

Remarks
- This product is not designed to stop or absorb impacts on the guide block.
- Installation of this product will reduce the stroke by 4mm on each side.
- Recommended tightening torque: 0.75N·m

Recommended Screw
- Hexagon socket button head screw M4, or pan head screw M4

Item Code	Item Name	Material	Colour	Weight (g)	Box (pcs)	Carton (pcs)
190-055-880	MRS30-EC	Polyacetal (POM)	Black	3.7	250	2500

This information provides a range of quality for the component. It does not ensure the performance or safety of the final product incorporating the component.

MINI GUIDE RAIL MRS40

Latest Info



- Grease or oil is not required due to the use of a special polyethylene resin that has excellent sliding properties.
- Resin also provides strong corrosion resistance to several types of chemicals.
- Uses flame retardant material rated UL94HB.
- Preload type guide block with minimal clearance is also available.

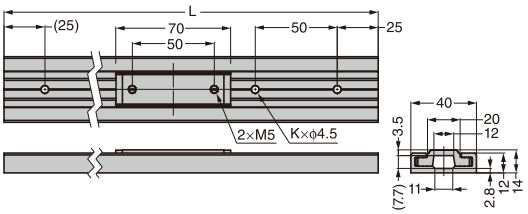
Recommended Mounting Screws

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

Remarks

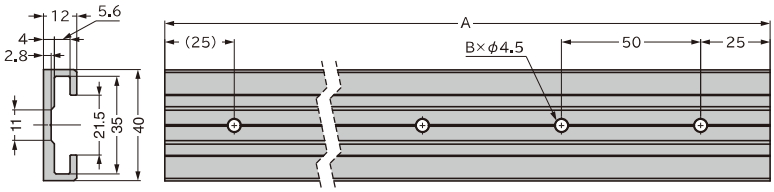
- The rail mounting holes and ends are uncoated.
- The preload type block does not fix the slider. Do not use the MINI GUIDE RAIL in a vertical or diagonal position, as it will lead to danger when the slider falls.
- The block unit working force changes depending on the operating temperature.

Combination Dimensions for Guide Rail & Guide block



MINI GUIDE RAIL MRS40 NEW

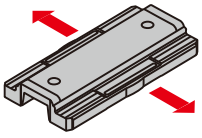




Item Code	Item Name	L	No. of Holes K	Material	Finish	Weight (g)
190-037-686	MRS40-400	400	8	Aluminium Alloy	Silver Anodised	236
190-037-687	MRS40-800	800	16	Aluminium Alloy	Silver Anodised	472
190-043-711	MRS40-1200	1200	24	Aluminium Alloy	Silver Anodised	708
190-037-688	MRS40-2000	2000	40	Aluminium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

MINI GUIDE BLOCK MR-40CNB Preload Type NEW



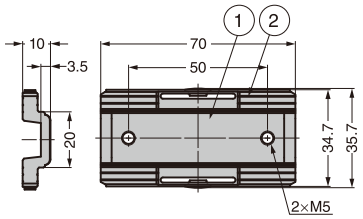


Preload direction

- Designed with preload to minimise backlash.

Specifications

- Operating temperature:0°C ~ 40°C



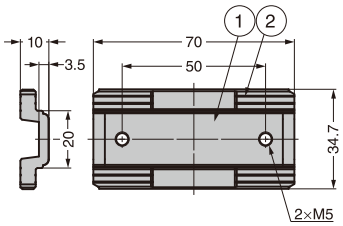
No.	Material	Finish/Colour
①	Stainless Steel (SUS304)	Barrel Polished
②	Special Polyethylene	High Sliding Grade/Grey

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

This information provides a range of quality for the component. It does not ensure the performance or safety of the final product incorporating the component.

MINI GUIDE BLOCK MR-40CS NEW





- A guide block without preload.

Specifications
- Operating temperature:0°C ~ 40°C

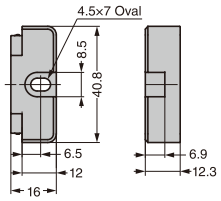
No.	Material	Finish/Colour
①	Stainless Steel (SUS304)	Barrel Polished
②	Special Polyethylene	High Sliding Grade/Grey

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

MINI GUIDE END CAP MRS40-EC NEW



End Cap on Rail



- Prevents the guide block from falling off of the rail.
- Protects the edge of the rail.

Remarks
- This product is not designed to stop or absorb impacts on the guide block.
- Installation of this product will reduce the stroke by 4mm on each side.
- Recommended tightening torque: 0.75N·m

Recommended Screw
- Hexagon socket button head screw M4, or pan head screw M4

Item Code	Item Name	Material	Colour	Weight (g)	Box (pcs)	Carton (pcs)
190-055-881	MRS40-EC	Polyacetal (POM)	Black	5.4	150	1500

This information provides a range of quality for the component. It does not ensure the performance or safety of the final product incorporating the component.

LAMP MULTI-ROLLER LINEAR GUIDE MLG20 Mini Type NEW

Latest Info

Passed a run test of 60 km



MLG20-200 MLG-20C



MLG20-200 MLG-20CS



MLG20-200 MLG-20C-8

- 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 short guide block is now available. The full length is shorter, allowing the travel length to increase by 13 mm.
- An 8-wheel guide block is now available. The load rating has been improved while maintaining the same travel distance.

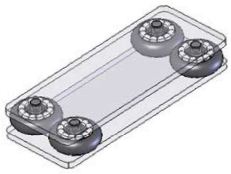
Application

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

Remarks

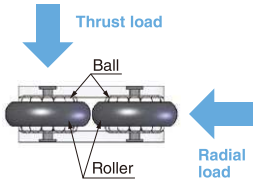
- Please use with stoppers.
- Mounting plates cannot be attached to short or 8-wheel guide block.

The Unique Mechanism



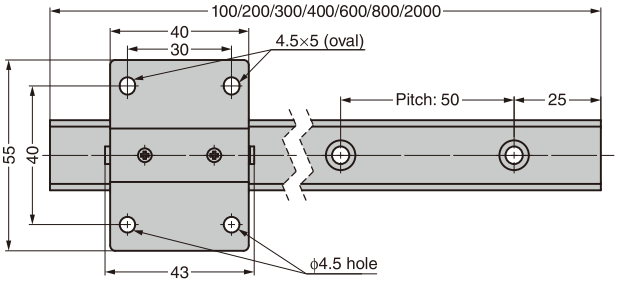
No ball creep due to roller type mechanism.

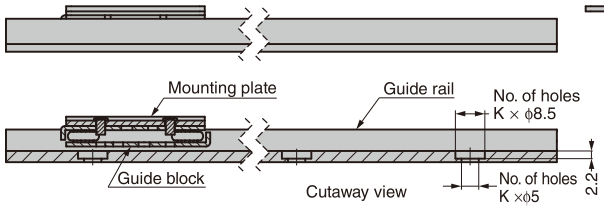
Ball creep is a phenomenon where travel distances vary between outward and return paths due to a misaligned ball contact point that may occur on ball type rails because of sliding or applied force. If extra load is applied in this state, the rail may become unable to move.

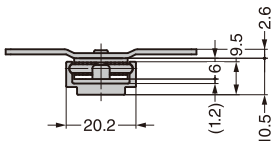


The multi-roller mechanism allows for smooth movement even with loads applied in radial or thrust directions.

Feature Example



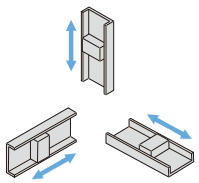




* The figure shows the dimensions when the guide rail, guide block (MLG-20C), and mounting plate are combined.

Mounting Directions

Can be mounted in the following directions



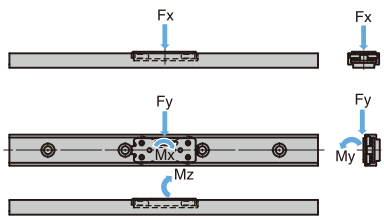
Operating Dynamic Load Guidelines

- Max. Static Load = Static Rated Load × Static Safety Coefficient
- Operating Dynamic Load = Max. Static 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-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.

This information provides a range of quality for the component. It does not ensure the performance or safety of the final product incorporating the component.

GUIDE RAIL MLG20 NEW



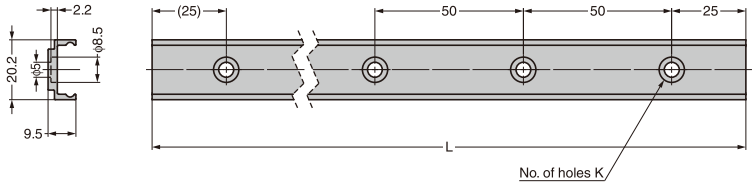
Multiple guide blocks can be used on a single rail.

Recommended Screw

- Hexagon socket bolt M4 (head diameter: ϕ7.6 mm or less, head height: 2.2 mm or less)

Remarks

- The rail mounting holes and ends are uncoated.



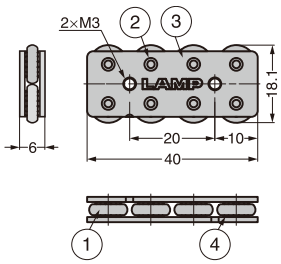
Item Code	Item Name	Length (L)	No. of Holes K	Material	Finish	Weight (g)
190-047-272	MLG20-100	100	2	Aluminium Alloy	Silver Anodised	18
190-045-763	MLG20-200	200	4	Aluminium Alloy	Silver Anodised	36
190-045-764	MLG20-300	300	6	Aluminium Alloy	Silver Anodised	54
190-045-765	MLG20-400	400	8	Aluminium Alloy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

8-WHEEL GUIDE BLOCK MLG-20C-8 NEW



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)

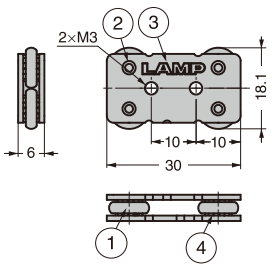
Item Code	Item Name	Weight (g)
190-054-826	MLG-20C-8	15

SHORT GUIDE BLOCK MLG-20CS NEW



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)

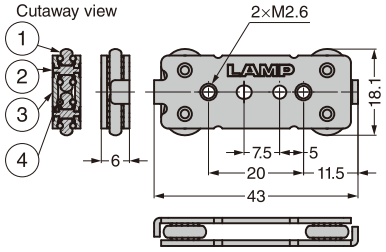
Item Code	Item Name	Weight (g)
190-047-271	MLG-20CS	11

This information provides a range of quality for the component. It does not ensure the performance or safety of the final product incorporating the component.

GUIDE BLOCK MLG-20C NEW



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)

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

MOUNTING PLATE MLG20-P55-40 NEW





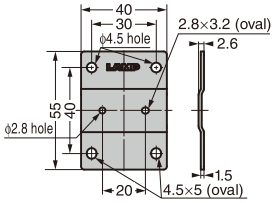
Guide rail and guide block combination (MLG-20C) pictured.

- ϕ4.5 holes and 4.5 x 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 short or 8-wheel guide blocks.



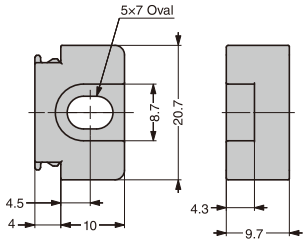
Item Code	Item Name	Material	Weight (g)
190-045-766	MLG20-P55-40	Stainless Steel (SUS304)	26

END CAP MLG20-EC NEW





End Cap on Rail



- Prevents the guide block from falling off of the rail.
- Protects the edge of the rail.

Remarks
- This product is not designed to stop or absorb impacts on the guide block.
- Installation of this product will reduce the stroke by 4mm on each side.
- Recommended tightening torque: 0.75N·m

Recommended Screw
- Hexagon socket button head screw M4, or pan head screw M4 (used with a washer, outer diameter ϕ8, thickness 0.8)

Item Code	Item Name	Material	Colour	Weight (g)	Box (pcs)	Carton (pcs)
190-055-883	MLG20-EC	Polyacetal (POM)	Black	1.8	250	2500

This information provides a range of quality for the component. It does not ensure the performance or safety of the final product incorporating the component.

LAMP MULTI-ROLLER LINEAR GUIDE MLG13 Slim Type NEW

Latest Info

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

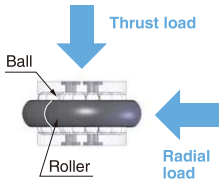
- Please use with stoppers.

The Unique Mechanism

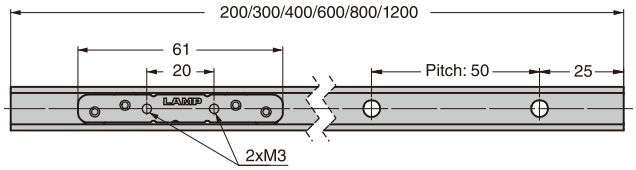


No ball creep due to roller type mechanism.

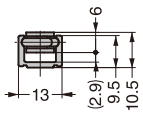
Ball creep is a phenomenon where travel distances vary between outward and return paths due to a misaligned ball contact point that may occur on ball type rails because of sliding or applied force.
If extra load is applied in this state, the rail may become unable to move.

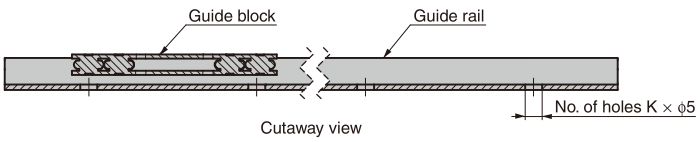


The multi-roller mechanism allows for smooth movement even with loads applied in radial or thrust directions.





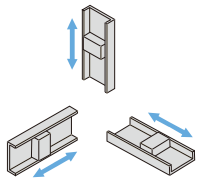




Cutaway view

Mounting Directions

Can be mounted in the following directions



Feature Example

Operating Dynamic Load Guidelines

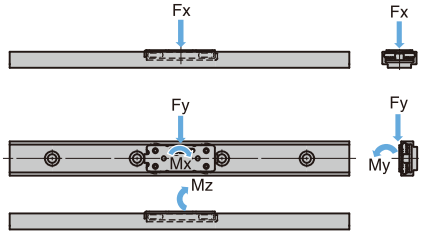
- Max. Static Load = Static Rated Load × Static Safety Coefficient
- Operating Dynamic Load = Max. Static Load × Dynamic Safety Coefficient
- Max. Moment = Static Rated Moment × Static Safety Coefficient
- Operating Moment = Max. Moment × Static Safety Coefficient

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.

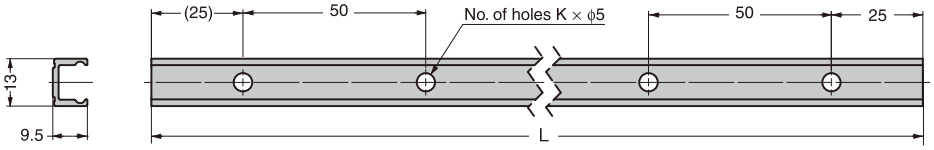
This information provides a range of quality for the component. It does not ensure the performance or safety of the final product incorporating the component.

GUIDE RAIL MLG13 NEW



Recommended Screw
- Hexagon socket bolt M4 (head diameter: ϕ7.6 mm or less, head height: 2.2 mm or less)

Remarks
- The rail mounting holes and ends are uncoated.

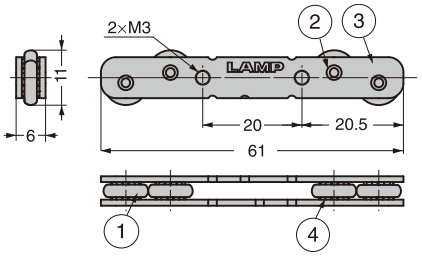


Item Code	Item Name	Length (L)	No. of Holes K	Material	Finish	Weight (g)/Rail	Box (pcs)
190-047-265	MLG13-200	200	4	Aluminium Alloy	Silver Anodised	23	760
190-047-266	MLG13-300	300	6	Aluminium Alloy	Silver Anodised	34	860
190-047-267	MLG13-400	400	8	Aluminium Alloy	Silver Anodised	45	1,000
190-047-268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

GUIDE BLOCK MLG-13C NEW



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)

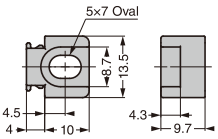
Item Code	Item Name	Weight (g)	Box (pcs)
190-047-264	MLG-13C	11	1,000

END CAP MLG13-EC NEW





End Cap on Rail



- Prevents the guide block from falling off of the rail.
- Protects the edge of the rail.

Remarks
- This product is not designed to stop or absorb impacts on the guide block.
- Installation of this product will reduce the stroke by 4mm on each side.
- Recommended tightening torque: 0.75N·m

Recommended Screw
- Hexagon socket button head screw M4, or pan head screw M4 (used with a washer, outer diameter ϕ8, thickness 0.8)

Item Code	Item Name	Material	Colour	Weight (g)	Box (pcs)	Carton (pcs)
190-055-882	MLG13-EC	Polyacetal (POM)	Black	1.2	500	5000

This information provides a range of quality for the component. It does not ensure the performance or safety of the final product incorporating the component.

LAMP LINEAR ROLLER GUIDE RAIL LGB30

Latest Info



- 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℃

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

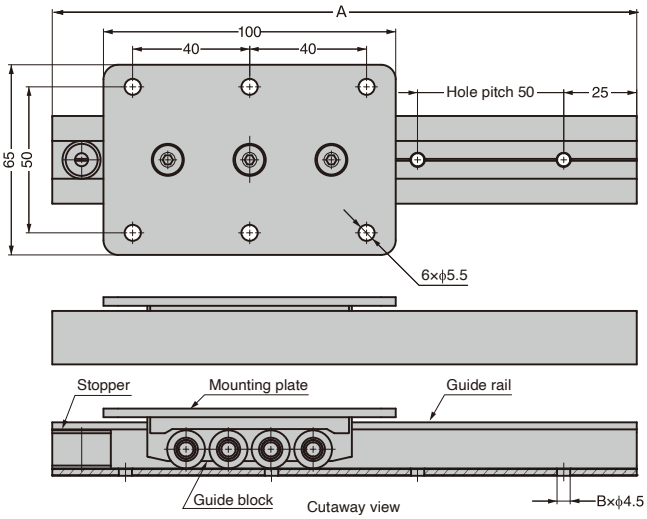
Remarks
- The surface of the mounting hole and both ends is not treated.
- Do not use it under the condition that moment load is applied.

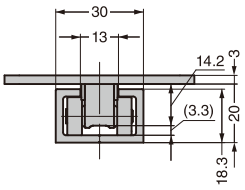
Parts Included
- For plate: Hexagon socket countersunk bolt M5 (stainless steel)

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 (P.1204), stopper LGB30-ST and mounting plate LGB30-P65-100 (P.1205)





Guide rail

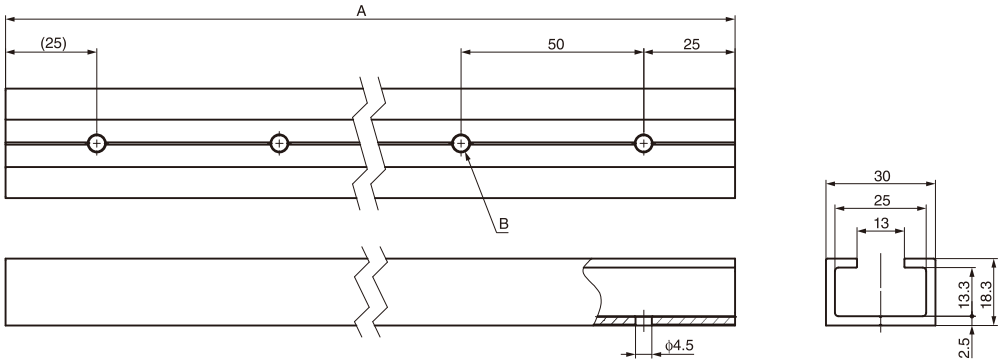
Item Name	Slide Length A	Holes B
LGB30-400	400	8
LGB30-800	800	16
LGB30-2000	2000	40

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.

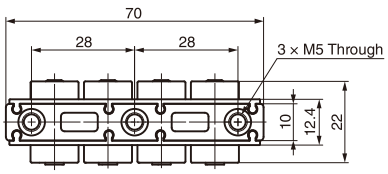


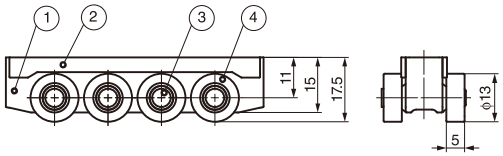
Item Code	Item Name	A	B	Material	Finish	Weight (g/pc)	Box (pcs)	Carton (pcs)
190-036-273	LGB30-400	400	8	Aluminium Alloy	Anodised Silver	195	50	–
190-036-274	LGB30-800	800	16	Aluminium Alloy	Anodised Silver	390	25	–
190-036-275	LGB30-2000	2000	40	Aluminium Alloy	Anodised Silver	875	10	–

This information provides a range of quality for the component. It does not ensure the performance or safety of the final product incorporating the component.

GUIDE BLOCK (SILENT TYPE) LGB-30CM







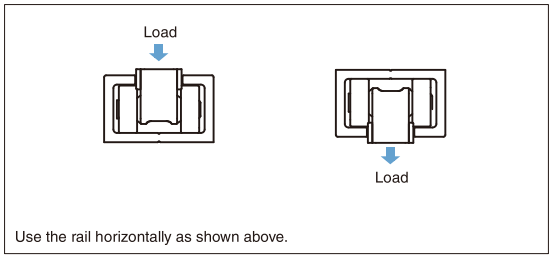
LOAD CAPACITY Max.294 N

- Bearing roller used in guide block allows for smooth movement.
- Plastic outer ring type bearing roller provides silent operation.
- Made exclusively for use with the guide rail LGB30.

Remarks

- Do not use under moment load.

Load Direction

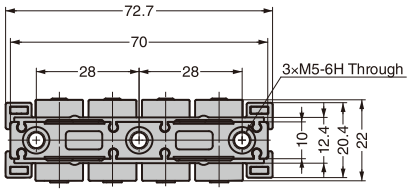


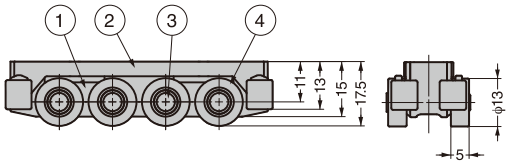
No.	Product Name	Material	Finish / Colour
①	Body	Zinc Alloy (ZDC)	Clear Zinc Chromate (Trivalent)
②	Slide Protector	PE	Black
③	Roller Shaft	Stainless Steel (SUS304)	Plain
④	Roller	Steel/POM	Outer Ring: Black

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

GUIDE BLOCK LGB-30CB Silent Type / Bidirectional Preloaded





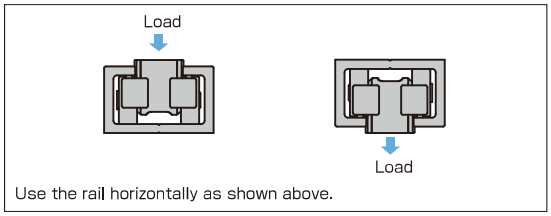


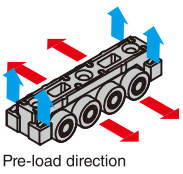
- Preloaded in two directions to significantly reduce the rattling between the guide block and rail.

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

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

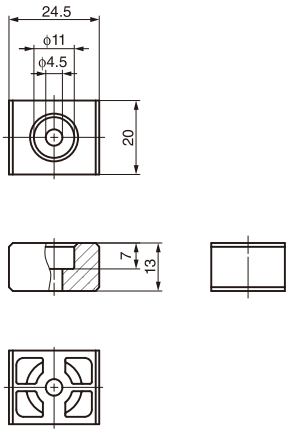
This information provides a range of quality for the component. It does not ensure the performance or safety of the final product incorporating the component.

STOPPER LGB30-ST



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

Remarks
- Do not use for stopping guide block collision.



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

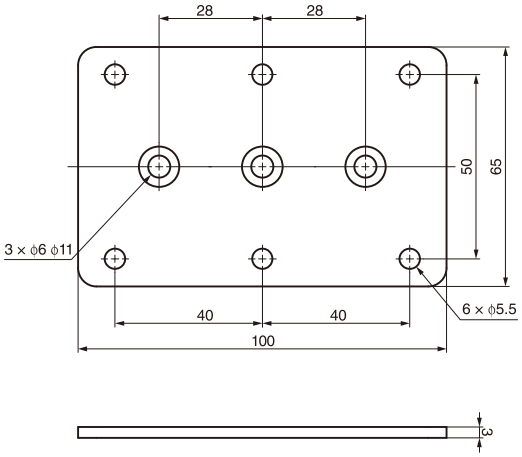
MOUNTING PLATE LGB30-P65-100



- Install to guide block LGB-30CM with supplied screws.

Parts Included
- Hexagon socket countersunk head screw M5 × 16 3 pcs (SUS)

Dimensions



Installation

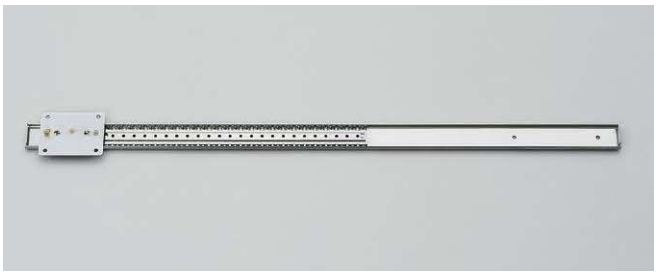


Item Code	Item Name	Material	Finish	Weight (g)	Box (pcs)	Carton (pcs)
190-036-465	LGB30-P65-100	Stainless Steel (SUS304)	Barrel Polished	137	50	–

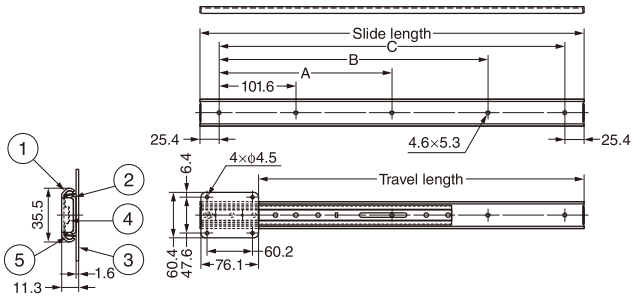
This information provides a range of quality for the component. It does not ensure the performance or safety of the final product incorporating the component.

LAMP LINEAR BALL BEARING GUIDE ESR9

Latest Info



- Ideal for doors of small cabinets. 2 slides can support up to 5 kg.
- Mounting plate attached.



No.	Part Name	Material	Finish
①	Outer Rail	Stainless Steel (SUS304)	Plain
②	Inner Rail	Stainless Steel (SUS304)	Plain
③	Mounting Plate	Stainless Steel (SUS304)	Plain
④	Retainer	Stainless Steel (SUS304)	Plain
⑤	Balls	Stainless Steel (SUS304)	–

Sold by piece.

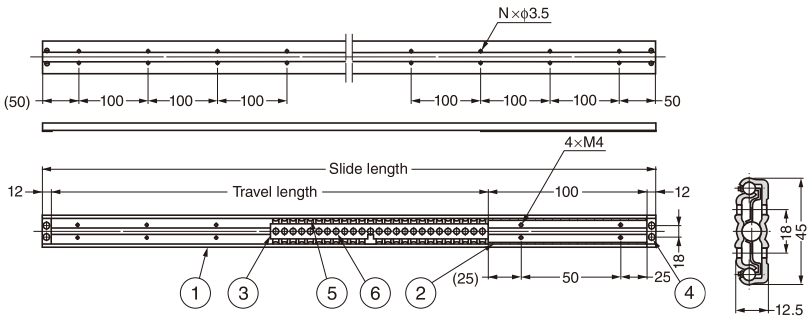
Item Code	Item Name	Slide Length	Travel Length	A	B	C	Load Capacity	Weight	Box
190-111-336	ESR9-12	304.8	225	–	152.4	254	5 kgf/pair	0.28 kg/pair	22 pcs
190-111-337	ESR9-14	355.6	276	–	203.2	304.8	5 kgf/pair	0.31 kg/pair	22 pcs
190-111-338	ESR9-16	406.4	327	–	254	355.6	5 kgf/pair	0.34 kg/pair	22 pcs
190-111-339	ESR9-18	457.2	378	203.2	304.8	406.4	5 kgf/pair	0.37 kg/pair	22 pcs
190-111-340	ESR9-20	508	428	228.6	355.6	457.2	5 kgf/pair	0.40 kg/pair	22 pcs
190-111-341	ESR9-22	558.8	479	254	406.4	508	5 kgf/pair	0.44 kg/pair	22 pcs
190-111-342	ESR9-24	609.6	530	279.4	457.2	558.8	5 kgf/pair	0.47 kg/pair	22 pcs
190-111-343	ESR9-26	660.4	581	304.8	508	609.6	5 kgf/pair	0.50 kg/pair	22 pcs
190-111-344	ESR9-28	711.2	632	330.2	558.8	660.4	5 kgf/pair	0.54 kg/pair	22 pcs

LAMP LINEAR BALL BEARING GUIDE TSSL

Latest Info



- Stainless steel slide.
- Inner rail is located inside the retainer for precise movement.
- Non-handed.



No.	Part Name	Material	Finish/Colour
①	Outer Rail	Stainless Steel (SUS304)	Plain
②	Inner Rail	Stainless Steel (SUS304)	Plain
③	Retainer	Stainless Steel (SUS304)	Plain
④	End Stopper	Polyamide (PA)	Black
⑤	Balls	Carbon Steel	–
⑥	Balls	Carbon Steel	–

Sold by piece.

Item Code	Item Name	Slide Length	Travel Length	Holes N	Weight	Box
190-110-600	TSSL-300-100	300	176	6	0.46 kg/pc	12 pcs
190-110-601	TSSL-400-100	400	276	8	0.57 kg/pc	12 pcs
190-110-602	TSSL-500-100	500	376	10	0.68 kg/pc	12 pcs
190-110-603	TSSL-600-100	600	476	12	0.80 kg/pc	12 pcs
190-110-604	TSSL-800-100	800	676	16	1.05 kg/pc	12 pcs
190-110-605	TSSL-1000-100	1000	876	20	1.30 kg/pc	12 pcs

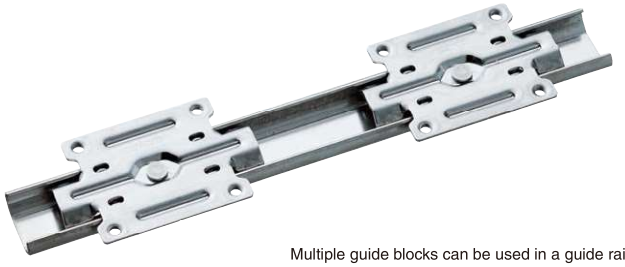
This information provides a range of quality for the component. It does not ensure the performance or safety of the final product incorporating the component.

LAMP MULTI-ROLLER LINEAR GUIDE MLGX25 For Medium Load NEW

Latest Info

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

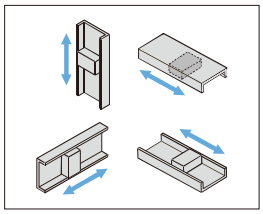
- Automatic machine, medical equipment, analytical instrument, machine tool.

Remarks

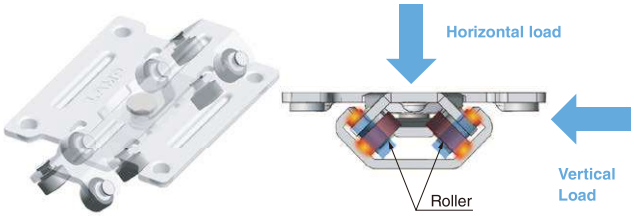
- Please use with stoppers.

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.

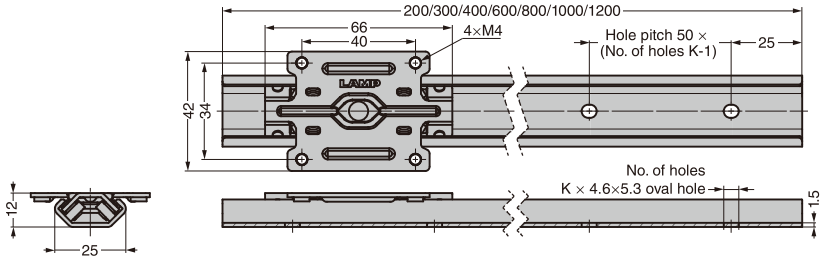
No Ball Creep



Ball creep*2 does not occur on roller slides, unlike ball bearing slides.

*2 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.

Feature Example

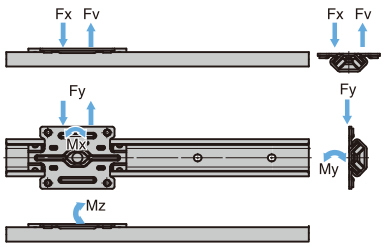


* The figure shows the dimensions when the guide rail and a guide block are combined.

Rated Load Reference Values

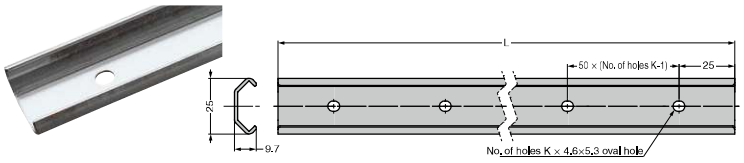
Loading Direction	Horizontal Load Fx		Vertical Load Fy		Horizontal Load Fv	
	N	kgf	N	kgf	N	kgf
Max. Load Capacity	200	20.4	200	20.4	130	13.2
Operating Load	120	12.2	120	12.2	80	8.1

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



This information provides a range of quality for the component. It does not ensure the performance or safety of the final product incorporating the component.

MULTI-ROLLER LINEAR GUIDE RAIL MLGX25 For Medium Load NEW



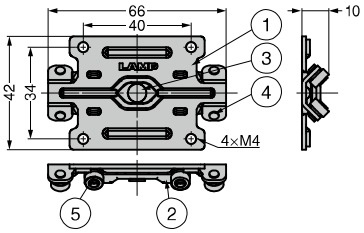
Other
- Grease is applied to the rail. When applying additional grease, use lithium soap grease.

Recommended Screw
- Hexagon socket bolt M4 (head diameter: ϕ7.6 mm or less, head height: 2.2 mm or less)

Item Code	Item Name	Length (L)	No. of Holes K	Material	Weight (g)	Box (pcs)
190-047-257	MLGX25-200S	200	4	Stainless Steel (SUS304)	86	100
190-047-258	MLGX25-300S	300	6	Stainless Steel (SUS304)	130	50
190-047-259	MLGX25-400S	400	8	Stainless Steel (SUS304)	173	50
190-047-260	MLGX25-600S	600	12	Stainless Steel (SUS304)	258	20
190-047-261	MLGX25-800S	800	16	Stainless Steel (SUS304)	344	20
190-047-262	MLGX25-1000S	1000	20	Stainless Steel (SUS304)	430	20
190-047-263	MLGX25-1200S	1200	24	Stainless Steel (SUS304)	516	20

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





- Preloaded type with minimal backlash.

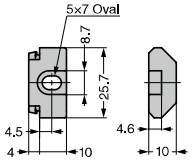
Remarks
- Rollers are made of steel. Be cautious of rusting when exposed to hot and humid environments.

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

Item Code	Item Name	Weight (g)	Box (pcs)
190-047-256	MLGX-25C-8	39	10

MULTI-ROLLER LINEAR GUIDE END CAP MLGX25-EC NEW


End Cap on Rail



- Prevents the guide block from falling off of the rail.
- Protects the edge of the rail.

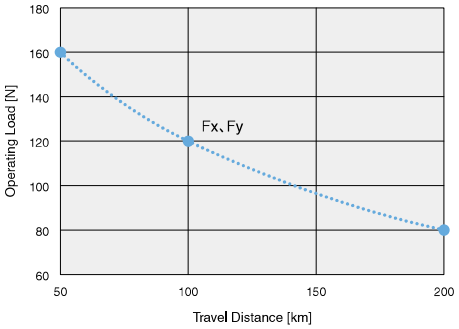
Remarks
- This product is not designed to stop or absorb impacts on the guide block.
- Installation of this product will reduce the stroke by 4mm on each side.
- Recommended tightening torque: 0.75N·m

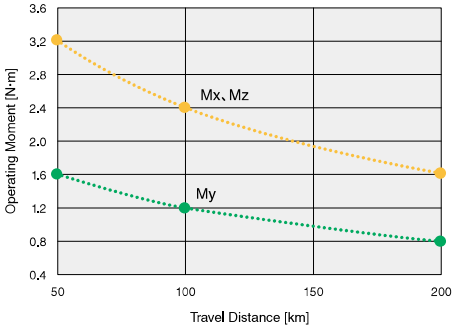
Recommended Screw
- Hexagon socket button head screw M4, or pan head screw M4 (used with a washer, outer diameter ϕ8, thickness 0.8)

Item Code	Item Name	Material	Colour	Weight (g)	Box (pcs)	Carton (pcs)
190-055-884	MLGX25-EC	Polyacetal (POM)	Black	2.2	250	2500

Operating Load/Moment and Travel Distance (Life) Guidelines

Condition: 200 mm/sec of speed





This information provides a range of quality for the component. It does not ensure the performance or safety of the final product incorporating the component.

Technical Information

1364 | TEST METHODS
1366 | SURFACE TREATMENT
1367 | MATERIALS
1368 | DOOR WEIGHT TABLE

September 2024

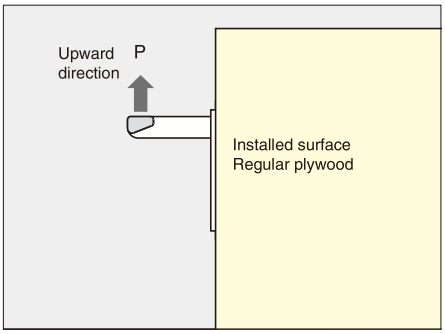
TEST METHODS

■Test Methods

In this catalogue, various values about products with TEST METHOD icon in the product specification columns are determined by the tests as described below. Values are to provide guidance for the safe use of our products.

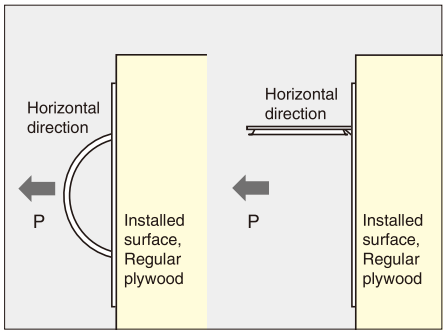
Product without TEST METHOD icon may not be based on these criteria in some cases.

TEST METHOD 1 HANDLE LOAD CAPACITY TEST



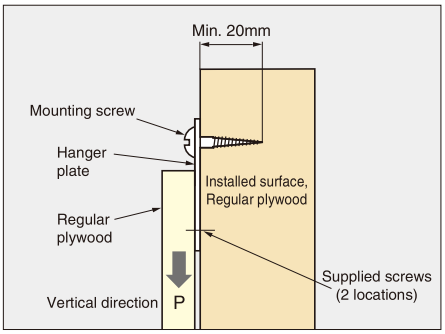
The load capacity is measured when the force (P) is gently applied in the direction of the arrow under the condition indicated by the figure.

TEST METHOD 2 HANDLE, PULL, HOOK LOAD CAPACITY TEST



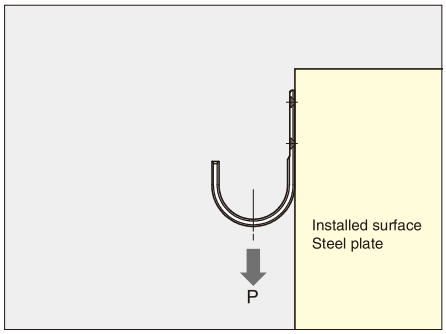
The load capacity is measured when the force (P) is gently applied in the direction of the arrow under the condition indicated by the figure.
Product may fail or distort if the force is applied in a direction other than the frontal direction. Please do not use on application other than in the pull direction.

TEST METHOD 3 HANGING-LOAD CAPACITY TEST



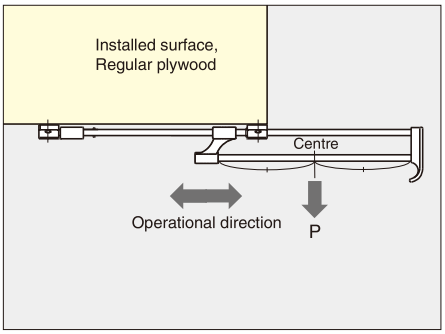
The hanging-load capacity is measured when the force (P) is gently applied in the direction of the arrow under the condition indicated by the figure. This value will vary according to the diameter / length of the screw(s) used and strength of the installed surface.
Hanging load of 10 kgf, in case of using round head wood screw 3.8 x 25.

TEST METHOD 4 HOOK LOAD CAPACITY TEST



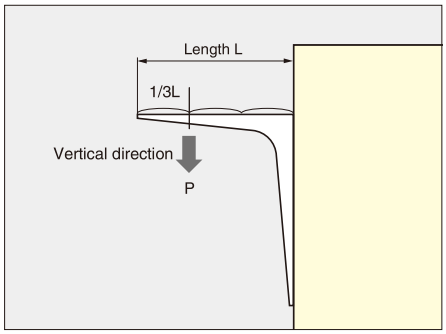
Under the conditions shown in the figure, a force (P) is gently applied to the centre of the hanging part in the vertical direction. The indicated load capacity value is about one-third of the limit load value (safety factor: 3). Therefore, this safety factor changes depending on the usage conditions. If you use it under adverse conditions, please be sure to check the actual product.

TEST METHOD 5 MAXIMUM HANGING-LOAD TEST



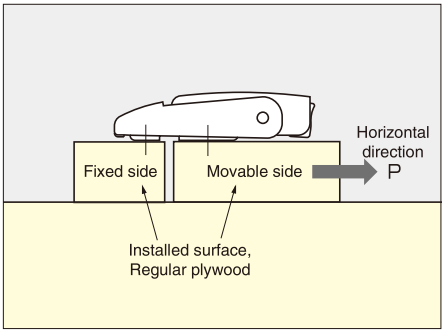
The maximum hanging-load capacity is measured when the force (P) is gently applied in the direction of the arrow and operated under the condition indicated by the figure. If the load is concentrated at the front tip of the hanger, the front tip may sag or the movement may become heavy.

TEST METHOD 6 BRACKET LOAD CAPACITY TEST



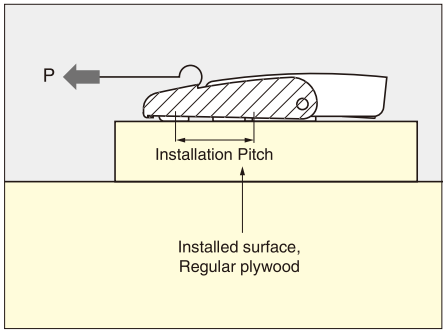
The load capacity is measured when the force (P) is gently applied in the direction of the arrow under the condition indicated by the figure.
(This is based on the force (W) applied at the centre of the shelf board with its length 4/3 times longer than the shelf bracket or angle bracket.)

TEST METHOD 7 FASTENER LOAD CAPACITY TEST



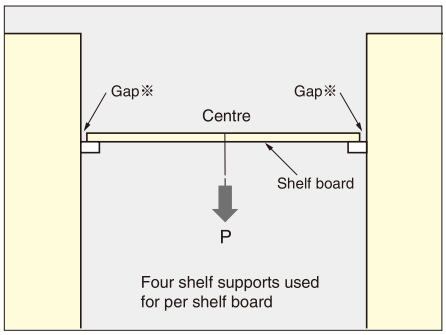
The load capacity is measured when the force (P) is gently applied in the direction of the arrow under the condition indicated by the figure.

TEST METHOD 8 CLAMPING FORCE TEST UNDER STANDARD INSTALLATION



The capacity of the clamping force under standard installation is measured when the force (P) is gently applied in the direction of the arrow under the condition indicated by the figure, and when the shaded portion begins to slide.

TEST METHOD 9 DOWEL, SHELF STANDARD LOAD CAPACITY TEST



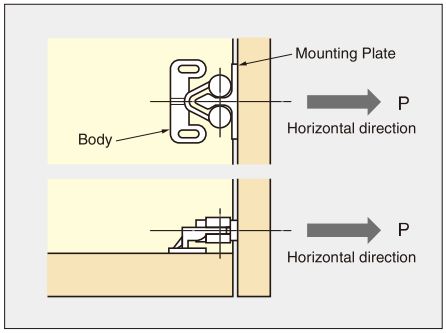
The load capacity is measured when the force (P) is gently applied in the direction of the arrow under the condition indicated by the figure.
Follow the conditions below to prevent the shelf supports or shelf board from falling off.

Condition 1 The gap (※) between the shelf board and the side board shall be 1mm or less.
※ The gap between the shelf board and the shelf standard if shelf support is installed on a shelf standard.

Condition 2 Use shelf board which has sufficient durability.

Condition 3 The mounting hole processing dimension of the shelf dowel shall be less than the recommended mounting hole dimension.
(The processing dimension may vary depending on the material of the side board.

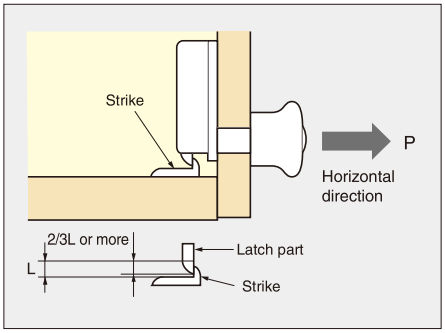
TEST METHOD 10 CATCH FORCE TEST



The catch force is measured when the force (P) is gently applied in the direction of the arrow under the condition indicated by the figure.

Note: Misalignment of the mounting plate and body parts may cause the catch force to decrease or parts failure.

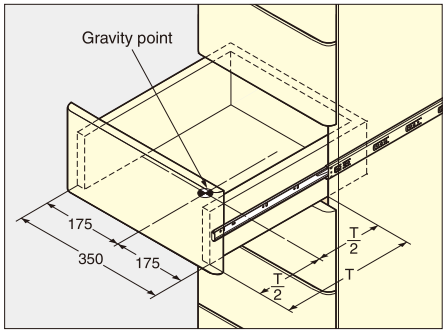
TEST METHOD 11 RETAINING FORCE TEST



The retaining force is measured when the force (P) is gently applied in the direction of the arrow under the condition indicated by the figure.

Note: Latch and strike must be engaged at least 2/3L or more (see the figure).

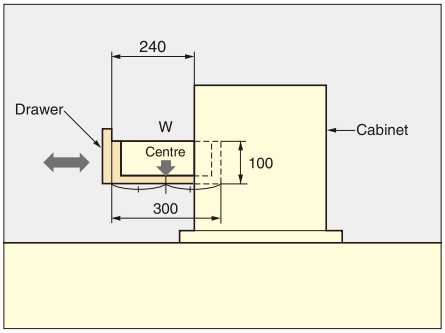
TEST METHOD 12 DRAWER SLIDE LOAD CAPACITY TEST



Calculation of slide centre of gravity

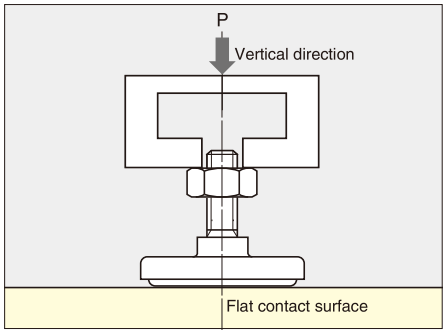
The load capacity is measured based on the condition:
- Continuous open-close: 50,000 cycles
- Speed: 10 cycles per minute
- Load is applied on the gravity point. The figure of load capacity includes drawer itself.
- Drawer width: 350mm

TEST METHOD 13 DRAWER SLIDE LOAD CAPACITY TEST



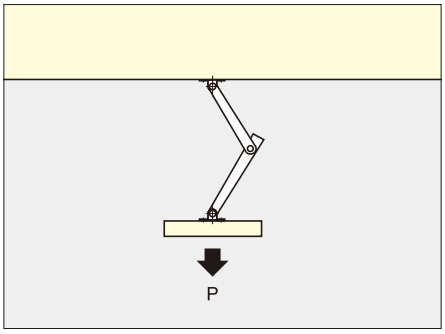
The load capacity is measured when the weight (W) is applied at the centre of the drawer under the condition indicated by the figure and the operation to pull out the drawer by 240mm is repeated. The gap between drawer and cabinet shall be 1 mm or less.

TEST METHOD 14 LEVELLING GLIDE LOAD CAPACITY TEST



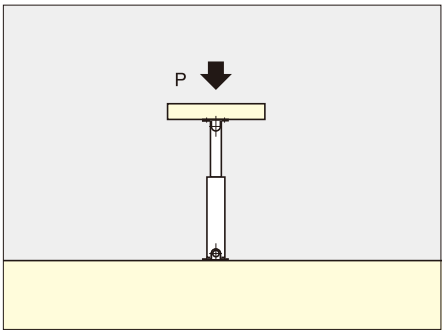
The load capacity is measured when the force (P) is applied in the direction of the arrow under the condition indicated in the figure.
Product may break or distort if the contact surface is not flat.

TEST METHOD 15 PULL LOAD TEST



The pull load capacity is measured when the force (P) is gently applied in the direction of the arrow under the condition indicated by the figure.

TEST METHOD 16 COMPRESSION LOAD TEST



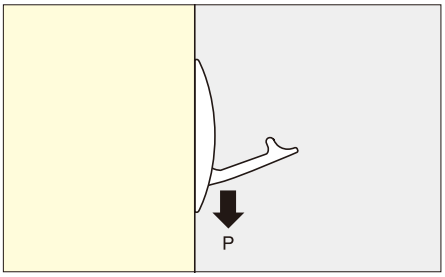
The compression load capacity is measured when the force (P) is gently applied in the direction of the arrow under the condition indicated by the figure.

TEST METHOD 17 PERMISSIBLE LOAD OF FASTENER

Permissible load kgf = Ultimate Load ÷ 3

The safety factor will vary depending on the conditions of use.
When used under adverse conditions, please test the fastener in intended application.

TEST METHOD 18 HOOK LOAD CAPACITY TEST

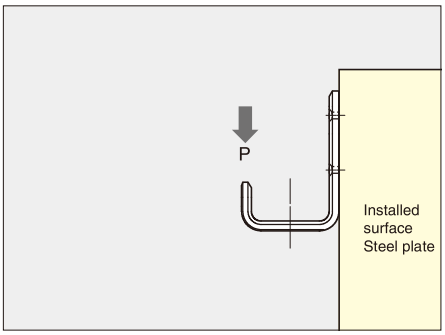


The load capacity is measured when the force (P) is gently applied in the direction of the arrow under the condition indicated by the figure.

Load capacity kgf = Ultimate Load ÷ 3

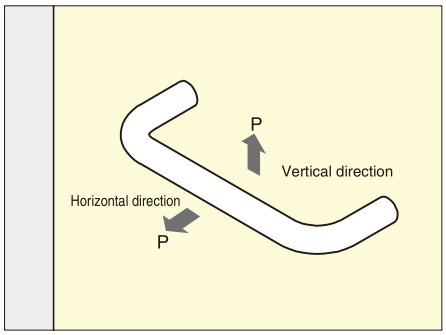
However, the safety factor will vary depending on the conditions of use.
When used under adverse conditions, please test the hook in intended application.

TEST METHOD 19 HOOK LOAD CAPACITY TEST



Under the conditions shown in the figure, a force (P) is gently applied in the vertical direction. The indicated load capacity value is one-third of the limit load value (safety factor: 3). Therefore, this safety factor changes depending on the usage conditions. If you use it under adverse conditions, please be sure to check the actual product.

TEST METHOD 20 HANDLE LOAD CAPACITY TEST



Under the conditions shown in the figure, a force (P) is gently applied in the vertical and horizontal directions. The load capacity is a value that indicates the strength of the handle itself. Install it on something with sufficient strength or reinforcement.

SURFACE TREATMENT

Finish	Characteristics
Zinc Plating	Zinc plating is commonly used on steel to prevent oxidation. Chromate is generally applied over zinc to enhance corrosion resistance.
Chromate Conversion Coating	Major coating mainly applied on parts after zinc plated or cadmium plated. Parts are immersed in a solution mainly consisting of chromic acid or heavy chromic acid to create the coating. This is used to improve corrosion resistance and appearance of metals, metal colouration, and is also used as a pre-treatment for painting. Various chromate coatings are developed such as yellow chromate (rainbow colour), clear chromate, black chromate, green chromate, etc.
Chrome Plating	Common electroplating for various industrial purposes. Reflective finish can be achieved by polishing. High hardness and good corrosion resistance along with thermal resistance, abrasion resistance and good adhesion characteristics. Generally used as final finish for various decorative parts and products due to its uniquely deep colouration.
Nickel Plating	Nickel is commonly used for decorative and anti-corrosion purpose because of its stability against air or humidity compared to iron. However, since the surface of the nickel plating will slightly discolour through exposure to air, chrome is often used after nickel to keep the finish/colour. Nickel plating has moderate hardness / corrosion-resistance and widely used on industrial application.
Alumite or Anodising (Anodic Oxidation Film Processing)	Also called the “anodic oxidation film processing”. This process thickens and toughens natural oxide layer on metal, commonly applied to aluminium for corrosion resistance and dyeing. In aluminium anodising, aluminium object serves as the anode (the positive electrode) when electrolysed in the sulfuric acid. This will create a layer of porous oxide film which has high electric insulation and abrasion resistance. The film is normally transparent when it is thin, although it becomes dull as the thickness increases.The pores produced by anodising are closed by a process called sealing, which is done by high-pressurised or boiling-hot deionised water. This process fills the pores and creates a thin layer that is corrosion resistant, suitable for various aluminium parts / products.

※Hexavalent-Chromium (CR6) Free

Sugatsune is strictly controlling the use of chemicals that would adversely impact the environment. We are designing and developing products with minimum use of materials which has adverse environmental impact. Hexavalent chromium compound is especially known for its adverse effects on the human body. We are actively substituting this Hexavalent-chromium (CR6) with the environment friendly Trivalent-chromium (CR3).

MATERIALS

In this catalogue, materials are indicated below. (For some items, only the materials of main parts are shown due to space limitations)

Irons and Steels

Material	Name
Steel	Iron-based screw, washer, etc.
Steel (SS)	Rolled steel for general structure
Steel (S※※C)	Carbon steel for machine structural use (Enter number for ※)
Steel (SECC)	Electrogalvanised steel sheet and steel strip
Steel (SF)	Carbon steel forging
Steel (SGCC)	Hot-dip galvanised steel sheet and steel strip
Steel (SK)	Carbon tool steel
Steel (SPCC)	Cold-rolled steel sheet and steel strip
Steel (SPHC)	Hot-rolled mild steel sheet and steel strip
Steel (SUM)	Sulfur and sulfur-composite free cutting steel
Steel (SUP)	Spring steel
Steel (SW)	Hard steel wire
Steel (SWP)	Piano wire
Steel (SWRH)	High carbon steel wire rod
Steel (SWRM)	Low carbon steel wire rod
Steel (SWCH)	Carbon steel for cold heading
Cast Iron (FC)	Grey iron casting
Stainless Steel	Stainless steel screw, washer, etc.
Stainless Steel (SUS301)	Austenitic stainless steel
Stainless Steel (SUS303)	Austenitic stainless steel
Stainless Steel (SUS304)	Austenitic stainless steel
Stainless Steel (SUS316, SUS316L)	Austenitic stainless steel
Stainless Steel (SUS420)	Martensitic stainless steel
Stainless Steel (SUS430)	Ferritic stainless steel
Stainless Steel (SUS440)	Martensitic stainless steel
Stainless Steel (SUS631)	Precipitation hardening stainless steel
Stainless Steel (SCS13)	Stainless steel casting
Stainless Steel (SCS14)	Stainless steel casting

Non-ferrous Metals

Material	Name
Aluminium Alloy	—
Aluminium Alloy (ADC)	Aluminium alloy die casting
Aluminium Alloy (AC)	Aluminium alloy casting
Zinc Alloy	—
Zinc Alloy (ZDC)	Zinc alloy die casting
Zinc Alloy (BRIC)	A kind of zinc alloy die casting
Brass	—
Free Cutting Brass	—
Phosphor Bronze	—
Phosphor Bronze for Spring	—
Nickel Silver	—
Copper Alloy Casting (CAC)	—
Magnesium Alloy (MDC)	Magnesium alloy die casting
Titanium Alloy	—

Magnets

Material	Name
Ferrite	—
Neodymium	—
Samarium Cobalt	Samarium-cobalt
Alnico	—

Plastics

Material	Name
ABS Resin	Acrylonitrile butadiene styrene
AES Resin	Acrylonitrile ethylene propylene rubber styrene
AS Resin	Acrylonitrile styrene
Cellulose Acetate (CA)	—
Casein (CS)	—
Epoxy Resin (EP)	—
Ethylene Vinyl Acetate (EVA)	—
EVOH Resin	Ethylene vinyl alcohol
FRP	Unsaturated polyester + glass fibre
Melamine Resin (MF)	Melamine formaldehyde resin
Polyamide (PA)	—
Polycarbonate (PC)	—
Polyethylene (PE)	—
PEEK Resin	Polyether ether ketone
High Density Polyethylene (HDPE)	—
Chlorinated Polyethylene (CPE)	—
PBT Resin	Polybutylene terephthalate
PET Resin	Polyethylene terephthalate
Phenol resin (PF)	Phenol formaldehyde resin
Methacrylic Resin (PMMA)	Polymethyl methacrylate
Polyacetal (POM)	—
Polypropylene (PP)	—
PPO Resin	Polypropylene oxide
PPS Resin	Polyphenylene sulfide
PPE Resin	Polyphenylene ether
Polystyrene (PS)	—
High Impact Polystyrene (HIPS)	—
Polytetrafluoroethylene (PTFE)	Polytetrafluoroethylene
Polyvinyl Chloride (PVC)	Polyvinyl chloride
Polyimide (PI)	—
Polyamideimide (PAI)	—
Polyetherimide (PEI)	—
Silicone Resin (SI)	Silicone plastic
Urea Resin (UF)	Urea formaldehyde resin
Unsaturated polyester Resin (UP)	—
~Elastomer	Elastomer

Rubbers

Material
Natural Rubber (NR)
Styrene Butadiene Rubber (SBR)
Butadiene Rubber (BR)
Isoprene Rubber (IR)
Nitrile Rubber (NBR)
Chloroprene Rubber (CR)
Ethylene Propylene Rubber (EPDM)
Isobutylene Isoprene Rubber (IIR)
Urethane Rubber (UR)
Polyurethane Rubber (PUR)
Silicone Rubber (Q)
Fluoro Rubber (FKM)
Synthetic Rubber

DOOR WEIGHT TABLE

Door Weight Calculator

The below density is only for reference and it may differ depending on their material and specification.
For door sizes not listed in the table below, please use the Door Weight Calculator.

Calculation: Door Weight (kg) = Density (Specific Gravity) × Door Height (mm) × Door Width (mm) × Door Thickness (mm) ÷ 1,000,000

Wooden Door Weight (kg)

Door Type	MDF (Density 0.8)					Particle Board (Density 0.6)					Plywood (Density 0.6)					Flush (Density 0.5)				
Door Thickness mm / Door Size mm	16	19	22	25	35	16	19	22	25	35	16	19	22	25	35	16	19	22	25	35
300× 400	1.5	1.8	2.1	2.4	3.4	1.2	1.4	1.6	1.8	2.5	1.2	1.4	1.6	1.8	2.5	1.0	1.1	1.3	1.5	2.1
300× 500	1.9	2.3	2.6	3.0	4.2	1.4	1.7	2.0	2.3	3.2	1.4	1.7	2.0	2.3	3.2	1.2	1.4	1.7	1.9	2.6
300× 600	2.3	2.7	3.2	3.6	5.0	1.7	2.1	2.4	2.7	3.8	1.7	2.1	2.4	2.7	3.8	1.4	1.7	2.0	2.3	3.2
300× 700	2.7	3.2	3.7	4.2	5.9	2.0	2.4	2.8	3.2	4.4	2.0	2.4	2.8	3.2	4.4	1.7	2.0	2.3	2.6	3.7
300× 800	3.1	3.6	4.2	4.8	6.7	2.3	2.7	3.2	3.6	5.0	2.3	2.7	3.2	3.6	5.0	1.9	2.3	2.6	3.0	4.2
300× 900	3.5	4.1	4.8	5.4	7.6	2.6	3.1	3.6	4.1	5.7	2.6	3.1	3.6	4.1	5.7	2.2	2.6	3.0	3.4	4.7
300×1000	3.8	4.6	5.3	6.0	8.4	2.9	3.4	4.0	4.5	6.3	2.9	3.4	4.0	4.5	6.3	2.4	2.9	3.3	3.8	5.3
400× 500	2.6	3.0	3.5	4.0	5.6	1.9	2.3	2.6	3.0	4.2	1.9	2.3	2.6	3.0	4.2	1.6	1.9	2.2	2.5	3.5
400× 600	3.1	3.6	4.2	4.8	6.7	2.3	2.7	3.2	3.6	5.0	2.3	2.7	3.2	3.6	5.0	1.9	2.3	2.6	3.0	4.2
400× 700	3.6	4.3	4.9	5.6	7.8	2.7	3.2	3.7	4.2	5.9	2.7	3.2	3.7	4.2	5.9	2.2	2.7	3.1	3.5	4.9
400× 800	4.1	4.9	5.6	6.4	9.0	3.1	3.6	4.2	4.8	6.7	3.1	3.6	4.2	4.8	6.7	2.6	3.0	3.5	4.0	5.6
400× 900	4.6	5.5	6.3	7.2	10.1	3.5	4.1	4.8	5.4	7.6	3.5	4.1	4.8	5.4	7.6	2.9	3.4	4.0	4.5	6.3
400×1000	5.1	6.1	7.0	8.0	11.2	3.8	4.6	5.3	6.0	8.4	3.8	4.6	5.3	6.0	8.4	3.2	3.8	4.4	5.0	7.0
400×1100	5.6	6.7	7.7	8.8	12.3	4.2	5.0	5.8	6.6	9.2	4.2	5.0	5.8	6.6	9.2	3.5	4.2	4.8	5.5	7.7
400×1200	6.1	7.3	8.4	9.6	13.4	4.6	5.5	6.3	7.2	10.1	4.6	5.5	6.3	7.2	10.1	3.8	4.6	5.3	6.0	8.4
500× 600	3.8	4.6	5.3	6.0	8.4	2.9	3.4	4.0	4.5	6.3	2.9	3.4	4.0	4.5	6.3	2.4	2.9	3.3	3.8	5.3
500× 700	4.5	5.3	6.2	7.0	9.8	3.4	4.0	4.6	5.3	7.4	3.4	4.0	4.6	5.3	7.4	2.8	3.3	3.9	4.4	6.1
500× 800	5.1	6.1	7.0	8.0	11.2	3.8	4.6	5.3	6.0	8.4	3.8	4.6	5.3	6.0	8.4	3.2	3.8	4.4	5.0	7.0
500× 900	5.8	6.8	7.9	9.0	12.6	4.3	5.1	5.9	6.8	9.5	4.3	5.1	5.9	6.8	9.5	3.6	4.3	5.0	5.6	7.9
500×1000	6.4	7.6	8.8	10.0	14.0	4.8	5.7	6.6	7.5	10.5	4.8	5.7	6.6	7.5	10.5	4.0	4.8	5.5	6.3	8.8
500×1100	7.0	8.4	9.7	11.0	15.4	5.3	6.3	7.3	8.3	11.6	5.3	6.3	7.3	8.3	11.6	4.4	5.2	6.1	6.9	9.6
500×1200	7.7	9.1	10.6	12.0	16.8	5.8	6.8	7.9	9.0	12.6	5.8	6.8	7.9	9.0	12.6	4.8	5.7	6.6	7.5	10.5
500×1300	8.3	9.9	11.4	13.0	18.2	6.2	7.4	8.6	9.8	13.7	6.2	7.4	8.6	9.8	13.7	5.2	6.2	7.2	8.1	11.4
500×1400	9.0	10.6	12.3	14.0	19.6	6.7	8.0	9.2	10.5	14.7	6.7	8.0	9.2	10.5	14.7	5.6	6.7	7.7	8.8	12.3
500×1500	9.6	11.4	13.2	15.0	21.0	7.2	8.6	9.9	11.3	15.8	6.0	7.1	8.3	9.4	13.1	7.2	8.6	9.9	11.3	15.8
500×1600	10.2	12.2	14.1	16.0	22.4	7.7	9.1	10.6	12.0	16.8	7.7	9.1	10.6	12.0	16.8	6.4	7.6	8.8	10.0	14.0
500×1700	10.9	12.9	15.0	17.0	23.8	8.2	9.7	11.2	12.8	17.9	8.2	9.7	11.2	12.8	17.9	6.8	8.1	9.4	10.6	14.9
500×1800	11.5	13.7	15.8	18.0	25.2	8.6	10.3	11.9	13.5	18.9	8.6	10.3	11.9	13.5	18.9	7.2	8.6	9.9	11.3	15.8

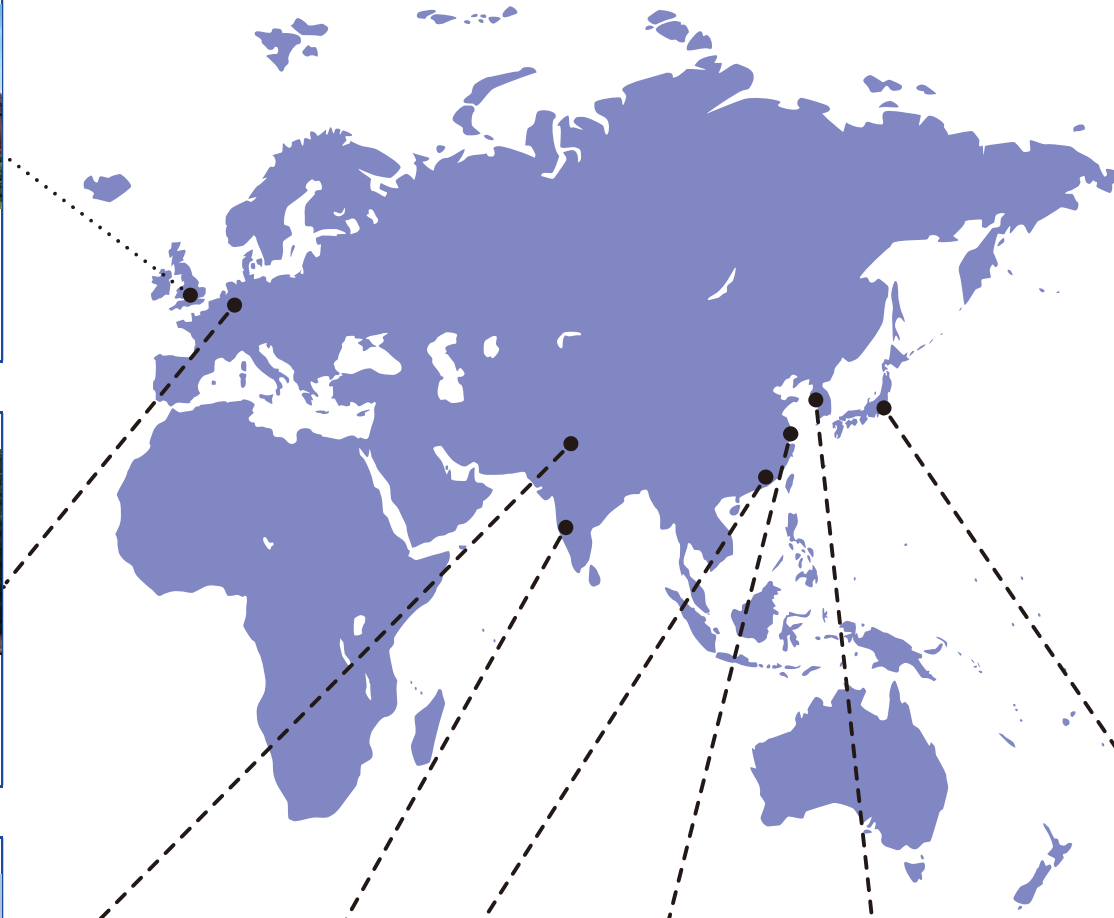
Glass Door Weight (kg)

Glass Door Thickness mm	4 (Density 2.5)							5 (Density 2.5)							6 (Density 2.5)						
Door Width mm / Door Height mm	300	400	500	600	700	800	900	300	400	500	600	700	800	900	300	400	500	600	700	800	900
300	0.9	1.2	1.5	1.8	2.1	2.4	2.7	1.1	1.5	1.9	2.3	2.6	3.0	3.4	1.4	1.8	2.3	2.7	3.2	3.6	4.1
350	1.1	1.4	1.8	2.1	2.5	2.8	3.2	1.3	1.8	2.2	2.6	3.1	3.5	3.9	1.6	2.1	2.6	3.2	3.7	4.2	4.7
400	1.2	1.6	2.0	2.4	2.8	3.2	3.6	1.5	2.0	2.5	3.0	3.5	4.0	4.5	1.8	2.4	3.0	3.6	4.2	4.8	5.4
450	1.4	1.8	2.3	2.7	3.2	3.6	4.1	1.7	2.3	2.8	3.4	3.9	4.5	5.1	2.0	2.7	3.4	4.1	4.7	5.4	6.1
500	1.5	2.0	2.5	3.0	3.5	4.0	4.5	1.9	2.5	3.1	3.8	4.4	5.0	5.6	2.3	3.0	3.8	4.5	5.3	6.0	6.8
550	1.7	2.2	2.8	3.3	3.9	4.4	5.0	2.1	2.8	3.4	4.1	4.8	5.5	6.2	2.5	3.3	4.1	5.0	5.8	6.6	7.4
600	1.8	2.4	3.0	3.6	4.2	4.8	5.4	2.3	3.0	3.8	4.5	5.3	6.0	6.8	2.7	3.6	4.5	5.4	6.3	7.2	8.1
650	2.0	2.6	3.3	3.9	4.6	5.2	5.9	2.4	3.3	4.1	4.9	5.7	6.5	7.3	2.9	3.9	4.9	5.9	6.8	7.8	8.8
700	2.1	2.8	3.5	4.2	4.9	5.6	6.3	2.6	3.5	4.4	5.3	6.1	7.0	7.9	3.2	4.2	5.3	6.3	7.4	8.4	9.5
750	2.3	3.0	3.8	4.5	5.3	6.0	6.8	2.8	3.8	4.7	5.6	6.6	7.5	8.4	3.4	4.5	5.6	6.8	7.9	9.0	10.1
800	2.4	3.2	4.0	4.8	5.6	6.4	7.2	3.0	4.0	5.0	6.0	7.0	8.0	9.0	3.6	4.8	6.0	7.2	8.4	9.6	10.8
850	2.6	3.4	4.3	5.1	6.0	6.8	7.7	3.2	4.3	5.3	6.4	7.4	8.5	9.6	3.8	5.1	6.4	7.7	8.9	10.2	11.5
900	2.7	3.6	4.5	5.4	6.3	7.2	8.1	3.4	4.5	5.6	6.8	7.9	9.0	10.1	4.1	5.4	6.8	8.1	9.5	10.8	12.2
950	2.9	3.8	4.8	5.7	6.7	7.6	8.6	3.6	4.8	5.9	7.1	8.3	9.5	10.7	4.3	5.7	7.1	8.6	10.0	11.4	12.8
1000	3.0	4.0	5.0	6.0	7.0	8.0	9.0	3.8	5.0	6.3	7.5	8.8	10.0	11.3	4.5	6.0	7.5	9.0	10.5	12.0	13.5
1050	3.2	4.2	5.3	6.3	7.4	8.4	9.5	3.9	5.3	6.6	7.9	9.2	10.5	11.8	4.7	6.3	7.9	9.5	11.0	12.6	14.2
1100	3.3	4.4	5.5	6.6	7.7	8.8	9.9	4.1	5.5	6.9	8.3	9.6	11.0	12.4	5.0	6.6	8.3	9.9	11.6	13.2	14.9
1150	3.5	4.6	5.8	6.9	8.1	9.2	10.4	4.3	5.8	7.2	8.6	10.1	11.5	12.9	5.2	6.9	8.6	10.4	12.1	13.8	15.5

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September 2024

Global Network



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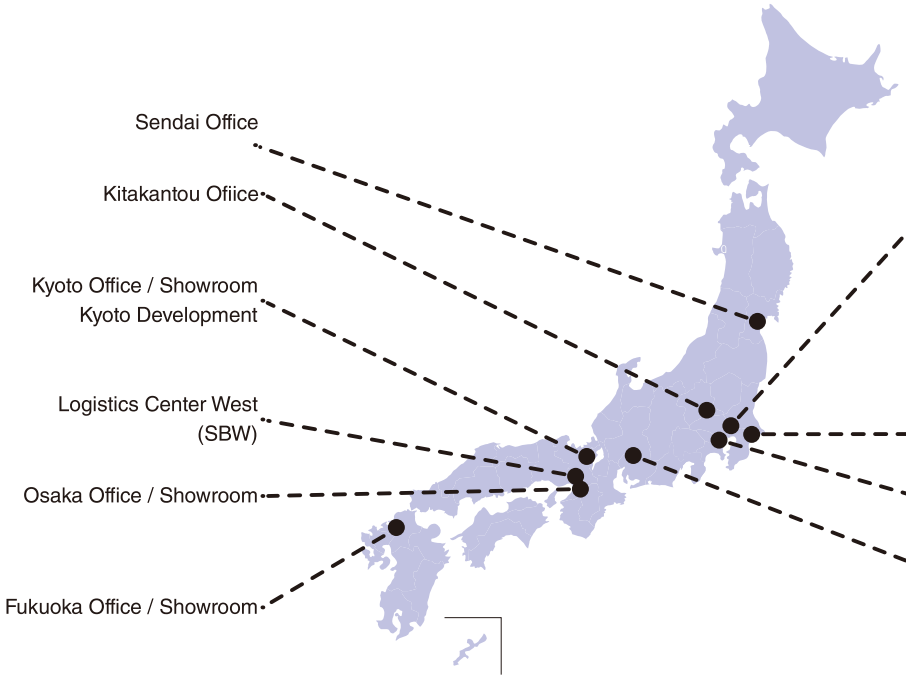
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Kitakantou Ofiice
Kyoto Office / Showroom
Kyoto Development
Logistics Center West
(SBW)
Osaka Office / Showroom
Fukuoka Office / Showroom

Tokyo Head Office / Showroom
Tokyo Development

Export Department
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Tokyo 101-8633,Japan
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Fax : +81-3-3866-4447
E-mail : export@sugatsune.co.jp

Chiba Factory,
Chiba Development
Logistics Center(SBC)
Kanagawa Office
Nagoya Office / Showroom

Sugatsune's History



The first home shop after the war (1946)

1930	“Sugatsune Shoten” is founded by Tsunesaburo Sugasawara.Sells European style furniture hardware.
1943	The company changes its name to “Sugatsune Kogyo Co., Ltd.”, manufacturing metal accessories for communication until the end of the war.
1949	The company starts manufacture furniture hardware and architectural hardware.
1968	Capital is increased to 50 million yen. Shin-ohashi Sales Office is moved to the site of Tokyo Factory (Adachi-ku, Tokyo), and Adachi Sales Office is set up.
1969	Chiba Factory is constructed on the Trading Estate at Matsuo-cho in Chiba. This marked the beginning of mass production.
1975	Osaka Sales Office (current Osaka Branch) is opened.
1982	A logistics centre (S.B.C) with a floor area of 4,026m^2 is completed at the site of Chiba Factory. Sugatsune America Inc. is established in the United States.
1987	Sugatsune Kogyo comes up with an original damper technology “Lapcon”.
1992	Sugatsune Kogyo’s President Sugasawara is presented with a Medal with a Blue Ribbon by the government of Japan. A new logistics centre (S.B.C) with modern facilities is completed. (Floor area of 8,884m^2)
1998	Sugatsune Kogyo’s President Sugasawara receives Gold and Silver Rays, an Order of the Sacred Treasure. A technical centre is built at the site of Chiba Factory. Nagoya Sales Office is opened. The company registers for ISO 9001 certification.
2004	Sendai and Fukuoka sales offices are opened. An office and showroom are established in Shanghai, China.
2005	The largest showroom in the industry in Japan is opened at Iwamoto-cho, Chiyoda-ku, Tokyo. A large exhibition is held to commemorate the opening of the new showrooms in Tokyo and Osaka, and a new product presentation is held in Fukuoka and Sendai. Sugatsune UK is established in Great Britain. Shanghai Office is changed to Sugatsune Shanghai.
2006	A showroom is opened in Nagoya, and an exhibition is held to commemorate the opening of the new showroom. New head office building No.4 and No.5 are completed.
2007	A new building at logistics centre (S.B.C) is completed. (Floor area of 7,413m^2) Nagoya Sales Office is moved from Naka-ku to Kita-ku.
2009	The product concept “Motion Design Tech” is presented for giving further motion functions to the “opening and closing of doors or lids”.
2011	Kanagawa Sales Office is opened. Fukuoka Sales Office is moved and a showroom is opened. A showroom and sales office are opened in Chicago by Sugatsune America.
2012	Kyoto Sales Office is opened.
2013	Kyoto showroom is opened.
2015	Sugatsune Kogyo India Private Limited is established in India. A showroom is opened in Mumbai, India. A new logistics centre (SBW) is established in Osaka.
2016	Sugatsune Europe GmbH is established in Germany. Sugatsune Canada, Inc is established in Canada.
2017	The Monoflat LIN-X1000 wins a Reddot award.
2018	Sugatsune UK changes locations. Private exhibitions displaying new products are held in Tokyo, Osaka and Nagoya. In total, exhibitions are held in 13 cities across Japan. Sugatsune EU opens a showroom in Düsseldorf.
2019	Sales office opens in Northern Kanto. The LDD-V100 door damper wins both the Red Dot design award and also the iF design award. The head office moves to a new location.
2020	Sugatsune Kogyo celebrated its 90th anniversary.
2022	Sugatsune Korea is established as a local subsidiary in South Korea.

Company Profile

Company Name	Sugatsune Kogyo Co., Ltd.
President	Jun Sugasawara
Headquarters	Tokyo, Japan
Founded	February 11, 1930
Established	November 20, 1943
Capital	¥400,000,000
Number of Employees	497 (January, 2024)
Business Segment	Furniture fittings, Architectural hardware, Decorative hardware, Various import hardware, Industrial components hardware, IT industrial components, Custom-made items, Lighting part metal, Furniture metal, Fixtures furniture

Business Partner Countries & Regions

Sweden/Netherlands/Belgium/Spain/Portugal/France/Maltese/Monaco/Denmark/Sweden/Finland/Norway/Cyprus/Greece/Brazil/Argentina/Brazil/Argentina/Chile/Britain/Ireland/Germany/Italy/Austria/Oman/Bahrain/Jordan/Iran/Egypt/Qatar/India/Pakistan/SriLanka/Bangladesh/South Africa/Russia/Poland/Romania/Bulgaria/Estonia/Lithuania/Turkey/Israel/Lebanon/SaudiArabia/Kuwait/Australia/NewZealand/Indonesia/Singapore/Malaysia/Thailand/Myanmar/Vietnam/Philippines/Mongolia/China/HongKong/Taiwan/Korea

Registration

ISO 9001 : JSAQ384

ISO 14001 : JSAE597

(ISO 9001 : Sugatsune's bases in Japan,
ISO 14001 : Chiba Factory of Chiba Production Division and Logistics Centre of Logistics Division)

General Construction Business Licence No. :
Tokyo Metropolitan Governor Licence (General –25) No.140997

The Origin of LAMP Brand

The initial trademark for LAMP goods was derived by the company's founder, Tsunezaburo Sugasawara, from the Japanese symbol for "ordinary" (常). By separating this character into its component pieces, he took this to symbolize "the use of fire," which he chose to designate as a metaphor for wisdom and courage. He visualized this concept as a lamp. He thought that Sugatsune goods may, even if only a little, "brighten" society. Sugatsune's reliable quality is still represented by the logo to this day.

HAND_LAMP Mark
Founding time ~ Around 1990

LAMP Mark
Around 1990 ~ Now

Commitment to Quality and the Environment

All departments from planning, manufacturing to sales have a high awareness of quality, and through unremitting efforts, all the domestic bases in Japan have achieved ISO 9001 certification (registration No.: JSAQ384). We also actively engaged in environmental conservation activities, and achieved ISO 14001 certification (registration No.: JSAE597) at our development bases, namely Chiba Factory of Chiba Production Division and Logistics Centre of Logistics Division.

Quality Management System ISO 9001 certification (certification/registration) approved

Quality Policy: I consider the fundamentals and pursue the essential and ideal.

Sugatsune America, Sugatsune Europe, and Sugatsune Shanghai are also ISO 9001 certified.

Environmental Management System ISO 14001 certification (certification/registration) approved

Connect with Us on Social Media

Watch our product videos, including instructional guides on our YouTube channel.

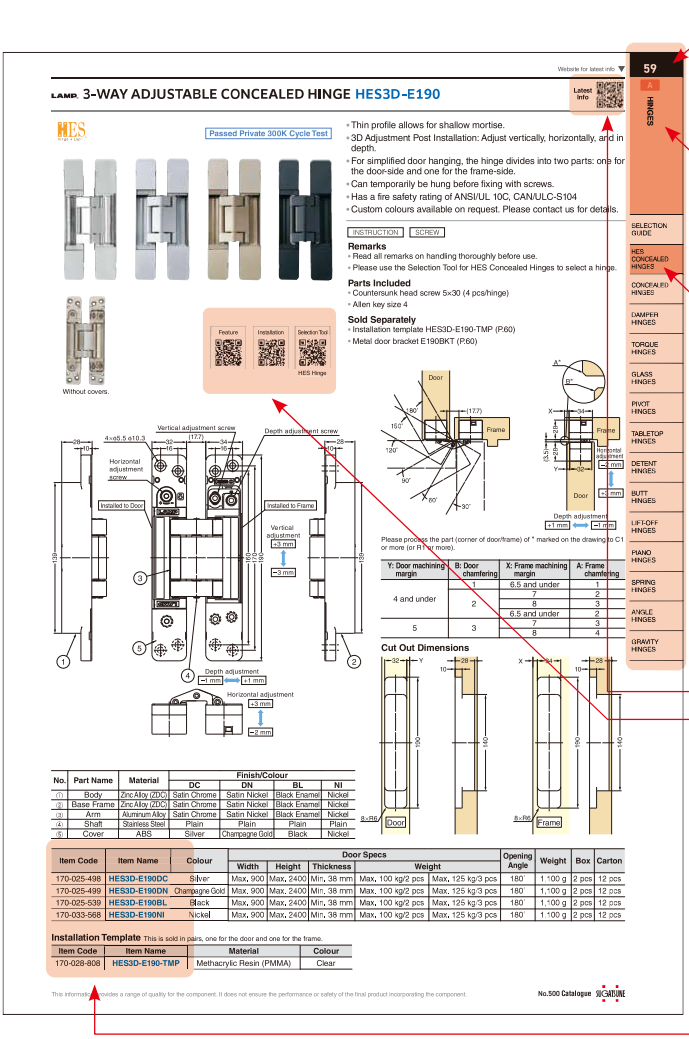
Sugatsune Global

Explore our product applications and stay updated on Instagram and Facebook.

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Description of Main Text

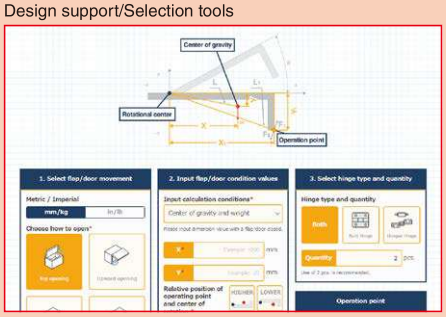


Viewable from the QR code.

Access website, videos and selection tools



Design support/Selection tools



With the selection tool Sasuga-kun, you can select the “Motion Design Tech” products meeting your requirements simply by entering values such as the size and weight of the lid or door. You can use it on our website.

Item Code	Item Name	Col
170-025-498	HES3D-E190DC	Silv
170-025-499	HES3D-E190DN	Champag
170-025-539	HES3D-E190BL	Bla
170-033-568	HES3D-E190NI	Nic

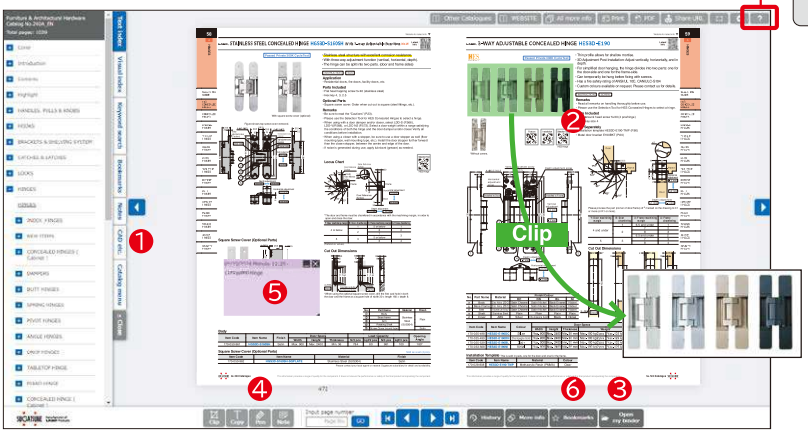
• Please specify the Item Name. and quantity when ordering.

Online Catalogue Functions

❶ CAD etc.
Access product information easily.

❷ Clip
Download images within the dragged area.

❸ MyBinder
Register favourites to MyBinder to download multiple catalogues together as a single PDF.



*Screens may be changed.

See Help for other functions and operation methods.

❹ Pen
Draw arrows, add frames, or take notes on the catalogue as desired.

❺ Note
Enter notes. Display only pages with sticky notes affixed.

❻ Bookmarks
Register favourite pages for easier reference later.

How to Use This Catalogue

- All items, unless specified, are made to exact metric dimension.
- Changes in dimensions, finishes, packing, etc., and suspension of production may occur without notice.
- Our liability is limited to the replacement of the merchandise.

Defective Products

- While great care is taken in the manufacturing of our products, should a defect arise, contact the dealer. The warranty period is one year from the date of our invoice. Should a defect arise during the warranty period, we will replace the product in question with a functioning product within the range of our responsibility.

Returns/Replacements/Post-Order Changes

- Returns and replacements will be handled upon confirming the actual product after customer consultation with a Sugatsune sales representative. Requests for returns or replacements must be made within 30 days of the date of our invoice.
  Please note that customers will be asked to cover handling charges for returns or replacements made at customer convenience.
- Please note that we may not be able to accommodate changes made after placing orders.

Precautions for Mounting

- Improper installation may not only cause the product to malfunction but could also result in damage. Handle with care.
  For some products, installation manuals are included or available online. Read the manual thoroughly to ensure correct installation.
- Pay attention to any loosened mounting screws or fastening parts. Screws or fastening parts may loosen due to the mounting conditions or the usage environment. Such loosening may result in decreased functionality or damage to the mounted product, as well as potential injuries. To ensure safe usage, retighten periodically, even if thread-locker is applied to the screws. Generally, retighten one month after initial use, again six months thereafter, and approximately every year subsequently. Note that these guidelines apply to specific conditions and do not guarantee product quality or safety. Their applicability to the product is to be judged by the customer.

Screws

- The included and recommended screws listed with the product conform to the former JIS standards.

CAD Data (3D & 2D)

- Register as a member on our website to download CAD data. Additionally, we will verify the registered data, as membership is intended for designers.

Product Information

- The information listed in this catalogue is current as of September 2024. Product prices, specifications, dimensions, colours, and other details may change without notice due to improvements or material price fluctuations; products may also be discontinued without notice. For the latest information, see our website.
- Due to the hard copy format, some specifications such as details of dimensions and shapes have been omitted.
  For more detailed information, please contact us.
- Many of the listed products include registered or pending designs, patents, and utility models.
- Due to the hard copy format, product colours may differ slightly from the actual products. Please refer to the actual product for accurate colour representation.
- The photographs and computer graphics in the catalogue are visualisations. Depending on the conditions, installation as shown may not be possible. Confirm before purchase.
- Data on specifications and performance, such as loads, weight, force, is listed for use as a guideline to product selection. The values shown are not guaranteed under all conditions.
- Product content listed in this catalogue indicates the quality range as parts. It does not guarantee the functionality, performance, or safety of the final product using these parts.
- Data when using our products with customer products may involve different figures depending on elements such as mounting accuracy, mounting method, temperature, humidity, dust, indoors/outdoors conditions, target product structure, material, size, installation conditions, and individual operation.
- For test content details, request a test report and confirm as needed.
- When using our products near the limits of the listed data, or when confirmation of safety or durability is required in order to prevent accidents, mount the actual product and confirm, or provide the most detailed possible explanation of the usage conditions to consult with us.
- With some exceptions, our products are furniture and architectural fittings for indoor use. Consult with a sales representative concerning use outdoors, near water, or in severe environments.
- Unauthorized reproduction of this catalogue is strictly prohibited.

Display Content

Material

For material notation, please see “Materials” on P.1367.

Finish (surface treatment)

Finish notations are displayed with the following abbreviations due to limitations of space.

Display	Finish
Bright Chromate	Zinc Plated Bright Chromate
Coloured Chromate	Zinc Plated Coloured Chromate

Coloured chromate is characterized by sharply varying hues; this is not a defect.

■Paint

Paint is displayed as follows. (e.g.) Powder Baked Enamel Paint/White

■Colour Display

There may be multiple display methods for a single colour.

(e.g.) White may be indicated as W, WT, or WH.
Black may be indicated as B or BL.
Silver may be indicated as S or SL.

Dimensional Units

The units for the listed dimensions are millimetres (mm) (unless otherwise stated).

Dimensional Error

The machining process inevitably results in a degree of product error. Be sure to confirm with the actual product before use.

Drawings

With some exceptions, drawings employ the third angle projection method. Due to limitations of space, some detailed dimensions, etc. may been omitted.

Weight

Notations indicate the weight for one product or one set only.

Load Capacity

The figures displayed for load capacity are examples of data we considered reliable and measured values in tests under conditions specified by us; they are not guaranteed values. As the values may vary depending on the usage method and application, be sure to make a selection upon confirmation of suitability for the application before use.

Units are shown in SI units based on the new measuring method, with MKS units also provided.

Quantity

Quantity, when notated, is shown as below.

1 box: Quantity in one small box displayed.
1 carton: Quantity in one cardboard box displayed.


SUGATSUNE



September 2024